A HISTORY OF AIPG
1963 - 2003

By Richard J. Proctor
A HISTORY OF AIPG
1963 - 2003

By
Richard J. Proctor

1st Executive Committee 1963 - 1965.

Richard J. Proctor, CPG-5091, AIPG Past-President

Publication was prepared under the direction of AIPG National Editor (2001-2003) Virginia T. McLemore, CPG-07438, AIPG National Editor (2004) Raymond W. Talkington, CPG-07935 and AIPG Publications Manager Wendy J. Davidson. Assistance was also provided by AIPG Office Assistant Jessica R. Valero and Lydia Testa.

Production of this publication was made possible in part by the financial support of the AIPG Foundation, American Geological Institute, BCI Engineers and Scientists, Inc./Richard M. Powers, HB Engineering Group/Kelvin J. Buchanan, Robert G. Corbett, John W. Hawley, Adolf U. Honkala, Rex Monahan, Roy J. Shlemon, Russell and Judy Slayback, Stephen M. Testa, Bobby J. Timmons, Robert Berg, Patrick J. Gratton, and the AIPG Headquarters Staff.

American Institute of Professional Geologists
12000 Washington St., Suite 285
Thornton, CO 80241
(303) 412-6205
www.aipg.org

Entire contents © 2004 by the American Institute of Professional Geologists

All rights reserved.

Printed in the United States of America.

Library of Congress Control Number: 200418905
Acknowledgments

The physical production of *A History of AIPG 1963–2003* is underwritten by a generous contribution of $500 or more from each of the individuals and corporations listed here:

AIPG Foundation
American Geological Institute
BCI Engineers and Scientists, Inc./Richard M. Powers
HB Engineering Group/Kelvin J. Buchanan
    Robert G. Corbett, Ph.D.
    John W. Hawley, Ph.D.
    Adolf U. Honkala
    Rex Monahan
    Roy J. Shlemon, Ph.D.
    Russell G. and Judy Slayback
    Stephen M. Testa
    Bobby J. Timmons

The following are also recognized for their thoughtful contributions:

    Robert R. Berg, Ph.D.
    Patrick J. Gratton
    AIPG Headquarters Staff
ACRONYMS

AAPG  American Association of Petroleum Geologists
AEG  Association of Engineering Geologists
AGI  American Geological Institute
AIPG  American Institute of Professional Geologists
APGS  Association of Professional Geological Scientists (short-lived name change of AIPG)
CPG  Certified Professional Geologists (a member of AIPG)
DPA  Division of Professional Affairs (a special category of AAPG)
EFG  European Federation of Geologists
GSA  Geological Society of America
SEPM  Society for Sedimentary Geology
SIPES  Society of Independent Professional Earth Scientists
SME  Society of Mining Engineers
TPG  The Professional Geologists (AIPG newsletter)

A SUMMARY OF WHAT AIPG DOES

Professional Certification
Certifies geologists based on their competence, integrity, ethics, academic training, and work experience.

Lobbying
Presents testimony and position papers to federal and state legislators and agencies on matters affecting geologists, the importance of geology, and employment opportunities of geologists.

Ombudsman
Intervenes with regulatory boards and agencies on behalf of individual geologists, at the geologist's request.

Publications

Insurance
Provides access to liability insurance for errors and omissions, designed specifically for geologists, and a full line of health, life, and accident insurance.

International Comity
Through agreements with professional geologic societies in other countries (The Geological Society of London, European Federation of Geologists, and Irish Association for Economic Geology), provides access for its Members to professional registration, certification, or chartered status in those countries.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acknowledgments</td>
<td>i</td>
</tr>
<tr>
<td>Acronyms</td>
<td>ii</td>
</tr>
<tr>
<td>A Summary of What AIPG Does</td>
<td>ii</td>
</tr>
<tr>
<td>Table of Contents</td>
<td>iii</td>
</tr>
<tr>
<td>Preface</td>
<td>vii</td>
</tr>
<tr>
<td>Prologue — What is AIPG?</td>
<td>vii</td>
</tr>
<tr>
<td><strong>AIPG Historical Highlights</strong></td>
<td>viii</td>
</tr>
<tr>
<td><strong>THE FORMATIVE YEARS</strong></td>
<td></td>
</tr>
<tr>
<td>The Founders of AIPG</td>
<td></td>
</tr>
<tr>
<td>The AGI-AAPG-AIPG connection</td>
<td></td>
</tr>
<tr>
<td>Organizational Meeting, Oklahoma City, September 1963</td>
<td>6</td>
</tr>
<tr>
<td>Minutes and the 14 attendees</td>
<td></td>
</tr>
<tr>
<td>Founding Convention, Golden, November 1963</td>
<td>9</td>
</tr>
<tr>
<td>Minutes and the 94 attendees</td>
<td></td>
</tr>
<tr>
<td>Acting Executive Director <em>Edward E. Rue</em></td>
<td></td>
</tr>
<tr>
<td>1963-65 President <strong>Martin Van Couvering</strong></td>
<td>15</td>
</tr>
<tr>
<td>Memorial (1888-1976) by Frank B. Conselman</td>
<td></td>
</tr>
<tr>
<td>“AIPG Bulletins” by Martin Van Couvering</td>
<td></td>
</tr>
<tr>
<td>Executive Director <strong>Arthur F. Brunton</strong></td>
<td></td>
</tr>
<tr>
<td>Model Geologists Registration Law</td>
<td></td>
</tr>
<tr>
<td>Items from the first <em>TPG</em>, November 1964</td>
<td></td>
</tr>
<tr>
<td>First Annual Meeting, Denver 1964</td>
<td></td>
</tr>
<tr>
<td>Continuing correspondence and AAPG/AIPG Agreement</td>
<td></td>
</tr>
<tr>
<td>1965 Second Annual Meeting, Golden, Colorado</td>
<td></td>
</tr>
<tr>
<td>City of L. A. requests AIPG help</td>
<td></td>
</tr>
<tr>
<td>1966 President <strong>Ben H. Parker</strong></td>
<td>34</td>
</tr>
<tr>
<td>Memorial (1902-1969) by Martin Van Couvering</td>
<td></td>
</tr>
<tr>
<td>Speech—“Attributes of the Geologic Profession”</td>
<td></td>
</tr>
<tr>
<td>Excerpts from the “President’s Column”</td>
<td></td>
</tr>
<tr>
<td>Dr. Richard Jahns Committee Report on L. A. Hazards</td>
<td></td>
</tr>
<tr>
<td><strong>GROWING YEARS</strong></td>
<td></td>
</tr>
<tr>
<td>1967 President <strong>Allen C. Tester</strong></td>
<td>42</td>
</tr>
<tr>
<td>Memorial (1897-1976) by Richard A. Hoppin</td>
<td></td>
</tr>
<tr>
<td>Excerpts from the President’s Column</td>
<td></td>
</tr>
<tr>
<td>“Hazards and/of Regulations” by Henry H. Neel</td>
<td></td>
</tr>
<tr>
<td>1968 President <strong>John T. Galey, Sr.</strong></td>
<td>48</td>
</tr>
<tr>
<td>Memorial (1908-1992) by John T. Galey, Jr. and Peggy Galey</td>
<td></td>
</tr>
<tr>
<td>President’s Message—“Blueprint for Action”</td>
<td></td>
</tr>
<tr>
<td>Environmental Geology Center concept</td>
<td></td>
</tr>
<tr>
<td>1969 President <strong>R. Dana Russell</strong></td>
<td>54</td>
</tr>
<tr>
<td>President’s Messages—“Why AIPG?” and “Let’s Talk”</td>
<td></td>
</tr>
<tr>
<td>First Award — Ben H. Parker Memorial Medal and AIPG’s Honors and Awards Program</td>
<td></td>
</tr>
<tr>
<td>1970 President <strong>Henry H. Neel</strong></td>
<td>57</td>
</tr>
<tr>
<td>President’s Messages—“The Active and the Indolent” and “Finale”</td>
<td></td>
</tr>
<tr>
<td>At Issue: Natural Resources vs. Environment</td>
<td></td>
</tr>
<tr>
<td>CORDEC Committee</td>
<td></td>
</tr>
<tr>
<td>1971 President <strong>Robert R. Berg</strong></td>
<td>65</td>
</tr>
<tr>
<td>Recollections of AIPG 1971</td>
<td></td>
</tr>
<tr>
<td>President’s Message—“A Time for Progress” and paper</td>
<td></td>
</tr>
<tr>
<td>“Future Education of Professional Geologists”</td>
<td></td>
</tr>
<tr>
<td>Public Relations Committee Report</td>
<td></td>
</tr>
</tbody>
</table>

—iii—
<table>
<thead>
<tr>
<th>Year</th>
<th>President</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1972</td>
<td>Neilson Rudd</td>
<td>Speech— “Geology as a Profession”</td>
<td>68</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Industrial Employment of Geologists Report</td>
<td></td>
</tr>
<tr>
<td>1973</td>
<td>Adolph U. Honkala</td>
<td>Speech— “The Individual Consultant”</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cooperative Evaluation of Geology Departments</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Letters from Alan Shepard and Harrison Schmitt</td>
<td></td>
</tr>
<tr>
<td>1974</td>
<td>Frank B. Conselman</td>
<td>Memorial (1910-1992) by Grover E. Murray</td>
<td>73</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The Ben H. Parker Medal Testimonial and Acceptance Speech</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>PUPO Committee (forerunner of APGS)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>First AIPG publications (six) for sale</td>
<td></td>
</tr>
<tr>
<td>1975</td>
<td>Arthur O. Spaulding</td>
<td>Congressional Testimony</td>
<td>81</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Speech at the White House</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Second AAPG-AIPG Agreement</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Legislative Counsel James U. Hamersley</td>
<td></td>
</tr>
<tr>
<td>1976</td>
<td>John D. Haun</td>
<td>President's Message— “Professionalism and the Geological Scientist”</td>
<td>87</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Congressional Testimony by five CPGs</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Greatest surge in membership</td>
<td></td>
</tr>
<tr>
<td>1977</td>
<td>John A. Taylor</td>
<td>“President’s Annual Review”</td>
<td>92</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Congressional Testimony by six CPGs</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>APGS Policy Board</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Public Affairs Committee</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>POF Committee</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Legal Action Committee Report</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Memorial to Ian Campbell (1899-1978) by Gordon B. Oakshott</td>
<td></td>
</tr>
<tr>
<td>1979</td>
<td>Edward E. “Bud” Rue</td>
<td>President’s Message - “Why AIPG?”</td>
<td>105</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Who's running AIPG Headquarters?—</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Executive Secretary Deborah Dare</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>APGS changed back to AIPG</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>First Martin Van Couvering Award</td>
<td></td>
</tr>
<tr>
<td>1980</td>
<td>James R. Dunn</td>
<td>“Join the World” and “The State of AIPG”</td>
<td>109</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Executive Director Stuart P. Hughes</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>First Governmental Affairs Conference</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>New AAPG-AIPG Agreement</td>
<td></td>
</tr>
<tr>
<td>1981</td>
<td>John W. Rold</td>
<td>President’s Messages</td>
<td>116</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Executive Director Victor C. Tannehill</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>The AIPG Foundation, Inc.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>College Geology Department Survey</td>
<td></td>
</tr>
</tbody>
</table>
# TABLE OF CONTENTS

1982 President **M. O. Turner**
- President's Message— “AIPG Background, Objectives and Services Rendered”
- Congressional Testimony by M. O. Turner
- Washington Representative **Russell G. Wayland**
- First Presidential Certificate of Merit

1983 President **Larry D. Woodfork**
- President's Message— “My Objectives for AIPG”
- Member Employment Survey 1983
- Memorial to **Richard H. Jahns** (1915-1983)
- First Public Service Award

1984 President **Dean Grafton**
- Speech -- “The Institute Message”
- First Honorary Member Award

1985 President **Ernest K. Lehmann**
- Speech— “Strategic Minerals: A View From the Geologic Profession”
- President’s Message— “Institute is a Professional Organization in the Public Eye”
- Institute officials meet with Interior Secretary Hodel

1986 President **Travis H. Hughes**
- President's Message— “AIPG Size Reflects Services Value”
- **Angelo Tagliocozzo** Scholarship

1987 President **Charles J. Mankin**
- AIPG/GSA Penrose Conference

**ANOTHER YEAR OF TURMOIL**

1988 President **Sam R. Evans**
- “President's Address to Members”
- Search for Executive Director—Administrative Manager **Carol A. Beckett**
- Washington Representative **Elisabeth G. Newton**
- The Kentucky Engineers controversy

**ROLLING ALONG AGAIN**

1989 President **Richard J. Proctor**
- President's Messages— “State Registration of Geologists,” and “Regulations, Regulations, Regulations”
- Executive Director **William V. Knight**
- “Revise your Code of Ethics, or else”—Attorney Alan B. Stover
- First Outstanding Achievement Award

1990 President **Susan M. Landon**
- President's Message— “Multiple Working Hypotheses” and paper “Registration for Geologists”
- AIPG Contacts with European Professional Geologists

1991 President **Haydn H. Murray**
- President's Message— “Environmental Issues”
- First Professional Liability Insurance

1992 President **Daniel N. Miller, Jr.**
- Speech— “Future Trends in Professional Geology”
- Washington Representative **Fred B. Mullin**

1993 President **William L. Fisher**
- Speech— “The Geosciences: Adapting to a World of Change” and paper “The New and Emerging Domestic Oil and Gas Industry”
# TABLE OF CONTENTS

1994 President **Russell G. Slayback**  
President’s Message—“Learning the Ropes” and paper  
“The Winds of Change—Are They Blowing, or Do I Just Feel Good ‘Cause Its Spring?”  
185

1995 President **Richard C. Fountain**  
President’s Message—“A New Year”  
188

1996 President **Robert K. Merrill**  
President’s Messages—“Vision for AIPG’s Future,” “World Geologist”  
and “At the Interface of Geological and Biological Sciences”  
191

1997 President **Jonathan G. Price**  
Paper—“AIPG at the Forefront”  
Washington Representative **John J. Dragonetti**  
195

1998 President **Stephen M. Testa**  
President’s Messages—“Why AIPG?,” and “Some Thoughts on Professional Development”  
Testimony before the USGS—Unfair competition  
New AIPG publications  
198

1999 President **Thomas G. Fails**  
Speech—“Student Recruiting—What are We Doing Wrong?”  
Executive Director **William J. Siok**  
Member Employment Comparisons, 1965-1999  
Governmental Affairs Program—**David Applegate**  
Geologists Salary Survey  
204

2000 President **Dennis Pennington**  
President’s Message—“Societies and Policy Makers”  
210

2001 President **Robert Fakundiny**  
President’s Message  
212

2002 President **Lawrence Cerrillo**  
President’s Message  
214

2003 President **Richard M. Powers**  
President’s Message  
216

**President-Elect for 2004 Presidency, Robert G. Corbett**  

**APPENDICES**  
1. AIPG Presidents  
2. AIPG Executive Committees  
3. AIPG Awards  
4. AIPG Annual Meetings  
5. AIPG Publications  
6. AIPG Activities and Service to Members  
7. CPG Certification by Year  
8. Charter Members 1-743  
9. Selected Speeches and Papers by CPGs  
10. European Federation of Geologists  
11. Canadian Council of Professional Geoscientists  

**INDEX, WHO’S WHO and WHO WAS WHO in AIPG**
PROLOGUE—WHAT IS AIPG

The American Institute of Professional Geologists (AIPG) was founded in 1963 to promote the profession of geology and to provide certification for geologists as a vehicle for establishing a standard of excellence for the profession. Since then, more than 10,000 individuals have demonstrated their commitment to the highest levels of competence and ethical conduct and have been certified by AIPG. From all branches of the science, AIPG members are employed in industry, consulting, government, and academia.

AIPG stresses professionalism, as compared to the many scientific geological societies. Even so, AIPG prepares many publications on important geological issues, both for the professional and the general public. Our most popular example is “The Citizens’ Guide to Geologic Hazards,” which has been translated into a Spanish edition.

AIPG is a nonprofit organization whose policies are determined by its Executive Committee. The Institute’s Executive Director and staff administer those policies. AIPG activities are supported by Membership dues and publications.

Our members are qualified to provide accurate geologic information and advice to the public and to political bodies. AIPG willingly continues to provide experts who testify in Washington, state capitols, and locally on legislative and regulatory issues that can affect geologists and the public good.

AIPG provides nonpolitical statements that represent the opinions of professional geologists as a group rather than the position of one industry or special interest group. Through its Washington Representative and Governmental Affairs Committee, AIPG monitors hearings on proposed bills, oversight hearings, regulatory agency actions, and Congressional investigations. It arranges for expert testimony by member geologists at legislative hearings.

Through its annual Washington Governmental Affairs Conference, the Institute brings its members together with key elected and appointed officials for meaningful exchanges.

The Institute has stringent membership requirements on competence, integrity, and ethics. The CPG (Certified Professional Geologist) designation is recognized nationally as a high-level professional achievement and worthy of public trust. When those without adequate training and experience attempt to perform geologic work, public health, safety, and welfare may be endangered and the risk of financial loss increased.

Members of AIPG include a variety of geologic specialists who are united for the common purpose of strengthening our profession. AIPG seeks to increase public awareness of the importance of geology, which leads to better understanding and appreciation of what geologists do and how geology can affect their lives.

Richard J. Proctor, CPG 5091
San Clemente, California
2003
AIPG Historical Highlights

1962-63
- Correspondence began on forming a new professional geological society, between Edward “Bud” Rue of Illinois, Frank Conselman of Texas, William Mallory of Colorado, Allen Tester of Iowa, Ad Honkala of Virginia, Robert Becker of Oklahoma, Ben Parker of Colorado.

1963
- Steering Committee (Bud Rue, Chairman) was formed of eleven geologists. Organizational meeting was held in September in Oklahoma City (Ben Parker elected Chairman).
- Founding Convention (William Mallory, Chairman) was held in November in Golden, Colorado, with 94 attendees.
- Martin Van Couvering was elected President.
- AIPG name was suggested by William Mallory.
- A loan from AGI was arranged by Michel T. Halbouty to get AIPG started.
- AIPG logo was designed by Allen Tester of Iowa.
- Constitution, Bylaws, and Code of Ethics was written by Tom Beveridge of Texas, Frank Conselman of Texas, Ad Honkala of Virginia, Allen Tester of Iowa and Bud Rue of Illinois. AIPG was incorporated in Colorado.

1964
- First Annual Meeting (William Newton, Chairman) was in Denver.
- First monthly newsletter TPG was by Editor Frank Conselman.
- Application forms were designed by Fred Earll of Montana.
- Model Registration Law was written by William Beebe.
- Executive Director was Art Brunton, until 1979.

1966
- Richard Jahns Committee presents hazards report to City of Los Angeles.

1969
- First AIPG award was the Parker Medal to Martin Van Couvering.

1974
- First six AIPG publications completed for sale.

1975
- First Congressional Testimony by a CPG was by Art Spaulding. Other Testimonies were by Kenneth Crandall and Edith McKee.

1976
- AIPG name was changed to APGS (Association of Professional Geological Scientists).
- Congressional Testimonies were by Walter Heinrichs, Fred Stead, John Taylor, Howard Hansen, and John Galey.

1977-78
- Congressional Testimonies were by TS Ary, John Galey, Ad Honkala, John Taylor, James Skehan, Kelsey Boltz, and Eugene Waggoner.

1979
- AIPG name was reinstated. Present logo was designed by William Atlee.
- First Martin Van Couvering Award was presented to Larry Woodfork.

1980
- First Governmental Affairs Conference (Washington Fly-in).

1981
- Executive Director was Vic Tannehill, until 1988.
- AIPG Foundation was formed with James Dunn first Chairman.

1982
- Congressional Testimony was by M. O. Turner.
- Headquarters was moved from Golden to Arvada, Colorado.

1984
- First Honorary Member was Grover E. Murray.
- Congressional Testimonies were by Allen Agnew and Ernest Lehmann.

1985
- Executive Director was William Knight, until 1999.
- New Code of Ethics was developed.
- Congressional Testimonies were by Michel Halbouty and Don Fife.
- First Outstanding Achievement Award was presented to Stephen Jay Gould.

1991
- Long Range Planning Report, “The Institute in Evolution,” was developed.

1993
- Book “Citizens’ Guide to Geologic Hazards” was published.

1998
- Books on “Ethics” and “Petroleum” were published.

1999
- Executive Director became William J. Siok.
- Headquarters was moved from Arvada to Westminster, CO.

2003
- Fortieth Anniversary was celebrated at Annual Meeting, Glenwood Springs, CO.

2004
- Book “History of AIPG 1963-2003” was published.
Prior to 1963, numerous societies existed to focus on the science of geology and upon specialty areas within this science, but many geological scientists were concerned about the lack of any national organization that focused on geology as a profession. The practice of geology, particularly with respect to public responsibility, regulation, and business practice, had no established guidelines and no national representation.

This deficiency was addressed in 1962-63 when seven eminent geologists in different states began phoning and writing each other about forming a new professional organization. The letter writing was led by Edward “Bud” Rue in Illinois. Bud corresponded with William Mallory in Denver, Frank Conselman in Texas, Allen Tester in Iowa, Bob Becker in Oklahoma, Ad Honkala in Virginia, and Ben Parker in Colorado. In mid-1963 Bud organized and was President and assigned CPG 1.

In California, at least four geologists heard about this plan and gave their support. These geologists were Mason Hill, (future CPG 20, HM 1990) of Richfield Oil Company (now ARCO), John Kilkenny, CPG 59, William Gussow, CPG 203, (HM 1998) of Unocal, and Art Spaulding, CPG 29, (President 1975) of the City of Los Angeles. It turned out that John Kilkenny was so enthused that he flew to the Founding Convention in Golden, Colorado in November 1963 with his friend Martin Van Couvering. At the Founding Convention, Martin was elected AIPG’s first President and assigned CPG 1.

Three early letters were discovered and are reproduced below.

Edward E. Rue Letterhead
June 5, 1963
Mr. W. W. Mallory
U. S. Geological Survey
Denver Federal Center
Denver, Colorado

Dear Bill:
Perhaps you will recall your letter of October 4, 1962, suggesting the possibility of a new organization of professional geologists and Frank Conselman’s letter shortly thereafter dated October 18. We now have Garibaldi and Moses at the helm as you can see by the form letter enclosed. In fact, the organizational meeting is set for exactly one year after your letter of October 4.

I sincerely hope that you will accept a position on the Steering Committee. Your name will afford prestige and influence that we will badly need later when we are referred to as a splinter group. Most of all, however, we would like to have your suggestions and help as you seem to have a faculty for getting to the root of the problem almost immediately.

Before you make a decision, please talk with Ben Parker who can fill you in on our general aims and purposes.

With kind personal regards, I am

Sincerely yours,

Edward E. Rue

Edward E. Rue Letterhead
July 17, 1963
Mr. Edward E. Rue
King City Federal Building
Mount Vernon, Illinois

Dear Bud:
Your letter of July 10 and attached correspondence was highly constructive, and it is evident that you have made a great deal of progress in getting our Steering Committee organized. In accordance with your request I am sending copies of this letter to all of the listed members of the Steering Committee, and invite their comment.

First, let me report on the chores you have assigned to me, i.e. circulating our definitions and contacting additional prospective Steering Committee members.

A copy of the report submitted by the AGI Sub-Committee on Definitions of the Professional Standards Committee is attached.

I have contacted two gentlemen whom I highly recommend as Steering Committee members — one from Houston and one from Pasadena. Mr. H. S. McQueen has had a distinguished professional
career and most recently was chairman of the program committee for the last AAPG convention. He is a consultant with offices at 1552 Esperson Building in Houston. Mr. Martin Van Couvering, also a consultant, is one of the senior past-presidents of the Pacific Coast section. His address is 1560 Knollwood Terrace, Pasadena, California. Both of these gentlemen are men whose advice I would respect and whose leadership I would gladly follow. Each of them is interested in our project, but each will await a specific letter of invitation from you setting forth our aims before definitely accepting. Bud, I would suggest that you write to each of them at once along the lines you have already used in your correspondence.

As regards the name, I want to cast a vote for retaining the word “American,” because that is what we are and because our problems are those of the forty-eight contiguous states. There should be no international objection to this word, and of course AAPG and AGI are loaded with non-Americans in spite of this word in their titles. The American Association of Petroleum Geologists presently has a Canadian as its head, and has had before. I believe that many more people will be helped rather than hurt by the use of this word.

An additional argument for the use of the word “American” is the negative effect created when it is omitted. I believe each of the names listed by Bill Mallory in his characteristically thoughtful letter would have been improved by inclusion of the word American, and they are bobtailed without it.

I continue to prefer our tentative name of The American Institute of Professional Geologists. “United” sounds like the United Auto Workers, the United Mine Workers or some other union. “League” sounds like a baseball organization, or worse yet, the League of Women Voters, of which my wife is a member and on which I dare not comment further. The League of Women Voters refers to itself as the “League,” and heaven help us all if an opportunity for mistaken identity should arise. “College” sounds like the barbers’ college or a six-month course for chiropractors or optometrists.

A title like “The American Institute of Professional Geologists” has dignity, precedent, and a fair degree of precision. Many variants are possible, but I hope we can stay fairly close to this one. Since I am in no way responsible for having proposed this term originally, I can advocate it with a clear conscience.

Cordially yours,

Frank B. Conselman
FBC: lh
Dist: The Steering Committee

The AGI-AAPG-AIPG Connection

Most of the following early history is from Edward “Bud” Rue, CPG 12, past-President, Honorary Member, and co-founder of AIPG. Thanks also go to past-President Sam R. Evans who asked Bud in 1988 to write down his recollections.

Some interesting articles appeared in the January-February 1963 issue of GeoTimes. The lead article announced the restructuring of the American Geological Institute (AGI). It had been operating under the National Academy of Sciences-National Research Council and would soon be operating as a separately incorporated non-profit organization. The Reorganization Committee under the leadership of B. Warren Beebe, (future) CPG 156, had just completed their four-year task.

Officers of the American Geological Institute at that time were President Hollis Hedberg, CPG 223; Vice President Konrad Krauskopf, CPG 229; past President Gordon Atwater, CPG 143; the Executive Director was Robert C. Stevenson, CPG 738, and the Finance Chairman was Michel T. Halbouty, CPG 10 (see Index and Who’s Who). Mike was financing a number of things back then, including a $10,000 non-interest loan to the fledgling AIPG later that same year, for which we are all still grateful. Former AGI President Ian Campbell, CPG 19, had just retired from the Executive Committee.

In that same issue of GeoTimes Bud Rue wrote an article about the Illinois Geological Society and its approach to the professional problem. The article was a history of the development of the society’s move into the certification field. Close liaison was maintained with the AAPG and AGI professional standards groups. The article concluded that “In spite of sometimes violent disagreements about registration and accreditation, much progress could be made toward professional improvement in a program of certification or internal regulation. More than 100 Illinois certificates had been issued recognizing ‘Qualified Professional Geologists’ (QPG).”

The reason the Illinois Geological Society began certifying their own was explained by future AIPG President John Taylor. In 1960, John came to Illinois from Louisiana with Mobil (Magnolia) Oil Company, to work with another future AIPG President Neilson Rudd, who was with Mobil in California. Together with independent Bud Rue, they observed that many non-geologists were writing bad reports and acting as experts in drilling. Many relatively easy to drill shallow oil wells were being drilled in Illinois. So, John, Neilson and Bud went to Mr. Carpentier, the Illinois Secretary of State, to complain. Mr. Carpentier told them to find some way to certify true geologists from the fakes. The State began accepting QPGs of the Illinois Geological Society as real geologists.

There was also a notice in GeoTimes that the Geological Society of Iowa was having a meeting to discuss professional standards. Dr. Allen C. Tester, CPG 2, would lead the discussion by reporting on the AGI Committee for Professional Standards. At the time, that AGI committee was headed by B. Warren Beebe and included eight future leaders of the not-yet-conceived American Institute of Professional Geologists: Tom Beveridge, CPG 3; Frank Conselman, CPG 4; John C. Frye, CPG 201; Jack B. Graham, CPG 242; Adolf U. Honkala, CPG 7; Ben H. Parker, CPG 5; Edward E. Rue, CPG 12 and Allen C. Tester, CPG 2.

April of 1963 was supposed to be a waiting period for those interested in the professional affairs of geologists. It was in May 1963 that a special AGI committee would make the momentous recommendation as to the course of action that AGI should follow with respect to the certification of geological scientists.

After six years of discussions, starting with the first AGI Committee for Professional Standards (appointed in 1957 by J. V. Howell) if anything was agreed upon, it was that internal regulation or certification was not only desired but necessary to resolve the problems of the geological profession. It was additionally agreed by all serious students of the subject.
that this new organization should be developed either through AGI as a spin-off group or be an entirely separate group representing all branches of geology and types of geologists. AGI would be the logical choice representing all branches of the science, but almost everyone also knew that some of AGI’s member societies would never stand for certification.

A logical question was “Why all the hoopla over a group trying to solve its own problems?” Some cried “unionism” and “guildism!” Some said “the technical societies are our professional representatives,” but the technical societies did amazingly little to improve the image and working conditions of professional geologists. Others, particularly academic types, said “let the academic degrees certify that a geologist is competent,” but not all geologists holding academic degrees were protected by the American Association of University Professors or by tenure and economic freedom.

Fortunately, there were groups who would sit and study no longer. These were local groups and national committees: to name a few, the Virginia Association of Geologists, the Illinois Geological Society, the Indiana-Kentucky Geological Society, the Geological Society of Iowa, the California Association of Engineering Geologists and others. Hardly anybody sat on the edge of his or her chair for the long-awaited decision from AGI, least of all the Society of Independent Earth Scientists (SIPES). They had already organized, but if you were not a consultant or independent, they did not need you. The future AIPG and AAPG members may have felt obligated to wait, even though they knew what the answer would be.

The president of AAPG admittedly was trying to get the future Division of Professional Affairs off the ground, and saw the proposed AIPG as a threat. (See following letters.) The future AIPG members were gaining momentum in their plans to organize what the AGI Professional Standards Committee set up as the only alternative to an AGI spin-off. That was to create an entirely separate group representing all branches and types of geologists.

It was all too apparent that no one really knew who was in charge of the professional affairs of geologists. AGI was controlled by its member societies, as it should be, but who controlled those societies? Academia was controlled by its institutions, but highly influenced by (1) the people and companies who hired their students, (2) the people and corporations who funded their research and, (3) the teachers themselves who were well represented by the American Association of University Professors.

In the May 1963 issue of GeoTimes the results of the founding meeting of the newly organized AGI House of Society Representatives were made public. Warren Beebe reported the recommendations of the AGI Professional Standards Committee. The gist of the report was that “the committee has studied the whole problem of professionalism for four years—and that in their view this committee could not go any farther with their study until AGI reaches a decision as to what course it wants to pursue regarding the whole problem. The AAPG delegation was instructed to ask for “some concrete proposal for the certification of geologists.” So naturally the president of AGI, Hollis Hedberg, CPG 223, appointed a committee to recommend the “course of action that AGI should follow with respect to the certification of geological scientists.” The committee was asked to “proceed with vigor” and to have its recommendations ready for the next Board of Directors meeting, which was set for May 25, 1963.

The verdict was known almost immediately. However, the official result was not conveyed to an informal Steering Committee of budding AIPG until October. In his letter to the new Executive Director of AGI, Linn Hoover, CPG 1280, stated what everyone already knew, that “AGI cannot undertake activities leading to the registration or certification of geologists without endangering its legal status as a non-profit scientific organization.”

The members of the AAPG Professional Standards Committee had suspected this for a long time, so after the close of the 1963 AAPG Convention, Bud Rue resigned as chairman of that committee and accepted the chairmanship of the Steering Committee to create a purely professional organization representing all branches of the profession. He waited until after the May meeting of AGI to gather a group of geologists representing several branches of geology with a wide geographical distribution. As you can well imagine, the names of possible members who were asked to serve on that committee caused excitement. The letters went out in June and July for an organizational meeting to be held in September in Oklahoma City.

But just before the Steering Committee actually met, the incoming president of AAPG, Cam Sproule, against the cautionary advice of most prestigious members of its own Professional Standards Committee members, decided to start certifying petroleum geologists. They were not the only ones. In March SIPES had its inaugural meeting in Houston during that fateful convention of AAPG. Thus the splintering to which Warren Beebe’s previous report referred became a reality. It was beginning to look like a very sad year for professional geologists and the future AIPG.

Following are three historic letters of late 1963 with very divergent thoughts, on the formation of a new geology association. The first from an alarmed AAPG President Cam Sproule to Frank Conselman. The second is Frank’s typically well-worded, and sometimes humorous reply. The third a letter of approval from AGI President Hollis Hedberg.

[American Association of Petroleum Geologists Letterhead]
October 29, 1963
Mr. Frank B. Conselman,
514 Petroleum Building,
Abilene, Texas.

Dear Frank:

Re: Certification and Registration and the A.A.P.G.

Thank you for your letter of October 10th relative to the above. About the same time, although I was absent from the office, I received from another source a copy of a circular letter addressed “To all American Geologists,” by a newly formed organization, the American Institute of Professional Geologists.

Whereas I appreciate that the feeling behind AIPG is a worthy effort to obtain a much needed up-grading of the status of geologists, I
regret very much the fact that these efforts are being put forth by
Active Members of the A.A.P.G. at a time when it is known, and has
been known for several months, that your A.A.P.G. Executive
Committee has promised to proceed with diligence to clear the mat-
ter of Certification of its members and thus fortify them for local
legal registration, as required.

Further in this same connection I am curious to know why the state-
ment was made by AIPG, in their circular, that the G.S.A. and
A.A.P.G. charters “commit them to the technical aspects of geology.”
To me this statement is not correct so far as A.A.P.G. is concerned.
And if it were, then it would be time to change the Constitution back
to where it was. For your information in this connection the 1921
Constitution under “Objects” reads as follows:

“The object of this Association is to promote the science of geology,
especially as it relates to petroleum and natural gas; to promote
the technology of petroleum and natural gas and improvements in the
methods of winning these materials from the earth; to foster the spir-
it of scientific research amongst its members; to disseminate facts
relating to the geology and technology of petroleum and natural gas;
to maintain a high standard of professional conduct on the part of its
members; and to protect the public from the work of inadequately
trained and unscrupulous men posing as petroleum geologists.”

It is correct that later changes in the Constitution were made but it
is not clear why they were made. As I see it, however, the deletion of
parts of this original Constitution, having to do with Professionalism
and the duty of members to protect the public, appears to have been
made in accordance with a purely transient belief on the part of tran-
sient governing bodies of the A.A.P.G., without recourse to legal opin-
ion, or logic.

We would also be interested in knowing why you say that doubt
that SIPES would be acceptable by A.A.P.G. standards. It is possible
that I am not entirely up-to-date but from what I have seen their pro-
posed standards are closely similar to those of AIPG, with the excep-
tion of their restriction to the “Independent” group. Incidentally, by
reference to SIPES I had no thought of by-passing AIPG At the time
our first draft was written and sent out we had not hear of AIPG.

Furthermore, in my opinion your statement that “The American
Institute of Professional Geologists will allocate to itself, with the
expression of consent of its future members, the following types of profes-
(oral (not scientific) responsibilities:” should made AIPG entirely
acceptable to the A.A.P.G. The specific point to which I refer is the
reference to Professional but not Scientific responsibilities. At that
point where you divorce the scientific aspect of a geologist’s profes-
(oral life from those aspects having to do with the application of his
scientifc results and scientific integrity to his Professionalism, you
run the risk of Professional Prostitution. I do not see how it can be
avoided.

I honestly believe this whole mess is the result of a very widespread
misinterpretation of the term “Professional.” Reference to any dic-
tionary will reveal a definition that demands that Petroleum Geology
is a Profession and that we are Professionals.

If I am wrong in any of the above, having to do with legal matters, I
should like very much to receive any copies of legal opinions in the
matter that you may have. Meanwhile, I hope we can come to some
agreement in the matter before it is too late. In the long run I can see
a real need for some such organization as AIPG as a go-between, but
you are making it very difficult for both your project and ours to get
“off the ground.”

Before closing I’d like to ask you to consider carefully what you can
find that is wrong about either or both of the following statements:

1. The difference between a Career Geologist and an “Amateur” or
   “Trainee” is that a Career Geologist has enhanced academic and
   experience background and preferably a responsible apprecia-
   tion of Ethics. A Career Geologist must, therefore, be regarded
   as a Professional, as opposed to an “Amateur”.

2. Scientific Knowledge, Scientific Integrity and Professionalism in
   one’s chosen Scientific Career are inseparable.

Somehow I feel that both AIPG and A.A.P.G. could have salvaged
something out of this business to their mutual advantage, had we got
together. As the situation stands, I can see little short of a head-on
collision that can only be unnecessarily damaging to all concerned.

Yours very truly,

J. C. Sproule,
President, A.A.P.G.

JCS/se
cc.

Executive Committee
Mr. T. H. Philpott
Dr. J. C. Hazzard
Mr. R. E. Rettger
Dr. R. E. King
Mr. Norman C. Smith
Mr. Ben H. Parker
Mr. Martin Van Couvering
Mr. Allen C. Tester
Mr. Bernold M. Hanson
Mr. Robert M. Becker
Mr. W. W. Mallory
Mr. Edward E. Rue
Mr. R. C. Rogers
Mr. Thomas R. Beverage
Mr. Adolf U. Honkala

The AGI-AAPG-AIPG Connection

THE FORMATIVE YEARS

regret very much the fact that these efforts are being put forth by
Active Members of the A.A.P.G. at a time when it is known, and has
been known for several months, that your A.A.P.G. Executive
Committee has promised to proceed with diligence to clear the mat-
ter of Certification of its members and thus fortify them for local
legal registration, as required.

Further in this same connection I am curious to know why the state-
ment was made by AIPG, in their circular, that the G.S.A. and
A.A.P.G. charters “commit them to the technical aspects of geology.”
To me this statement is not correct so far as A.A.P.G. is concerned.
And if it were, then it would be time to change the Constitution back
to where it was. For your information in this connection the 1921
Constitution under “Objects” reads as follows:

“The object of this Association is to promote the science of geology,
especially as it relates to petroleum and natural gas; to promote
the technology of petroleum and natural gas and improvements in the
methods of winning these materials from the earth; to foster the spir-
it of scientific research amongst its members; to disseminate facts
relating to the geology and technology of petroleum and natural gas;
to maintain a high standard of professional conduct on the part of its
members; and to protect the public from the work of inadequately
trained and unscrupulous men posing as petroleum geologists.”

It is correct that later changes in the Constitution were made but it
is not clear why they were made. As I see it, however, the deletion of
parts of this original Constitution, having to do with Professionalism
and the duty of members to protect the public, appears to have been
made in accordance with a purely transient belief on the part of tran-
sient governing bodies of the A.A.P.G., without recourse to legal opin-
ion, or logic.

We would also be interested in knowing why you say that doubt
that SIPES would be acceptable by A.A.P.G. standards. It is possible
that I am not entirely up-to-date but from what I have seen their pro-
posed standards are closely similar to those of AIPG, with the excep-
tion of their restriction to the “Independent” group. Incidentally, by
reference to SIPES I had no thought of by-passing AIPG At the time
our first draft was written and sent out we had not hear of AIPG.

Furthermore, in my opinion your statement that “The American
Institute of Professional Geologists will allocate to itself, with the
expression of consent of its future members, the following types of profes-
(oral (not scientific) responsibilities:” should made AIPG entirely
acceptable to the A.A.P.G. The specific point to which I refer is the
reference to Professional but not Scientific responsibilities. At that
point where you divorce the scientific aspect of a geologist’s profes-
(oral life from those aspects having to do with the application of his
scientifc results and scientific integrity to his Professionalism, you
run the risk of Professional Prostitution. I do not see how it can be
avoided.

I honestly believe this whole mess is the result of a very widespread
misinterpretation of the term “Professional.” Reference to any dic-
tionary will reveal a definition that demands that Petroleum Geology
is a Profession and that we are Professionals.

If I am wrong in any of the above, having to do with legal matters, I
should like very much to receive any copies of legal opinions in the
matter that you may have. Meanwhile, I hope we can come to some
agreement in the matter before it is too late. In the long run I can see
a real need for some such organization as AIPG as a go-between, but
you are making it very difficult for both your project and ours to get
“off the ground.”

Before closing I’d like to ask you to consider carefully what you can
find that is wrong about either or both of the following statements:

1. The difference between a Career Geologist and an “Amateur” or
   “Trainee” is that a Career Geologist has enhanced academic and
   experience background and preferably a responsible apprecia-
   tion of Ethics. A Career Geologist must, therefore, be regarded
   as a Professional, as opposed to an “Amateur”.

2. Scientific Knowledge, Scientific Integrity and Professionalism in
   one’s chosen Scientific Career are inseparable.

Somehow I feel that both AIPG and A.A.P.G. could have salvaged
something out of this business to their mutual advantage, had we got
together. As the situation stands, I can see little short of a head-on
collision that can only be unnecessarily damaging to all concerned.

Yours very truly,

J. C. Sproule,
President, A.A.P.G.

JCS/se
cc.

Executive Committee
Mr. T. H. Philpott
Dr. J. C. Hazzard
Mr. R. E. Rettger
Dr. R. E. King
Mr. Norman C. Smith
Mr. Ben H. Parker
Mr. Martin Van Couvering
Mr. Allen C. Tester
Mr. Bernold M. Hanson
Mr. Robert M. Becker
Mr. W. W. Mallory
Mr. Edward E. Rue
Mr. R. C. Rogers
Mr. Thomas R. Beverage
Mr. Adolf U. Honkala

[Frank B. Conselman Letterhead]

November 11, 1963
Dr. J. C. Sproule, President
The American Association of Petroleum Geologists
P. O. Box 2525
Calgary, Alberta, Canada

Dear Cam:

I have not yet received the letter which you addressed to me on
October 29 and which we discussed in Oklahoma City, but I have the
copy which you gave me there. Because of its wide circulation and the
misapprehensions on which it is based a reply appears to be appro-
priate.

I was not the author of the AIPG circular to which you refer, and
therefore to the extent your remarks are addressed to me they are
misdirected. However, in disclaiming authorship of this circular I do
not wish to dissociate myself from its general content.

Apparenty you have also ascribed to me some of the ideas contained
in letters received from Frank Clark and Warren Beebe. I am unfa-
miliar with the contents of Mr. Clark’s letter; I have a copy of
Warren’s letter of October 22, and all but its first enumerated para-
graph are in agreement with decisions already reached at Oklahoma
City by the AIPG Steering Committee.

All of the AAPG members on the AIPG Steering Committee are, I
believe, wholeheartedly devoted to AAPP. If we expected the “head-
on collision” with AAPG which you anticipate, we would not have pro-
cceeded with AIPG. But such a collision should not occur, because the
purposes of AIPG either run parallel to or are extensions of the pur-
poses of AAPG.

Let me recall the events leading to the formation of AIPG. For years
it has been felt that the ideal organization to foster professional
advancement in geology was the American Geological Institute, and
many of us worked on AGI committees toward that end. There was
then no thought of conflict by AAPG. AGI was the logical organiza-
tion for the job because (1) it encompasses all branches of geology, not
just petroleum, and (2) we were reliably informed that AAPG’s char-
ter, purposes and tax classification might be endangered by a “professional” rather than “scientific” function. If you disagree with this second point it nevertheless has been strongly urged by competent authority.

Since it is now obvious that AGI cannot or will not do the job that is needed, a job which AAPG had not wanted to assume, many of us felt that something was required to fill the void, and to provide co-ordination of the many local attempts to organize professionally in self-defense.

Last year’s AAPG Professional Standards Committee submitted a report urging that a questionnaire be submitted to the AAPG membership to determine professional sentiment. This recommendation was not accepted by the Executive Committee, nor was the retiring chairman’s suggestion as to his successor. Instead, we were promised last spring a “policy statement” by the committee. Such a “policy statement” would have little value as compared to an accurate measure of membership views, but we awaited it. It has not yet been published, although we postponed AIPG organization from July to September in the hope that it would appear.

You now have in the works a very far-reaching proposal for AAPG certification, which is a major step in the right direction. AAPG not only should not find such a general proposal objectionable or competitive but should support it fully, when and if however it is approved. Presumably AIPG would accept on a reciprocal basis any certification system of comparable rigor to its own.

However, as an AAPG member I must question the eventual wisdom of certifying selectively within the AAPG membership, as you intend. By so doing you may create a caste system which will be resented by (1) rejected members and (2) non-applicants. Many rejected applicants for certification would consider such rejection an unjustified humiliation, and might resign as a matter of pride. The system could be schismatic.

Regardless of the basis for certification you propose, I believe you are over-optimistic in assuming that it will be rapidly and completely accepted. As a former member of the Executive Committee, I have learned that such things take time and are opposed. It took us four years to get a Code of Ethics approved, even though there was general agreement as to the need for one. The need for certification is by no means as widely recognized. GSA is completely opposed to it, and AAPG has many GSA members.

I recall that you stressed that AAPG is a “homogeneous” organization. This may be true as regards nominal dedication to petroleum, but it is not true as regards the membership itself. I have found during the years in which I have actively solicited opinions on professional matters that our membership includes the following distinct types, in addition to the moderate majority:

1. **The Old Mossbacks.** These are the obsolescent gentlemen who will not consider any departure from the established system. They are frequently quite influential, and often do not hesitate to impose their views on their subordinates, employees, or students. Time and sometimes flattery are the only remedies.

2. **The Nervous Nellies.** These people see “loss of liberty,” “regimentation” and “government control” behind every proposal such as certification or registration. They ignore the fact that the U.S. medical profession would be under government control right now if it were not organized, and that the most tightly regimented professionals of all, the lawyers, are actually running your country and mine.

3. **The Cynics.** These individuals seek ulterior motives behind every proposal. Since they never place principle above material self-interest themselves, they refuse to believe that any one else might do so. They are often vocal, but are not susceptible to persuasion on any moralistic basis. Violence is sometimes appropriate in such cases, but seldom worth the effort.

4. **The Pussyfooters.** These people prefer compromise and straddle to decision. They neither advocate nor oppose, but temporize. They want to “see a legal opinion first” or refer to committee. Time means nothing to them, and AAPG has many such.

But assuming your certification proposal overcomes any and all opposition in essentially its present form, and assuming it does so soon, you still have not solved the overall problem, which now urgently calls for solution. Can AAPG do the following things, and will it in time to be helpful?

1. Extend certification to all branches of professional geology, including the 50 percent of the profession not in AAPG?
2. Formulate a model law involving all classes of geology, and then enter into negotiations at the state level where legal registration is required?
3. Publish a journal primarily of topical, personal and professional interest, rather than a scientific and technical one such as the Bulletin?
4. Speak for the mining geologists, the engineering geologists, the academic geologists, etc., as well as the petroleum-affiliated geologists?
5. Consider standards of training and accreditation at colleges and universities?
6. Undertake proper representation of the profession in matters of public interest?
7. Move promptly and effectively with singleness of purpose?

AIPG potentially can and will do these things and many others, if it is accepted, as it deserves to be. Professional geology involves much more than partial certification by one of its branches.

Your question about SIPES is easy to answer. SIPES admits geophysicists and geologists on equal terms, calling them “earth scientists”; AAPG does not. SIPES refuses admittance to salaried people and to those salaried within the past two years; AAPG does not and should not. SIPES admits people on the basis of “standing in the profession” whom AAPG would not. These are the more obvious differences.

Incidentally, you have yourself demonstrated clearly in your letter the lack of inherent dedication to professional as well as purely scientific objects by AAPG. You show that the Constitution was changed to delete parts relating to professionalism and the public, and you will recall that the original Code of Ethics under which we both were admitted to AAPG was scrapped by simple Executive Committee action. Certification by AAPG will not be inviolate if a Mossback is elected president at some later date, or if Nervous Nellies and Pussyfooters predominate in a future “transient” Executive Committee. I can give you quite a list of outspoken opponents of certification in your “homogeneous” organization. I wish you luck with them, and will do all I can to help, because you will have opposition a-plenty from within AAPG—not AIPG.

In summary, AIPG is trying to do a necessary job which only AGI of existing societies might have done. We are going to considerable effort and expense to do this because we see no other way. By the end of this week I will have spent well over a thousand dollars in time and travel on a job which we would be only too happy to let others do if they would.

Please do not press the panic button where AIPG is concerned. AAPG has no better friends anywhere than in the proposed organization. Our courses do not intersect, and there should be no collision. Instead, the two societies should be co-adjustive. We are not trying to “get off the ground,” but intend to keep both feet firmly planted on it, and we have no intention of becoming involved in trade unionism, politics (except as directly affects us as professional men) nor interdisciplinatory squabbles. We will stand or fall on our merits as a professional elite, and on the services we are able to render to our membership. It would be regrettable if AAPG found any basis for opposition in such a program, and as you say, it would be unnecessarily damaging to all concerned. A relaxed, benevolent attitude would
The enthusiastic support received from local geological groups from all over the country clearly illustrated the grass roots support that AIPG had from the beginning. The institute was founded in a vacuum of support from the national groups then claiming to represent geologists. Most of these national groups were promoting geology—not geologists.

June of 1963 marked the first month of any official activity toward the founding of AIPG. The late Bob Becker, CPG 41, found out about the tentative plans and invited the Steering Committee to have their initial meeting at Oklahoma City. He volunteered to be the host and make all the arrangements. Bob was assisted by several members of the Oklahoma City Geological Society, namely Bob Hancock, CPG 44, future AIPG President Jack Taylor, CPG 237, Jerry Newby, CPG 245, and J. D. McDavid.

The AGI conducted endless studies and accepted many subcommittee reports on the subject of professional upgrading and has as yet not been able to resolve a course of action.

Organizational Meeting, Oklahoma City, 1963

June of 1963 marked the first month of any official activity toward the founding of AIPG. The late Bob Becker, CPG 41, found out about the tentative plans and invited the Steering Committee to have their initial meeting at Oklahoma City. He volunteered to be the host and make all the arrangements. Bob was assisted by several members of the Oklahoma City Geological Society, namely Bob Hancock, CPG 44, future AIPG President Jack Taylor, CPG 237, Jerry Newby, CPG 245, and J. D. McDavid.

The enthusiastic support received from local geological groups from all over the country clearly illustrated the grass roots support that AIPG had from the beginning. The institute was founded in a vacuum of support from the national groups then claiming to represent geologists. Most of these national groups were promoting geology—not geologists.

So, by June 4, 1963 enough names had been put into the hat to mail out an announcement requesting that eleven individuals serve on the Steering Committee and attend the initial meeting at Oklahoma City. The Invitation read:

The American Institute of Professional Geologists
(Tentative name)

In the past five years, national scientific societies have been unable to resolve professional needs of geologists. These societies have supported the professional movement to a limited degree by cooperating with the AGI and its Professional Standards Committee realizing that any system of certification or registration and the internal disciplining of geologists should represent all branches of geology.

The need is primarily for a national Institute to coordinate these activities by promoting uniformity of standards and maintaining reciprocity between them. It should also aid these groups in the field of public relations. The public image of geologists is poor in many areas of the country.

Therefore, a meeting of a Steering Committee will be held:

Place: Skirvin Hotel

Oklahoma City, Oklahoma

Date: Friday, September 13, 1963

Time: 9:00 A.M.

Host: Mr. Robert M. Becker

Purpose: To formulate the aims of the new institute and determine an organizational structure as to representation of local groups and financing of initial expenses. Narrowness of scope and selfishness of purposes are to be avoided. The finest leadership must be obtained.

The results from the Invitation mailing were most satisfying. Each person asked accepted and all except one attended the Steering Committee meeting in person.

By August 1963, the name of your embryo institute, as suggested by William Mallory, CPG 11, was accepted as more than a tentative name. Some of the comments which solidified its use were: “The tentative name for the organization sounds quite proper to me,” Allen C. Tester, CPG 2; “I continue to prefer our tentative name (it) has dignity, precedent and a fair degree of precision,” Frank B. Conselman, CPG 4; “Of the various names proposed, I have a strong preference for American Institute of Professional Geologists. Adequate reasons for my preference for this name over the others suggested have been given by Frank Conselman and Allen Tester in their letters to you,” Ben H. Parker, CPG 5.
THE FORMATIVE YEARS

It also could be said that if the word “American” was not a part of our name it would indicate that our scope was probably local. Then, by all rights, we are an institute not an association. Webster defines an institute as: an arrangement, plan or intention (a) an established principle, law, custom or usage (b) a summary of principles—an organization for the promotion of art, science, education, etc. An association indicates an organization for companionship, fellowship, partnership for those with common interests, a society or league. The name was accurate and it sounded good.

On the morning of Friday the thirteenth of September 1963, Adolf Honkala, CPG 7, Tom Beveridge, CPG 3, and Bud Rue, CPG 12, were early arrivals at the old Skirvin Hotel in Oklahoma City. All three geologists had known each other as advocates of professional geology, having served on local and national professional committees. None knew at the time that a crew headed by Honkala, which included Rue, would within a few short years bring one of the largest cement plants in the world to the state of Missouri where Beveridge was then state geologist. But that day they were there for another purpose.

As several more members of the group checked-in at the little lobby of the hotel there was a calm sense of anxiety as to whether Ben Parker would be able to make the meeting. He was the obvious leader of the group and without his presence they knew that the new organization would be in for rough sledding. It was his presidential address to AAPG in 1961 “The Attributes of the Geologic Profession” (see Appendix 9), that set the stage for a profession controlled by the practicing geologist. He was vice president of Frontier Refining Company, past president of the Colorado School of Mines and at the time of the meeting he was chairman of the Board of Trustees of that school. He was a consultant in both the mining and petroleum business. All were glad and relieved to see him arrive with Bill Mallory just in time for the nine o’clock meeting.

The group that was about to assemble was the Steering Committee for the formation of the American Institute of Professional Geologists. They were there to serve notice to the American geological community that AIPG was about to do what the scientific geological societies avoided for too many years. It was these societies that also prevented AGI from taking on the task of the professional development and certification of geologists. The time had come for individual geologists to assume some control of the profession in which they practiced.

The first order of business was to elect Ben Parker as chairman of the meeting. Ben then appointed Bud Rue as secretary. Ben next appointed Tom Beveridge, Ad Honkala and Bruno Hanson to pen a “Statement of Purpose” (see following Minutes). The statement was approved by all those present. As the meeting closed, a unanimous resolution was passed thanking Bob Becker and the Oklahoma Geological Society group who hosted the meeting. The final resolution was to accept the invitation of the Rocky Mountain Association of Geologists to host the Founding Convention of AIPG at Denver. The dates selected were November 14 and 15, 1963.

All members of the committee were assigned various tasks to make the Founding Convention a success. The course about to be taken was well thought out over many years by many geologists from all branches of the science. With the newly penned Statement of Purpose, each member left the meeting to pass the word like modern day Paul Reveres.

American Institute of Professional Geologists

MINUTES

Steering Committee Meeting

Friday, September 13, 1963

The Skirvin Hotel, Oklahoma City, Oklahoma

Members present: Ben H. Parker, Bernold M. Hanson, R. G. Rogers, Frank B. Conselman, Adolf U. Honkala, Martin Van Couvering, Robert M. Becker, W. W. Mallory, Edward E. Rue, Thomas R. Beveridge

Members absent: Allen C. Tester

Special Guests from the Oklahoma City Geological Society: Jerry Newby, Bob Hancock, Jack Taylor, J. D. McDavid

Before the meeting was called to order a report of the recent actions of the Oklahoma City Geological Society on professional development was given by Bob Becker. Several detailed reports appeared in the September issue of the “Shale Shaker”. This is recommended reading.

Bill Mallory reported on the actions and a recent poll of the Rocky Mountain Association of Geologists. The vast majority of those polled reflected the need for a national professional geological society.

In the first order of business Ben Parker was unanimously elected chairman of the meeting and Bud Rue was made secretary.

Ben Parker opened the discussion by asking various members of the committee to tell why there is a need for such organization. In light of the Oklahoma City’s “Shale Shaker” article, the AAPG’s role in professional movement was discussed at length. The reorganization of the Iowa, Virginia and Illinois societies was discussed. It was pointed out that states with only one geological society were in an advantageous position to participate with a national coordinating body.

The role of college professors, survey personnel and company geologists was discussed. “It was generally conceded” that all groups could be professional geologists. Those who deal regularly with the public or whose work is applied to industry directly are most concerned with professional development. It was suggested that we concentrate our efforts on the consultant and company geologists and build an institute that the other would want to join.

It was moved and seconded that the members of the Steering Committee proceed with the formation of the AIPG. A roll call vote was taken and was unanimously affirmative.

The important purposes of AIPG were discussed at length. Chairman Parker appointed a committee of three to put our agreed upon statement of purposes into written form. Tom Beveridge, Chairman, Bruno Hanson and Ad Honkala.
THE FORMATIVE YEARS

Organizational Meeting, 1963

Steering Committee Meeting
9:00 A.M.—September 13, 1963

AGENDA

A. Election of Chairman (9:00 - 9:10)
B. Appointment of Secretary (9:10 - 9:15)
C. Resolve, What is our purpose? (9:15 - 10:15)
   1. What is our ultimate aim? What should the AIPG be 20 years from now?
      a. Certifications within AIPG.
      b. Registration or some legal acceptance in the various states.
      c. Public relations, National, Local.
      d. Professional publication to inform those within the profession.
      e. Accreditation by AIPG, Graduate Schools? Undergraduate Schools? High Schools? None?
      f. National representation or recognition by government (to represent clients in federal courts as C.P.A.s.).
   2. How do we get there from here? (10:15 - 12:15)
      Initial Organization of AIPG
      a. State professional societies requiring Local and National Scientific Society affiliation — Members of National AIPG within a single state constitute the state organization.
      b. National Headquarters, staff primarily coordinating those things which cannot be done locally.
      c. Authority and responsibility of State groups.
      d. Authority and responsibility of National office.
      e. Representation of State organization.
   Lunch (12:15 - 1:30)
D. Committee Appointments by Chairman (1:30 - 2:00)
   1. Organizational meeting.
      a. Announcements (possible change in date or place).
      b. Arrangements.
   2. Ethics, adoption of code.
   4. Disciplinary, recommend uniform procedures for State groups.
   5. Finance, amount of dues; statements; financial needs.
   7. Publications, editor, desirability of various subjects, news, information on professionalism in any profession.
   8. Other Committee chairmen who may be needed.
E. Continuation of Morning topics on agenda (2:00 - 4:00)
F. Announcement of Organization [Founding] Meeting
   (Place, date, time, one day? Two days?)
   It was generally conceded that the form of organization should be individual membership with those members residing in a particular state becoming an administrative unit.
Dues would be payable to the national headquarters with part for distribution to the state group. Initially, the support of local geological societies will be solicited. The state unit will determine future participation of local scientific societies. The local group would meet when professional work was to be done, not interfering in any way with the existing social and scientific societies.

The meeting was adjourned for lunch. The entire committee was the guest of Bob Becker at the Petroleum Club.

Tom Beveridge read the report of the Statement of Purpose Committee.

It was moved and seconded that the statement be approved. The vote was unanimously affirmative as revised herein. [The Statement of Purpose is included in the following Invitation to the Founding Convention.]

Bill Mallory presented a letter from the Rocky Mountain Association of Geologists. It was an invitation to have our organizational meeting at Denver, a center of mining, foundation, petroleum and ground water geological endeavors.

It was moved and seconded that we accept the invitation of the RMAG to host the organizational meeting. The vote was unanimously affirmative.

Ben Parker suggested that we investigate the possibilities of using facilities at the Colorado School of Mines at Golden.

It was moved and seconded that the date of the organizational meeting be Thursday and Friday, November 14th and 15th, beginning at 1:30 P.M., with a Steering Committee meeting at 9:00 A.M. The vote was unanimously affirmative.

A resolution of appreciation was passed thanking Bob Becker of the Oklahoma City Geological Society for being host to this first Steering Committee meeting. His fine arrangements and hospitality are greatly appreciated by the entire committee. Thanks, Bob.

The following committees were appointed by Chairman Parker:

1. Constitutional, Tom Beveridge, Chairman, Ad Honkala and Bud Rue. To present a tentative constitution to be presented for revision and approval at the organizational meeting.
2. Public Relations and Membership, Bud Rue, Chairman, Bill Mallory and Rollie Rogers. To prepare announcement to individuals by letter and to all geologists through various trade and scientific journals. Prepare a tentative form of application for membership to be revised, approved and used at the organizational meeting.
3. Qualifications and Ethics, Frank B. Conselman. To present a code of ethics and set of qualifications for membership in the AIPG. These will be certification requirements, national level.
4. Nominating, Martin Van Couvering, Chairman, Bob Becker, Rollie Rogers. To nominate a temporary chairman of the organizational meeting, a temporary secretary and a temporary treasurer.
5. Convention, Bill Mallory, Chairman, and his local
appointees. To work with the host organization and any other groups and plan the organizational meeting.

6. **Budget, Bruno Hanson.** To determine costs of convention and set registration fee and possible future dues requirements. It was suggested by Chairman Parker that the various committee chairmen conduct work shop sessions with those interested in their particular topic Thursday afternoon (November 14th) to explain their prepared statements and receive questions and suggestions before formal presentation on Friday, November 15th, for acceptance of all committee reports.

7. **Liaison Committee.** The committee as a whole appointed **Ben Parker** to be Chairman. To inform by letter the heads or executive committees of the various scientific societies of our intentions and purposes.

Everyone having a sufficient amount of work to do and the hour being very late in the day, “It was generally conceded” that the meeting be adjourned.

**Edward E. Rue**
Secretary of the Meeting

---

**Founding Convention, Golden, 1963**

**The Invitation**

[The following elaborate invitation was mailed to hundreds of geologists in October 1963]

**Prominent Professional Geologists Plan New Organization**

On Friday the 13th of September, a meeting was held in Oklahoma City, which may be a milestone in the annals of the professional geologist.

It was the meeting of a Steering Committee whose purpose it is to form the American Institute of Professional Geologists. Final plans for the founding convention are being made. It will be held on the campus of the Colorado School of Mines at Golden, Colorado on November 14th and 15th of this year. All Professional Geologists are invited. Each local, area and state geological society is asked to send an official observer appointed by the President of the local society. The official observer will also be a participant.

The Steering Committee is composed of Professional Geologists who were mutually chosen because of their background and interest in the professional movement in geology. They have studied the problem over an extended period of years and are well informed on the subject. They are listed below:

Robert M. Becker, Consultant, Oklahoma City, Oklahoma; Oklahoma Society Professional Standards Committee; Host of the Steering Committee meeting.

Thomas R. Beveridge, State Geologist of Missouri, Rolla, Missouri; AGI Professional Standards Committee; Active in professional movement in Missouri.

Frank B. Conselman, Consultant, Abilene, Texas; Past Vice President of AAPG; Geological Advisor of Southwestern Legal Foundation; AGI and AAPG Professional Standards Committee since inception of both.

Bernold M. Hanson, Consultant, Midland, Texas; Chairman AAPG Professional Standards Committee and actively interested in professional up-grading.

Adolph U. Honkala, Consultant, Richmond, Virginia; AGI Professional Standards Committee; Director, founder and Past President of the Virginia Association of Professional Geologists.

W. W. Mallory, U.S.G.S., Denver, Colorado; AAPG Professional Standards Committee; Actively interested in the national professional up-grading of geologists.

Ben H. Parker, Vice President, Frontier Oil & Refining; President of the Board of Trustees, Colorado School of Mines; Past President AAPG; five years on AGI Professional Standards Committee; First Chairman of AAPG Professional Standards Committee.

Edward E. Rue, Consultant, Mt. Vernon, Illinois; Illinois Geological Society, AAPG and AGI Professional Standards Committees; Active in reorganization of IGS on professional level.

R. G. Rogers, Colorado Interstate Gas Company, Amarillo, Texas; Chairman of Professional Ethics and Standards Committee, Panhandle Geological Society.

Allen C. Tester, Professor of Geology, State University of Iowa, Iowa City, Iowa; AGI Professional Standards Committee; Active in the reorganization of the Iowa Geological Society on a professional level.

Martin Van Couvering, Consultant, Pasadena, California; Past President of the Pacific Section AAPG and actively interested in improving the status of geologists.

**Background for Action**

In recent years almost every geological organization has had active groups attempting to focus attention on the professional problems of geologists. Serious studies have been made in Colorado, Michigan, Missouri, Ohio, Oklahoma, Texas, Utah, and Wyoming. And in California, Illinois, Indiana, Iowa, Kentucky and Virginia existing geological groups have been reorganized into professionally oriented societies. Each group certifies its members on certain academic, ethical and experience standards. The need is to coordinate this “grass roots” action so that uniform standards can be maintained and reciprocity between these groups extended. In addition, we have needed a voice by which we could speak as a unit to the public, to government and be heard, not as a scientific group but as professionals. Today, changes in the employment picture have set in motion throughout the profession forces which are strongly felt not only in industry, but also on university and college campuses and in government geologic circles as well. The need for professional orientation, self-leadership and exploration of new channels for geologic activity has never been greater.

These problems cannot and should not be met by existing scientific societies, however influential they may be. GSA and AAPG, for example, have imposing records of contribution to
the development of the science of geology, but their charters commit them to the technical aspects of geology. Their leaders are therefore properly reluctant to distort the functions of these organizations which have served the science so well for decades lest more be lost than gained. Moreover, by tradition and interest, these societies have represented only specialized segments of the profession. When AGI was formed many among us hoped it would fill the great need of a professional organization. It has now become apparent that AGI cannot meet this need. The taxation and legal status of its scientific member societies would be jeopardized if the necessary functions of a strong professional association were carried on and made a part of its policy.

The Steering Committee envisions a national association of individuals, not of national scientific societies, entitled the American Institute of Professional Geologists. The individual members residing within a particular state will constitute a strong administrative unit. In this way there is no duplication of membership and each individual has a direct channel to national policy.

The Steering Committee has unanimously adopted the following Statement of Purpose:

WHEREAS, the geological profession has no nationwide structure dedicated to the establishment and maintenance of professional standards, and
WHEREAS, the public has an uncertain concept of the identity of this profession, and
WHEREAS, both the public and profession have insufficient protection against unethical and inadequate standards as related to the geological profession, and
WHEREAS, the profession lacks proper legal status in the eyes of its members, the public and the courts.
NOW THEREFORE, be it resolved that:

A professional organization herein designated as the American Institute of Professional Geologists be established to take the action necessary to strengthen the profession by the establishment and constant evaluation of its qualifications and thereby to enhance and preserve the standing of the geological profession in the public community. And that standards be established which will insure the protection of both the public community and the profession from non-professional practices.

In addition to this statement of purpose the American Institute of Professional Geologists will allocate to itself, with the express consent of its future members, the following professional, not scientific, responsibilities:

1. To define who properly is a Professional Geologist.
2. To protect reputable geologists from those who would engage in unethical practices in the name of the profession.
3. To protect the public from incompetent persons purporting to be geologists.
4. To establish a system of certification to implement the administration of items one, two and three.
5. To better serve the public by advancing the application of geology to vast new engineering projects being undertaken by industry and government.
6. To provide a mechanism for representing the profession to the public in connection with differences of opinion involving the application of geology to public projects.
7. To keep our educational standards properly high and to maintain continuing mutual understanding on common professional ground between academic and professional fields.
8. To speak to the press and to government and be heard.

Definitions Clear the Air of Misconceptions

The following definitions have been formulated and used by persons studying the professional development of geologists:

- **Certification**: Internal self control of standards by geologists.
- **Registration**: Legal licensing by states.
- **Geology**: 1. The science which treats of the composition and history of the Earth and its life, especially as recorded in rocks. 2. The applied science, art or practice of utilizing knowledge of the physical, chemical, biological and structural properties, configuration and forces of the Earth and its many constituent rocks and minerals to predict, locate and evaluate the occurrence of materials, sources of power and natural phenomena that may be useful to mankind.
- **Geochemistry**: A subdivision of geology in which a geologist adapts or interprets the laws, principles and theories of the science of chemistry as related to the constituents of the Earth.
- **Engineering Geology**: A subdivision of geology in which a geologist studies the applications of geology to the solution of engineering problems.
- **Geophysics**: A subdivision of geology in which a geologist adapts or interprets the laws, principles, and theories of the science of physics as related to Earth structures and forces.
- **Geological Engineering**: A subdivision of the general field of engineering in which geological factors are the principal or collateral functions in the solution of engineering problems.
- **Geologist**: 1. One well versed in geology. 2. One who follows as a calling any branch of geology, a professional geologist.
- **Professional Geologist**: A person qualified to apply the principles of geology or its subdivisions to economic, industrial or engineering problems, by having high standards of training, experience and personal integrity.

The term apply or applied as an economic consideration of a desired result separates the professional from the purely scientific geologist. This does not mean that a geology teacher is not a professional geologist. He may quite well be a professional if his research or part time employment is directed at the solution of an economic problem. When he is teaching in a class room, however, he is an academician whose profession at the time is teaching or professing. The same is true for a pure research geologist. Both may be professional geologists from time to time.

All professional geologists in the United States are invited to take part in framing the policies of this new entity by attending its founding convention.
To be considered as a participant you must have a post card postmarked on or before October 31 in the hands of Wm. M. Lyle, 1845 Sherman Street, Denver, Colorado, 80203, stating the Denver hotel in which you have reservations and whether or not you will drive to Golden on meeting days. Bus service to the meeting will be provided from the Denver Hilton Hotel.

PROGRAM FOR FOUNDING CONVENTION, NOVEMBER 14 and 15, 1963

12:00 Noon, Thursday, Bus leaves Main Door of Denver Hilton Hotel

1:30 PM, Room 113, Arthur Lake Library
Welcome by Orlo E. Childs, President, Colorado School of Mines
Introduction of Steering Committee
Election of meeting Chairman

2:00 PM, Committee Workshops:
Constitution Committee, Thomas R. Beveridge, Chairman
Qualifications and Ethics, Frank B. Conselman, Chairman
Public Relations and Membership, Edward E. Rue, Chairman
Budget Committee, Bruno Hanson, Chairman

5:30 PM, Bus leaves Lake Library for Denver Hilton Hotel

8:00 AM, Friday, Bus leaves Denver Hilton Hotel

9:00 AM, Room 113, Lake Library, General Assembly, Committee reports

The meeting was called to order in the Arthur Lake Library, Colorado School of Mines, Golden, Colorado, by the Chairman of the convention committee, Dr. W. W. Mallory, at 1:30 P.M. on November 14, 1963. A register of those in attendance is attached as Exhibit "A". [See Appendix 9 for the 94 attendees]

In the first order of business Frank B. Conselman was elected Chairman of the convention by a unanimous vote. The Chairman appointed Edward E. Rue Acting Secretary of the meeting.

Our host Dr. Orlo Childs, President of the Colorado School of Mines, was introduced by the Chairman. Dr. Childs presented an inspiring address of welcome impressing on the group assembled the great responsibility it had assumed in behalf of the professional geologist. Dr. Childs pointed out that since Columbia University housed the Geological Society of America in its early youth it is altogether proper that Colorado School of Mines offer housing to the American Institute of Geologists. Acceptance of Dr. Childs’ gracious proposal for housing was delayed until the discussion of membership qualifications, Ethics, and Constitution were completed.

A proposed draft of membership qualifications was presented by Dr. Conselman. Each section was discussed separately and amendments were made to the satisfaction of the majority. It was moved and seconded that the Membership Qualifications be accepted as revised by those present. The motion was carried.

Thomas R. Beveridge presented the first draft of a proposal Constitution. Each section was discussed separately and amendments were made to the satisfaction of the majority.
At 5:00 P.M. the meeting was recessed until 9:00 A.M. the following morning.

The meeting was called to order at 9:00 A.M., November 15, 1963, by Dr. Conselman who also presented a draft of the proposed Code of Ethics. Each section was discussed separately and amendments were made to the satisfaction of the majority. It was moved and seconded that the Code of Ethics be accepted as revised by those present. The motion was carried. The Code of Ethics as amended and approved is contained in Exhibit “B” attached.

Revised drafts of the Constitution and a block diagram of the management structure were distributed for examination. It was moved and seconded that the Constitution as revised be accepted with “Section IV Management” to be stated as outlined on the diagram of organization subject to the approval of the new Executive Committee. The motion was carried. The Constitution as amended and approved is contained in Exhibit “B” attached.

The motion was then recessed for lunch.

Some correspondence, pro and con, was read and discussed. A poll was taken to determine if anyone had missed the Geological Society of America meeting. No one had. Five said they would attend the GSA meeting.

Membership and the screening of the original or founding members was discussed. After a suggestion by Dr. Ben Parker, it was moved and seconded that the persons present who were qualified according to the membership qualifications be considered eligible to vote for the original officers, and that each would be screened at a later date in a manner prescribed by the Executive Committee which would also submit to screening in the same manner, and that those not qualified or not desiring to support the Constitution, Code of Ethics and Membership Qualifications identify themselves and not vote in the election of officers, and that a suitable length of time be allotted by the Executive Committee for persons applying for membership and subsequently accepted to constitute the charter membership. The motion was carried.

The Nominating Committee report was made by R. G. Rogers. Other nominations were made from the floor. Since there was no advisory board, nominations were also made for the four “at large” members of the Executive Committee. The following officers were elected by the majority of those present: President, Martin Van Couvering; Chairman of the Advisory Board (Past President), Ben H. Parker; Vice President Allen C. Tester; Secretary-Treasurer, Thomas R. Beveridge; Editor, Frank B. Conselman; Members at Large, Fred N. Earll, Adolf U. Honkala, William A. Newton, Howard E. Rothrock.

The newly elected President relieved Dr. Conselman of the chair and accepted the congratulations and condolences of those present. In the absence of the elected Secretary, Edward E. Rue continued to act as Acting Secretary of the meeting.

It was moved and seconded that Golden, Colorado, be our headquarters and that the American Institute of Professional Geologists accept the kind offer of the Colorado School of Mines to furnish a room for its headquarters.

It was moved and seconded that voluntary contributions be accepted after adjournment, not to be counted as 1964 dues, to be applied to the obligations of the Institute in its beginning stages of development. The motion was carried.

It was moved and seconded that the Founding Convention of the American Institute of Professional Geologists be adjourned. The motion was carried and the meeting was adjourned at 4:00 P.M.

Edward E. Rue
Acting Secretary of the Meeting

[Note: The Register of the 94 attendees is in Appendix 9. Robert Berg recalls that after the meeting, Warren Beebe entertained a group of about 50 founders at his home in Boulder.]

Amazingly, the Constitution, Bylaws and Code of Ethics were formulated (and approximately 19 pages typed on old typewriters—no word processors) prior to AIPG’s Founding Convention on November 14, 1963. This was a lot of work performed by Tom Beveridge, Frank Conselman, Ad Honkala, Bud Rue and Allen Tester. And most of the writing had to have transpired within the two months since the September organizational meeting in Oklahoma City. The document was distributed to the 94 geologists at the Founding Convention, and it was approved in principle that same day. The Constitution, Bylaws and Code of Ethics were adopted by the Executive Committee in February 1964. (They were extensively revised in 1989, q.v.)

In December 1963, one month after chairing the Founding Convention, Bill Mallory, CPG 11, and co-founder of AIPG, told a surprised President Van Couvering that he would no longer be active in AIPG. Bill Mallory nevertheless chaired technical sessions at the first and third Annual Meetings in 1964 and 1966.

Our first logo in 1963, designed by Allen Tester with help from two unknown geologists, looked similar to our present one. The logo was changed slightly in 1976 to represent the Association of Professional Geological Scientists (APGS). Then it was redesigned in 1979 by William Atlee, CPG 2861, to again represent AIPG.

In early 1964, Fred Earll, CPG 6, of Montana designed and submitted a Membership Application form. Membership requirements for AIPG certification were more stringent then. They included a bachelor's degree in geology, 12 years experience, five geologic sponsors, and membership in another geologic society (to show affiliation with a scientific society). This last requirement was dropped in the mid-1980s, as financially too burdensome. The applications were reviewed by a 4-man Screening Board, consisting of members of the Executive Committee, who recommended either approval or rejection to the President, who had the final say. Interestingly, President Martin Van Couvering’s application was approved by himself on June 2, 1964, seven months after he was elected president.
Frank Conselman wrote the first AIPG Code of Ethics and was our first TPG Editor. Frank also had a renowned sense of humor. It may be of interest to include here parts of one of Frank's tongue-in-cheek doodlings that he penned soon after the Founding Convention. The distribution is unknown, but probably only to a few select friends:

ANNouncing
A NEW PROFESSIONAL REGISTER
THE GEOSCIENCE ASSOCIATION OF NORTH AMERICA
(Serving Geology, Geophysics, Geochemistry, Geopolitics, Geography and Geometry)

In order to take advantage of the suggestion that legal registration of geologists may be avoided by the creation of a professional register, we are happy to announce the formation of

The Geoscience Association of North America

The Geoscience Association of North America (GANA) is composed of the following ten geoscientific societies:


Section D - Publications

All GANA members are entitled to subscribe to the GEOGAZETTE, official publication of GANA, for only $1.98 per year. This amount will be billed with your dues for each society, and you'll hardly notice it.

GEOGAZETTE, geology's answer to the “Police Gazette”, will be full of interest to the profession, particularly for our earthier earth scientists. It will include news, cheesecake, humorous jokes and interesting anecdotes, girlie pictures, crib notes for students, pin-ups, help wanted ads, and leg art. GEOGAZETTE will give you an inside insight into geoscience.

Section E - Code of Ethics

All registrants in the GANA professional directory must adhere to (i.e., stick with) the following Code of Ethics.

1. GANA members must never do anything they may be sorry about later.
2. Always tell your employer or client what he wants to hear—he has enough troubles already without worrying about unpleasant details.
3. Never say you will “drink all the oil, etc.” anywhere. There may not be any.
4. Never refer to the employer or client as a “mullet”, “victim”, or “sucker”. He may hear about it.
5. When a dry hole is drilled on a member's recommendation, he should always adopt a cheerful attitude in the presence of the party or parties who paid for it. A light-hearted remark, like “Believe me, I really hate it” or “Well, we can’t win ’em all” will do much to ease the tension.
6. Be careful with your maps and contours—some one may still believe in them.
7. Do not accept questionable employment. If in doubt, make ’em pay in advance.

Frank B. Conselman

Future President Bud Rue was recording secretary at the organizational meeting in September and at the Founding Convention in November 1963. At the Founding Convention, Bud was asked to be Executive Director of AIPG. He said yes, tentatively. Thus, although also asked, Bud was not available to be a member of the first Executive Committee. However, it soon became apparent to Bud and the Executive Committee that it was too soon to have a salaried Executive Director, and require Bud to move from Illinois to the Denver area. So Bud became acting Executive Director from November 14, 1963, through most of 1964.

At the fourth Executive Committee meeting on November 12, 1964, Bud told the committee that the $750 per month salary was not enough for him to make a major relocation. The committee asked Art Brunton of Denver, who accepted the position.

Parts of two letters from President Van Couvering to Bud explain the situation of AIPG’s almost first Executive Director.

[Martin Van Couvering Letterhead]
November 29, 1963
Mr. Edward E. Rue
King City Building
Mt. Vernon, Illinois

Dear Bud:

In the excitement and enthusiasm of the founding convention at Golden, it was almost inevitable that mistakes would be made that would have to be corrected afterward. A number of these have already come to light, such as the failure to give someone the job of keeping detailed minutes of that meeting while it was in progress. [Editor: Actually, Bud Rue recorded the minutes, see herein.] If it had not been for Bob Hancock, we might not even have known all who attended.

After parting from you, I have discussed our problems with many experienced men in the A.A.P.G., G.S.A., A.G.I. and others, including several members of our own executive committee. The thing that worries me the most, because I had a hand in creating the office, is the unanimous opinion that we do not, at this stage, need an “executive director”, when we have neither the business nor the money to justify such action. Of course, it was inspired by the tremendous drive and enthusiasm you had shown in getting this movement off the ground.
You may have come to the above conclusion yourself by this time, but I am hurrying to write this letter to forestall your moving to the Denver area, in the belief that you are needed there by our Institute at the present time.

On the national level, we do not intend to take a stand for or against State registration, leaving it for the members within any State to decide that. We will give them such help as they request, if we can. We are so young that we are still a little wobbly, but I will send you copies of our constitution, bylaws, code of ethics, and application-for-membership form as soon as they are available. In the meantime, I will be pleased to hear any comments you may care to make, and I earnestly solicit your cooperation. Where good will prevails on both sides, almost any obstacle can be overcome.

Yours very truly,

Martin Van Couvering

MVC:lv
cc: AIPG Executive Committee
AIPG Steering Committee

[December 28, 1963]

Mr. Edward E. Rue
King City Federal Building
Mt. Vernon, Illinois

Dear Bud:

As you know, my letter of December 5th, addressed to you, crossed yours of December 4th to the Executive Committee, in which you asked to receive copies of Committee correspondence. Because of the immensely important part you played in bringing AIPG into existence, I know I will have the support of all members of the Executive Committee in inviting you to attend and participate in all of its functions, like an official member. We will be glad to have the benefit of your enthusiasm and organizing ability and experience. At the same time, we wish not to impose upon the time you need for making a living. I have been sending you copies of all Executive Committee correspondence that I have written, and will continue to do so.

I note that you are already receiving and answering correspondence resulting from the fact that you have been widely publicized as Executive Director. Please feel free to continue to do so to the extent that it does not become a burden. If you feel a matter requires prompt attention and you cannot give it, please pass it on to Tom Beveridge or Ben Parker or me, whoever seems to fit the need the best.

In our telephone conversation of Dec. 10, you agreed to serve as Director of Co-ordinators to the extent permitted by your professional activities. At the suggestion of Frank Conselman, I am now asking you to serve, instead, as Chairman of the Membership Committee, which would cover the same functions, and describe your activities more accurately. This of course would be subject also to the limitations upon your time. In view of this, you may prefer to nominate somebody else for the position of co-ordinator for Illinois; if so, please let me have your suggestions.

Kindest regards,

Martin Van Couvering

Martin Van Couvering, CPG 1

Our first President, Martin Van Couvering, was a well-known and highly regarded consulting geologist when he helped create AIPG in 1963. Even before AIPG, Martin was elected Honorary Member of these geological societies: the Utah Geological Society in 1960, the New Mexico Geological Society in 1963, and later the American Association of Petroleum Geologists (AAPG) in 1967. Martin was born in Allendale, Michigan, on June 15, 1888. He traveled far from home to matriculate at Oregon State in Corvallis earning his BS degree in 1916. From his AIPG membership application, he spent “three years as inspector and petroleum engineer for the California Department of Oil and Gas, being concerned primarily with subsurface geology and hydrogeology of oil fields.” He had been a successful petroleum consultant in Pasadena since 1922. Martin was appointed to the Federal Oil Conservation Board’s Committee on Economics, 1931-32, by the Secretary of the Interior. After being a consultant for 18 years, he decided to return to school and attended the University of California at Los Angeles (UCLA), obtaining his MA degree in geology in 1941, at age 53. He was a special lecturer at Stanford, UCLA, USC, Caltech, and the New Mexico School of Mines.

Martin attended the organizational meeting of AIPG in Oklahoma City on September 13, 1963, along with ten future prominent AIPG members and officers. Two months later he attended the AIPG Founding Convention at the Colorado School of Mines on November 14, 1963. Those attending elected Martin President by voice-vote. Interestingly, since no membership application forms existed, Martin was elected President of AIPG before he was a member!

Just 14 days after being elected President, Martin issued his first “AIPG Bulletin,” giving his views on matters affecting the fledgling Institute.

Martin applied for membership in the new AIPG on April 15, 1964, and was accepted as a member on July 2, 1964—two and one-half months later! What took so long was the fact that the three approving members lived far apart: Allen Tester in Iowa, CPG 2; Tom Beveridge in Missouri, CPG 3;
and Frank Conselman in Texas, CPG 4. Martin was awarded CPG No. 1. His five sponsors were eminent geologists: Dr. Mason L. Hill, CPG 20, Chief Geologist of ARCO, later Honorary Member; Dr. Ian Campbell, CPG 19, California State Geologist, later Parker Medalist; Dr. Orlo Childs, President of Colorado School of Mines; Dr. John C. Crowell, Chairman of the Geology Department, UCLA; and Dr. Robert P. Sharp, Chairman of the Geology Division, CalTech.

It is fitting to reprint the memorial tribute to Martin by his close friend and AIPG co-founder Frank Conselman.

Memorial to Martin Van Couvering 1888-1976
By Frank B. Conselman

Martin Van Couvering, pioneer and acknowledged leader in the application of professionalism in geology to the extractive industries, died at Pasadena, California, on December 19, 1976, in his 88th year. He was to have received the Human Needs Award of the American Association of Petroleum Geologists in Washington, D.C., June 15, 1977, on what would have been his 89th birthday. The presentation was made posthumously.

Some geologists achieve distinction by voluminous publications on specialized scientific subjects of various degrees of importance, or lack of it; some score outstanding coups in the mineral or energy industries, and may incidentally attain considerable financial as well as professional recognition thereby; still others are pre-eminent among their fellows because of their embodiment of the ideals of integrity and honesty, and their high standards of professional ability and personal deportment. They become exemplary not by design but by consistency of character. Martin Van Couvering has been perhaps the outstanding example of the last category, while achieving no small degree of success in the second. Lest this sound stuffy, it should be remarked that to the very last Martin retained his twinkly eye, his puckish wit, his kindly sense of humor, his lively interest in his fellows, and a helpful and enthusiastic relationship with his juniors. To them he was and will remain “Martin,” everybody’s wise and benevolent Dutch uncle. De mortuis nil nisi bonum, so nothing will be said about Martin’s puns, which frequently bordered on the outrageous, but gave him great personal satisfaction.

Martin was born June 15, 1888, in Allendale, Michigan, then and still a small community in the wooden-shoe region around Holland. During his salad days he moved from Michigan to the Pacific Coast, which thenceforth was to be his primary base. His first academic degree was a B.S. in Mining Engineering in 1916, from Oregon Agricultural College, and it is noteworthy that he actually pursued two professional careers sequentially, for many years in petroleum engineering, then in petroleum geology—undoubtedly with some useful degree of overlap.

Soon after his graduation, World War I spread to the United States, and Martin entered military service. He was soon overseas, attending and later instructing in the Artillery School at Saumur, France. After the Armistice he remained on duty in Germany until 1919. When he returned to the States, he resumed his budding career in petroleum engineering, working first as an inspector and then as Chief Petroleum Engineer for the California Department of Oil and Gas.

By 1922, however, he was ready to undertake self-employment as a consultant and opened an office at Long Beach. This was the beginning of a consulting career of 54 years. Inevitably this involved many assignments of different types, for many and diverse clients, at locations all over the world, including supervision of drilling of a 90,000-bbl-per-day oil well in Iraq (1927) and preparation of principal testimony and exhibits for the Kettleman Hills North Dome lawsuit (1938). The models he prepared for this suit were widely exhibited, and as a form of publication compared favorably in circulation and impact with the more formal types of technical publication. Routinely, however, the private and confidential nature of investigations precluded publication.

The fascination of geology as such, in contrast with engineering, became irresistible by the close of the thirties. So in 1941, at the mature age of 53, Martin received his master’s degree in geology from the University of California, Los Angeles. For the remainder of his long professional life he elected to consider himself primarily a geologist, although there continued to be the same parallelism between fields that had existed when he was professionally classed as an engineer.

The record of his activities as a consultant is full and detailed, and includes not only private but public assignments of responsibility. Meanwhile he had become involved in the humanistic aspects of his calling and had become active in the affairs of scientific and technical societies in his field. He joined the American Association of Petroleum Geologists in 1924. In 1946, he organized a stratigraphic study group in Los Angeles, which led naturally to his election as president of AAPG’s Pacific Section in 1947. During his term he launched the Pacific Coast Section’s highly successful Pacific Petroleum Geologist, a monthly newsletter. In 1967, he was elected to honorary membership in AAPG, for distinguished contributions to his profession, and in 1972 his beloved Pacific Section established the Martin Van Couvering Awards for deserving students.

Martin Van Couvering has been a Fellow of the Geological Society of America since 1947, as well as an Honorary Member of the New Mexico and Utah Geological Societies. In 1963, at the age of 75, he opened a new and entirely unselfish phase of his professional life—he accepted nomination to the presidency of a new organization, the fledgling American Institute of Professional Geologists. No one else was considered when Martin’s availability became known, because no one so well and widely exemplified the ideals of professional honor, combined with professional competence, that AIPG wished to promulgate. His election was unanimous and extremely gratifying in its results. Martin became “CPG No. 1,” and number one he has remained. He received a special certificate of recognition from AIPG in 1965; the creation by AIPG of the Ben H. Parker Award resulted in his being its first recipient in 1969.

Martin Van Couvering undertook these new assignments for his profession with characteristic unselfishness, zest, and dedication, and made no secret of the fact that he enjoyed them. He lectured, he visited, and he went on field trips—no
The formative years 1963-65 President Martin Van Couvering

matter where or when—for a decade or more after his AIPG (now Association of Professional Geological Scientists) commitment. If there were a geological field trip being held by anyone, Martin would in all probability be a participant, this, after a full lifetime of involvement and production.

Martin’s family life, like his career, is pleasant to review because it was equally admirable. On July 30, 1917, 60 years ago this summer, immediately after enlisting in the Army, he married Marian Turley. Of their life together his widow remarked, “In almost 60 years of marriage, and six years prior to that, I never knew Martin to do anything that was dishonest, mean, or petty, or other than honorable.” No one will disagree.

Martin leaves four children: Turley Van Couvering of Lynwood, California; Lynn (Mrs. F. L.) Vernon of Pasadena; Allan Van Couvering of Brea, California; and Nancy Van Couvering of El Cerrito, California.

He also leaves at least two generations of geologists who, whether they have yet discovered it or not, are his professional debtors. Those of us who were privileged to know him have not the slightest doubt of the extent of our obligation.

An appropriate epitaph for Martin Van Couvering might be the poignant one he wrote for A. I. Leversen:

Now he has gone where there are no unconformities and no problems to be solved.
And so, Dear Friend, we say Adieu.
Problems remain, but not for you.
You showed the way; we follow through,
Inspired by your broader view.

An insight into the type of person Martin was may be gleaned from the following two letters. The first to William Newton (future Honorary Member; see Index and Who’s Who), thanking him for accepting chairmanship of a new committee. The second letter he wrote to a young geologist he had just met. It is dated just one month after the first AIPG Annual Meeting in November 1964. The addressee, C. Michael Scullin, later joined AIPG and became a well-known geologist in southern California, being the Engineering Geologist for the County of Orange, then a consultant, until his untimely death in 1995.

[AIPG Letterhead]
July 24, 1964
William A. Newton, President
Rocky Mountain Natural Gas Co., Inc.
1726 Champa Street
Denver, Colorado 80202

Dear Bill:
It was a source of great pleasure and relief to me when you accepted the responsibility of being Chairman of a new public-relations body to be known as the Public Information Committee of AIPG. You are particularly desirable for this position. First, because of your demonstrated ability to handle it; and second, because you are on the Executive Committee of AIPG, with the headquarters nearby. Denver is also a good center of information of the kind with which you will be concerned.

As I see it, your principal function will be to keep the public and the geological profession aware of what is going on in matters related to geology, and more particularly, reflecting the questions of ethics, financial responsibility, and the public welfare. While all of us have been aware of these problems, my decision to act without further delay was occasioned by letters I received from Ben Parker and Howard Rothrock, both of which involve the element of urgency. Since Ben Parker is readily available to you, you can consult with him about the advertisement in the Denver Post, about which he wrote on July 15; also his letter, of the same date, about an article in Petroleum Today. The next day, I received a letter from Howard Rothrock, in which he called attention to the fact that the Oil and Gas Journal, in its issue of July 20, 1964, at Page 57 and Paragraph 5, had erroneously used the term “certified professional geologist” when the second word should have been “petroleum”, as shown in the AAPG Bulletin for July, 1964 at Page 1222. All of these matters require immediate action.

Another item came to my attention recently in a letter from Richard W. Harding of State College, Pennsylvania, who is now a member of AIPG and has been assigned Certificate Number 17. I believe you have already received a copy of his letter. Note that he offered to provide more incidents. After reading his letter, I think: “How delightful to have men of this type in our membership!”

With the approval of the State Co-ordinator for Pennsylvania, Donelson A. Robertson, I am asking Dr. Harding to be Assistant Co-ordinator of AIPG Affairs for that State.

Bill, as we grow in numbers and influence, material of this kind will be coming in from all over the country, and perhaps from all over the world, and you will need much assistance. As rapidly as suitable individuals emerge, I will ask them to serve on your committee, and I shall certainly welcome your suggestions in this matter. It occurs to me that, for the time being, the State Co-ordinators can add this to their responsibilities. Nevertheless, I think we should have such a committee, in order to focus attention on this problem. As Ben and Howard have suggested in their letters, this seems to me an excellent way for AIPG to prove its worth and to become known.

This is not only a personal letter to you, but will be widely circulated among AIPG supporters. If all recipients of this letter will funnel, into Mr. Newton’s committee, any information of which they are aware, that bears on this problem, they will be serving one of the central functions for which AIPG was created. Mr. Newton’s address is: William A. Newton, President, Rocky Mountain Natural Gas Co., Inc., 1726 Champa Street, Denver, Colorado 80202.

Kindest regards,

Martin Van Couvering
MVC:im
cc: AIPG Executive Committee
   E. E. Rue
   M. T. Halbouty
   W. W. Mallory
   R. W. Harding
   D. A. Robertson
AIPG Co-ordinators

[AIPG Letterhead]
December 14, 1964
C. Michael Scullin, Engineering Geologist
Department of Building and Safety, Orange Co.
400 West 8th Street
Santa Ana, California

Dear Mike:
It was a real pleasure to get acquainted with you at the end of the earthquake conference in San Francisco and to find out about your comings and goings. You impressed me as a very desirable member for AIPG if you have the necessary qualifications. You looked a little
young to have had 12 years of experience, but some people's looks are quite deceptive. In case you do lack the necessary years, you could become a junior affiliate of the California Section of AIPG.

In order that you may be more fully advised, a packet of information and an application blank are enclosed. Let me call your attention to the fact that you can still be a Charter Member if you are qualified and you make application before the end of 1964.

Kindest regards,

Martin Van Couvering

MVC:im
cc: H. H. Neel
A. O. Spaulding
A. F. Brunton
B. H. Parker
A. C. Tester
F. B. Conselman

---

“The AIPG Bulletins” by Martin Van Couvering

The forerunner of The Professional Geologist newsletter was Martin Van Couvering’s “AIPG Bulletins.” In November and December 1964 four were mailed to members of the Executive Committee and the Steering Committee. These are included in Appendix 9.

Excerpts from “President's Page” by Martin Van Couvering

The following are excerpts from Presidential Messages that appeared in TPGs of January and May 1965.

AIPG continues to be called upon for help from various parts of the country, and has, in all cases, responded without delay. The details will appear in other sections of this publication at appropriate times. Our course is not always clear, but we are learning by experience. We know what our ultimate objective is, namely to create more public awareness of and respect for the geological profession. No other organization exists that can do this with anywhere near the effectiveness of AIPG.

Another factor in our forward acceleration is the rapid growth in our membership, and especially in the very high calibre of the geologists who are joining AIPG. As of the time of publication, 834 had applied and membership had been accorded to 392.

Attendance at the first Annual Meeting was an exhilarating experience. Seldom, if ever, have I attended a gathering of geologists where there was so much enthusiasm and earnestness on the part of the participants. Much of the enthusiasm derived from the outstanding program originating in the facile mind of the General Chairman, W. A. Newton, and put into effect under his direction and with the assistance of Jay G. Marks.

This time, my main subject will be the applications for membership in AIPG. There is much to be said about them. From time to time, objections are raised to the requirement for sponsor and reference letters. While such cases are a small minority of the total number of applications, I believe it is worthwhile to dwell on the subject briefly.

A very few applicants seem to have felt that the request for sponsorship letters was an adverse reflection on them. Of course, the obvious answer is that we have to treat all applicants alike in this matter, to avoid a charge of favoritism. Nearly all applicants have seen the necessity of this step and have provided the necessary letters without complaint. This goes for many of the top geologists in the country.

To those of us who have been engaged in screening applications, the usefulness of the letters, indeed the absolute necessity of them, is obvious. I feel safe in saying that not one of us would for a moment consider abandoning the practice.

The objection has been raised that an applicant naturally would seek endorsement only from those whom he felt would be favorable. There is little doubt about that; but, if a geologist is able to get letters of endorsement from five competent and respected geologists, the likelihood of his being in the same category is very considerable. If they are his friends, as they usually are, that is all the more recommendation.

As might be expected, the letters vary from the flamboyant to the terse, depending upon the author's temperament. Not a great deal of experience with these letters is required to enable the reviewer to evaluate the letters themselves. Quite a satisfactory picture emerges. To some degree, different sponsors are impressed with different qualities in the applicant. Also a good deal of "reading between the lines" is possible. The degree of enthusiasm of the sponsors is an important factor.

In short, we find our screening process a necessary function, that is quite burdensome but also very rewarding. To me, watching the parade of personalities and personal histories has been an exciting experience, and has made me happy and proud to find myself in such company. I refer not only to those who have outstanding reputations, but also to the "rank and file." There is much to be admired all along the line.

One of the most gratifying things is the enthusiasm for both AIPG and the geological profession that pervades so many of the letters. As long as this feeling exists, AIPG cannot fail in its mission. Many have expressed the position that this is just what they have been waiting for. After seeing the kind of men who have joined our cause, it is plain that we have an ample supply of dedication, experience and energy to carry on our work indefinitely. Strong feeling about ethics and professional practices is expressed again and again.

As of this writing, it has been my privilege to process approximately a thousand applications for AIPG membership. The experience has been a liberal education for me. It has given me an insight, into the practices of geology and the character of geologists, that I could not have acquired in any other way.

One of the problems is that, in many cases, there is no sharp definition between categories. However, I believe the demand for this kind of information will impel us to try to satisfy that...
demand. Besides the wide diversity of occupations among geologists, there is also the problem of their wide dispersion geographically, and their frequent changes of location.

The applications form such a vital part of the AIPG organism that I thought it desirable to dwell upon them at some length.

Mail is still reaching me that indicates confusion in the minds of some prospective applicants about the matter of sponsorship. The writers are not sure whether they may still use sponsors who are not members of AIPG. We inform these people that, by action of the Executive Committee, non-AIPG sponsors who belong to a qualified society may still be used until our next Annual Meeting, October 8th and 9th, 1965. Because of the existing uncertainty, this seems a good place to restate that fact.

---

First State Sections and First Committee

In 1964 the first State Section was Texas, approved on September 26, with Michel T. Halbouty as President. Next the Colorado Section was approved, with William W. Mallory as President. Third was California, with Arthur O. Spaulding as President. In 1965, seven more sections were approved: Oklahoma, Iowa, Louisiana, Ohio, New Mexico, Missouri and Illinois.

The first AIPG committee was the “Public Information Committee.” In July 1964 President Van Couvering formed this committee “to keep the public and the geological profession aware of what is going on in matters related to geology, and more particularly, reflecting the questions of ethics, financial responsibility, and the public welfare.” Under the Chairmanship of William A. Newton, Denver, the committee members included Robert M. Becker, Oklahoma City; Gordon L. Bell, Bismarck, North Dakota; Robert R. Berg, Denver; Richard W. Harding, State College, Pennsylvania; J. Q. Tompkins, Salt Lake City; and Ernest E. Wahlstrom, Boulder, Colorado.

---

Executive Director
Arthur F. Brunton

Our first salaried Executive Director (originally termed Executive Secretary) was Arthur F. Brunton, CPG 24. He served from November 14, 1964, being approved at the first Annual Meeting, until January 1979. Art was born in McGill, Nevada, in 1926 and graduated the University of Nevada with a B.S. in geological engineering in 1951. He spent most of his life in Colorado, and was President of the Rocky Mountain Geological Society in 1963. In November 1964, Ben Parker convinced Art he should leave a promising career in oil and gas exploration and become the first Executive Director of the newly formed AIPG.

Art ran the Headquarters office at the Colorado School of Mines in Golden. His initial Headquarters secretaries were Norma O’Boyle and Lynne Vernon, and Ann Cashion after 1965. Ida Montague was secretary to Martin Van Couvering.

Art’s close friend Frederick Stead recalls that in the early years of AIPG all Executive Committee meetings were held in Denver, and many were held in Art Brunton’s home where all enjoyed his wife Marion’s gourmet cooking.

Art served under 15 different AIPG presidents and all agreed that his business management and people skills were largely responsible for the continued growth and development of the State Sections. During those 15 years AIPG membership grew by 3,789 members. (One week in November 1964, 42 applications were received.) At his retirement dinner in 1979, the plaudits received were from some of the finest geologists in the profession. Art agreed to be available as “Interim Director” of AIPG in 1979-81 during the search for a new director. Art passed away in 1997 in Payson, Arizona.

---

AIPG Member Specialties in 1965

The first AIPG member survey was by Art Brunton, and appeared in the March 1965 TPG. It included the Institute’s first 743 members, the Charter Members. The specialties and percentages at that time, were:

**Type of Employment**

<table>
<thead>
<tr>
<th>Type</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporate</td>
<td>43%</td>
</tr>
<tr>
<td>Consulting &amp; Independent</td>
<td>29%</td>
</tr>
<tr>
<td>Government*</td>
<td>14%</td>
</tr>
<tr>
<td>Academic**</td>
<td>14%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100%</td>
</tr>
</tbody>
</table>

* In 1965, 14 State Geologists were members of AIPG:

<table>
<thead>
<tr>
<th>State</th>
<th>Geologist</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
<td>Ian Campbell</td>
</tr>
<tr>
<td>Florida</td>
<td>Robert O. Vernon</td>
</tr>
<tr>
<td>Idaho</td>
<td>Rolland R. Reid</td>
</tr>
<tr>
<td>Illinois</td>
<td>John C. Frye</td>
</tr>
</tbody>
</table>
THE FORMATIVE YEARS

1964 Model Registration Law

Iowa
Kansas
Mississippi
Missouri
North Dakota
Ohio
Tennessee
Texas
West Virginia
Wyoming

H. Garland Hershey
Frank C. Foley
Frederic F. Mellen
William C. Hayes, Jr.
Wilson M. Laird
Ralph J. Bernhagen
William D. Hardeman
Peter T. Flawn
Paul H. Price
Horace D. Thomas

**Academic includes 31 Chairmen of Geology Departments.
(For a comparison of member surveys over the years, see 1999.)

Model Geologists Registration Law

In 1964, members of the newly formed AIPG decided that a model registration law should be prepared, so as to be available to states considering registration of their geologists. California and Louisiana were actively preparing such acts.

Warren Beebe, CPG 156, was then Chairman of AIPG’s Legislative Coordinating Council, and was also Chairman of AGI’s Committee on Professional Standards. In mid-1964 he took up the task to draft a registration law that would be acceptable to AAPG, AGI and AIPG.

The Model Law was distributed on January 12, 1965, one of several letters of encouragement to Warren Beebe is included here.

[Adolf U. Honkala Letterhead]
August 28, 1964
Dr. B. W. Beebe
Box 634
Boulder, Colorado 80301

Dear Doctor Beebe:

I have reviewed with amazement the volumes of material which you submitted on the Registration of Geologists and wonder how any one person could accomplish so much. I am sure that all of us associated with AIPG Executive Committee and the AGI Professional Standards Committee feel as I do.

I have read through the material several times now and find very few if any additions or corrections which I feel would improve the original text. I will enclose copies of one or two pages where I have comments.

I took the liberty of discussing this work with Mr. Turner Burton, Director of the Department of Professional and Occupational Registration of the State of Virginia. He was impressed with the work and made several comments which I pass on to you.

First, that “any state registration committee which considers an act such as this must have conclusive proof that geologists work affects the safety, health and welfare of the citizens about them. It is true that you spell this out in the registration act under the general provisions. However, I wonder whether it might be practical to submit documentation of type examples applicable to the practice of general geology as it affects safety, health and welfare of the people around us. This, I believe, is necessary to help implement the arguments of the individuals within the states who will pursue the adoption of registration laws or amendments to registration laws.”

Secondly, Mr. Burton felt that amendments to existing professional registration acts are much more difficult to obtain than new registration laws for new professions. He explains that more often than not, once an amendment is tried other professions, for instance architects, engineers and land surveyors, will try at that time to attach riders for their professions. According to his experience this creates numerous involved situations which would tend to hold back the primary cause.

Finally, he recommends that although the work is extremely well done it be condensed so that legislative committees working on the law may handle it more easily. I realize that the current length comes from incorporation of all phases for all states, but I pass this on at any rate.

I am enclosing a copy of the Virginia State Board Rules and Regulations for the Engineering Section as an example of the type of condensation that Mr. Burton refers to.

I look forward to seeing you in Golden on September 12-13.

Sincerely,

Adolf U. Honkala
AUH/e

Minutes of the Meeting of the American Geological Institute Committee on Professional Standards
(Re: Model Registration Law)

The meeting was called to order at 2:15 p.m. on November 19, 1964, in the Cyrano Lounge of the Deauville Hotel, Miami Beach, Florida, with Mr. B. Warren Beebe, chairman, presiding. Attendance: Committee members, and others, Ian Campbell, Carl C. Branson, Sigmund I. Hammer, Don U. Deere, John C. Hazzard, George E. Eckblaw, William H. Hintze, Emmett A. Finley, Linn Hoover, William H. Gardiner, Cedric L. Iverson, George A. Kiersch, Konrad B. Krauskopf, Wilson M. Laird, L. Kenneth Wilson, Elmer C. Marlivate, John C. Maxwell, Martin Van Couvering.

1. Mr. Beebe opened the meeting by stating that the Committee on Professional Standards has repeatedly voted against recommending that the geological profession seek statutory registration. It has prepared a model registration law simply as a defense measure, in the event that registration should be proposed in one or more states. Already the legislatures in at least two states—California and Louisiana—have been asked to pass laws to register some branches of geologists. The model registration law is not designed to meet the needs of a particular state, Mr. Beebe said. It will require modification wherever it may be adopted, but it does provide a basic pattern for state registration laws.

Mr. Beebe warned that geologists will bear a substantial financial burden in those states that pass a registration law. He estimated the minimum annual cost of administering such a law at $30,000, and added that only about five states have enough resident geologists to support legal registration.

2. The Committee then reviewed the revisions to the model law that were suggested by Mr. Milton F. Lunch, legislative counsel for the National Society of Professional Engineers. Committee members noted two major problems that could arise from any registration law, namely, reciprocity and jurisdictional disputes. They agreed that
3. The problem of the relations between geologists and geophysicists was discussed. Mr. Beebe pointed out that exploration and geophysicists are more closely aligned to geologists than are other categories of geophysicists and that the use of terms in the model registration law must be broad enough to include all classes of geologists, as well as certain groups of geophysicists.

4. A lengthy debate concerning the use in the model law of the terms “geologist” and “geology”, or “geological scientist” and “geological sciences” was resolved when the Committee voted unanimously, on a motion by Mr. Laird, seconded by Mr. Van Couvering, to use the latter two terms. Despite some misgivings that the Committee may be attempting to make the model law too all inclusive, it was agreed that the less restrictive terms, “geological scientist” and “geological sciences”, would be more satisfactory to those practitioners who do not consider themselves as geologists but who actually are doing geological work. The Committee also agreed that the model law basically should protect the title “geological scientist”, rather than attempt to regulate the practice of geology. Mr. Gardiner pointed out that regulation of practice would be more likely to invite jurisdictional disputes than would title protection. (Note: This action was reversed after consultation with counsel; see transcript of meeting of 11-20-64).

5. Following a ten-minute recess, the Committee considered the merits of providing for a training or apprentice grade in the model law. Mr. Finley said that a geologist who has just received a BS or AB degree cannot be considered a professional and that the Civil Service Commission now recognizes the grade of “engineer-in-training”. Dr. Deere asked about the time required to attain professional status. Mr. Beebe said that a qualifying examination might be necessary, but that it should not be so difficult as to effectively produce a closed shop. Dr. Branson was concerned about the accreditation program implied in the model law. The accreditation program of regional associations may be superficial, Dr. Krauskopf remarked, but the alternatives are worse, in his opinion.

6. Mr. Tucker observed that if the model law contains a statement to the effect that nothing in this law prevents engineers from doing what they may now lawfully do, then the law should not otherwise restrict the practice of geology.

The meeting recessed at five p.m., to reconvene in the same room at 9 a.m. on November 20.

**Items from the first TPG, November 1964**

**THE PROFESSIONAL GEOLOGIST**  
Newsletter of the American Institute of Professional Geologists  
P. O. Box 836, Golden, Colorado 80402  
Volume I - Number 1 - November, 1964

**Officers**  
President, Martin Van Couvering, Pasadena, CA; Vice President, Allen C. Tester, Iowa City, IA; Secretary-Treasurer, Thomas R. Beveridge, Rolla, MO; Editor, Frank B. Conselman, Abilene, TX; Chairman, Advisory Board, Ben H. Parker, Denver, CO; Executive Committee, Fred N. Earll, Butte MT; Executive Committee, Adolph Honkala, Richmond, VA; Executive Committee, William A. Newton, Denver, CO; Executive Committee, Howard E. Rothrock, Coleman, TX.

**First AIPG Section Organized**

The first section of AIPG was organized on September 26, 1964 at the Commodore Perry Hotel in Austin, Texas, at a meeting of Texas AIPG members and applicants attended by President Van Couvering.

The Texas Section at this meeting adopted a Constitution and Bylaws and elected the following officers: Michel T. Halbouty of Houston, President; A. Wayne Wood of San Antonio, Vice-President; James A. Wheeler of Houston, Secretary-Treasurer; Howard E. Rothrock of Coleman, interim Past-President and Delegate to the National Advisory Board; Frank B. Conselman of Abilene, Charles F. Passel of Fort Worth and John S. Rives of San Antonio, Executive Committee members; Richard R. Bloomer of Abilene, Chairman of the Screening Board; and Thomas D. Barber of Houston, Chairman of the Public Information Committee.

**AIPG Formally Applies for AGI Membership**

AIPG, by unanimous vote of its Executive Committee, has submitted formal application for membership in the American Geological Institute, following unofficial exploratory discussions between the two organizations.

Action by AGI on the AIPG application will probably be forthcoming before the end of the current year. AIPG is the only national geological society devoted to the professional aspects of all phases of geology, and as such would serve as a complement to the primarily scientific societies of which AGI is now composed.

**Editorial**

“The beginnings of all things,” observed Cicero quite a few years ago, “are small.” With this small beginning, AIPG launches *The Professional Geologist*, the first of what we fondly hope will be a long and constantly improving series. This is Volume I, Number 1, and perhaps it should be preserved as a standard of reference for future progress — a sort of zero milestone to measure our advance in years to come.

Like *The Professional Geologist*, AIPG is itself new and formative. As an Institute, we are dedicated to the advancement of professional geology. Surely our profession needs a constructive program of self-analysis and self-help in these difficult times. In fact, professional geology is currently in flux, and what it eventually may become will, to a large extent, be determined by what we elect to make it. There is challenge a-plenty in our present situation.

*The Professional Geologist* will even more directly be what we choose to make it. It belongs to the members of AIPG, and has no function other than to serve their best interests, as
they are construed to be. Specifically, this is your magazine, and will be what you make it — a sort of audience-participation journal. Write us and tell us what you like, and what you don’t like, what you believe and what you need, and within our limitations we shall do our best to provide an outlet for your ideas. We shall try to give you as much of grass-roots professional origin as our budget will permit.

Sir Francis Bacon wrote, “I hold every man a debtor to his profession.” Perhaps AIPG will provide us with a means of discharging this debt. We seem to be overdue.

F. B. C.

Colorado Organizes AIPG Section

Colorado became the second state to create an AIPG Section, as a result of action of a founding meeting of 32 AIPG members at the Petroleum Club in Denver, Colorado, on October 15, 1964.

The following officers and executive committee men were elected: W. W. Mallory, President; R. Dana Russell, Past-President; Jack W. Knight, Vice-President; Keith M. Hebertson, Secretary-Treasurer; Dudley W. Bolyard, Harry W. Oborne and Charles S. Robinson, Executive Committeemen.

The Colorado Section will become operational as soon as its Constitution and Bylaws have been approved by the Executive Committee of AIPG.

AAPG Certification Plan Approved

The American Association of Petroleum Geologists has announced the results of its membership referendum on certification, as proposed in the plan approved by the Business Committee at the Toronto convention of AAPG. Of approximately 12,615 eligible voters, 5,994 votes were tabulated, or 47.5 percent of the electorate.

The AAPG program was endorsed by 4,094 members, or approximately 68 percent of those voting, and 32.4 percent of the eligible electorate. Opposed were 1,900 members, or approximately 32 percent of those voting, and 15.1 percent of the eligible electorate.

A qualified member of AAPG upon application and approval will be certified by AAPG as Certified Petroleum Geologist.

President’s Page

With this issue, The Professional Geologist comes into being as the voice of the profession in all matters pertaining to its professional welfare. There are other voices, too, but they do not speak for the whole field in the same way as the American Institute of Professional Geologists aims to. There are many societies covering the scientific aspects of geology; here the emphasis is exclusively on strengthening the profession and increasing its public standing.

Respect is something that cannot be bought or solicited; it has to be earned by the right kind of performance. But competent performance alone has not proved sufficient to provide geology with the professional and public standing it deserves. However, we cannot afford to despair. There are many geologists in every field who are willing to work for the benefit of their profession, and they must band together because “in union there is strength.” That is why AIPG was formed—to avoid the scattered, and sometimes futile, efforts of small groups, working against tremendous odds. How else can the influence of 20,000 geologists be felt in a population approaching 200,000,000? When we consider that there are approximately 800,000 engineers, for example, it is clear that our work is cut out for us. AIPG has already established liaison with many of the scientific societies for this purpose.

The rest of the population is not necessarily opposed to us, but they can, and do, create problems for us. Probably the vast majority have only a hazy idea of the meaning of geology and geologists—if they know that we exist at all. And this goes for a sizeable proportion of legislators and jurists, who sometimes have direct control over our lives and activities. It is quite obvious that there will be times when we will have to fight for our rights—and AIPG was created for that purpose, too.

AIPG will spend a considerable part of its efforts on the problem of public awareness, informing the rest of the population of what geology means to it—how it enters into the lives of all the people, and how geologists can help them, particularly in the way of preventing mistakes, misfortunes and even catastrophes. We plan to coordinate our efforts in this field with those of AGI (assuming that our application for membership in AGI will be approved).

One problem which causes trouble complete disproportionate to the number of individuals involved is that of unethical practices. The vast majority of geologists are decent, respectable individuals, but the few unethical ones give the entire profession a bad name. And, unfortunately, the general public is frequently unable to distinguish between the professional geologist and the individual, with no geological training, who misrepresents himself as being a geologist. I believe the best tools available to us in combating these related problems are publicity and education. In future issues, I hope to enlarge on this theme.

Another area in which AIPG can be of great service is in connection with regulatory legislation. At the national level, AIPG does not take a stand either for or against State registration of geologists. We have been most effective, so far, in killing proposed State legislation that would have been detrimental to the profession as a whole.

On the other hand, we have participated in the preparation of a model law that can be used where desired by the profession, and which incorporates the idea of reciprocity, as between States, in licensing geologists.

In my opinion, the importance of certification recently has been exaggerated out of all proportion to the other problems, confronting the profession, to which AIPG will address itself. Considering certification, as distinguished from State registration, AIPG gives each of its members, upon admission, a membership card stating that he (or she) is a Certified Professional Geologist.

AAPG has recently voted to certify those members who desire it, and who meet its qualifications, as Certified Petroleum Geologists. Despite rumors that have been circulating in some areas, there is no conflict between the sponsoring societies. The relationship between the two executive...
boards has been very friendly, and we have every reason to believe that there will be continued cooperation between the two organizations. In like manner, it is the intention of AIPG to cooperate with every other geological society in our efforts to achieve our stated purposes.

M. V. C.

California Section Established

The California Section AIPG was established on October 17, 1964 at an organization meeting held in Los Angeles. At this meeting 34 members and applicants adopted a Constitution and Bylaws subject to the approval of the AIPG Executive Committee and elected officers and other officials.

Officers elected were: Arthur O. Spaulding, President; Elmo W. Adams, Advisory Board Delegate; Siegfried Muessig, First Vice-President; John E. Kilkenny, Second Vice-President; and Bennie W. Troxel, Secretary-Treasurer.

District representatives elected at the founding meeting were: Paul A. Witherspoon, Bay Area; Vern C. Jones, Sacramento Valley; C. M. Carson, Coastal Area; Wesley G. Bruer, San Joaquin Valley; Henry H. Neel, Los Angeles Basin; and Richard L. Threet, San Diego Area.

Graham B. Moody was chosen as Chairman of the Screening Committee. Other elected members of this important committee were Willard J. Classen and S. W. Totten from the Bay Area; Robert H. Paschall and Sargent M. Reynolds from the Sacramento Valley; Thomas L. Bailey and John F. Curran from the Coastal Area; Peter W. Gester and James C. Benzley from the San Joaquin Valley; and Franklin J. Weishaupl, H. W. Sullwold, Jr. and John H. Wiese from the Los Angeles Basin.

The Plight of The Earth Scientist

The unfortunate position in which many qualified geologists and geophysicists have found themselves during the present exploration depression apparently has now attracted the attention of figures outside of the profession and outside of the mineral industries.

U. S. Senator Peter H. Dominick of Colorado has recently inquired of Executive Committeeman William A. Newton, Chairman of AIPG's Public Information Committee, with respect to a specific case of which he had knowledge. The geologist involved represented an individual of unquestioned ability and character, who had been reduced to a hardship situation by current economic conditions.

In a reply to Senator Dominick dated September 2, 1964, Mr. Newton wrote as follows:

"The plight of many earth scientists is of deep concern to our profession and should be of concern to our Government. Not only are earth scientists leaving the profession, but college majors in earth science have dropped to an alarming degree.

"These trained and educated men are walking the streets in search for work while our Government plans a billion-dollar anti-poverty program concentrated in an area where from personal experience I know many of the recipients-to-be don’t want to work and have scarcely experienced same in their lifetime.

"In searching for the root of the problem which confronts the geologic profession, and especially the oil industry which provides a livelihood for a great number of geologists, I conclude that the basic trouble is that the Independents are being squeezed out of existence. The result is that domestic employment is reduced, exploration and exploitation are curtailed, and discoveries and additions to reserves are slowed. If we are to believe the predictions for future energy demands in this country, just the opposite trend should be taking place for the future welfare and safety of our nation.

"Why are the Independents being squeezed out of business? Fundamentally, I believe the cause is excessive importation of foreign oil. The result is that profits on domestic crude are reduced to such a low factor that the incentive to reinvest in exploration for new supplies is curtailed; ‘volume’ becomes the sole criterion of success and only the major producers, refiners and marketers can survive under the economic impact of our foreign oil import program. Many strong Independents in the Rocky Mountain area have gone out of business during the past 10 years via the merger and sale routes, and others will follow as long as excessive oil imports affect the marketing practices of the industry as they presently do.

"Another governmental factor which strongly affects the health of our petroleum industry is the regulatory attitude of the Federal Power Commission toward gas producers and transmission companies. The ‘climate’ is often anything but encouraging (El Paso Natural Gas Company abandoned their successful exploration department) and the excessive cost of doing business with and through this Commission is sometimes unbelievable.

"The regulatory powers of the Federal Government on oil imports and through the FPC may seem a far cry from the problem, but I believe not. On the contrary, I believe a more moderate and realistic regulatory climate is the root of the problem which can strengthen the important oil and gas industry, its diversified and numerically important companies and manpower reservoir. Unless steps are taken in this direction we can expect a continuous erosion of competition and trained scientific personnel in this country. Geared as we are to the use of immense quantities of energy from natural resources, such a dependence on foreign supplies in time of war could be disastrous.

"It is my hope that an opportunity will arise for you to influence a course of action in governmental affairs which will truly help a lingering and worsening plight of many good, trained men such as you wrote to me about.”

Letters to the Editor

October 9, 1964

Dear Sir:

The query, “What can AIPG do for the Geologist?” is often heard. The benefits that could be listed for the burgeoning facet of geological professionalism are numerous but of immediate concern is the accomplishment of a handful of dedicated officers and members in less than a year’s time. This record includes three important items: relief from restrictive legislation in California and Louisiana and elimination of a misunderstanding regarding the registration of geologists through AIME. Credit for the first two items should go chiefly to President Van Couvering, Ben Parker and Gordon Atwater and for the last
the geological profession. With the actual existence of the
consider the organization a true high standard and guide for
believe, be an aspiration of geologists.
trier of the fact.
sable to an untrained jury to aid them in their function as the
this legal basis we are experts and our testimony is indispen-
objectives and help, to improve man’s place on earth. We are
foundations for the support of any human endeavor, a build-
seems natural that we have professional standing
recording, in addition to academic degrees, membership in our
scientific societies, and experience. We have already exposed
ourselves, it seems to me, to the alert eye of the registered
attorney, who may ask, are you a registered engineer, — well
then are you a registered or certified geologist?
Again, I am reminded that we owe a service as members
of a profession. A profession that is called on for specialized
opinions and help, to improve man’s place on earth. We are
asked to give method, purpose and meaning to many aspects
of human endeavor and the future of man. In court we owe a
service by drawing a conclusion, based on facts known
through education, experience and personal observation. On
this legal basis we are experts and our testimony is indispen-
sable to an untrained jury to aid them in their function as the
trier of the fact.

Professional recognition by certification should, I
believe, be an aspiration of geologists.

I have studied the Constitution and Bylaws of AIPG and
consider the organization a true high standard and guide for
the geological profession. With the actual existence of the
organization, I still try to have the geological profession rec-
ognized by State Legislators in the North Dakota Legislative
Session this winter. This could be the first step in achieving
favorable legislation. If you have any suggestions for presen-
tation please send them and I will do my best to gain recog-
nition for The American Institute of Professional Geologists.

“Our engineers (North Dakota State Highway
Department) are proud of their Certificates of Registration and
have them framed on the wall by their desks. When they
are registered they receive a salary increase of $25 a month.
This is a good incentive and registration is not limited to col-
lege graduates, provided the applicant qualifies by experience
and examination. These are details commonly known and I
say them with the hope that we can upgrade our image and
elevate our status as geologists among the other professions.
Our requirements and standards are certainly strong and
among the highest.”

Gordon L. Bell

October 14, 1964
Dear Sir:
I should like to see AIPG undertake, among other things, the following:
1. To combat the growing tendency in state legislatures toward
compulsory wildcat-type legal registration as engineers in order
to practice as geologists.
2. To substitute, instead, where state legislatures demand regula-
tion, laws drawn up by geologists and standardized among all 50
states as an aid to nation-wide reciprocity.
3. Protection of the public and geologists themselves from unethi-
cal practices by other geologists or by employers.
4. Recognition of geology as a profession by the courts and hence
recognition of geologists as qualified expert witnesses in their
field.
These objectives, and others as the need for them may arise, seem
worthwhile to me.

Very truly yours,
W. W. Mallory
Denver, Colorado

Professional Opinion

“I have always listed myself as a Professional Geologist.
Geology is my profession and I have practiced my profession
successfully, and for the good of my fellow men. I feel that we
geologists owe a service of safety where our work includes
foundations for the support of any human endeavor, a build-
ing, bridge, highway, waterway, or any structure.

“It seems natural that we have professional standing
recorded, in addition to academic degrees, membership in our
scientific societies, and experience. We have already exposed
ourselves, it seems to me, to the alert eye of the registered
attorney, who may ask, are you a registered engineer, — well
then are you a registered or certified geologist?

“Again, I am reminded that we owe a service as members
of a profession. A profession that is called on for specialized
opinions and help, to improve man’s place on earth. We are
asked to give method, purpose and meaning to many aspects
of human endeavor and the future of man. In court we owe a
service by drawing a conclusion, based on facts known
through education, experience and personal observation. On
this legal basis we are experts and our testimony is indispen-
sable to an untrained jury to aid them in their function as the
trier of the fact.

“Professional recognition by certification should, I
believe, be an aspiration of geologists.

“I have studied the Constitution and Bylaws of AIPG and
consider the organization a true high standard and guide for
the geological profession. With the actual existence of the
Professional Paragraphs

Frank C. Foley (CPG 161) is the new president of the American Association of State Geologists, succeeding Earl F. Cook (CPG 113). Ian Campbell (CPG 19) is the Secretary-Treasurer, and Robert O. Vernon (CPG 164) is Editor.

Thomas C. Clements (CPG 186) has opened a consulting office in Los Angeles. He recently retired as Chairman of the Geology Department at USC.

George C. Hardin, Jr. (CPG 77) has moved from Houston, Texas to Oklahoma City.

Robert J. Weimer (CPG 98) has been named head of the Department of Geological Engineering at the Colorado School of Mines. He recently completed a Distinguished Lecture tour for AAPG.

Howell J. McGarr (CPG 155) has moved from San Angelo, Texas to Redding, California.

Theodore A. DeBrosse (CPG 82) is serving as President of the Ohio Geological Society.

William C. Hayes (CPG 125) has been appointed State Geologist for Missouri. He replaces Thomas R. Beveridge (CPG 3), who resigned to accept a position of Professor of Engineering Geology at the University of Missouri at Rolla.

Orlo Childs (CPG 146) is a candidate for the presidency of AAPG, an office currently held by Grover E. Murray (CPG 94).

Vito A. Gotautus (CPG 34) has opened a consulting office in the Oil Center, Lafayette, Louisiana.

Elmo W. Adams (CPG 55) is the new president of the Northern California Geological Society, succeeding L. Kenneth Wilson (CPG 122).

Michel T. Hallbouty (CPG 12) has been elected a vice-president of the Texas Independent Producers & Royalty Owners Association.

First Annual Meeting, Denver, 1964

AIPG’s first Annual Meeting was held at the Denver Hilton Hotel November 13-14, 1964. William A. Newton, CPG 8, was the General Chairman. President Martin Van Couvering remarked, “It was very heartening to see the obvious enthusiasm of the members. The first edition of The Professional Geologist (TPG) newsletter was distributed, and Editor Frank Conselman received many well-deserved compliments on it.”

Over the years, Annual Meetings of the Institute now consist of a corporate business session, a technical session at which individuals present papers, and a symposium at which invited speakers present talks related to professional geology, and short courses are often presented. The annual banquet and field trips also are included as a part of these meetings. Spouses’ activities are scheduled.

Following are President Van Couvering’s general letter of invitation, the first Annual Meeting Program, and Martin’s summation of the meeting. The extensive minutes are reproduced in Appendix 9.

[First Annual Meeting, Denver, 1964]

First Annual Meeting, Denver, 1964

AIPG’s first Annual Meeting was held at the Denver Hilton Hotel November 13-14, 1964. William A. Newton, CPG 8, was the General Chairman. President Martin Van Couvering remarked, “It was very heartening to see the obvious enthusiasm of the members. The first edition of The Professional Geologist (TPG) newsletter was distributed, and Editor Frank Conselman received many well-deserved compliments on it.”

Over the years, Annual Meetings of the Institute now consist of a corporate business session, a technical session at which individuals present papers, and a symposium at which invited speakers present talks related to professional geology, and short courses are often presented. The annual banquet and field trips also are included as a part of these meetings. Spouses’ activities are scheduled.

Following are President Van Couvering’s general letter of invitation, the first Annual Meeting Program, and Martin’s summation of the meeting. The extensive minutes are reproduced in Appendix 9.

July 28, 1964

Dear Fellow Geologist:

Since you have expressed an interest in the American Institute of Professional Geologists, we are enclosing herewith a report which will bring you up to date on one phase of its activities.

Interest in AIPG continues to be widespread, as evidenced by the fact that over 1,200 requests for information have been received. We have been particularly pleased with the high calibre of geologists who have applied for membership. These include applicants from 14 of the AGI Member Societies, which insures the broad experience and wisdom of geologists in diverse specialities. The member and application lists are beginning to take on the character of “Who’s Who in Geology”. Among the present members or applicants whose applications are being processed are the President, Vice President and Secretary-Treasurer of AAPG; at least two past presidents and four past vice presidents of AAPG, two past presidents of AGI, and a past president and at least four councillors or past councillors of GSA.

The enclosed list of some of the AIPG officials will show you from whom in your vicinity further information may be obtained. If you are seriously considering joining AIPG and wish to be a Charter Member, may I suggest that you submit your application at the earliest opportunity? We find that, generally, it takes a few weeks to receive all of the sponsor and reference letters; then approximately two more weeks at least for the screening process to be completed and the necessary signatures obtained from the Executive Committee. As stated in the Bylaws, Charter Membership is limited to those “approved by the Executive Committee prior to the Annual Meeting held in 1964.”

Our Annual Meeting is scheduled for November 12-14, at Golden, Colorado, and we extend to you a cordial invitation to attend.
Yours very truly,

Martin Van Couvering
President

MVC:

Program for the First Annual Meeting of AIPG
November 13-14, 1964
Denver Hilton Hotel, Denver, Colorado
AIPG Business Session

Friday, November 13, 1964
Silver Room, Denver Hilton Hotel

Presiding: Martin Van Couvering, President
Greetings: W. A. Newton, General Chairman
The State of the Institute: Martin Van Couvering, President
Financial Report: Thomas R. Beveridge, Treasurer
Membership Report: Allen C. Tester, Vice-President
Recess
Editor’s Report: Frank B. Conselman, Editor
Proposed Model Law, Presentation and Discussion: Warren Beebe, Chairman, Legislative Coordinating Council

Luncheon - Gold and Century Rooms
Report of Advisory Committee: Ben H. Parker, President
Report of Public Information Committee: W. A. Newton, Chairman
Recommendations of Executive Committee for Modification of By-Laws: Allen C. Tester
Recess

Member’s Forum on Institute Policy and Activities: Frank B. Conselman, Editor - Leader

Friday Evening, November 13, 1964
Social Hour - Assembly I
Dinner - Junior Ballroom

Presiding: Orlo E. Childs, President, Colorado School of Mines


Saturday, November 14, 1964
General Session - Assembly III

Presiding: Ben H. Parker

Morning Program Theme
Future Direction of Growth and the Geologic Man-power Requirements in:
Petroleum and Natural Gas
James Donald Weir, Chief Geologist, Standard Oil Company of California, San Francisco

Metals
James O. Harder, Manager of Operations, Homestake Mining Co., Lead, S. Dakota
Recess

Engineering Geology
Richard H. Berry, Engineering Geologist, Alexandria, Virginia

U. S. Geological Survey

William Thurston, Staff Geologist, Office of the Director, U.S.G.S., Washington, D.C.

Questions and Discussions

Luncheon - Denver and Spruce Rooms

Afternoon Program Theme
Inter-Professional Round Table Conference on Development and History of Standards for Professional Practice

Presiding: W. W. Mallory
American Medical Association

Leo E. Brown, Asst. to the Executive Vice-President, AMA, Chicago

American Bar Association

Richard M. Schmidt, Jr., Past President, Denver Bar Association, Denver

American Institute of Architects

R. K. Ayers, Executive Secretary, Colorado Chapter, AIA, Denver

Colorado State Board of Registration for Professional Engineers

Lawrence M. Robertson, Chairman, Denver

Questions and Discussion

Preliminary Report on AIPG Annual Meeting
November 18, 1964

A most successful meeting was held at Denver November 13 and 14. Members and applicants from about 20 states attended. It was very heartening to the Executive Committee to see the obvious enthusiasm of those present. This widespread support is evidenced by the increasing number of applications being received (over 600 by the start of the Annual Meeting). These applications represent every field of geological activity, and we have been very pleased by the offers of cooperation from the scientific geological societies. For example, in the November Newsletter to members of the Rocky Mountain Association of Geologists, President J. W. Rold states as follows:

“During the many discussions on A.A.P.G. certification and AIPG, many of us got the feeling that there might be considerable controversy between the fledgling AIPG and the A.A.P.G.’s beginning activity in the field of certification of petroleum geologists. It was heartening, however, to attend an evening meeting at the Durango Convention and hear Grover Murray, Martin Van Couvering and other leaders of both groups pledge the utmost cooperation between the groups and put this feeling to rest.

“I would urge every geologist to examine in detail the purposes and aims of the American Institute of Professional Geologists. It can only fulfill these purposes with the support of a major segment of the profession.”

Two significant changes in the Bylaws were enacted. Within the last month, the Executive Committee has received a large number of inquiries from individuals, in various areas, indicating that they had just learned about the Institute and wished to become Charter Members. Surprisingly enough, some of these inquiries came from California and Texas, where apparently the first knowledge these individuals had of AIPG came from the announcements of the formation of Sections in these two states. However, most of them are from areas where
AIPG has not received much publicity. In order to accommodate these people in their desire to become Charter Members, the membership approved a change in Article II, Section 1 of the Bylaws, extending Charter Membership to geologists whose applications are received at Golden prior to January 1, 1965 and approved prior to March 1, 1965.

Since many of these recent inquiries have come from areas containing only a few AIPG members, the membership also approved a change (in Article II, Section 3, C.) Permitting sponsorship by any full member of a duly recognized scientific or professional society until the 1965 Annual Meeting.

In order to provide continuity during this formative period, the membership voted to continue the present Executive Committee in office for another year. A Nominating Committee has been appointed to provide a slate of two candidates for each of the four elected offices. After the election, to be held next summer, the new officers will assume office at the close of the 1965 Annual Meeting.

At the Executive Committee meeting, formal approval was given to the Texas, Colorado and California Sections of AIPG. The Executive Committee also appointed Arthur F. Brunton to serve as Executive Secretary.

The first edition of the Institute newsletter, “The Professional Geologist”, was distributed at the meeting and Editor Frank Conselman received many well-deserved compliments on it. The next edition will be mailed in January and will include a more detailed report on the Annual Meeting.

Yours very truly,

Martin Van Couvering
MVC:im

AIPG-NAGT Symposium at GSA

At the GSA Annual Meeting in Miami November 1964, AIPG joined NAGT (National Association of Geology Teachers) to sponsor a symposium titled “Is Education for Applied Geoscience on Target?” Most of the eleven speakers were CPGs. The speakers and their topics were:


James Dunn, CPG 1347, Adjunct Professor Rensselaer Polytechnic Institute and Chairman Dunn Geoscience Corporation (future president of AIPG). “Compilation of Results of an Educational Questionnaire to Professional Geologists”

Samuel Ellison, CPG 429, University of Texas. “Where is Teaching Taught in Graduate Geoscience Curricula?”

George Kiersch, Cornell University. “Educational Background for Environmental/Engineering Geology Practice”

Vincent Murphy, Weston Geophysical Engineers, Inc. “Shallow Zone Exploration’s Requirements and Responsibilities”


James Balsley, USGS. “Applied Geoscience in Land-Use Decision-making”

David Stevenson, University of Wisconsin. “Problem Solving and Decision Making: Part of a Geoscience Education”

Howard Pincus, CPG 65, University of Wisconsin. “Better Prepared for What?”


Grover Murray, CPG 94, Texas Tech University (future president of AIPG). “Education or Vocation?”

John Haun’s (CPG 136) hard-hitting abstract was available, and is reprinted here:

"EDUCATION OF THE PROFESSIONAL GEOLOGIST"
By John D. Haun
Colorado School of Mines
Golden, Colorado 80401

Professors of geology should recognize that most of their students will not become professors! The aim, therefore, should not be to educate students to become mirror images of the professors. Education should emphasize principles, technical skills (including report writing, and field and laboratory techniques), ethical implications of the profession, the need for post-graduate education, the necessity for life-long study, and the development of intellectual curiosity and mental discipline. Industry has a responsibility as great as that of the university in the education of professionals.

Education for professional practice requires industrially experienced faculties who have maintained contact with industrial problems. Professors who are conversant with the needs, organization, and problems of professional employment are better prepared to instill in students the dedication, interest in practical applications, and ethical requirements necessary to a successful industrial career.

Most undergraduate students are oriented naturally toward the practical aspects of geology and industrial careers. This interest should be nurtured rather than diluted by the academically oriented professor. Professionally competent geologists, however, are also scientifically competent and educators in engineering and other practically oriented schools should not lose sight of this fact.

Initial student selection is as important as faculty selection. Outstanding students become outstanding graduates despite the system.

Continuing Correspondence and AAPG/AIPG Agreement

The following letters give a sense of the conflict and final compromise between the officers of the well-established AAPG and the fledgling AIPG in 1964-65, concerning registration of geologists. A major meeting took place on April 25,
1965 in which SIPES (Society of Independent Professional Earth Scientists) was invited. AAPG President Grover Murray, CPG 94, presided in an even-handed manner. Then three months later, on July 22, 1965, a Memorandum of Agreement was signed by the new President of AAPG Orlo Childs, CPG 146, and AIPG President Martin Van Couvering. For the historical record, five letters written prior to the Agreement are produced here, from Grover Murray, Wayne Wood, Martin Van Couvering, William Newton and Michel Halbouty:

[Louisiana State University Letterhead]

March 23, 1964

Mr. Martin Van Couvering
1560 Knollwood Terrace
Pasadena, California

Dear Martin:

I just noticed the announcement in the GSA Bulletin concerning the AIPG. As a member of the Council of the Geological Society of America, I am pleased that said organization has seen fit to cooperate to the extent of publishing the announcement of the formation of the Institute.

As President-elect of the American Association of Petroleum Geologists, I have, of necessity, been giving the matter of certification and registration considerable attention. As I told you, Ben Parker, Frank Conselman and others in Midland, I see no basic conflict between the AAPG and AIPG. Unless there is some real modification of the Institute's stated purposes, it is my opinion that the Institute and the Association should be able to work closely together in mutual harmony to advance the science and profession of geology. In fact, it would be my considered judgment that the AIPG nicely complements the certification activities of the Association by its efforts to coordinate professional policies and standards at the national level for all categories of geologists.

I wish you and the other officers of the Institute much success in your undertaking, and I hasten to add my assurances that I will attempt to work in any way possible to insure mutually beneficial cooperation between the Institute and the Association. In support of this effort, I have written the Institute requesting forms for application for membership in the AIPG.

With best personal regards,

Sincerely,

Grover E. Murray
President-elect, AAPG
GEM:pm

[AWW Letterhead]

July 9, 1964

Mr. Edward A. Martin
Petroleum Publishing Company
P. O. Box 1260
Tulsa, Oklahoma

Dear Mr. Martin:

In answer to your inquiry as to our Society's stand on certification I will begin by giving some background on the subject relative to our Society. One entire meeting was devoted to hearing Mr. Tom Philpott, outgoing AAPG Vice President, present the AAPG position on the matter. His presentation was then followed by a rebuttal by Mr. Roy H. Guess who was closely associated with the inquiry into certification and registration made by AGI. There was then a long discussion between members of the Society and the speakers.

Later, Mr. Martin Van Couvering, President of AIPG, met with the officers, former officers, and senior members of the Society. It is significant to note that everyone present at this meeting is an active member of AAPG. Following this meeting, I as President, placed the inclosed letter in our Bulletin in order to acquaint the membership with AIPG. Following publication of the letter a post card ballot was mailed to the membership (see inclosure). The results were as follows:

<table>
<thead>
<tr>
<th>Responses</th>
<th>124</th>
</tr>
</thead>
<tbody>
<tr>
<td>In favor of voluntary certification</td>
<td>120</td>
</tr>
<tr>
<td>In favor of certification by AIPG</td>
<td>74</td>
</tr>
<tr>
<td>In favor of certification by AAPG</td>
<td>37</td>
</tr>
<tr>
<td>Expressed no preference</td>
<td>9</td>
</tr>
<tr>
<td>Opposed to voluntary certification</td>
<td>4</td>
</tr>
</tbody>
</table>

Before the ballots were in, the Society was addressed by current AAPG Vice President W.H. Curry who strongly urged certification by AAPG.

Our membership, including a former AAPG President, generally felt that AAPG should remain a scientific society. In fact it was pointed out by members long active in AAPG affairs that in order for the AAPG to become involved politically, the charter would need revision and the Association could lose its tax exempt status. Furthermore, it was felt that after passing the buck on the certification matter for 17 years, AAPG should cooperate with a strong professional society, which was set up primarily to aid the profession.

Some of us feel that the title “Certified Petroleum Geologist” as proposed by AAPG is merely an attempt to keep up with AIPG which purports to represent all geologists, whereas AAPG is limited to petroleum geologists. We also are of the opinion that outgoing President Sproule jumped the gun when on April 7, 1964, he sent the AAPG position on certification to “All State and Other Registration Bodies of North America”. This was done before the business meeting at Toronto in May, and long before the balloting to begin July 20.

On the other hand, AIPG has already demonstrated an awareness of the political scene by aiding in the delay of mandatory registration in two states. Instead of a sideline, many of us are convinced that the professional status of geologists is the full time occupation of AIPG. AIPG is prepared to go much further than mere certification. In time the legislative committee plans to draft a set of uniform standards so that certification or registration will have equal status in all the states. This will require lobbying and other political activities which AAPG has no intention of doing.

We feel that there is room for both organizations; AAPG for the scientific side and AIPG for the professional.

Very truly yours,

SOUTH TEXAS GEOLOGICAL SOCIETY

A. Wayne Wood, President

AWW:rr

cc: Dr. Grover Murray
    Baton Rouge, Louisiana
    Mr. Martin Van Couvering
    Pasadena, California

[AIPG Letterhead]

July 15, 1964

Mr. A. Wayne Wood
Box 2641
San Antonio, Texas

Dear Wayne:

Your correspondence with the Oil & Gas Journal proves beyond question what a valuable asset you are to AIPG. I was thrilled at the way you dished it out. You stated the case so concisely and so effectively!
Your letter appearing in the Journal will undoubtedly have a profound effect upon many of the AAPG members, particularly in Texas, where we are most concerned.

I cannot tell you how much I appreciate your help. It is a great feeling to know that we have a strong man working for the cause in a strategic area, where you can be so much more effective than I possibly could.

Many thanks,

Martin Van Couvering

MVC:iv

cc: AIPG Executive Committee
    Grover E. Murray
    Michel T. Halbouty
    Edward E. Rue
    William W. Mallory

---

AIPG Letterhead

August 14, 1964

Dr. Grover E. Murray, President
Louisiana State University
Box 16016, University Station
Baton Rouge, Louisiana 70803

Dear Grover:

It is too bad when a man cannot be left in peace, even in far-away Australia, but things keep happening over here, and I am sure you like to keep posted so that you will not be caught "off base" when you return. Also, I wish to implement our previously expressed desire for very close and friendly relations between our societies.

The latest to-do is an invitation from the National Council of State Boards of Engineering Examiners to AIME to help them set up standards for the registration of professional geologists under engineering laws. Well, as usual, we are working as fast and as hard as we can to head off this latest threat to our independence.

Enclosed, also, are some other documents relating to other activities of AIPG. Since your name is mentioned, you should be aware of these.

You may be interested to know that the Texas membership of AIPG is now getting ready to organize themselves into a State Section. I think the only other states that have enough full-fledged members, at this time, are Colorado and California. They have not taken this step, but may be prodded into it by the Texans. It has been previously discussed, but I discouraged it, at this time, on the premise that I would rather have the State Section formed when we have enough members to make it a little more representative of the whole geological fraternity in California. Perhaps I am wrong in that attitude.

AIPG is growing at an encouraging rate, and one of the most gratifying things is the quality of men who are applying for membership. Up till last week, 212 applications had been received and, as of July 24, we had 100 completely processed members. I am delighted to report that Charter Member 94 is Grover E. Murray. Over 1,200 inquiries have been received.

In a recent communication, Warren Beebe was thanking God for people like you and me. He must have had some dealings with individuals that he found a little difficult. Well, I feel the same way about you; that is, I thank God for Grover Murray.

No doubt you would like to have some respite from official cares so I bring this to a close.

Kindest regards,

Martin Van Couvering

MVC:im

Enclosures

cc: Dr. Grover E. Murray
    Box 1837P G.P.O.
    Adelaide, South Australia
    George C. Hardin
    B. Warren Beebe
    Michel T. Halbouty
    Ben H. Parker
    Allen C. Tester
    Frank B. Conselman
    Thomas R. Beveridge
    Edward E. Rue

---

AIPG Letterhead

August 14, 1964

To: National Council of State Boards of Engineering Examiners

It has come to our attention that the National Council of State Boards of Engineering Examiners has asked the American Institute of Mining, Metallurgical and Petroleum Engineers to join in setting up standards for the registration of professional geologists. Our organization is intensely interested in this and as a consequence, letters in this form are being sent to the National Council as well as to officials of the member boards of the National Council.

The American Institute of Professional Geologists, the only national organization of individual geologists representing all branches of the geological profession, respectfully requests that the National Council of State Boards of Engineering Examiners reconsider and deny the registration of geologists until such Model Law is submitted for consideration.

It is unfortunate that a letter addressed to the State Boards by Dr. J. C. Sproule on April 7, 1964 left the impression that geologists in general wish to be registered. Actually, the opposite is true. Dr. Sproule is a Canadian citizen and a resident of Alberta where geologists are registered under a general act covering engineers, geologists and geophysicists. He was President of the American Association of Petroleum Geologists at the time he offered the cooperation of the AAPG in this matter. The AAPG limits its membership to petroleum geologists and those in closely related fields and therefore can speak only for one segment of geologists. The AAPG does not certify professional geologists, although a plan for certification of petroleum geologists is only now being balloted upon by the membership. In our opinion, therefore, Dr. Sproule was premature in his invitation to you; his suggestion was out of order; and his wishes do not necessarily represent the consensus of U.S. Geologists.

The AIPG was founded on a national basis to certify those geologists who can qualify, regardless of the specialty involved. It is the only such organization so constituted and qualified, and therefore speaks for the geological profession as a whole.

The AIPG recognizes that registration of geologists is desired and demanded in some states. It also recognizes that conversely such registration is not desired and is impractical in other states. Through its National Legislative Coordinating Council the AIPG is cooperating with the Professional Standards Committees of the American Geological Institute, the American Association of Petroleum Geologists and others to formulate a Model Registration Law which will be helpful to professional groups in all States desiring registration of geologists.

It is firmly believed that for any registration law to be effective in fulfilling such needs as may exist, it must first be acceptable and backed by the geologists themselves. It therefore should be written by geolo-
gists representing all segments of the profession and not by one branch of geologists only nor by any other group of scientists or practitioners.

The members of the Professional Standards Committees now at work on the Model Law are among the leading geologists in the United States, representing a great diversity of specialization. Their wide representation of geographic location will also contribute to the final draft of a Model Law which we are certain you will want to give great consideration. It is expected that the final draft of their proposal will be available early in 1965.

We therefore urge you to withdraw your request to the AIME to draw up standards for the geologists until such time as you hear from the geologists themselves on the subject of registration.

Respectfully yours,
The American Institute of Professional Geologists
W. A. Newton
Chairman, Public Information Committee

In August 1964, the AAPG membership approved an amendment to the AAPG constitution which provided for the certification of AAPG members by AAPG. Throughout the discussions leading up to the passing of this constitutional amendment, many members expressed the conviction that certification and the related problems of registration should eventually be handled by AIPG or AGI. Since AIPG was less than a year old, it was not believed practical to turn this matter over to a brand new organization with a membership of less than one hundred people. The AAPG Executive Committee recognized that they should move ahead without waiting to see if AIPG jelled, with the thought in mind that later certification procedures in AAPG and AIPG might be combined and that possibly still later all certification procedures could be centralized.

Discussions were held in early 1965 between Executive Officers of AAPG, AIPG, and SIPES as to when and how to achieve unity of certification. A formal Committee on Coordination of Certification was appointed and met at the AAPG New Orleans meeting and made recommendations for standardizing certification.

Acting on these recommendations in July 1965, the AAPG Executive Committee formally requested that AIPG determine the basic geological and ethical qualifications of all who applied for AAPG certification. This attempt to unify the profession for the good of all geologists came under such criticism from a few AAPG members that the Executive Committee rescinded its request.

As can be determined from the foregoing, great amounts of time have been spent by many people in consideration of the problems of professional action in geology. Through all the deliberations there has been one thread of agreement binding the deliberators together—the imperative need for concerted professional action by geologists, preferably through one unifying body.

Mr. Martin Van Couvering, President
American Institute of Professional Geologists
1560 Knollwood Terrance
Pasadena, California 91103

Dear Martin:

I have just finished reading additional correspondence from you concerning the activities of AIPG. I have been particularly intrigued with the latest to-do, that is, an invitation from the National Council of State Boards of Engineering Examiners to AIME to help them set up standards for the registration of professional geologists under engineering laws. I hope that your work during the past month has watered off this latest threat to our independence.

At this time I would like to inquire if, either personally or as President of AAPG, there is anything I can do to assist you in this matter. If so, please advise me by correspondence or speak to me personally if you are present at the meeting of the Rocky Mountain Section in Durango, Colorado the latter part of this month.

Meanwhile, I shall await with anticipation and interest the actions and activities of the AIPG in its efforts to head off this latest threat to independent action and activity by geologists.

With best personal regards, I am
Sincerely,
Grover E. Murray

P.S. Martin, I am still somewhat puzzled and to a certain extent intrigued by the apparent misunderstanding, intentionally or unintentionally, of individuals in both the AIPG and AAPG camps. As far as I am concerned, I can state my own position rather briefly and I hope succinctly. I believe that it is the place of AAPG in this whole matter of professionalism to certify people as petroleum geologists. The rest is up to AIPG. I hope this makes my whole position rather clear in the matter and will put my own feelings and desires as far as aiding organizations involved in clear perspective. If I may assist you in any way, please let me know.

G.E.M.

[Michel T. Halbouty Letterhead]
October 6, 1964
Dr. Grover E. Murray
Box 16016
University Station
Baton Rouge, Louisiana 70803

Dear Grover:

As you have probably been informed, I have been elected president of the Texas Section of AIPG. The Texas Section had its organizational meeting in Austin, Texas last September 26. This is the first section to be organized under AIPG and plans are underway for similar sections to be organized immediately in California and Colorado.

Everyone knows how dedicated I am to AAPG, and, consequently, it is my desire and hope that AAPG and AIPG work together as close as possible in the future.

I am sure that you have been advised that AIPG has made formal application for affiliation with AGI. I am most hopeful that AIPG can count on AAPG’s support in this request. AIPG’s affiliation with AGI may be the step in the right direction that will eliminate many of the problems and overlapping that exist today with certification, registration, professionalism, et cetera. AGI could delegate AIPG to be the professional standards organization representing the entire geological profession and in this manner accomplish what AGI set out to do some years ago. If AGI delegated AIPG to serve in this capacity this action would not preclude other member societies of AGI to certify
geologists in their particular specialties. In other words, for example, AAPG could still certify its members if it desired to continue to do so; yet, AIPG would be available upon request to assist AAPG or its individual members.

In this manner AIPG and AAPG could work together closely in the future not only through AGI but also through their respective executive committees to accomplish whatever is best for the welfare of the profession as a whole. After all it is for the best welfare of the profession that we are all most vitally interested in accomplishing.

With best wishes and personal regards, I am

Most sincerely,

Michel T. Halbouty

MTH/vv

c: All members of AIPG Executive Committee

Memorandum of Agreement Between AAPG and AIPG Regarding Screening of Petroleum Geologists for Certification

Following numerous conferences between members and representatives of the Executive Committee of AAPG and AIPG, the following agreement was reached in a meeting, held July 22, 1965, in the office of Dr. Orlo E. Childs, and attended by the following: Dr. Orlo E. Childs, President of AAPG; Martin Van Couvering, President of AIPG; Dr. Ben H. Parker, member of AIPG Executive Committee; William A. Newton, member of AIPG Executive Committee; and Arthur F. Brunton, Executive Secretary of AIPG.

1. AAPG has requested, and AIPG has agreed, that the screening of all AAPG applicants for certification as Certified Petroleum Geologists shall be undertaken exclusively by AIPG.

2. Application for certification as Certified Petroleum Geologists by AAPG Members shall be made on a form prepared and supplied by AAPG. This application shall be directed to the Tulsa Office of AAPG. Upon receipt of each application, the AAPG-Tulsa office shall open a file for each applicant, and shall assemble the required supporting sponsor and reference letters. When each file is complete, with the required sponsor and reference material, the application and all supporting letters shall be microfilmed at the expense of AAPG. Following microfilming, the original application together with the required supporting material shall be transmitted to the Golden Office of AIPG.

3. Upon receipt of the completed file, AIPG shall undertake
the screening of each applicant in accordance with its normal screening procedure. In those cases where less than five sponsorship letters from qualified sponsors have been transmitted to AIPG with the completed file, AIPG shall, at its expense, require the applicant to submit additional letter or letters of sponsorship, to meet the required AIPG standard of five sponsors. AIPG agrees to make such requests for additional sponsors in letters prepared and signed by an AAPG officer. AIPG agrees to accept the reference letter from an AAPG district or society representative as one of the five required sponsor letters.

4. Upon completion of its screening process, AIPG shall submit, without delay, to Tulsa, the results of its screening, together with its recommendations for or against certification. At this time, the original application and supporting material shall be returned to AAPG for permanent filing.

5. AAPG agrees to hold AIPG, members of its Screening Boards, its officers, and individual members, harmless from claims of damage, slander or libel made by any AAPG member whose application has been screened by AIPG, pursuant to those procedures, so long as the section of AIPG, its Screening Boards, officers and members has been in good faith.

6. As compensation to AIPG for its services in connection with this screening service, AAPG shall pay AIPG $10.00 for each application to be screened pursuant to this agreement. Such payment shall be made at the time the application and supporting material are transmitted to AIPG by AAPG.

7. AIPG shall not be obligated, but shall be permitted, to solicit for membership in AIPG, such AAPG members, screened pursuant to this procedure, as appear suitable to AIPG.

8. AAPG shall be free to obtain at its expense, and to retain, microfilm or other copies of applications and supporting material transmitted to AIPG by AAPG pursuant to this agreement.

9. This agreement shall become effective on August 1, 1965, and shall continue in effect until July 1, 1966, and thereafter until terminated by either AAPG or AIPG, following three months' written notice to the other party.

10. As compensation to AAPG for its services in connection with the screening of each applicant in accordance with its normal screening procedure. In those cases where less than five sponsorship letters from qualified sponsors have been transmitted to AIPG with the completed file, AIPG shall, at its expense, require the applicant to submit additional letter or letters of sponsorship, to meet the required AIPG standard of five sponsors. AIPG agrees to make such requests for additional sponsors in letters prepared and signed by an AAPG officer. AIPG agrees to accept the reference letter from an AAPG district or society representative as one of the five required sponsor letters.

4. Upon completion of its screening process, AIPG shall submit, without delay, to Tulsa, the results of its screening, together with its recommendations for or against certification. At this time, the original application and supporting material shall be returned to AAPG for permanent filing.

5. AAPG agrees to hold AIPG, members of its Screening Boards, its officers, and individual members, harmless from claims of damage, slander or libel made by any AAPG member whose application has been screened by AIPG, pursuant to those procedures, so long as the section of AIPG, its Screening Boards, officers and members has been in good faith.

6. As compensation to AIPG for its services in connection with this screening service, AAPG shall pay AIPG $10.00 for each application to be screened pursuant to this agreement. Such payment shall be made at the time the application and supporting material are transmitted to AIPG by AAPG.

7. AIPG shall not be obligated, but shall be permitted, to solicit for membership in AIPG, such AAPG members, screened pursuant to this procedure, as appear suitable to AIPG.

8. AAPG shall be free to obtain at its expense, and to retain, microfilm or other copies of applications and supporting material transmitted to AIPG by AAPG pursuant to this agreement.

9. This agreement shall become effective on August 1, 1965, and shall continue in effect until July 1, 1966, and thereafter until terminated by either AAPG or AIPG, following three months' written notice to the other party.

Executed at Golden, Colorado, this 22nd day of July, 1965.

American Association of Petroleum Geologists—
By Orlo E. Childs, President

American Institute of Professional Geologists—
By Martin Van Couvering, President

1965
Second Annual Meeting,
Golden, Colorado

The second Annual Meeting was held on October 8-9, 1965 at the venerable Brown Palace Hotel in Denver. Jay G. Marks was the Chairman, and Earl G. Griffith was Program Chairman who collected a formidable group of speakers. The first Annual Meeting Keynote speaker was Michel T. Halbouty, CPG 10, who spoke on Geology for Human Needs. His talk began with “There is no interest to the human race into which geology does not explore or participate in some manner, however remote.” We should trumpet these words. One hundred and fifty-eight members attended. The meeting program is included here, but of importance at that time was the exorbitant cost of $6.00 for the banquet! (See Frank Conselman's objection.) The Banquet speaker was E. L. Winterer of the Scripps Institute of Oceanography who provided a 30-minute movie on what can be seen from a diving saucer.

Also in 1965, AIPG was accepted by AGI as a member society by unanimous vote.

[Letterhead]
August 26, 1965
TO: THE EXECUTIVE COMMITTEE, AIPG

Gentlemen:

I note that the Second Annual Meeting of AIPG includes a banquet on Friday evening. For the second year in a row admission to this banquet costs $6.00 a plate.

In my opinion this is entirely too much, and is above the price scale of many members. I hope we are not setting a precedent which will result in discouraging attendance at these affairs.

Very truly yours,

Frank B. Conselman

Program for the Second Annual Meeting of AIPG
October 8th and 9th, 1965
Brown Palace Hotel, Denver, Colorado

Pre-Meeting Activities
Thursday, October 7

Advisory Committee, 8:00 a.m., Tabor Room
Executive Committee, 1:30 p.m., Tabor Room
Registration, 4:00 p.m., Mezzanine
Reception, 5:30 p.m., Central City Room

Friday Morning, October 8
General Session, Central City Room
Presiding: Jack W. Knight

9:00 Call to Order, Jay G. Marks, General Chairman
9:05 Address of Welcome, The Honorable John A. Love, Governor of Colorado
9:30 The State of the Institute, Martin Van Couvering, President
10:00 Membership Report, Allen C. Tester, Vice-President
10:10 Financial Report, Thomas R. Beveridge, Secretary-Treasurer
10:20 Coffee
10:40 Keynote Address: Geology, For Human Needs, Michel T. Halbouty, President, Texas Section

Editor's Report, Frank B. Conselman, Editor

"The Professional Geologist"
11:25 The Geological Profession and the Mining Industry, 
James Boyd, President, Copper Range Company

11:45 Announcements

12:00 Friday Luncheon, Ballroom A
Luncheon address by John M. Kelly
"Relationships of the Federal Government and the Geological Profession" Introduction by William A. Newton

Friday Afternoon, October 8
General Session, Central City Room
Presiding: Charles Robinson

1:45 Geology and the New Conservation Movement, 
Peter T. Flawn, Director, Bureau of Economic Geology, Texas


2:40 Coffee

3:00 Business Session: Amendments to the By-Laws

4:15 Announcements

Friday Evening, October 8
Ballrooms A and B

6:30 Social Hour

7:30 Banquet, Guest Speaker, E. L. Winterer, Scripps Institute of Oceanography, "Geology from a Diving Saucer", Illustrated with 30-minute film. (Wives, teenage children, and other guests cordially invited)

Saturday Morning, October 9
General Session—Central City Room
Presiding: Eugene M. Shearer

9:00 The Role of Earth Science in Pre-College Education, 
Robert L. Heller, Director, Earth Science Curriculum Project

9:30 The Role of the Geoscientist in the Space Program, 
Peter C. Badgley, Program Chief, Advanced Missions Office of Manned Space Science Programs, N.A.S.A

10:00 Coffee


10:55 Important Trends in the United States Geological

1st Executive Committee 1963-1965
Seated L to R: Allen Tester, Tom Beveridge, Martin Van Couvering, Ben Parker, Frank Conselman.
Standing L to R: William Newton, Howard Rothrock, Adolf Honkala, Fred Earll.
The City of Los Angeles requested AIPG to “undertake a study of the means by which the City of Los Angeles may with the best prospects of success protect its residents from risks, caused by geological hazards,” and the Institute replied that it will be “greatly honored” to do so.

In an exchange of correspondence between the Hon. Samuel W. Yorty, Mayor of Los Angeles, and AIPG President Van Couvering, Mayor Yorty summarized the history of the utilization of geological guidance in engineering geology problems by the City of Los Angeles, but pointed out that “despite the elaborate precautions taken by the City, extensive property damage” had occurred from landsliding. He stated the City would be “particularly pleased to receive suggestions as to how we can ensure the competent practice of geology within this City where the public interest is at stake.”

President Van Couvering advised Mayor Yorty that a local study committee of Certified Professional Geologists, from AAPG, AEG and GSA, will be appointed immediately, and offered to meet with the Mayor for planning discussions.

The correspondence is as follows:

City of Los Angeles Letterhead
July 30, 1965
Mr. Martin Van Couvering, Pres.

Dear Mayor Yorty:

During the past 15 years the population of the City of Los Angeles has grown so rapidly and in such proportions that much of the flatlying and central areas of the City have been densely settled. As a consequence, and for aesthetic reasons also, residents of the City have sought homesites in the more remote portions of the City, usually in the hilly or mountainous regions. The construction of homes and other improvements on such terrain has introduced a new problem of concern to the City, the identification and control of natural hazards, particularly those of geological origin.

In the mid-1950’s the City instituted the novel practice of requiring geological reports in connection with hillside development plans wherever there was danger of geological disturbance. In order to assure the high quality of these reports the City established a board of examiners to evaluate the qualifications of geologists practicing this kind of geology in the City. As an additional precautionary measure the City authorized the employment of geologists in several City departments to review the incoming reports and to pinpoint the areas of outstanding geological hazard. Today the City employs one engineering geologist in the Department of Building and Safety, and several more under the Board of Public Works. The Engineering Geological Qualifications Board meets once a month, and more frequently members of this body convene in a consulting capacity to advise the City on especially acute problems of engineering geology. This composite effort is regarded as the minimum necessary to recognize and control geological hazards within the City of Los Angeles.

Recently, despite the elaborate precautions taken by the City, extensive property damage occurred from landsliding in the Pacific Palisades portion of the City. The area has been investigated for geological hazards in 1961 and has been pronounced suitable for building with the imposition of certain safeguards. The failure of this landslide mass after the early diagnosis of stability gives rise to the belief that perhaps the controls, and indeed the very system, adopted by the City to cope with geological hazards may need strengthening or improvement.

We should be grateful if your organization, which we understand has been founded to elevate and enhance the professional practice of geology throughout the United States, would undertake a study of the means by which the City of Los Angeles may with the best prospects of success protect its residents from risks caused by geological hazards. We should be particularly pleased to receive suggestions relative to how we can ensure the competent practice of geology within this City where the public interest is at stake.

Very truly yours,

Sam Yorty
Mayor

American Institute of Professional Geologists
Post Office Box 836
Golden, Colorado 80402

Dear Mr. Van Couvering:

The Honorable Samuel W. Yorty
Mayor of Los Angeles
City Hall
Los Angeles, California

It was an honor and a pleasure to receive your letter of July 30, regarding the problems of geological hazards within the City of Los Angeles. Such problems are of particular concern to the American Institute of Professional Geologists because one of the primary pur-
poses of AIPG is “to establish standards to insure the protection of the public welfare.”

Such disasters as the failure of the Baldwin Hills Reservoir, the “Good Friday” earthquake in Alaska, with its attendant destruction, and the overtopping of the Vaiont Dam in Italy by a devastating deluge of water, have shown how many geologic hazards still exist in spite of the advances of modern technology. The impact of these events has caused AIPG to set up a Commission on Geologic Hazards for the purpose of providing counsel to those confronted with such hazards. The membership of the Commission is being drawn from a wide spectrum of nationally-known experts.

The national Institute is comprised of State Sections. By this means, those most conversant with local problems can be called into action quickly, to see that the supervision of geologic hazards is in competent hands. Following the disastrous “Good Friday” earthquake, the City of Anchorage appointed a Geologic Advisory Committee, consisting of Certified Professional Geologists, to advise it on urban geologic matters, but this was after the catastrophe. You are to be commended for taking action now.

It happens that, although I am the current national President, I am also a long-time resident of Los Angeles County; so I shall be glad to discuss these matters with you in person as soon as your very heavy schedule will permit. It would be highly desirable for you to make the acquaintance of other members of the Institute too, if the opportunity offers. We are well represented in California; for instance, Dr. Ian Campbell, the State Geologist, was one of the first to join our organization. Our President-elect, Dr. Ben H. Parker of Denver, is another outstanding geologist with whom I should like you to meet, if circumstances will permit.

The Institute will be greatly honored to help the City of Los Angeles with its problems of geologic hazards. Accordingly, I shall immediately proceed to appoint a local study committee of Certified Professional Geologists, from such distinguished scientific societies as the American Association of Petroleum Geologists, the Association of Petroleum Geologists, the Association of Engineering Geologists, and Geological Society of America.

I should like to meet with you at your earliest opportunity to discuss this matter in detail.

Yours very truly,

Martin Van Couvering
President

1966 President Ben H. Parker

Our second president, Ben H. Parker, CPG 5, was a highly respected geologist in Colorado and beyond. He was born in Oklahoma City on November 3, 1902. Ben then obtained his BA in geology in 1924 at the Colorado School of Mines (CSM), then worked for two oil companies from 1924-32 — Marland and Gypsy. In 1932 he obtained his masters at CSM and in 1934 his Ph.D. Ben loved this school, and progressed from Instructor in 1932 to full Professor in 1942 and then its President from 1946-50. In 1939-40 Ben took a leave of absence from CSM and was Assistant Chief Geologist for Argentine Government Oilfields. In 1942 he became Vice President of Frontier Refinery Company, the position he retained until his death.

Surprisingly, in 1949, 15 years after his Ph.D. in geology, Ben graduated Colorado College with a Doctor of Law degree. Ben was elected President of AAPG in 1960 and delivered a prophetic Presidential Address on professionalism, titled “Attributes of the Geology Profession,” which is reproduced in Appendix 14. In the early 1960s, after his teaching career, Ben became President of the Gold Hill Mining and Milling Company, was Chairman of the Board of Directors of Golden State Bank, and was President of the Golden Investment Company. Ben Parker passed away on July 31, 1969. Some of his AIPG highlights are discussed in the following Memorial by his long-time friend Martin Van Couvering.
Memorial to Ben H. Parker  
1902-1969  
By Martin Van Couvering

The closing hours of July brought the shocking news that Ben Parker had been snatched from among us by death. It was unbelievable—but tragically true. The first chapter in the history of AIPG had been closed. AIPG can never again have a comparable period, involving the tribulations, excitements, and satisfactions of building a new institution from the ground up. And Ben Parker was the central figure.

The qualities that made him so outstanding were sagacity, generosity, strength of character, and self-control. There was plenty of turbulence, but Ben kept his composure. His experience as President of Colorado School of Mines, President of AAPG, Chairman of the Board of Trustees of Golden State Bank, and in other positions of responsibility, gave him unusual qualifications for meeting the challenges arising from the creation of AIPG.

He was the unanimous choice of the Steering Committee as first president of AIPG, but he declined that responsibility. After the organization had been set up, it was largely through his insistence that the certificate numbers were assigned in the order of the offices, leaving him with Certificate No. 5, when his should have been No. 1.

But Ben did not need that honor to establish his place in the geological world. In addition to being a Past President of AAPG, he was a Fellow of the Geological Society of America, an Honorary Member of AAPG and of the Rocky Mountain Association of Geologists, and a member of many other societies. His name appears in half a dozen books of the Who's Who type. He was one of the truly great men of the profession.

A touch of nostalgia brings the temptation to reminisce about those stirring days when AIPG took its first faltering steps. Such memories will be shared, particularly by those small band who formed the Steering Committee and the Executive Committees of the first years, as well as by the numerous less conspicuous individuals who gave invaluable assistance.

Ben Parker was Chairman of the Steering Committee that gathered at Oklahoma City in 1963 to break the ground and lay the foundations of AIPG. He was a potenent member of the first four Executive Committees, as Chairman of the Advisory Board and as President. In his presidential address to AAPG in 1961, he had foreseen the need for such an organization as AIPG has become.

Almost every action of AIPG felt his influence. He arranged with the current President of Colorado School of Mines to provide office space for our headquarters at a convenient location and a nominal cost. As an officer of Golden State Bank, he provided a repository for our funds, which he augmented by generous personal contributions. He spearheaded the move to register the title "Certified Professional Geologist." When our house organ, "The Professional Geologist" came into being, Ben Parker designed its attractive format. (The publication was the creature of another member of the Executive Committee, who became its Editor, and who had served as Ben's Vice President in AAPG).

When the need for a paid executive officer became apparent, the names of our present highly successful Executive Director was proposed by another member of the Executive Committee. Like Ben himself, the nominee was a Past President of the Rocky Mountain Association of Geologists. Ben had worked with him and he continued to collaborate closely with him to the end. Ben was Chairman of the Headquarters Advisory Committee, designed to enable quick decisions to be made in emergencies, as well as acting as a counseling body in routine affairs.

Ben was active in trying to increase the membership of AIPG, including the writing of letters to all his former students at the School of Mines. His home state of Colorado was the second to organize a State Section of AIPG, which is surpassed in membership only by Sections in the much more populous states of California and Texas.

These are only the highlights of Ben's career in AIPG. To have known him intimately was one of those rare privileges that life sometimes accords us.

In closing, let us not forget that his mature life was shared with the bride of his youth, the former Elizabeth Thorley. She not only shared it but she had an encouraging and sustaining influence on it throughout. No one could know Betty Parker without realizing this.

The following tribute to one of our most distinguished and influential members, Dr. Ben H. Parker, was prepared by Alvin D. Turquette, CPG 49, and published in the Monthly Newsletter of the Rocky Mountain Association of Geologists in 1966. We endorse and would gladly extend these remarks.

Success and eminence in the business world often overshadow a geologist's professional, scientific and academic accomplishments. Ben Parker's achievements as a geologist and the contributions which he has made to the science and profession of geology merits particular recognition. Dr. Parker's outstanding professional ability in business is recognized by his service as Vice President of Frontier Refining Company since 1942, as well as director since 1951. The Colorado School of Mines, which is internationally known in the field of mineral engineering, was guided by Dr. Parker as President from 1946 to 1950.

"Dr. Parker, an Honorary Member of the Rocky Mtn. Assoc. of Geologists, has been an active member of the American Association of Petroleum Geologists since 1928, has served on many committees, and was President from 1960 to 1961. Ben has been Chairman of the Board of Examiners for Professional Engineers and Land Surveyors for Colorado, and his membership in other professional organizations, such as the Geological Society of America, the American Petroleum Institute and many others, attest to his participation and interests in the advancement in the science and practice of geology. To implement this purpose, he has been instrumental in the formation of the American Institute of Professional Geologists and carries Certificate Number Five. Ben has served as President and Chairman of the Advisory Board. The American Institute of Professional Geologists continues to benefit from Ben's experienced guidance and counsel. The devotion to his chosen profession and his willingness to serve
whenever and wherever needed, are testimony and tribute to Ben’s character.”

__________________________

Speech—“Attributes of the Geologic Profession”

Ben Parker was President of AAPG in 1960. He made his presidential address, which prophetically extolled professionalism, three years before AIPG was founded. His speech is given in Appendix 9.

Excerpts from the President’s Column

By Ben H. Parker

Conceived in the fertile minds of some of our most distinguished colleagues, devised to fill an imperative need, and organized to accomplish for the profession of Geology that which no Geologist or specialty group can do independently—that is the American Institute of Professional Geologists.

With the formation of this new national professional institute, we hope to establish a professional elite which will not only strengthen the profession internally, but will offer to the public a firm set of standards that will insure professional competence and integrity. This is a system that has been used for many years by the engineering, medical, and legal professions, and we believe that the continued growth and importance of geology in everyday life, as well as in developing our natural resources, makes this one of vital significance to geologists and the public alike.

There is already in existence the American Geological Institute, an organization of societies which aims to unify the scientific efforts of all of its member societies, and AIPG is proud to support and to be affiliated with it. But AGI, having no individual Geologists as members, excludes professionalism from its activities. That professionalism is precisely what AIPG is concerned with.

The Constitution of AIPG makes it clear that while the Institute devotes its efforts to the professional status of all geologists it supports the existing scientific geological societies through the requirement that its members hold membership in at least one society which meets the required scientific standards.

AIPG provides that its members be known as “Certified Professional Geologists.” Certification means voluntary self-discipline as distinguished from statutory registration under control of a governmental body. AIPG hopes to achieve the same public recognition and acceptance for “CPG” as has been gained over the years for “CPA” in the accounting profession.

It should be noted that AIPG, at the national level, takes no stand on legal registration or other legislative matters within the province of the individual states; its Legislative Coordinating Council keeps abreast of all aspects of these problems and is prepared to assist, as it has done, the State Sections as may be desired.

Our membership at the end of 1965 stood at 1,093, with 263 applications in various stages of processing. Our roster contains many of the most distinguished names in the various fields of geology, representing a wide geographic distribution. The professional status of present members indicates that AIPG membership is a worthy aim for all who can qualify.

At the time of the founding of AIPG, while privileged to serve as Chairman of its Advisory Board, I said: “With the formation of this new national professional institute, we hope to establish a professional elite which will not only strengthen the profession internally, but will offer to the public a firm set of standards that will insure professional competence and integrity. This is the system that has been used for many years by the engineering, medical and legal professions, and we believe that the continued growth and importance of geology in everyday life, as well as in developing our natural resources, makes this one of vital significance to geologists and the public alike.”

The tremendous strides accomplished thus far by AIPG mark the Institute as the organization prepared and capable to provide leadership for the total profession. Never before has there been a time in which professionalism was so important, nor the necessity for action so imperative. All professional geologists who can qualify and who are willing to subscribe to Institute standards and to participate in its activities should lend their support to the elevation of our profession through membership in AIPG.

With the growth of the Institute to its present position of strength and substantial size, the Executive Committee feels that it is now advisable to make longer range operating plans to assure the continuing welfare of the Institute and its financial responsibility. As a part of such change from temporary to more permanent operational and budgetary planning the income required for Institute operation and professional development must be derived to a greater degree from members’ dues and to a lesser extent from contributions and loans. In other words, the Institute, having progressed through its organizational and early growth periods to a position of mature strength, must operate within a framework created by the support of its own members.

Consequently, after a thorough study of services essential for Institute operation and professional development, your Executive Committee is recommending that dues be increased from $15.00 to $25.00. This represents the minimum amount required to permit operation on a balanced budget without resort to outside sources of income. No other choice appears open and the Executive Committee strongly recommends your approval of necessary Bylaw changes to accomplish this essential requirement for the assumption of Institute financial responsibility. Even with this recommended increase in dues any substantial additions to services performed will necessarily be possible only as income is increased by expanded membership.

So many somewhat contradictory statements have been made about the certification of geologists that I feel some clarification and declaration of need and intent to be in order.

Until relatively recent times, geology was considered as having little real impact on everyday life or as possessing
substantial value insofar as the public welfare was concerned. Geology as an aid in the search for mineral deposits was the first industrial use of the science, and even in that field few laymen realized its full capabilities. Subsequently there has been increasing need for and use of geology in other important works of man, particularly public works and land development and utilization, until geology has come into the public eye, but sometimes, unfortunately, to its detriment.

In many instances in the field of construction of public works and in planning of land development where incompetence has resulted in highly disastrous effects, either geology was not utilized in the planning or its utilization was attempted by those not truly qualified as geologists. The public has had no adequate method of distinguishing between the layman who professes a knowledge of geology for his own personal benefit and the truly competent scientist. This inability of the public to protect itself against the inept and the charlatan has given rise to the demand in many areas for protection of the public through the restriction of practice of geology by licensing or legal registration.

In answer to these demands, states, counties and even some municipalities have taken action or are now considering legal registration of geologists, all with varying standards and areal restrictions. With recognition that registration may be necessary or advisable under some conditions, but with hope of averting the widespread adoption of legal registration and of restoring the geologist to the esteem he deserves, some segments of the profession have turned to certification as a possible solution. This objective was one, but only one, of the purposes for which the American Institute of Professional Geologists was organized.

While a substantial portion of our profession agrees that certification has become a necessity, there is some doubt as to where the responsibility should lie. It seems logical to me that a person should be certified as a professional geologist first and as a specialist subsequently, if at all. Specialization must stand on a firm foundation of general professional proficiency. Certification is a professional action and every geologist certified has a right to expect the ultimate in professionalism from his certifying body. How many of our existing specialty organizations are prepared for a continuing program of professional action? Our Institute is so prepared and indeed concentrates its activities toward professionalism.

Geology has reached a professional crossroads. If it is to maintain the freedom so necessary to the nomadic character of its practice, there must be unity of action in obtaining public recognition and support of a profession wide certification program acceptable as a substitute for legal registration. Surgeons, pediatricians and neurologists must first be licensed as general practitioners; criminal and tax lawyers must first be admitted to the bar for general practice; tax accountants must first be certified as public accountants. Geologists should profit from the long experience of other professions which have learned that general certification is the necessary basis for specialty certification.

Ben H. Parker

Happenings in 1966

AIPG was accepted as a member society of AGI. Sections in Virginia, Wyoming, Pennsylvania and Montana were established, making a total of 14. There were now seven Standing Committees. Michel T. Halbouty, CPG 10, AIPG Advisory Board Member, was elected president of AAPG. He later endowed a Chair in his name to his alma mater Texas A & M University; AIPG 1971 President Robert Berg currently occupies this honored Chair.

1966 Executive Committee

Ben H. Parker, CPG 5, President, Denver, Colorado; James Boyd, CPG 225, Vice-President, New York, New York; Jay Glenn Marks, CPG 48, Secretary-Treasurer, Los Angeles, California; Sherman A. Wengerd, CPG 108, Editor, Albuquerque, New Mexico; Martin Van Couvering, CPG 1, Chairman, Advisory Board, Pasadena, California; Michel T. Halbouty, CPG 10, Advisory Board Representative, Houston, Texas; Neilson Rudd, CPG 131, Advisory Board Representative, Mt. Vernon, Illinois; Arthur O. Spaulding, CPG 29, Advisory Board Representative, Los Angeles, California; and Allen C. Tester, CPG 2, Advisory Board Representative, Iowa City, Iowa.

Dr. Jahns’ Committee Report on L.A. Hazards

As described for the year 1965, President Van Couvering appointed Dr. Richard H. Jahns, CPG 289, to head the new AIPG “Committee for the Geological Environment in the City of Los Angeles.” In January 1966 seven CPG members were selected, and worked on the report which was submitted to Mayor Sam Yorty on August 25, 1966. The following day the Mayor transmitted the report to the City Council. At that time, Art Spaulding, CPG 29, was Petroleum Administrator for the City of Los Angeles, and coordinated the efforts of the AIPG committee with city officials. Art prepared a summary of the committee’s work which is reproduced here, as are Dr. Jahns’ letter of transmittal, Mayor Yorty’s letter to the City Council, and Jahns’ description of hazardous geologic conditions in Los Angeles in the 1950s and 1960s. The complete Jahns Report is given in Appendix 9.

Dr. Jahns to Head Committee to Help Los Angeles

Reported by Arthur O. Spaulding

In January 1966, Mayor Sam Yorty of Los Angeles announced that, at his request, the AIPG had established a committee to study the geological environment of Los Angeles. The Geological Environment Committee, with Dr. Richard H. Jahns, Dean of the School of Earth Sciences at Stanford University, as Chairman, will serve without pay as a public service of the AIPG.

In his request to the AIPG, Mayor Yorty asked for suggestions on how to insure the competent practice of geology within the City wherever public interest is at stake. He reviewed the City’s practice of requiring geological reports with hillside
development plans instituted in the mid-1950's and other steps taken to protect against geological disturbances. In spite of the precautions that have been taken, extensive property damage has occurred from landsliding in Pacific Palisades portions of Los Angeles. The area had been investigated for geological hazards in 1961 and was pronounced suitable for building with the imposition of certain safeguards. The consequent failure of this land mass after such a diagnosis led to the belief that the controls adopted by the City to cope with geological hazards might need strengthening or complete revision.

In accepting Chairmanship of the AIPG committee, Dr. Jahns acknowledged the efforts which have been made by the City of Los Angeles in the interest of the public and public safety. He outlined as principal objectives of the new committee the seeking of the best means for moving toward the logical, immediate, and difficult ultimate objectives, as well as insuring the recognition of all future geologic hazards.

A March progress letter to Mayor Yorty from Dr. Jahns reported that “attention has been focused upon identification of present and potential ‘problem areas’ in Los Angeles, the effectiveness of earlier geological and engineering studies that have been made in these areas, the present divided responsibilities within City Government for determining suitability of building sites, the nature and administration of the City’s grading regulations, and the City’s present procedures for evaluating the qualifications of geologists.”

[The American Institute of Professional Geologists letterhead]

August 25, 1966

The Honorable Sam Yorty, Mayor
City of Los Angeles
180 City Hall
Los Angeles, California 90012

Dear Mayor Yorty:

As members of the Committee on the Geologic Environment in the City of Los Angeles, appointed by the American Institute of Professional Geologists in response to the request you made to the Institute in July 1965, we are pleased to transmit herewith our report to you. This report, embodying discussions, conclusions, and recommendations, represents a careful study addressed to your basic questions of how “the City of Los Angeles may with the best prospects of success protect its residents from risks caused by geologic hazards” and how you and your government “can ensure the competent practice of geology within this city where the public interest is at stake.”

We have met as a group five times during the past months, and between meetings each of us has been engaged in various kinds of “homework” pertinent to our charge. We also have had lengthy discussions, as individuals and as groups, with officials and staff members of the City’s Administrative Office, Department of Building and Safety, Department of City Planning, Department of Public Works, and Office of City Attorney, and several of us have taken special field trips in order to observe current hillside property developments and so-called “problem areas.” Further to broaden the base of our study, we have obtained a sampling of views from responsible civil engineers, engineering geologists, and land developers who have been dealing with elements of ground instability within the City.

All the people with whom we have communicated are themselves deeply concerned with the problems we have been considering, and their many thoughtful, forthright comments and suggestions are much appreciated. We are indebted to the City departments noted above for supplying us with maps, charts, records, and other useful data, and special thanks are due Mr. W. E. Milburn, Chief of the Grading Division, for his compilations of historic records of major ground failures and for his condensation of other pertinent file materials that would have been impracticable for us to seek out in any other way.

Throughout our study we have focused upon the practice of geology as applied to private and public development of the land surface within the City. Because we have considered the land and its geologic problems only within this basic context, we offer neither identification nor analysis of known ground failures, individual hazards or areas of exceptional risk, or correlations between geologic features and past or future disasters. To have become deeply involved with the physical situation itself would have constituted a somewhat presumptive deviation from our charge; the City’s geologic environment will continually demand the best professional efforts of all geologists who deal with it, and it is with the further stimulation, encouragement, and coordination of such efforts that we have been primarily concerned.

We have been privileged to serve the City of Los Angeles as representatives of the American Institute of Professional Geologists, and we hope that our recommendations will be critically examined by you and others who share the responsibilities of the City's government. The committee now awaits discharge, but stands ready to provide any assistance you might request as a consequence of the recommendations we have offered.

Respectfully yours,

Ted L. Bear, CPG 523
Consulting Geologist
John C. Crowell, CPG 169
University of California, Los Angeles
John E. Kilkenny, CPG 59
Union Oil Company of California
Jerome J. O’Brien, CPG 611
Union Bank
Russell A. Paige, CPG 626
U. S. Naval Civil Engineering Lab.

Bennie W. Troxell, CPG 220
California Div. of Mines & Geology

Martin Van Couvering, ex officio, CPG 1
Past President, AIPG

/S/ Richard H. Jahns

Richard H. Jahns, Chairman, CPG 289
Stanford University

[Office of the Mayor letterhead]

Los Angeles, California
August 26, 1966

Council of the City of Los Angeles Honorable Members:

Subject: Committee on Geologic Environment

We are all keenly aware of the misfortunes which have occurred in various portions of our City because of failures resulting from construction in geologically hazardous areas. The problem is of continuing importance. Feeling that the interest and experience of the American Institute of Professional Geologists might well be of valuable assistance in this connection, on July 30, 1965, I addressed Mr. Martin Van Couvering, President of the American Institute of Professional Geologists, requesting his organization to undertake “a study of the means by which the City of Los Angeles may, with the best prospects
of success, protect its residents from risks caused by geological hazards." I also asked for "suggestions relative to how we can ensure the competent practice of geology within this City where the public interest is at stake." Mr. Van Couvering immediately responded and appointed a study committee for this purpose consisting of Certified Professional Geologists headed by Dr. Richard H. Jahns, Dean of the School of Earth Sciences at Stanford University.

Said committee, titled "The Committee on the Geologic Environment in the City of Los Angeles" has investigated extensively in the course of this assignment, both in discussions with responsible officials and staff members and in field observation, as well as research into existing geological conditions in the area and the steps which the City of Los Angeles has taken in an attempt to cope with this major problem. It is encouraging that this distinguished group has seen fit to comment favorably on several of the procedures which the City has adopted in recent years. However, there are some constructive suggestions put forward by the Committee involving possible reorganization of functions and utilization of personnel as well as some interesting concepts which deserve serious scrutiny in our approach to eventual solution, insofar as such solution is humanly possible.

I am transmitting a copy of the Committee's report to every member of the Council. I will not, therefore, summarize the conclusions and special recommendations of the Committee in this letter. I know that your honorable body will want to give serious consideration to the suggestions put forward therein. The Committee has kindly consented to stand available for any further assistance which it may render in effectuating such aspects of the report which are deemed feasible and desirable by the responsible officials of the City government.

Very truly yours,

Sam Yorty
MAYOR

In the eloquent words of Richard H. Jahns, CPG 289, he described the geologic problems in the City of Los Angeles in the 1950's and early 1960's:

"It was an uneasy time, during which occurrences of ground failure in some carefully engineered projects could be traced to lack of geologic understanding. In most of these projects nothing beyond engineering analyses had been made, but in others the grading plans had been backed up by geologic reports. At the request of the City, several experienced engineering geologists reviewed these reports and made discouraging discoveries. Nearly half of the reports obviously had been submitted by people with little or no experience in geology or applied to engineering works, and at least half of them either were essentially without pertinent data or presented no more than generalized information rather crudely abstracted from the published record. Little more than one out of ten contained maps or sections that had been prepared at an appropriate scale or in suitable detail. With a few refreshing exceptions, these reports offered various combinations of no data and firm conclusions, no data or conclusions but much discussion, some data without discussion or conclusions, and so on; name a combination, and it was present somewhere in the pile. Less than ten percent of those reports would have been regarded as acceptable when submitted, had the City of Los Angeles then been favored with the kind of geological staff it has today. So this was the major problem.

"There were many competent geologists in the Los Angeles area at that time as there are now. But how could they be recognized and how could more of them be attracted to this important work? How could decision-makers in the Grading Section be spared reviews of when the ancient seas came in and when they went out in a particular area, or discussions of faults in the desert a hundred miles away? How could they instead be assured, for example, of three-dimensional analyses that might better contribute to reasonable conclusions on local ground stability?

"For openers, the Department established an Engineering Geologists Qualification Board, with responsibilities for examining applicants and judging their experience and capabilities. Thus the City undertook some of the difficult, and at times painful, procedures that the State of California later employed in establishing criteria for the licensing of geologists. Technically unqualified opportunists thereby were dealt out of the game, and soon there was a growing number of effective match-ups between problems and practitioners. Even so, there were some slip-ups. There also were continuing irregularities in the contents of geologic reports, so that the Board found it necessary to issue a set of guidelines indicating desired coverage and, where appropriate, lines of detailed inquiry.

"And so it went, with the system being improved incrementally from a growing body of experience. Then, in the winter season of 1961-62, the effects of severe storm rainfall revealed a need for further tightening of the ground rules. This was done in 1963, with special attention given to means for insuring thorough pre-grading studies, translation of the study results into specifications, and inspection of graded sites to determine whether all specifications had been met.

"The resulting regulations were the toughest anywhere at that time, and they have served as models for many other cities and counties. That they have been well worth the effort is indicated by impressive reductions in frequency of ground failure and amount of associated damage. The financial losses that have been forestalled cannot be readily estimated, but they could well be at an average annual level of millions of dollars in the City of Los Angeles alone.

"... we also hear many of those old, familiar questions. How does one identify a good geologist? How can good geologic and engineering input be assured? How can the small-property owner be well served? And how can geologists and engineers continue to undertake certain kinds of investigations that, though required by law, seem to invite expensive lawsuits? We still have more challenging questions than good answers, but let us not be discouraged.

"From time to time we remind ourselves that we live in a period of human history when vast changes are being made in our resource base and life style. Let us be consistent and also remind ourselves that the problems discussed and lamented reflect transitory stages in a sort of evolutionary progression, and that most of our troubles on this score are akin to growing pains. We really have no choice but to respond and learn."

1966 Annual Meeting, Denver

The third AIPG Annual Meeting was held at the Denver Hilton Hotel on October 21-22, 1966. Earl G. Griffith, CPG
90, was Chairman, with Fred S. Jensen, CPG, Program Chairman. There were no Keynote Speaker or field trips. The program and the impressive list of speakers follow.

Program of the Third Annual Meeting of AIPG

October 21 and 22, 1966
Denver Hilton Hotel, Denver, Colorado

Call to Order—Earl G. Griffith, General Chairman, Independent Petroleum Geologist, Denver, Colo.
Program Target and Purpose—Fred S. Jensen, Program Chairman, Vice President, Juniper Oil & Gas Co., Denver, Colo.

First Session
The Scientific and Technical Competence Required of the Practicing Professional Geologist
Presiding: Adolf U. Honkala
The Professional Hydrogeologist, Philip E. LaMoreaux, State Geologist and Oil & Gas Supervisor, University, Ala.
The Professional Engineering Geologist, Martin Malinofsky, Partner, Welch and Malinofsky, Consulting Engineers & Geologists, Summit, N.J.

Second Session
The Education and Training of Geologists for Professional Practice
Presiding: William W. Hambleton
The Dilemma of Geological Education, William W. Hambleton, Prof. of Geology, Univ. of Kansas; Assoc. Dir., Kansas Geological Soc.; Chairman, Council on Educ. in the Geological Sciences, Lawrence, Kan.
Education and Training for the Professional Practice of Geology, John D. Haun, Professor of Geology, Colorado School of Mines, Golden, Colo.
Viewpoint—The Education of Geological Scientists, Laurence L. Sloss, Professor of Geology, Northwestern Univ., Evanston, Ill.
Open Panel Discussion, W. W. Hambleton, J. D. Haun, L. L. Sloss, Leslie Mack

Third Session
Opportunities for the Professional Practice of Geology
Presiding: Richard H. Jahns
A Panel Discussion Representing Contrasting But Interrelated Areas of the Profession—From the Standpoint of The Federal Organization, Thomas F. Bates, Assistant & Science Advisor to the Secretary of the Interior; Member, Federal Council for Science and Technology, University Park, Pa.
The State Organization and the University, William W. Hambleton
The Mining Industry, Fredrick C. Kruger,* Vice-
President, Mining & Exploration Div., International Minerals & Chemicals Corp., Northfield, Ill.

The Petroleum Industry, William Barbat, Chief Geologist, Standard Oil of California

The Consulting Geologist, John F. Mann, Jr., Consultant, LaHabra, Calif.

Moderator: Richard H. Jahns, Professor of Geology, Dean of the School of Earth Sciences, Stanford Univ., Stanford, Calif.

*Now Chairman of Mining Department, Stanford University.

Fourth Session
The Role and Responsibility of the AIPG in Enhancing Scientific and Technical Competence in the Geological Profession
Presiding: William W. Mallory


The Procedures and Devices Used by Other Professions to Enhance Competence, David M. Evans, Consulting Geologist, Denver, Colo.

The Role of A.G.I. and Its Member Societies, Linn Hoover

Examinations for Prospective CPG's?, William A. Newton, Pres., Rocky Mountain Natural Gas Company, Denver, Colo.

Accreditation of University Geology Departments, Truman H. Kuhn, Dean of Faculty, Colorado School of Mines, Golden, Colo.

Saturday Luncheon
Speaker: John A. Taylor, independent petroleum geologist from Oklahoma City summarizing the essentials of the previous papers and discussion, treating various viewpoints on controversial questions, in preparation for the afternoon session.

Fifth Session
Annual Business Meeting
Presiding: Ben H. Parker, President of The AIPG


Report of Secretary-Treasurer
A. Financial Report
B. Proposed Amendments to By-Laws, Jay G. Marks, Paleontologist, Humble Oil & Refining Co., Los Angeles, Calif.
AIPG’s third president, Allen Tester, CPG 2, was born in New Haven, Missouri, on October 30, 1897. He obtained both his BA and MA in 1921 at the University of Kansas, and his Ph.D. in 1929 at the University of Wisconsin. Allen was Instructor of Geology at three universities: Kansas from 1921-22, Wisconsin from 1924-25, then moved to Iowa in 1925. At the latter university he found his home, and was a teaching associate from 1925-29, assistant professor from 1929-35, and associate professor from 1935-37. Concurrent with teaching, Allen was Assistant Iowa State Geologist from 1934-37. He then took a two-year leave of absence to become District Geologist for Socony-Vacuum Company in Columbia, South America. He returned to the University of Iowa as full professor from 1940-42, and again in 1946, after four years war duty as Lt. Colonel in the U. S. Army Corps of Engineers.

In 1949, Allen became a consultant to Texaco, to Shell oil in 1952, to Pacific Power and Light in 1957, and participated in mapping for the USGS and the State Surveys of Iowa and Kansas. He was vice President and Director of Vermillion Cliffs Mining Corporation.

Allen designed the AIPG logo in 1963, and was awarded the Parker Memorial Medal in 1972. The citation for this award by Jack B. Graham, CPG 242, reads:

Dr. Tester has long been involved with geological organizations. In 1963, he became one of the designers and founders of the American Institute of Professional Geologists. There is special significance in the fact that Allen Tester has certificate number two in the list of Certified Professional Geologists, Martin Van Couvering having the number one certification. Allen was one of the handful of farseeing and dedicated geologists who recognized the need for a central, cohesive professional organization to improve the interrelationship among all geologists and with the public, and to set high standards of technical and ethical performance.

Allen was directly and deeply involved in the genesis of the objectives and the organizational structure of the new Institute. He had a major role in the formulating of the Constitution and Bylaws. He served as Vice President for the first two years and as President during the fourth year. He has continued to contribute his time and energy to the advancement of AIPG. His efforts on behalf of the Institute to date have involved a very substantial sacrifice of his time and personal funds. It is clear that his contribution to this Institute has been outstanding.

However, we are honoring Allen Tester not so much for his achievements in AIPG but for his overall contribution to the profession of geology. With a career in teaching, federal and state geological survey activity, and experience in the fields of mineral and oil exploration, he has distinguished himself as a professional geologist in the broadest sense and has truly earned his qualifications for the Parker Medal. No small part of this contribution has been his willingness and effectiveness in participating in professional and technical organizations such as AIPG, AAPG and many others.

I have a very personal view as to the appropriateness of this award to Allen Tester. As one of his students years ago and from the close association with him as his Vice President in AIPG, I know him to be a man of highest personal integrity and with an unbending insistence on fairness. These are requirements that all professional men should have but they are of special importance when applied to the training of young men and women. By the awarding of the Ben Parker Medal to Allen Tester, AIPG pays tribute not only to his career accomplishments but also to the impact his philosophy of professional conduct has had throughout his long career.
Co., Pacific Power and Light Company and the City of Des Moines. His expertise included petroleum and uranium exploration and development as well as ground water problems. He provided a valuable bridge between the classroom and the professional world. Most of his many graduate students moved on to successful careers in industry with his insistence on integrity and fairness as a model.

The author of two geology textbooks and a number of research papers, he was also associated with developing a hydrometer for measuring the density of silt and another instrument for measuring the shape of pebbles.

He was a Fellow, Geological Society of America and a member of the AAAS, American Geophysical Union, Society of Economic Paleontologists and Mineralogists and the American Association of Petroleum Geologists. He was a founder and past president (1967) of the American Institute of Professional Geologists, receiving in 1972 that organization’s Ben Parker Medal for outstanding service to the geological profession. He was one of the founders of the Geological Society of Iowa. He was especially concerned with professional standards and certification.

He was married to Corinne Lesh in 1920. The Testers were actively interested and involved in community affairs in Iowa City and later in Sedona. Allen was a member of the Planning and Zoning Commission and of the Rotary Club of Iowa City. Though spending most of their later years in Sedona, the Testers maintained a residence in Iowa City at 2315 Rochester Avenue to which they returned several times a year. Corinne preceded Allen in death in July 1975. Surviving are a daughter, Mrs. Robert (Terry Anne) Chesney, of Cincinnati, Ohio, three grandchildren and a sister, Mrs. Robert A. Smith, of Memphis, Tennessee.

Following his retirement in 1966, he continued a strong interest in the activities of the department as well as doing part-time consulting in Arizona. He donated his considerable collection of books to the geology library along with a number of items of field equipment, which contributions we gratefully acknowledge.

---

**Excerpts from**

**The President’s Column 1967**

“A New Year”

Year Four of the Institute has arrived. We have had the excitement of birth, the thrill of survival, and the pains of growth. There will be more troubles ahead but we are better equipped to meet the new, or old problems in different disguises with the help of the good and kind people that comprise our 1,470 living Members. In my way of thinking the Institute has made remarkable progress and has clearly demonstrated that it is here to stay. We are very much alive! The glory belongs to all but we shall always recall the leadership of Martin Van Couvering during the first two years and of Ben Parker in the year just ended. And, to paraphrase a melodious line of a Frenchman’s song. “Thank Heavens for Art Brunton” and his able secretary Ann Cashion. I have never been adept at phrasing compliments so I can only say THANK YOU to scores of Executive and Advisory committee members, the State Section officers and committees, and to the hundreds of plain ardent supporters and hard workers. We are fortunate to have so many Indians and so few chiefs. Yes, we can be proud of the efforts of our Members in the past, and hopeful for the future.

Today our membership is almost exactly double our Charter Membership, and would be except for the twelve whose death we mourn, and two resignations. During the past year of 1966 we grew by more than 31 percent, certainly the Wall Street Journal would class us as a growth industry. And our assets of people are of a specie coined 40 or more years ago before character was deflated to long hair and short trousers. In numbers there is strength, but of more importance, in quality there is strong character and belief in principles.

We have other work too. We must find a method to reach the general public to keep them conscious of the impact of geology on their health, welfare, and appreciation of their living standards. We have had so many excellent discussions on this subject in our national and state meetings they would require several volumes to report. Even if they all were published, who would read them? Other geologists, almost entirely. This is one way of saying that we are talking to ourselves. What we really need is a method to reach the masses of lay people. We need constructive ideas that can be put to work by simple methods with direct responses. Some day we may find angels who will finance a weekly hour on television with a cast of Ronald Reagans and Joan Crawfords, and I mean this respectfully. Short non-technical articles in popular magazines and more books like CPG Walter Youngquist’s best-seller “Over the Hill and Down the Creek” would create more public interest and understanding of how geologists work and why they should be used in situations in which geological phenomena are the basic factors. But right now every Member should consider himself one of the Committee on publicity and Public Relations and work with his State Section and with the Institute Headquarters. If each member would write a letter with an idea and a simple method for implementation the Executive Committee would try to assimilate this wealth of material, and surely there would be some procedures that would produce results.

“Specialty Divisions”

This seems an appropriate time to review and summarize some of the situations that have led to the concept of specialty divisions as a part of the superstructure of our organizational design. The President’s Column in the November 1966 issue was the initial presentation of a plan conceived by President Parker based on ideas developed jointly with Michel Halbouty. Halbouty was then a member of the Executive Committee of the Institute and had started his term as President of the American Association of Petroleum Geologists. Much of the drive behind the efforts of these men was generated by their sincere desire to unify the certification phases of the Institute and the Association, and to serve the interests of the entire geological profession.

The problem of AAPG certification of petroleum geologists was on the horizon when AIPG was founded in November 1963, and it was hoped by some that AIPG certification as pro-
essional geologists would satisfy the petroleum group. When AIPG voted to implement the certification movement at the Toronto meeting in May 1964, a study was begun of ways and means to bring the two ideologies to a common system. The rapid growth of AIPG in 1964 and 1965 in which petroleum geologists (and members of AAPG) comprised over 60 percent of its members was proof that AIPG could fulfill a much-needed service as a professional organization for all specialties in geology, and especially petroleum geologists. The same is true today as the growth of AIPG continues. The facts cannot be denied. The geological profession is accepting the Institute as the organization to represent and to resolve their professional problems, and the certification provided by AIPG is becoming less important as an incentive for becoming a member. Certification is an identification, an emblem of membership, a mark of the established quality of the member, and not a major ideal, nor the objective of the Institute, nor the reason for its existence, as our Editorial points out.

In 1964 and again in 1965 attempts were made by AIPG to resolve the certification issue, but conferences with AIPG were ended before any real negotiations could be started. In 1966 Halbouty tenaciously pursued ideas to find a remedy and to overcome the blocks within AIPG that had been met by others. In October 1966 a series of meetings of the AIPG Executive Committee with Halbouty produced a form of understanding that was incorporated in a Letter of Intent of purpose to be used by both AAPG and AIPG in developing a detailed plan of joint certification to be submitted to members of both organizations for consideration.

Throughout all of the discussions and conferences with AAPG, and in AIPG intra-committee discussions and correspondence, the position of AIPG Executive Committees was that any AIPG program which entails certification must be based on the qualities of a professional geologist as to training, experience, and ethical standards as established by the Constitution of the Institute, and that any specialty certification which might be developed would be a subsidiary by-product of the basic certification as a professional geologist. On this premise the Letter of Intent as developed in October 1966 contained the stipulation that a joint Specialty Division of AAPG and AIPG would be established, composed of members certified by both groups, who would thereafter screen and certify new members of the Division as professional geologists with a petroleum specialty. That is, an applicant for certification by the Joint Specialty Division who was already an Active Member of AAPG as an oil geologist now or in the future an Active Member of AAPG would be required to become a Member of AIPG with its certification at the same time that he was certified as a petroleum geologist. By this procedure membership in AIPG and certification as a Petroleum Geologist could be attained by one application covering all items and screened by the joint AAPG-AIPG Board.

Halbouty discussed this plan with several AAPG groups across the land and met with resistance because of the compulsory requirement of membership in AIPG to obtain certification as a petroleum geologist, and to a limited extent, the additional costs of AIPG membership. As a result, Halbouty announced in the January 1967 issue of the AAPG Bulletin, the formation of an independent AAPG Professional Division for Certification. The Executive Committee of AIPG is not involved in this development and believes that this program is wholly a matter for the management and individual members of AAPG to resolve and either adopt or reject as they see fit.

Another article in the Letter of Intent developed in October 1966 stated, “It is recognized that a qualified petroleum geologist now or in the future an Active Member of AAPG may not desire certification by the Division but may desire membership in AIPG and that such may be accomplished through the regular and existing procedures of the Institute.” It might be desirable to utilize this principle of independence and to permit a reciprocal choice that would eliminate the compulsory feature of the now dormant Letter of Intent. If an arrangement could be agreed upon, even though it permitted a specialty certification without first the basic certification, it would unify the certification procedure with both organizations exercising control of their respective certifications. Such a plan might stimulate a better appreciation of the broad and basic professional work that the Institute is doing and the obligations of the petroleum geologist to support such work.

Unification of certification procedures will require some compromise of earlier positions to get it started, but once it is operating and being tested, the better parts should survive. In the long run the chief beneficiary will be the geological profession.

Allen C. Tester

[Specialty Codes were developed later, and were revised in 1989 into the geologic specialties that appear in the annual Directory.]

Miscellany 1967

From the May 1967 TPG this letter to the Editor, filed under “Too good to be true.”

Dear Sir:

Your statement that the City of Los Angeles is sitting on top of one of the most prolific Oil producing areas in the world is correct or true, and I can demonstrate and prove it through the medium of my Calibrated Electronic Neophysics Dictator Locating Testing and Delineating Equipment.

Total ignorance of the Science of Neophysics is Responsible for the prevalent failures of all Major Oil and Mining Companies.

My Neophysics Dictator Equipment can find or Locate and Delineate any predetermined Element, Which includes Human beings, Animals, Minerals, Water, Oyster Beds, Clam Beds, Large Schools of Fish, etc; or any thing you want.

The Calibrated Electronic Neophysics Dictator Locating Testing and Delineating Equipment, King of the Mineral and Water Kingdoms, has a Detection, Direction, and Distance Range, Exceeding a Radius of 200 Miles, and eliminates Small Worthless Structures. Is Guaranteed to Eliminate Failures and Positively and Accurately Locate and Delineate a Commercial Structure in one day, of any of the following Minerals or Elements: Oil, Gas, Water, Gold, Silver, Rhenium, etc.
All elements Emanate an Electro Chemical Energy at an individual Frequency and is only necessary to have the proper Receiving Equipment and Tune them in same as Radio and Television. The Facets of Neophysics Format are innumerable and mostly inconceivable to the average Human being, but are a wonderful source of valuable information.

Sincerely Yours,
(no name)

Creation of a Second Class of Membership, To Be Known as “Associate Member”

At a recent meeting of the Headquarters Advisory Committee, which is composed of Messrs. Martin Deuth, CPG 665, William Newton, CPG 8, and Ben Parker, CPG 5, considerable discussion was given to the desirability of creating a membership classification in the AIPG which would admit to membership geologists who met all the qualifications for full membership except the time required in the experience factor. The subject came up during our discussion of the need for vitalizing our new member enrollment in order to continue to strengthen the organization.

It is impelling that some such action be taken, because in the near future we could have a greater reduction than gain in total members as a result of (1) the retirement and/or death of many of the original and Founding Members and (2) the large time factor required to qualify for full membership in the AIPG.

Some of us look fondly to our student days when one of our professors honored us by suggesting and recommending us for Junior or Associate Membership in the AAPG or Sigma Xi. We believe that we are missing a great opportunity for future AIPG members by not providing a place for enthusiastic applicants who have not yet attained sufficient seniority to qualify for full membership. We believe that we not only can provide a pre-training in ethical practice, but can insure membership continuation which we might otherwise lose.

Inasmuch as Howard E. Rothrock, CPG 9, twice a member of the AIPG Executive Committee, has been a strong advocate of a membership classification for in-training members, it was natural that we consult him on this subject. Mr. Rothrock responded with an excellent list of benefits which would accrue to the Institute by creation of that which he proposes to call a “provisional” grade of AIPG membership, as follows:

1. Increase total membership without lowering the standards for full membership;
2. Increase the number of CPG’s by automatically supplying a reservoir of interested, indoctrinated applicants from the “Provisional” ranks;
3. Increase the influence of the Institute as a result of larger membership;
4. Enhance the image of the Institute in the eyes of the student geologist as well as the public by demonstrating a helpful interest in geologists during their early years of practice. A geologist who is forbidden association with the Institute during the eight years following his baccalaureate degree is less apt to seek membership than one to whom help has been offered when he is embarking on his career.
5. Reduce the possibility of unethical conduct by giving guidance during the formative period of establishing a practice. This is particularly true in the matter of breaches of etiquette due more to thoughtlessness than to low standards of ethics.
6. Stimulate the Institute by close association with young, idealistic, vigorous, newly trained geologists. The importance of this association is illustrated by the experience of the Texas Section which was alerted to the restrictions to geological practice of the Engineering Practices Act of Texas by a candidate for “Juniorship”. Prompt action by the Texas Section procured alteration of the act so as to exempt geologists from its provisions.
7. Assist the emerging generation of geologists in solving their public and client relationships during the 8, 6, or four years of early practice. This is a field where an ounce of prevention is worth a pound of cure.
8. Instill pride of professionalism in the “Provisional” group.
9. Bridge the gap between proposed qualifying examinations and admittance to membership in AIPG. If exams are given, as has been proposed, they will be taken as soon after graduation as possible, because they will be passed more easily at that time. This means a delay of 8, 6, or four years before application for membership in AIPG can be made. How many successful candidates will wait out this period without some form of recognition by AIPG? The engineers have found that it is advantageous to recognize the successful candidates immediately and welcome them as subordinate members. AIPG should profit by this experience.

Our committee heartily endorses these benefits as enumerated by Mr. Rothrock, and strongly recommends consideration and action by the Executive Committee toward inauguration of this new class of membership.

While Mr. Rothrock denotes the name of the new class as “Provisional”, some preference may be given to the name “Associate”. One of our members considers the word “Provisional” as patronizing, since it is defined as temporary or conditional. He believes that since these members will have qualified as professional geologists in all respects except years of experience, the term “Associate” will enhance the membership status. The term “Junior” is believed to be unacceptable as stressing immaturity. Other than these comments on the proper name for the proposed classification, this committee is not adamant and makes no recommendation.

It is recommended, however, that if this proposal is adopted it would be necessary to make such Constitutional and Bylaws amendments as required to clarify the Institute’s position. Mr. Rothrock suggests that such amendment also include other types of membership which may seem advisable, such as Life, Honorary, etc.

Respectfully submitted,
Headquarters Advisory Committee
William A. Newton
Ben H. Parker
Martin J. Deuth
“Hazards and/of Regulation”
By Henry H. Neel, CPG 528

[Editor: In 1967, future AIPG President Henry H. Neel, wrote this paper delivered to the California Section of AIPG, and a year later it was published in the May 1968 TPG. Henry (“Hank”) had always been interested in registration of geologists. (See also messages herein by Proctor, 1989, and Landon, 1990.) When registration became California law in 1968, a few years later Hank prepared a fascinating History of the going-on behind the scenes between those pushing for the law and those opposed. Some of his History is reproduced in Appendix 9 in his presidency year 1970. But the following thoughtful 1967 AIPG paper preceded the state law, and is reproduced here for the historic record.]

Although it is certainly not agreed among all geologists that there is a necessity for geologists’ registration under a State Board, it is agreed by a vast majority of geologists that, if such registration is inevitable, it must be governed by the profession of geology rather than some other profession, no matter how closely related.

In recent years and even recent months there has been an explosion of interest in the subject of “geologic hazards.” There is hardly a geologic society or organization in the country that has not actively or passively espoused this cause. There are as many definitions of a geologic hazard as there are people concerned with geologic hazards. One of the best is as follows:

“A geologic hazard is a potential or actual change in the geologic environment that adversely affects men. Geologic events and processes responsible for such a change may be sudden and catastrophic or they may be slow and undramatic; they include, but are not restricted to earthquakes, seismic sea waves, volcanism, landsliding, land and sea level changes and flooding.”

Recently, Tom Murphy in his column, “In the Aggregate,” in Mining Engineering has said that a geological hazard is actually a “people problem.” It is, for the most part, a naturally occurring geologic phenomenon which does not become a hazard until people are involved. In many cases the catastrophes which we regard as geologic hazards are no different than the geological processes that have been going on for millions of years. It is only when they interfere with the activities of man that they become a hazard.

This brings us to the point that the phases of geology to which some form of governmental legislation or control might apply should include all phases of geology which have any influence on the well-being of the people. A term which is coming into increasing use to describe this type of geology is “environmental geology.” This includes a great deal more than the “engineering geology, sensu strictu” with which we are all familiar and which has been the subject of most of the efforts at legislative action.

Environmental geology is any and all geology which has a relationship to the human environment. This includes, but is by no means limited to:

A. Related to or Influenced by Human Activities:


2. Geology of Waste Disposal:
   Liquid Waste: Oil, Water, and Chemical
   Solid Waste: Refuse Dumps and Mine Dumps

3. Pollution (see also 2, above): Gas, Liquids and Solids

4. Geology of Environmental Alterations due to Extractive Activities:
   Subsidence due to: Water removal, Oil and/or gas removal, Mining; Landsliding.

5. Geology of Environmental Alterations due to Additive Activities:
   Subsidence due to: Water application, Loading; Landsliding.

B. Not Related to or Influenced by Human Activities:

1. Fault Movement (not including earthquakes):
   Fast
   2. Earthquakes
   3. Floods
   4. Snow and Ice
   Slow
   5. Natural Subsidence or Consolidation
   6. Tsunamis

The above list can go on almost indefinitely. It is merely a small portion of some of the preliminary work of the Committee on Geologic Hazards of the AIPG which has been established as a liaison organization to correlate the activities of scientific societies, public bodies and other organizations who are concerning themselves with environmental geology and geologic hazards.

All of the above has been given to illustrate that the effects of environmental geology on the public have already extended infinitely farther than the concepts established by the few conflicting local ordinances and regulations which have been put into effect, mostly in California, for the control of “Engineering Geologists, s.s.” None of the existing local ordinances would have any bearing on the relationship of the public to the majority of “environmental geologists.”

Present governmental regulation is almost entirely confined to the relationship of the public with a very small segment of environmental geology and an even smaller segment of the total geologic profession. Without entering into an argument as to whether or not there is a need for registration of geologists we must face the fact that the field of environmental geology, which so vitally concerns the public, has gone much beyond the field of engineering geology as we have known it. It is as much concerned with public health as it is with engineering, and to paraphrase a remark made by Wes Bruer, CPG 85, Bakersfield, California, in some sectors it would be just as logical to register the environmental geologists under the Board of Medical Examiners as it would under the Engineering Board, if the profession could not have its own board.

If all professional licensing were to be placed under one licensing body, as it is in Mexico, or if even distantly related
professions were under one organization, as in Alberta, there should be no objection to including geologists. However, as long as the Engineers’ Registration Boards are made up principally of engineers and are concerned solely with the registration of engineers, and since the majority of the facets of environmental geology can in no way be related to engineering, or controlled, or even understood by a board of engineers, the placing of geologists under this Board would forever stifle the orderly development of environmental geology which is so vital to the public welfare.

Henry H. Neel, CPG 528

1967 Annual Meeting, Houston, Texas

The Fourth Annual Meeting of the Institute was held in the Shamrock Hilton Hotel in Houston, October 5th, 6th, and 7th, 1967, where the Texas Section was host. The meeting was under the able direction of Monty G. Martin, CPG 758, General Chairman, and its theme was “Public Relations.” The program follows.

Thursday, October 5
Advisory Board and Executive Committee Meetings
Registration 4:00 p.m. and Reception 6:00 p.m.

Friday, October 6
Morning-Welcome Addresses: Hon. Louie Welch, Mayor of Houston
Dr. Allen C. Tester, CPG, President, AIPG
J. Ben Carsey, CPG, Houston, President, AAPG
Frank B. Conselman, CPG, President, Texas Section
Morgan J. Davis, Jr., CPG, Houston, Program Chairman

First Session
Papers:
'The Professional Geologist and His Image', Edward W. Owen, CPG, Consultant, San Antonio
‘Ethics and the Professional Geologist’, Orville W. Lundstrum, Consultant, Houston
‘Public Relations for the Professional Geologist’, Lance Livingston, Houston Chamber of Commerce
‘The Professional Geologist and His Role as an Independent’, Dr. Roy M. Huffman, CPG, Consultant, Houston
Luncheon Guest Speaker, David M. Searles, Attorney, Houston

Second Session
Afternoon-Papers:
'The Financial Future of the Professional Geologist', Morgan J. Davis, CPG, Consultant, Houston
‘Certification’, Michel T. Halbouty, CPG, Consultant, Houston
‘The Banking Role of the Professional Geologist’, Harold Vance, Consultant, Houston
‘The Fast Moving Automatic Data Trend in Geology’, M. E.

Trostle, Geophysical Services, Inc., Midland
Public Relations - A Discussion, Ted Roggen, Public Relations and Advertising, Houston

Dinner 7:00 P.M.
Guest Speaker - NASA Representative
Saturday, October 7
Third Session

Morning-Papers:
‘The Professional Geologist in State Geological Survey
Work’, Norman F. Williams, State Geologist, Arkansas Geological Survey
‘The Responsibility of Faculty in Creating a Geologic Image’,
Dr. Samuel P. Ellison, CPG, University of Texas
‘The AGI’, Ross L. Shipman, Acting Exec. Director, AGI, Washington, DC
Panel on Standing Committees Objectives and Projects, Dr. Allen C. Tester, CPG, Moderator
Luncheon Guest Speaker, Dr. Allan Lohse, University of Houston

Afternoon Business Meeting
The State of the Institute, Dr. Allen C. Tester, CPG
Report of the Secretary-Treasurer
Report of the Editor
Other Business

Summary of Advisory Board and Executive Committee Meetings with Comments on the Annual Business Meeting 1967

Advisory Board

On October 4th, 27 delegates representing 17 State Sections met for their debate. The most hotly discussed item was the possibility of creating a second class of membership. In the presentation, Bill Newton pointed out the need to take cognizance of our younger geologists who have all the requirements of membership except that of experience. This vigorous and well-trained group of young men could add to the vitality of the Institute. In turn, the Institute could directly encourage the kind of professional development necessary to gain the public respect we desire. Some delegates were instructed by their Sections to vote against the issue.

A motion was made to recommend to the Executive Committee that an Associate grade of membership be provided. After it became apparent that the motion did not have enough support, an amended motion was passed to recommend that the issue be referred to the Professional and Scientific Standards Committee for study. It was interesting to note that the representatives from California, Colorado, Missouri, Pennsylvania and Texas, who represent well over half the membership, favored the creation of a second class of membership. For this reason, the Advisory Board was justified in keeping the issue alive even if “in Committee.”

Other discussions resulted in the following recommendations to the Executive Committee:
1. The listing of specialty categories and telephone numbers in the 1968 Roster, 10 to seven vote;
2. Provide for decals and lapel buttons for distribution to the membership, by a unanimous vote;
3. Consider changing the By-Laws on the election of officers, by a 24 to three vote;
4. That membership solicitations be coordinated at the Headquarters Office;
5. To set a policy to encourage local meetings of Certified Professional Geologists, by a unanimous vote;
6. Accept the proposal of the Oklahoma Section on promoting geology through the use of educational signs.

At the close of the meeting, a Resolution which was passed unanimously by the Oklahoma Section was read by Jack Taylor. It called for presentation and adoption by the State of Oklahoma of an act providing for legal licensing of geologists through chartering.

Executive Committee

The fourth meeting of the 1967 Executive Committee was held on October 5th and 6th.

Action on Advisory Board recommendations occupied the major portion of the meeting. The item of a second grade of membership was referred to Committee as recommended. In addition, the Executive Director was asked to furnish bids and designs for lapel buttons and decals for use by the membership and also to prepare a questionnaire for approval by the Executive Committee to determine specialty categories of the membership and telephone numbers as recommended by the Advisory Board Delegates.

A motion was passed that a detailed retirement plan for Institute employees be presented in The Professional Geologist so that the membership of the Institute may be informed of our efforts in that regard and that funds be set aside pending acceptance of the program.

A long discussion was pursued concerning the second class of membership. President Tester explained that the Professional and Scientific Standards Committee was charged to present a plan in this regard by July 1, 1968, with the thought in mind that a detailed plan may overcome the objections raised by some Sections.

A motion to initiate the machinery to undertake the creation of the grade of Honorary Membership was passed just before the close of the meeting.

Respectfully submitted,
Edward E. Rue, CPG 12
Secretary-Treasurer

---

THE GROWING YEARS

2. Provide for decals and lapel buttons for distribution to the membership, by a unanimous vote;
3. Consider changing the By-Laws on the election of officers, by a 24 to three vote;
4. That membership solicitations be coordinated at the Headquarters Office;
5. To set a policy to encourage local meetings of Certified Professional Geologists, by a unanimous vote;
6. Accept the proposal of the Oklahoma Section on promoting geology through the use of educational signs.

At the close of the meeting, a Resolution which was passed unanimously by the Oklahoma Section was read by Jack Taylor. It called for presentation and adoption by the State of Oklahoma of an act providing for legal licensing of geologists through chartering.

Executive Committee

The fourth meeting of the 1967 Executive Committee was held on October 5th and 6th.

Action on Advisory Board recommendations occupied the major portion of the meeting. The item of a second grade of membership was referred to Committee as recommended. In addition, the Executive Director was asked to furnish bids and designs for lapel buttons and decals for use by the membership and also to prepare a questionnaire for approval by the Executive Committee to determine specialty categories of the membership and telephone numbers as recommended by the Advisory Board Delegates.

A motion was passed that a detailed retirement plan for Institute employees be presented in The Professional Geologist so that the membership of the Institute may be informed of our efforts in that regard and that funds be set aside pending acceptance of the program.

A long discussion was pursued concerning the second class of membership. President Tester explained that the Professional and Scientific Standards Committee was charged to present a plan in this regard by July 1, 1968, with the thought in mind that a detailed plan may overcome the objections raised by some Sections.

A motion to initiate the machinery to undertake the creation of the grade of Honorary Membership was passed just before the close of the meeting.

Respectfully submitted,
Edward E. Rue, CPG 12
Secretary-Treasurer

---

John T. Galey, Sr., CPG 511

“One of the friendliest persons I know” sums up what people said about John Galey. John began his presidency year by preparing several President’s Messages for TPG, and preparing to visit and speak at several AIPG Sections—the first president to do so. He was one of the first geologists to recognize the need for training in the blossoming field of environmental geology, and to propose an Environmental Geology Center. John gave congressional testimony in Washington, D.C. in both 1976 and 1977 (his testimony is reproduced in Appendix 14). The year 1968 saw registration of geologists in California become law. Future President Henry Neel explained how it happened (see his year 1970 and Appendix 14). AIPG’s Public Service Award was changed in 1992 to the John T. Galey, Sr., Memorial Public Service Award, in posthumous honor of our fourth president, whose life exemplified public service.

John’s son, John T. Galey, Jr., CPG 2622, is a mining geologist in Colorado (and often in Alaska). He served as AIPG Treasurer in 1987-88.

A Memorial to John Galey appeared in the July 1992 TPG. It is augmented by the citation by John T. Rouse, on John’s being awarded the Parker Medal (see 1978).

MEMORIAL
John T. Galey, Sr.
1908-1992

By John T Galey, Jr., CPG-2622, and Peggy Galey

John Taylor Galey, CPG 511, Past President (1968) of AIPG, Ben H. Parker Medalist (1978), consulting geologist, and independent natural gas producer, died May 5, 1992, in Latrobe Pennsylvania Area Hospital, after choking during a dinner party at the Rolling Rock Club in Ligonier Township. He was 84 and is survived by his wife of 54 years, Blanche “Bege”, daughter Margaret “Peggy”, son John T. Jr., CPG 2622, and two granddaughters.

Probably no other AIPG member, past or present, embodied the combination of personal achievement and family her-
itage in the American oil and natural gas industry to match John's. His passing truly was the end of a legacy the like of which will not occur again.

John, a native of Beaver, Pennsylvania, was a fourth generation oil and gas man. His heritage in the oil industry goes back to its very inception when his great uncle, the intrepid John H. Galey, often referred to as the "greatest wildcatter of the 19th century", drilled the famous "Maple Shade Gusher" in 1860 near Pleasantville in Venango County, Pennsylvania. John’s grandfather, Robert, father, George, and various uncles were all successful drillers, oil and natural gas operators, and developers. Carrying on the family tradition, in 1935, John, operating with his uncle John “Big Red” Duff, who later became Governor of Pennsylvania, discovered the Blackhawk pool 10 miles west of Beaver Falls, the first Oriskany sandstone natural gas production in western Pennsylvania. Over the next 40 years, he explored for and developed natural gas production in eastern Ohio, western Pennsylvania, northern West Virginia, and western Virginia.

A 1932 graduate of Princeton University, John was a founder of the Pittsburgh Geological Society and was its president in 1948. Over his long and highly successful professional career, he was active in many professional and civic organizations. AIPG was not the only geological organization to be the beneficiary of John’s intellect and energy. AAPG honored him with its highest award, the Sidney Powers Medal, in 1990. The AAPG national organization had previously bestowed two other high honors on him, the Distinguished Service Award in 1974 and Honorary Membership in 1980. John was widely recognized for his pivotal role in establishing the Eastern Section of AAPG. In recognition of that, the Eastern Section bestowed a unique, one-time-only, "Founder's Award" upon him in 1987. He was also a fellow of the Geological Society of America.

And what are the other activities of this capable and personable man? He believed geology was a requisite for sound city planning. In 1971, he organized securing funding from the National Science Foundation, and chaired the President’s Conference on Environmental Geology at Airlie House, Virginia. Here 55 geologists, architects, engineers, and planners worked two days in concentrated sessions, developing a comprehensive plan for a new town that was to reach a population of 300,000 in 10 years.

A man of so many talents and interests is in demand to participate in Pittsburgh civic organizations, such as the Carnegie Museum of Natural History, of which he has served two terms as a Trustee.

John’s long and full life touched many people in many ways. However, nearly everyone who ever knew him will undoubtedly recall one thing—his characteristic hearty parting wish of “Happy Day!” at the end of almost every meeting, conversation, or telephone call. Indeed, one’s days were happier for having had the opportunity to know John.

Excerpts from 1968 President’s Page
By John T. Galey

Knowledgeable people are expressing major concern about the dangers to their well-being caused by their changing environment. They are aware that their physical and mental health, as well as their esthetic sensibilities, are being affected by such things as air and water pollution, traffic jams, automobile graveyards, excess noise, and overcrowding. However, they are almost totally unaware that geology often has the dominant role in many environmental problems. We, as geologists, recognize these problems. Therefore, our obligation to society, as responsible professionals, is to create awareness and do our part in the role geology must play in the urgent need to maintain the environmental values with which human values are enmeshed.

A study by the Princeton University School of Architecture, for the American Institute of Architects, recommends that the professions applicable to the design of the environment create a team. Each profession represented would fulfill a partial but specific function in the overall task. Seven Professional Societies this past fall formed the Interprofessional Commission on Environmental Design. It calls itself ICED. The Societies represented were: American Institute of Architects, American Institute of Consulting Engineers, American Institute of Planners, American Society of Civil Engineers, American Society of Landscape Architects, Consulting Engineers Council, and National Society of Professional Engineers. At its first meeting, ICED stressed the need for improving its professional prestige and for criticism from an informed public, because this can be a catalyst to improved performance. The meeting moved to establish interprofessional ethical principles and to define problems of conflict in registration. This indicates significant progress toward interprofessional collaboration. "Perhaps other disciplines should begin to see their specialties in the light of our common interest," the publisher of Engineering News-Record editorialized after the conference. Geology has common interest in this matter and must be one of the disciplines.

The Richard King Mellon Charitable Trusts of Pittsburgh recently made a $1,800,000 grant to 18 leading universities. This was prompted by the Trusts' belief in the need to improve standards of urban development by upgrading the professional capabilities of the members of the design team. This is the result of the combination of foresight to see the problem and courage to divert resources to solve it. However, it does not include geology. We must see to it that it does!

Failure to recognize the need for the utilization of geology in designing, changing, shaping and cooperating with our environment is a serious matter. We know ourselves, but none of the organizations mentioned seems to realize they must use the capabilities of geologists, now, in the interest of the public safety, well-being, and economy. The greater the combined impact of population increases and human demands becomes, the greater becomes the need.

Whether or not geology is utilized—becomes a member of the team—depends upon us. Therefore, we must educate the responsible citizenry, as well as the professional societies such as members of ICED and some governmental agencies, on the need for and place of geology in dealing with environmental problems, and do our part in solving them. Our ethical principles and our professional and scientific standards are of the best and should be acceptable to these groups. They should
welcome having responsibility accepted for the geology of the environment by the discipline to which it belongs.

As a start toward implementing this objective, we have already activated an Institute Committee on Interprofessional Relations. Our Hazards Committee is cataloging as “Environmental Standards” the advantages, as well as the disadvantages, in the geology of our environment and discovering the means of dealing with them. Our Public Relations and Publicity Committee will disseminate this information. These efforts, together with those of the Governmental Agencies Relations Committee, and every AIPG member, must insure a position for geology on the environmental team. This is a grave responsibility. We must succeed, if we are to fulfill our obligation to society and to our related professions, as well as to geology.

**President’s Message**

“Blueprint for Action”

We are using our environment too dangerously. We must preserve our own values in our environment. We must protect the public health, safety and welfare. Explosive growth of population, rapid economic expansion and intensifying technology mean that we must plan, manage, and anticipate the result of change in our environment to meet the needs of society and its children. Ours will be a technological, not a natural, environment and it must be of the optimum quality.

Can the government act to guarantee a quality environment? It might, but it hasn’t so far. We have laws against polluting air and water, and laws to acquire and develop outdoor recreation areas. But there is no broad and clear statement of hopes and goals—there is no comprehensive national policy on the total environment like the comprehensive plan for Civil Rights, Education, and Full Employment. We need and must have such a comprehensive plan.

Does the environment mean the natural world alone, or everything that affects the physical and mental health of man? The criteria for a good quality environment have not been set. They cannot be set for they are not well understood. In fact, Congressmen are not even sure who should determine what the criteria are, or what the appropriate division of responsibilities between the private and public sectors for environmental quality management should be. The decision will be difficult. For example, we continue to maximize exploitation of natural resources, but in doing so impede the Interior Department’s non-degradation policy of implementing the water pollution control program. Which has priority?

There was a colloquium last July on Capitol Hill in Washington. Its purpose was to identify elements of a national policy for the environment and survey environmental management policies so that all concerned Committees of Congress could gain a fuller knowledge and understanding of the requirements for effective legislation and overview in the field of the environment. Interestingly enough, the technique of an informal study session was employed to circumvent jurisdictional limitations of committees so that Congressmen who could not legally attend such a session could participate in the colloquium. This was the first time in the memory of veteran observers that members of different, and at times competing, Congressional Committees ever came together to grope toward a national policy for the environment.

Even with this extraordinary possibility for getting results, the colloquium produced only one concrete proposal for action—one step on the road toward a national environmental policy. Laurence Rockefeller, Chairman of the President’s Citizens Advisory Committee on Recreation and National Beauty, proposed an 18-member “Commission on Environmental Policy and Organization” made up of members of Congress, top executive Agency officials, and private citizens, to promptly present the new President proposals for reorganizing the Federal government to make it responsive to environmental needs. Several favorable comments on the proposal were made. But neither Congress nor the White House has acted to implement Rockefeller’s suggestion.

At the State level, the New York Constitutional Convention drafted a Conservation Bill of Rights for their proposed new constitution. This would have provided essentially the same measures as the resolution in the U. S. House. But the public voted the New York Constitution down. The public is not aware or doesn’t care about protecting our environment. It is our responsibility, as geologists, to create such an awareness in order that the public will care.

The survival of our society hinges on prompt innovation. Yet, American style is least effective when it confronts issues which require radical innovation promptly. U. S. policy-making consists of a series of reactions to major crises. The bureaucratic machinery is often by-passed. This is because the myriad departments, bureaus, agencies and commissions of the Executive Branch lack coordination, and the Congressional committee structure is fragmented on matters such as this. This precludes their anticipating crises so as to advise the policy makers what to do in advance.

It is said that effective knowledge is professional knowledge supported by a restrictive acquaintance with useful subjects subservient to it. The danger of this situation is that the directive force of reason is weakened. The leading intellects lack balance. That is, they see this set of circumstances or that set, but not both sets together. This often leaves the task of coordination to those who lack either the force or the character to succeed in some definite career. Hence, the specialized functions are performed better and more progressively, but the generalized direction lacks vision. The progressive-ness in detail only adds to the danger produced by the feebleness of coordination and to decisions concerning interlinked matters too often being made independently of each other. This is a very great weakness and it must be overcome.

The knowledge, skills, and time required for such a large and complex process as dealing with our environment are impossible for a single professional to provide. The goals of society have become too diverse and dynamic. We have learned to assemble teams of the disciplines required for finding minerals and oil. We must develop teams of individuals competent in the disciplines necessary and who can work together wisely and effectively to carry the burden of the environmental task. Geologists are indispensable members of this team. They will provide partial but specific contributions to it, just as professionals of other disciplines. Such discipline should welcome having responsibility taken by the discipline to which it
belongs. The professionals involved in the team give up neither their identify nor their professional standards. However, competence and ethical principles of each member of the team must be acceptable to the others. Our professional organizations and/or registration boards must cooperate to assure this.

Once oil was king in geology. Recently, energy has deposed oil as king. But this is a new world we live in. Changes happen at an amazing rate. Environment will be the new king in geology before you know it. More geologists are going to be required to work with the environment for the protection of the health, safety and welfare of society than in any other area. This is preventive geology. It includes the specialties of oil and energy, together with many others. Here are a few of the places it fits into the picture.

While we plan to spend hundreds of billions to make urban American fit for human habitation, we overlook the resources of land that can be reclaimed in our single-minded concentration on the cities. Admittedly, lands classified as worthless cannot be easily, quickly or inexpensively converted to usefulness. However, they can, for less money than will be needed to rehabilitate the cities. This will require thorough evaluation of hundreds of millions of acres of land in the light of massive projected technological advance. Desalination and irrigation, such as are contemplated in the Imperial Valley and Salton Sea areas of California, will create facilities and systems of productivity. They will become self-sustaining and income-producing. Wise utilization will add immeasurably to the total product of the nation in future years. Geology has an indispensable role to play in this undertaking.

John T. Galey
President

1968 Committees

John Galey greatly expanded the use of committees to serve the Institute. He reorganized and increased to 12 the number of Standing Committees, plus added two Annual Committees and three Ad Hoc Committees:

STANDING COMMITTEES

Ethics
Executive Liaison - V. Gotautas
Adolf U. Honkala, Chairman
Chester O. Ensign
E. G. Griffith

Finance
Executive Liaison - A. Tester
James P. Spillers, Chairman
John A. Taylor
C. W. Couser
Robert E. King
Frank A. Morgan, Sr.
J. A. Wheeler

Geologic Hazards
Executive Liaison - R. Poose

Martin Van Couvering, Chairman
Henry H. Neel, Vice-Chairman
David M. Evans
Peter T. Flawn
Gordon B. Oakeshott
John E. Allen
E. L. Krinitzsky
Neilson Rudd
Richard E. Gray
Ruth A. Schmidt
Doak C. Cox

Headquarters Advisory
Executive Liaison - A. Brunton
Ben H. Parker, Chairman
William A. Newton
William D. Chawner

Membership
Executive Liaison - J. Galey
Dan C. Edwards
Arne R. Nielsen
Charles F. Dyer
A. S. Fureron
John C. Mickelson
Miles T. Rader, Jr.
Paul A. Manera
Frank H. Walker
Frank C. Foley
J. M. Neilson
James E. Nichols
Jacques B. Wertz

Professional and Scientific Standards
Executive Liaison - R. Berg
Truman H. Kuhn, Chairman
Charles S. Robinson, Vice-Chairman
Frank E. Byrne
William A. Newton
Andrew G. Alpha
Richard H. Jahns

Professional and Scientific Standards (continued)
Allen F. Agnew
Henry H. Neel
Walter E. Heinrichs
Howard J. Pincus
Adolf U. Honkala
Edward E. Rue

Professional Employment Standards
Executive Liaison - Mellon
E. L. Krinitzsky, Chairman
Gordon W. Gulmon
Linn Hoover
Miles T. Rader, Jr.
E. Burton Kemp, III
Ben H. Parker
G. M. Knebel
Roy L. Ingram
William H. Park

Publications
Executive Liaison - A. Spaulding
Samuel P. Ellison, Jr., Chairman
Donald R. Richner
Frank B. Conselman

Public Relations and Publicity
Executive Liaison - T. Murphy

1968 President John T. Galey
Edith M. McKee, Chairman
John E. Allen
Fred S. Jensen
Frank A. Morgan
William G. Pittman

Relations with Governmental Agencies
Executive Liaison - J. Galey
Philip E. LaMoreaux, Chairman
George R. Arnett
Leopold A. Heindl
George F. Hanson
Frank H. Walker
Robert O. Vernon

State Section Organization and Affairs
Executive Liaison - A. Tester
Kirk C. Forcade, Chairman
James W. Nance
Gordon Hurd

Statutory Regulation and Legislation
Executive Liaison - R. Faggio1
Jackson M. Barton, Chairman
Peter W. Gester
Richard E. Gaffio1
Eldon J. Mayhew
Clarence E. Brehm
Fred H. Kler
B. Warren Beebe
Ernest K. Lehmann
Edward E. Kinney
Henry H. Neel
Glenn A. Boyd
Thomas D. Murphy

Annual Committees
Nominating:
Howard E. Rothrock, Chairman
William C. Hayes, Jr.
John Montagne

Annual Meeting 1968:
Daniel J. Pickrell, General Chairman
Elmo W. Adams, Co-Chairman
Charles M. Cross, Co-Chairman
Henry H. Neel, Program Chairman

Ad Hoc Committees
Interprofessional Relations:
Elmo W. Adams, Chairman
T. D. Murphy
Arthur F. Brunton

Policy:
Martin Van Couvering, Chairman
Ben H. Parker
Allen C. Tester

Professional Fees:
Ernest K. Lehmann, Chairman
Jay Glenn Marks
Neilson Rudd

From John Galey: “At the Fifth Annual Meeting, a relative newcomer remarked that AIPG appears to be more concerned with polishing up the brass aboard ship than with the direction in which the ship is sailing. Too many committee meetings fall into disrepair among a welter of conflicting trivia, and the business of the Institute goes largely overlooked. Let’s not forget that the object of the exercise is to make geology a respected profession.”

The Environmental Geology Center Concept

The following is a 1970 report and recommendations by William A. Newton, CPG 8, Chairman of the AGI Committee on Environmental Geology Advisory to AIPG. It is included here, for the year 1968, because the Center was the idea of 1968 President John Galey. However, the Center never came to fruition.

Proposed Environmental Geology Center

Shortly after being elected president of AIPG in October 1967, John T. Galey began publicizing the need for the services of professional geologists in solving some of the growing environmental problems of our society. To show engineers, architects, and community planners concerned with environmental problems where geology can play an essential role in the solution of these problems, he proposed that an Environmental Geology Center be established by AIPG.

At Mr. Galey’s direction a proposal for such a Center was prepared and printed on August 1, 1968. Copies of the proposal received only limited distribution, as they were used primarily in fund-raising activities for the proposed Center.

Mr. Galey did much to awaken geologists to the field of environmental geology in his travels to AIPG Sections throughout the nation and in his writings in The Professional Geologist and for the Geological Society of America. He personally presented the case for a Center to some of the larger foundations located in the eastern United States. The 1968 annual meeting of AIPG in San Francisco was devoted in part to reports on environmental geologic activities by members in various parts of the United States.

Initial attempts at funding an Environmental Geology Center did not meet with success. Experience gained in contacting certain philanthropic foundations indicated that the original proposal should be revised. Revised drafts were thus submitted to a six-man committee appointed by the president of the American Geological Institute. The committee was charged with the task of reviewing the entire proposal and submitting recommendations for its revision.

Following individual studies and communication by correspondence, the committee met in Denver on November 16, 1969 to discuss all aspects of the problem. The present report constitutes the unanimous opinion and recommendations of the AGI Committee on Environmental Geology Advisory to AIPG, whose members are: William A. Newton, Chairman; Harold Bloom, Society of Mining Engineers; William C. Hayes, Jr., Association of American State Geologists; Stanley W. Lohman, Geological Society of America; Ogden L. Tweto,
Observations on Current Activities in the Field of Environmental Geology

1. State geological surveys are becoming very active in the field of environmental geology because of the pressing needs within their states. Examples are the Missouri Survey's Educational Series No. 2, titled Environmental Geology in Towne and Country, and the Illinois Survey's Geology for Planning in McHenry County. By means of such publications, geologic data are presented with new meaning, and perhaps for greater practical usage, than ever before. Studies are going on in many other state surveys and this work will continue to expand.

2. The U. S. Geological Survey has recently set up a major organizational unit of environmental geology in recognition of the growing demand for redirection and stress on these aspects of geologic endeavor.

3. A growing number of societies and organizations are now paying attention to environment. Some, like the American Chemical Society, are producing action reports by the committee method, rather than forming a continuing center.

4. Consulting demand in the field of environmental geology is expanding, although there seems to be no such thing as an environmental geologist. Environmental geology is a field in which no one geologic specialty is the master.

5. Several universities are now offering programs and/or courses in environmental geology.

Conclusions

Recognition of this new field of geology by the layman may become more prevalent as adequate planning is demanded by our society. It is gratifying that many of the state geological surveys and the Federal Survey are now providing information to the public by means of publications, personal help, and association of their geologic personnel.

The Environmental Geology Center, as proposed, was to have three main aims: (1) to promote research on the changes and effects in the environment resulting from man's activities; (2) to promote interdisciplinary technologies on problems of population growth, environmental quality, and health, safety, and welfare, and (3) to provide a centralized information, collection and distribution mechanism. The first two aims are being met in considerable degree by the activities noted above, and the outlook for continued progress is excellent. The third aim, that of an information center, is not being met, except locally as in some state surveys.

In summary, the field has progressed so rapidly during the past two years that a new, separately funded Environmental Geology Center as originally conceived by AIPG is no longer needed, nor can it be justified. This does not mean that all aspects of the problem are being satisfied, however. This committee makes the following recommendations.

Recommendations

1. Within the memberships of AIPG and AEG there exists the expertise to conduct a National (or President's) Conference on Environmental Geology. Progress in this direction was exhibited by a highly successful Governor's Conference on environmental Geology, held in Denver, Colorado, April 30 through May 2, 1969. This conference, sponsored jointly by the Colorado Section of AIPG and the Denver Section of AEG, was an interdisciplinary program which succeeded in publicizing the need for geology in solving many environmental problems of today's society. Attendance was greater than anticipated, professional and nonprofessional backgrounds of the participants were extremely varied, and the conference was financially self-sustaining. A similar conference on a national scale is needed now.

It is hereby recommended that AIPG, AEG, and perhaps others concerned with environmental geology, e.g. the AASG, jointly sponsor a National Conference on Environmental Geology, to be held in Washington, D.C. on Tuesday and Wednesday, October 20 and 21, 1970, immediately preceding the annual convention of the Association of Engineering Geologists.

2. There is need for a center to collect, abstract, and distribute timely environmental geologic publications in a form that non-geologists can use. Such a center could also be a repository for films highlighting how geology affects the public, and a source of information for community planners, government agencies concerned with the public welfare, and the schools.

In recognition that the American Geological Institute is the appropriate organization to establish and manage an Environmental Geology Information Center, it is hereby recommended that proper steps toward this end be taken by AGI. To this end the committee passed the following motion at its meeting on November 16, 1969.

It is the recommendation of this committee that an Environmental Geology Information Center be established for the dissemination of information on geology as it pertains to man's environment, for distribution to interested geologists, the lay public, and other professional and nonprofessional disciplines involved in community, urban, and rural planning; that such a Center should be established and managed by a centralized, prestigious national organization representing the professional and scientific geologic societies, and that the American Geological Institute is the logical organization for this purpose.

The committee would also like to go on record as having unanimously passed the following resolution:

Resolved, that John T. Galey and the American Institute of Professional Geologists are to be commended for their pioneering efforts in awakening geologists in general and the lay public in particular to the natural and important role that geology must play in the solution of man's environmental problems. The dedication of Galey and the AIPG to the advancement of the field of environmental geology is hereby officially recognized and noted in appreciation by the professional and scientific societies composing the American Geological Institute.

William A. Newton
1968 Annual Meeting, San Francisco

The Institute's fifth Annual Meeting was held at the famous Mark Hopkins Hotel on October 11-12, 1968. Daniel J. Pickrell, CPG 651, was Chairman, with Henry H. Neel, CPG 528, Program Chairman. The Welcoming Address was by Ian Campbell, CPG 19, California State Geologist. The luncheon speaker was Lloyd Cluff President of the Association of Engineering Geologists, on the topic of "Recent Geological Disasters." No awards were given this year.

1969
President R. Dana Russell

R. Dana Russell, CPG 172

The Institute's fifth President was born in Pomona, California in 1906 and passed away in Santa Rosa, California in 1992. He obtained his B.A. in geology at Pomona College in 1927 and his Ph.D. in 1931 from the University of California at Berkeley. After graduation, Dana started his life-long career with Marathon Oil Company. He was President of AGI in 1973, was AIPG's Parker Medal awardee in 1976, and was an Honorary Member of AAPG. During his year as AIPG President he spoke to more state sections and universities than any other president — 24. 1969 also marked the first AIPG President he spoke to more state sections and universities than any other president — 24. 1969 also marked the first AIPG Honors and Awards, the Parker Medal, which was awarded to first President Martin Van Couvering (see below).

Dana Russell was a conscientious writer of Presidential Messages for TPG. His concerns and thoughts about AIPG and our profession are found in three of his following messages.

Excerpts from President's Messages
By R. Dana Russell

AIPG has come a long way in five years. We now have nearly 2,000 members, representing all branches of geology and essentially all types of activity by geologists. We are organized into 24 State Sections. We have become well known, in at least some states, as the geological organization to which public agencies may turn for unbiased, objective advice on problems involving geology or geologists. Last year, President Galey initiated efforts to establish an Environmental Geology Center, to further public knowledge and understanding of the contributions geology can make to environmental and related public problems, and to provide assistance in solving such problems. Several State Sections have already made important contributions along these lines. Some have also effectively blocked efforts to register, license, or otherwise regulate geologists under the administration of engineers or other non-geologists. The California Section, in cooperation with the Association of Engineering Geologists and with help from the Institute and other geological organizations, has finally succeeded in obtaining passage of a "model" registration law with a governing body of geologists. All these accomplishments, and many more, have been described in our official publication The Professional Geologist. Under the leadership of three exceptionally competent and dedicated editors (Conselman, Wengerd, and Spaulding), this newsletter has grown to an effective medium of communication—witness the 16-page November 1968 issue.

But we have really only made a good start. As Art Spaulding pointed out in his November editorial, only six percent of all geologists are members of AIPG—hardly enough for us yet to claim that we represent the entire profession. Bringing in the younger geologists as "affiliates" to involve them in professional concerns would have helped—but this proposal was voted down. Vito Gotaautas is doing yeoman work in reorganizing and revitalizing the Institute Membership Committee, but these efforts will be effective only if each of us helps. The same statement applies to all aspects of our organization—we must all discuss, select, then get behind and push those activities that will foster true professionalism and the recognition of geology as a respected profession important to essentially all of man's activities relative to his environment—the Earth.

How do we do this? Through the State Sections. The national Institute is only a coordinating organization. To be effective, its committees must gather information from all the Sections and feed back items of interest and concern for discussion at the state and local level. This means that Institute committees must have State Section counterparts, if only one person, to maintain contact. And every state where there are more than 10 geologists should have a Section—though we have 24 State Sections, there are 10 more states that have enough members to form a Section.

So let me suggest the following as goals for 1969:

1. Let's each of us try to get at least two well-qualified geologist non-members to join AIPG in 1969. And, if you find new ways of interesting others, pass them on to your Membership Committee chairman so that he can pass them to others.
2. If you are not now serving AIPG in some capacity, how about looking over the list of your State Section committees and other jobs, and volunteering for one or more?
3. Let's each make a point whenever opportunity occurs (and can't we make opportunities?) to show others who are concerned about our environment what geology can...
THE GROWING YEARS

R. Dana Russell

President’s Message
“Why AIPG?”

Why AIPG? Geology has many organizations—more than any other scientific disciplines. Why was another necessary? Because none of the existing organizations were able or willing to speak for all geologists on professional matters; to undertake the hard task of establishing and enforcing professional ethics and standards; to stand up in public and speak, firmly and objectively, on public matters where geologists can make a special contribution; and to become involved in political activities when necessary. The American Geological Institute was organized to unify the scientific efforts of all branches of geology, but AGI is specifically enjoined by its bylaws to undertake the hard task of establishing and enforcing professional ethics and standards; to stand up in public and speak, firmly and objectively, on public matters where geologists can make a special contribution; and to become involved in political activities when necessary. The American Geological Institute was organized to unify the scientific efforts of all branches of geology, but AGI is specifically enjoined by its bylaws to undertake the hard task of establishing and enforcing professional ethics and standards; to stand up in public and speak, firmly and objectively, on public matters where geologists can make a special contribution; and to become involved in political activities when necessary.

AIPG has become well known as the geological organization to which public agencies may turn for unbiased, objective answers on problems involving geology or geologists. A few salient accomplishments of the Institute are listed on the attached sheet.

Why Join AIPG? Why should you apply for certification by the American Institute of Professional Geologists? Many academic, government, and company geologists have not applied because they think they “don’t need it.” Under their protecting canopy of job security, they think they can afford the selfish attitude of “let the consultants who need it support it.” But history shows that the “protective canopy” is not permanent and does not always protect, and the consultants’ need for protection from charlatanism and restrictive legislation is a need affecting all of us to varying degrees. Moreover, protection is only one aspect of the total function of professional representation performed for all geologists by AIPG, and it seems to me that any professional who is proud of his profession, or who owes his position to professional training and experience, has an obligation to support that profession.

If you would like additional information about the American Institute of Professional Geologists or its work, please feel free to call on me, on any of the other officers of the Institute, or on the Executive Director.

President’s Message
“Let’s Talk”

In my first column, in the January ’69 issue of The Professional Geologist, I plied for monthly State Section or local meetings to discuss controversial issues of professionalism. I plugged the same subject—the need for free and frank discussion—in almost every other issue. It was the main theme of my Presidential Address. And here it is again in my swan song. I’m hipped on the subject.

In my last column I promised a list of discussion items—possible topics for those monthly meetings—primarily as a means of reviewing the “State of the Institute” and determining its future course. I said, “Let’s re-examine our mission, our specific objectives, and our methods for achieving them. Let’s discuss these problems with each other, and then let our Advisory Board delegates, Headquarters, our Editor, and our President, know our conclusions.” O.K., here’s an outline for a series of discussions on “The State of the Institute.” It doesn’t purport to be all-inclusive, but it should stimulate you to think of other questions that need exploring. And a review of past issues of The Professional Geologist will suggest several more.

1) What are our objectives in AIPG?

   a) With respect to membership:

      i) Do we really expect to represent (i.e., to speak for) all professional geologists?
ii) If so, what percentage of the eligible geologists do we need to enroll, to claim to speak for the profession?

iii) What percentage can we realistically expect to enroll? Five percent? Ten percent? Twenty-five percent? Fifty percent?

iv) How do we go about reaching that goal?

b) In what ways do we expect to represent the profession; i.e., are some of our current activities really professional? Are we overlapping too much on other organizations? Or are there things we should be doing that we’re not?

c) Should more of our effort go into political activity? Should we set up a drive for universal chartering or registration? (And if registration became general, would there be any need for AIPG?)

2) Having decided on objectives, how do we reach them?

a) Can we set priorities on our objectives, so we don’t waste effort by spreading ourselves too thin?

b) Is our current organization, depending heavily on State Section initiative, the best one for our purposes?

c) If so, how do we get the State Sections to assume and carry out their responsibilities more effectively? Suggestions received include?

i) Organize local “chapters” in those states with larger memberships.

ii) Provide section and chapter officers with monthly discussion items (here are some!).

iii) Stimulate local groups to take an active part in local politics.

iv) Have more visits from national officers and from the Executive Director.

v) Improve information exchange on controversial issues by opening the pages of The Professional Geologist to all communications from the State Sections.

There are several ways to organize these discussions; one of the best is debate style, with an eloquent proponent speaking for each point of view, followed by questions and comments from the floor. When the argument gets too warm, try the old Quaker trick of “silent meditation”—call a halt to all discussion for five or ten minutes while each person thinks about what the others have said, instead of thinking up new arguments for his own point of view. You might also try the trick recommended by the communication specialists—before stating the next point in your own argument, you must restate your opponent’s point in different words than he used, but preserving his meaning—and he is the judge of whether you’ve succeeded. This type of luncheon meeting can be fun, as well as instructive and enlightening.

So-o-o-, may you have good talk. And may I see the results of it at our Advisory Board meetings next year, where, as you know, I’ll be acting as chairman.

I can’t end this last column without a farewell word on how gratified and complimented I feel at having been chose your president for this year. You have given me much pleasure and taught me a lot; I hope that I have helped the Institute some in return. And I want to assure the incoming officers and Advisory Board representatives that I’ll do all that I can to make their takeover on January 1 as easy as possible. They won’t need much help because you have chosen very well.

Au Revoir, and thanks,

R. Dana Russell

---

AIPG Membership in 1969

A statistical analysis of the membership showed 1,954 members employed as follows:

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum</td>
<td>57%</td>
</tr>
<tr>
<td>Minerals</td>
<td>23%</td>
</tr>
<tr>
<td>Engineering</td>
<td>11%</td>
</tr>
<tr>
<td>Geohydrology</td>
<td>6%</td>
</tr>
<tr>
<td>General</td>
<td>3%</td>
</tr>
</tbody>
</table>

100%

1969 Annual Meeting, St. Louis

Our sixth Annual Meeting was chaired by William C. Hayes, Jr., on October 10-11, 1969. No Information is available.

First Award—Ben H. Parker Memorial Medal and AIPG’s Honors and Awards Program

The first AIPG award was devised in 1969, in honor of Ben H. Parker. Fittingly, it was awarded to our first President Martin Van Couvering. Shortly after the death of Ben Parker in late July, President Russell, at the suggestion of Executive Director Art Brunton, proposed to the Executive Committee the establishment of a medal to be awarded by AIPG in Ben’s honor, for outstanding service to the Institute and the profession. Art’s proposal was endorsed with enthusiasm by the Executive Committee. Art Brunton was asked to present the medal to Martin. Art’s tribute to Martin included: “It was my distinct pleasure and very much to my professional benefit to have worked closely with the man we honor by the establishment of the memorial medal, and with the men we honor as its first recipient. I know of no two men more deserving of every honor we could possibly bestow.” Martin’s response was not recorded, but according to Art he “was taken quite by surprise and was tremendously pleased.”

Over the years, five honors are recognized by the Institute: the Ben H. Parker Memorial Medal, the Martin Van Couvering Memorial Award, the John T. Galey, Sr. Public Service Award, Honorary Membership, and the Outstanding Achievement Award, given to a non-member of AIPG. In addi-
tion, Presidential Certificates of Merit are provided for members for significant contributions made during the year.

The American Institute of Professional Geologists has a history of effective service to the profession of geology. From its beginning, the Institute has emphasized the role that professional geologists play in this fascinating and changing world in which we live.

In an Institute such as ours, there are so many highly motivated geologists contributing to the profession, and to the public, that the identification of a select few for particular awards is in itself a monumental task. The success of the Honors and Awards Program is dependent on an accessible nominating process and a diligent screening of those nominated. This is done by the Honors and Awards Committee.

See Appendix three for full descriptions of each award. Many award citations are printed in TPG soon after the Annual Meeting. A formal Annual Awards Booklet (started in 1983) giving all citations is available on request.

1970
President Henry H. Neel

Henry H. Neel, CPG 528

“Hank” Neel’s life story, including numerous quotes by him, is eloquently told by 1975 President Art Spaulding, on the occasion of Hank being awarded the Ben H. Parker Memorial Medal in 1982. A true Angeleno, Hank passed away in his birth city Los Angeles, in 1994 at age 81. Here is Art Spaulding’s biographical tribute to Hank, followed by two of Hank’s Presidential Messages.

Henry Howard Neel was born March 5, 1913 in Los Angeles, California. His formative years, however, were spent in Ventura where his family was involved in growing lemons. Let me put the essence of those years in Hank’s own words.

“My entry into the petroleum business was somewhat by chance. When I was growing up in Ventura only about one-half a mile from the Ventura Avenue oil field, I had nothing but antipathy for oil companies because they continually raised hell with the best fishing and swimming holes of the Ventura River; and since I was pretty much of a hillbilly type kid myself, I was incensed by the fact that they kept building roads and intruding on what I considered my territory. As a result of all this, I had absolutely no interest in the oil business. Even though I had some relatives who earned their living there, I still felt that the oil business had nothing to offer me. Of course, when I was a kid in Ventura, there weren’t too many geologists around and those who were, were somewhat looked down on by the practical cable tool drillers who inhabited the Ventura Avenue oil field. Before I got into college I didn’t even know there was any such thing as geology.”

Hank’s life story shows that he graduated from Stanford University with an A.B. degree in geology in 1934. What that story omits, however, is the true nature of Hank Neel.

“I had a rather easy time of it in high school and apparently continued on the same life style when I got into college, with the result that I flunked out of school at the end of the second quarter. In those days when you flunked out, there were no ifs, ands, or buts about it. There wasn’t any probation nonsense. To get back to school you had either to go to an accredited college and get a B+ average or you had to work nine months at a ‘gainful occupation’ before they would let you back in again. Since I had already flunked out of Stanford, I wasn’t about to flunk out of some other school. I got a job working on a Ventura County surveying crew and spent nine months cutting brush and hauling a chain around the mountains of Ventura County. It just happened that the Stanford summer geology crew was doing their field work in the same area at that time, and I had quite a few contacts with them and perhaps that aroused a little interest in geology. When I went back to school after the end of my nine months, a very good friend of mine with whom I had roomed my first six months in school had taken geology and recommended it to me as a very interesting and easy course. He had been one of my camping, hunting and fishing companions when I was in high school, so he knew that short of stuff might interest me. I proceeded to take geology and got the first A, and I think the only A, that I ever got in college. (I believe that anything above ‘C’ average showed a waste of time.) I really enjoyed the subject and decided that that was the thing for me. However, I was more interested in mining than petroleum and, therefore, my emphasis in college was on hard rock geology.”

Again, if we return to the impersonal summary of his accomplishments, we see that he worked for Tidewater Oil Company and its predecessor in interest from 1942 to 1962, 20 years in which he started as a bug picker in the Paleo Lab and finished as General Manager, International Exploration & Production Division for Tidewater in Los Angeles. The summary does not reveal how Hank got started and his reasons for leaving the company.

“When I got out of school in 1934, nobody was get-
tiring jobs of any kind in geology, so I borrowed some money from the bank of A. Levy in Oxnard and went into the lemon business. By 1941 the lemon business had hit the doldrums, but fortunately the oil business was starting to pick up. In the meantime, I had gone to night school at Ventura Junior College and taken micropaleontology under the tutelage of C. M. ‘Kit’ Carson, who was the paleontologist for the Associated Oil Co., which later became Tidewater Associated, then Tidewater, then Getty. Kit ran the bug lab in the middle of the Ventura Avenue oil field, and I got a job with him in January, 1942 to augment the meager returns from the lemon business. I spent the next couple of years washing and picking samples in the bug lab, shooting ground squirrels out the windows, and generally having a very good time with Kit Carson. During the course of this operation, I helped out a guy by the name of Roy Tallant who was working on the landslide problem in the Ventura Avenue oil field. At the end of the year, Roy left this job, since he had a one-year contract, and went to South America in 1944, and I was asked to take on the landslide job. I did this exclusively for about four years. By about 1948 the landslide job commenced to slow down because most of the research was done, and we were just in the phase of applying preventive and corrective measures. At this point in my career, I started out in petroleum exploration, mapping mostly in Southern California. About 1953 or 1954 the Exploration Department of Tidewater was ‘put through the cleaners’, and I came out the other end as Western Division Exploration Manager in San Francisco in 1954. My curriculum vitae tells generally what happened after that, as far as dates are concerned, but I did enjoy all of that foreign travel. I got into that because in 1956 we were offered a proposal in Cuba and I happened to be the only guy in the Exploration Department who could speak a little bit of Spanish. I was sent down there in January to do a reconnaissance mapping job of all of Cuba and check out the possibilities of getting concessions and the political climate, etc. Fidel Castro had landed on the east end of Cuba about that time, and so, by the end of the year, it became obvious that that was not the place to be. In 1957 I got sent off to the middle east, the Far East, Europe, and quite a few other places around the world."

Hank became a consulting geologist after leaving Tidewater and had the good fortune of joining with Frank Morgan, a pillar of the profession, in his Los Angeles office, office space which Hank still occupies. As Hank tells about it,

“When I was about 40 or 45 years old, I had decided that I was either going to quit working for the company before I was 50 or I would continue working for the company ‘forever’ and vowed to hold my peace and not complain about anything. I had seen too many guys who had waited until they were 60 years old to decide to quit, and then it was too late for them to do anything else. At about 49 years and nine months I decided that this was the time to leave, so in September, 1962 I left Tidewater (on good terms with excellent relationships) and started out consulting on my own. In March of 1963, Frank Morgan, whom I had known and admired for many years, asked me if I would care to move into extra office space that he had and become associated with him. This I did gladly. At about that time Frank was involved with the geological hassle that was taking place in connection with the location of the Corral Canyon nuclear power plant which the Department of Water & Power of the City of Los Angeles wanted to install in the mouth of Corral Canyon on the Malibu Coast, directly astride the Malibu Coast fault. This was perhaps a classic example of locating a plant such as this on the basis of engineering factors and then trying to make the geology fit the location. Before this thing was over with, there were perhaps 50 to 100 geologists involved, and the quality of the testimony of some of the geologists (no names mentioned) was such that it became obvious that something needed to be done about the ethics of the profession.”

As Hank has said, his first collision with professional problems in geology occurred shortly after he entered the consulting business, and, as our good luck would have it, Hank and AIPG were among those trying to enhance the standing of geology as a profession.

“At that time my original boss and mentor, Kit Carson, was actively involved in the formation of AIPG, and he virtually grabbed me by the neck and dragged me into the organization. Of course, this fitted exactly with the problems of Corral Canyon and related problems of engineering geology. Although a very significant portion of my career had been concerned with engineering geology in connection with the landslides in the Ventura oil field, I had never had the dubious privilege of working for civil engineers. The landslide research, correction and control methods in Ventura were all handled by the Geological Department, and the engineers worked for and under the direction of the geologists, as the geologists saw fit. The company had recognized that a landslide was a geological phenomenon and needed to be studied by geologists using geological methods, resolved by geological solutions and cured by geological treatment.”

His experience in solving the landslide problems in Ventura would soon undergo the ultimate test.

“After I arrived in Los Angeles from San Francisco, when the company transferred its headquarters in 1958, I purchased a home on which a respectable geological report had been by a well-known geologist in Los Angeles. The report was very well done and listed several precautions that should be taken in the development of the tract on which my house was located. Alas and alack, in 1963 the house slid off the hill. This was a rather embarrassing situation for a landslide geologist to find himself in. However, I have been able to say that I’m the only landslide expert who has owned and operated his own landslide! In the course of legal action to recover what I could out of this fracas, it was discovered
that the geological report had been totally ignored by the contractor in excavating and grading the tract, and I found out much to my sorrow that geologists had virtually no standing in the City of Los Angeles at that time. This again was a reason for the formation of AIPG — to give some stature to geologists who had no registration or any other official recognition such as that held by civil engineers. It is unfortunately, in my opinion, that we were never able to get membership in AIPG recognized as the equivalent of registration, such as is enjoyed by the C.P.A.s."

Hank's most significant contributions to the geologic profession were related to registration of geologists as a professional group, much in the same fashion as engineers and surveyors are licensed to practice for the public. His initial exposure to early registration laws was in the City of Los Angeles. To understand Hank's role in this affair, one must know something of the history of geological registration in California.

Geologists' registration in California had its basis in the very heavy rainfall winter of 1951-52 which caused many disastrous landslides and mudslides in Southern California and particularly within the City of Los Angeles. These slides were the result of extensive excavation that had been completed by housing developments in hilly areas, particularly the Santa Monica Mountains, during the post-war housing boom. The city wisely recognized that there was not an adequate ordinance in the City of Los Angeles, or anywhere else for that matter, to control the practices of excavation and grading, particularly for housing developments. With the help of geologists the city wrote a grading ordinance, which was adopted in 1952, aimed at the regulation of these practices. This ordinance was probably the first such ordinance written in the United States, if not in the world. Among other things, it required that a geologic opinion must be obtained in the event that the City Building & Safety Department believed that the area presented any sort of geologic hazard.

An Engineering Geologists Qualification Board was established by the City of Los Angeles in 1957. The purpose of this board was to review the qualifications of those geologists practicing engineering geology in the City of Los Angeles and to establish a list of those whose reports would be accepted by the City Department of Building & Safety.

The City of Los Angeles Engineering Geologists Qualification Board did a very creditable job of establishing qualifications and giving both written and oral examinations to those geologists desiring to practice engineering geology in Los Angeles, but this did not provide for outlying areas controlled by other governmental entities. As a result, the County of Los Angeles followed suit and established its own grading ordinance and Geologist Qualification Board in 1959.

The result of the City of Los Angeles and the County of Los Angeles each having its own Geologists Qualification Board led to the absurd circumstance where some geologists were authorized to practice within the City and not in the County of Los Angeles and others could practice in the County but not in the City.

Following the establishment of the ordinances requiring geological input in Los Angeles City and County, there was a proliferation of similar ordinances and boards in other parts of the state. In all, approximately 20 or more local geologist qualification boards were established in California.

It was known in the early fall of 1966 that both the City and County of Los Angeles were getting fed up with being in the geologists registration business and were going to work for a statewide geologists regulation bill in 1967. One of the recommendations of the “Committee on the Geological Environment in the City of Los Angeles,” August 25, 1966, which was established at the request of Mayor Sam Yorty, appointed by National AIPG President Martin Van Couvering and chaired by Richard H. Jahns of Stanford University, was that, “The Engineering Geologist Qualification Board should be dissolved . . .” and that, “If this recommendation were translated into action, the City of Los Angeles would no longer be assuming local responsibility for registering, qualifying, or certifying geologists in a field that is extraordinarily difficult to define. In our view, regulation of some kind is highly desirable for professional geologists as a whole, and such regulation would be introduced at state level . . .”

Eventually, efforts in which Hank was a major force culminated in a bill which was passed by the legislature in 1968 and became the blueprint for registration laws in many other states. Hank's contributions to the passage of this law related to being professional.

"In a lawsuit where I was testifying in Federal Court, the opposing attorneys were giving me hell because geologists were not licensed. Finally one said to the judge, 'Your Honor, are we to understand that we have to waste our time listening to the testimony of a witness who claims to be in a profession which is not even recognized by any governmental agency?' To which the judge replied, 'Mr. Neel, don't you have any kind of number?' I answered, 'Yes, I am registered Petroleum Engineer No. 183.' The judge said, 'That's all I want to know; I don't care what the number means as long as you have a number — the witness is qualified.'"

To round out all of Hank's professional dossier, he belongs to the American Association of Petroleum Geologists, he was president of the American Institute of Professional Geologists in 1970, he is a member of the Geological Society of America, the American Institute of Mining, Metallurgical and Petroleum Engineers, and the American Association for the Advancement of Science. His experience includes work in petroleum exploration and production, mineral exploration and production, submarine mineral exploration, and the geology of engineering projects; and he has conducted investigations of geologic, economic and political conditions, negotiating with government and private agencies, and/or management of operations from Argentina to Turkey with a myriad of other countries alphabetically listed in between.

-59-
I should like to finish these encomiums with remarks that may not be related directly to Hank’s professional accomplishments, but they are still appropriate, as they account for the esteem, love and friendship we all have in such abundances for him. Hank is known for his directness, candor and his ability to say complicated things in simple English (or Spanish, if you want) as we have just heard. Above all, his sense of humor predominates. Since my office has been located approximately 200 ft from Hank’s, I have developed a fond affection for him and respect for his capabilities. All of these qualities come together when I accompany him to a bar, and I hear him order a drink, “Tino, I’ll have a glass of whiskey, please.”

The President’s Column
“The Active and the Indolent”
By Henry H. Neel

To my fellow members of the American Institute of Professional Geologists I would like to take the opportunity in the first paragraph of my first President’s Column to express my humility and thanks to all of you for the honor which you have bestowed upon me by electing me the President of the Institute. I sincerely hope that I will be able to live up to the reputations of my esteemed predecessors and your expectations in the ensuing twelve months.

As I start on my first President’s Column I wonder if this gets easier as it goes along or if all of the 12 columns will be as difficult to start out as this one.

There have been many questions asked in many quarters, all relating to the general theme — what is AIPG? There is no simple answer and I think that this is no time to try to generate answers. I would like to dedicate my first column to an answer to the question: Who are the members of AIPG?

In Dana Russell’s President’s Column for October he remarked that after his travels around the country and his appearance before many AIPG groups he was somewhat discouraged to find that the principal work of the Institute was being carried on by only a very few people. I cannot really become too alarmed by this situation. I think we must realize that the AIPG will always be made up of a relatively small, active membership. In any group, wherever you are, you will find that the active few carry the load and make the decisions. The remainder are happy to follow along and be relieved of the responsibility of making the decisions and taking the initiative for themselves.

The membership of AIPG will probably always remain small compared to the total profession of geology. Although we sincerely hope for the support of all geologists we must realize that an organization of the active must not become diluted by the indolent, otherwise their potency would be seriously diminished. I hope that none of my geologist friends will be offended by my comments. I wish it clearly understood that I make no reference whatsoever to anyone’s abilities as a geologist, I am speaking only of their attitudes as professionals.

I would like to show as an example of the effectiveness of the “active” the recent passage of Assembly Bill 600, the Geologists Registration Act in California. Of approximately 3,000 to 3,500 geologists in the State of California there were less than 300 members of the California Section of AIPG. This represents less than 10 percent of the geologists in the state. The California Section of AIPG had the wholehearted support of the Pacific Section of AAPG and most of the AEG in their efforts to attain passage of the Geologists Registration Act. Without this support our efforts would have been fruitless, but the work of obtaining registration was actually done by probably less than 30 geologists or 10 percent of the California Section, and one percent of the geological population in the state. It could not have been otherwise. In a project such as this it is essential that a few people with excellent communications carry the load. The larger the organization the more cumbersome and the more ineffective its efforts. This is not to say that every member of the California Section would not have helped to his utmost if requested. It merely indicates that the Section realized that the only effective way to operate was through a small, active, flexible group.

The American Institute of Professional Geologists needs as many “active” members as it can obtain. What we do not need are “indolent” members. In any group, wherever you are, you will find that the active few carry the load and make the decisions. The remainder are happy to follow along and be relieved of the responsibility of making the decisions and taking the initiative for themselves.

As I start my first month of my year as President of AIPG all I can ask is that I have the support of the active 6.6 percent of the geologists of the United States. The indolent will follow because they know no other course.

Henry H. Neel

The President’s Column
“Finale”
By Henry H. Neel

Since this is my last President’s column I suppose I should properly look back and review the accomplishments of the Institute during my term of office. However, in doing this I keep thinking about the many things that I wanted to do and never quite got around to, rather than the things which we actually did accomplish. So perhaps the best thing to do is to take the advice of that great philosopher of baseball,
Satchel Paige, who said, “Never look back, something might be gaining on you.” As long as we continue to look forward and to advance, as we have in the first seven years of our existence, I don’t think we need to worry about anybody gaining on us. In most of the projects which we have elected to undertake, we are far ahead of the rest of the profession.

One of the things that I look forward to is an ever-increasing recognition of the influence of the members of AIPG on the profession of geology. As the members individually are highly influential in the profession, so should the combined efforts of the members in the Institute be even more influential.

There has been some criticism of the Institute by non-AIPG geologists and by other geological organizations because of their belief that the Institute has been too aggressive and too willing to take up the sword for any type of crusade. This, of course, has been the criticism that has fallen on the ears of the active from time immemorial. The active have the foresight to start trying to solve a problem before the indolent even realize that it exists. As the rest of the profession has a chance to contemplate in retrospect what the Institute has done, I believe that this criticism will be replaced with recognition that many of the advances and improvements of the profession of geology since 1963 would not have come to pass without AIPG.

One thing which I do not expect in looking forward, is a rapid increase in our membership. The Institute is composed of leaders of the profession and as a result its size will be limited by the number of leaders available, not by the number of followers. We are an organization of Chiefs, and out of a maximum of 30,000 Indians in the country there can only be so many Chiefs. I believe that three or four thousand is perhaps the limit. We will still continue to get new members as new people assume leadership, but concurrently we will lose some of the older members who have chosen to retire and drop out of the Institute.

This brings up a subject which I have thought about for the past year, the names of those who have dropped out or resigned from the Institute, I am impressed by the fact that I see many names of those who only a few years or even months ago we urged strongly to join. From this I conclude that if a man is not sufficiently motivated to join the Institute on his own initiative he is not worth having as a member. Those who must be urged do not have enough regard for the profession to be the type we want in the Institute.

At the risk of having something catch up with me I will take one look backward. I wish that I had been able to travel around and visit more state sections and more local meetings than it was possible for me to do. This will probably be a continuing problem with officers of the Institute. Even when we become sufficiently affluent to pay expenses incurred by officers, there is still the question of time. Most of us in this organization are very active and very busy. The problem of finding the time to travel is serious. As the Institute becomes larger, and more state sections are formed, this problem will be aggravated. Jim Wheeler, Vice-President, has helped out tremendously this year in the visits he has made. Possibly in the future even more of the officers and Executive Committee members should be called on to carry part of the load of local visits.

Now as I conclude this last column, I can only say that it has been the utmost honor for me to serve you as President. I said as much at the beginning of my term of office, but those were only hollow words compared to the feelings that I express at the end of my term. It is only after a year in office that I come to the thundering realization of the caliber of the professional leaders who make up the membership of the Institute. I say in all humility that to have been selected by the officers of the Institute to serve as Chief is an honor which I hope in some small way I have deserved.

Henry H. Neel

---

**At Issue:**

**Natural Resources vs. Environment**

A compendium of papers and testimony by more than a dozen CPGs on this hot topic in the 1970s-1980s

The 1970s and 1980s were a time of increased federal regulations and withdrawal of lands from mining and petroleum extraction. These increased regulations affected the livelihood of most geologists. It seemed, according to political scientist Paul Weaver, that “Some Washington regulators seem to have goals aimed at the mass of Americans who go around doing and enjoying things without permission.” President Henry Neel was possibly the first of many prominent AIPG members to speak out on this subject. His President’s Column in the October 1970 TPG “Natural Resources vs. Environment,” begins and ends with these paragraphs:

“Is it inevitable that preservation of the environment and development of natural resources should be considered incompatible? They certainly should—
n’t be, but many people seem to be heading toward that conclusion. Apparently the unprecedented standard of living attained by Americans as a result of the development and utilization of our natural resources has given many people the leisure time to become interested in the environment; to the extent that they now wish to do away with development of natural resources entirely. I do not think that any of us are in favor of “the rape of our environment,” but unfortunately many of the present-day environmentalists have become so emotional about the subject that not only are they opposed to rape but they are against sex in any form.

“The emotional aspects of the problem will certainly be the most difficult to overcome. An example of this took place in a recent hearing for an application of Occidental Petroleum Corporation to conduct test drilling along the coast near Santa Monica, California. One of the protesters, a nearby local resident, stood up and stated that even though he was fully aware that the operation would be carried out in such a manner that he would be unable to smell it, hear it, feel it or even use it, the mere fact that he could wake up in the night and know that it was there would cause him sufficient mental anguish that he would seriously consider selling his home and moving to a different neighborhood. This man may have slightly exaggerated his feelings for the sake of emphasis, but probably not very much. Unfortunately, much of the opposition is based on just such reasoning. It is difficult to know what sort of an answer can be given in cases like this. But we must hope there are enough reasonable people left in the world that a solution can be found.”

Then, in December 1974, President Frank B. Conselman wrote to “#732” of the Bureau of Land Management, with a copy to Secretary of the Interior Rogers Morton. Note how Frank uses the English language, in the manner in which he became famous.

[AIPG letterhead]

Director (Attn: 732)
Bureau of Land Management
U. S. Department of the Interior
Washington, D.C. 20240

Dear #732:

With reference to the draft environmental statement on OCS oil and gas leasing, I respectfully submit that it is time to deflate the exaggerated importance now being given to “potential effects of possible” evils in OCS drilling. The same holoboblin philosophy would have prevented the development of the airplane, the automobile, electricity, and even the acceptance of the gift of fire. Precisely what evils do we fear, to what extent, and on what evidence?

Twenty-five miles offshore and beyond, the value of “aesthetics” and “recreation” approaches zero. Danger to marine life, if any, will probably be more than compensated by advantages of the sort already observed in the Gulf of Mexico, where drilling has taken place offshore for quite a few years.

Barrels are more important than barnacles; we can produce more fish (if need be) but we cannot generate more oil and gas. Ironically, our oil and gas source materials originate on the very sea floors which you now wish to protect.

Oil and organisms are not mutually exclusive; if they were, they would be only partially and locally so. In any case, let’s inject a little realism into evaluating the net importance to humanity of the alternatives. People, too, deserve protection—against cold, disease, immobility, economic insecurity, and hunger.

Very truly yours,

Frank B. Conselman, Ph.D.
President

In 1975, President Arthur O. Spaulding was the first of 18 CPGs to give congressional testimony to explain to legislators some basic geologic and economic realities. Also in 1975 a disgruntled Dr. Burdette Ogle, CPG 348, decried the plight of petroleum geologists contending with radical environmentalists (see Appendix 9). In 1976 five more CPGs gave congressional testimony, and six more in 1977. One of these was TS Ary, Director of the U.S. Bureau of Mines, who represented AIPG in giving congressional testimony against exclusion of Alaska lands from exploration. A list of all CPGs who gave congressional testimony and their topics is given in Appendix 9.

The 1978 Annual Meeting Technical Session was devoted to seven eminent speakers, including Geologist/Astronaut Harrison Schmitt (see Index and Who’s Who). All speakers were concerned with ill-advised government regulations. Harrison’s speech can be found in Appendix 9 for 1978, and his letter to President Richard Nixon in the text for 1973.

Also in 1978 Fred Stead’s AIPG Committee on Legal Affairs prepared a report on “The Taking of Federal Lands.”

In 1979 past-President Art Spaulding gave a Keynote Address to the 15th Annual Meeting of the California Section of AIPG, in which he discussed the changing role for geologists as “governmental intervention in your business is pervasive and expanding.”

In 1980 a concerned President James Dunn and his Executive Committee authorized publication of the critical AIPG booklet “Withdrawal of Alaska Lands from Multiple Use” (1980). Then two years later President Mo Turner and the 1982 Executive Committee and guests flew to Washington, D.C. and met at the Renaissance Hotel. After a briefing on the current issues by AIPG Legislative Counsel Jim Hammersley, the group split up to visit and lobby various congressmen and senators. Several members laid out their woes and concerns before our own esteemed member Dan Miller, who was then Assistant Secretary of the Interior. Dan quietly but firmly reminded them about the real facts of life in Washington then arranged an opportunity for them to present a 5-minute statement on behalf of AIPG and AAPG, which generally opposed the Wilderness Protection Act then being debated before the Senate Energy Committee.

In the November 1982 TPG, President Mo Turner spoke his mind in Senate testimony as regards the environmental momentum and the locking-up of public land. (Part of his testimony is reprinted herein, see 1982.)

The March 1983 issue of TPG printed a letter from past-President James Dunn to the editor of The Living Wilderness magazine. Parts are quoted here, because Jim gave a new perspective on industry’s positive role in the environment:
“I look across the lake on which I live at hills which are heavily wooded and abound with wildlife. Many of the species are more abundant than when the Europeans first came to North America.

“It is clear to me that the things I enjoy in my environment are results of our industrial system. Trees are no longer the only source of thermal energy. The steep, inhospitable, bouldery farmland is no longer needed for food production. Glass and iron that depended on local energy resources a century ago are now produced efficiently elsewhere and the remnants of the mills, furnaces, and farms are rapidly disappearing.

“When I consider our environmental gains here, as well as in all industrialized countries, and compare them to the absolutely devastating environmental deterioration of the non-industrial nations, it is obvious to me that environmental conservation and wilderness could not exist without industrialization and the wealth it produces.”

Then, on page 15 of the September 1988 TPG, Don Fife, CPG 4735, a spokesman for the mining industry, wrote an article based on his testimony at a Senate hearing, titled What Price ‘Wilderness’? It begins with this startling paragraph, in which his ‘pending’ premonition has come to pass:

“The formal concept of ‘wilderness’ began back in 1964 as a method to preserve a few mountain tops and a few million acres, perhaps 10 or 12 million acres of primitive roadless wild land. This reasonable idea grew into a consumptive land use which has locked up more than 100 million acres of our valuable energy and mineral land base. Pending future wilderness legislation, this figure approaches 330 million acres, an area the size of three Californias.”

The following year, Don, who lives and works his family’s carbonate rock mine in California’s Mojave Desert, gave additional congressional testimonies in Washington (see Appendix 9).

In the December 1988 TPG, Gerald V. Mendenhall (1990 Vice President) wrote an article titled “The Time has Come to Hang Tough.” Parts of it read:

“Specifically, it is in the area of natural resources, energy, minerals and environment, that we are most knowledgeable and concerned. These are our livelihood. Presently, the area is in a shambles, domestically and internationally. Domestic production and reserves of hydrocarbon are decreasing. Drilling is little more than 20 percent of its former high. Rigs sell for less than 10 percent of replacement cost. Infrastructure of trained people is decimated, embittered, scattered and replaced by inexperienced and, of greater importance, less costly people who suffer from lack of tempering from time in grade. Can political candidates ignore national security in energy and strategic minerals?

“It is time to establish policies that are pragmatic, bipartisan, enduring and accountable; removed from whims of electoral needs and racial ideology. Then, hang tough!”

On page two of the January 1989 Geotimes appears a letter by Robert H. Paschall, CPG 118, on the then-hot subject of the “ANWR debate.” Excerpts follow:

“...I have been backpacking in the Sierra Nevada for 50 years. I am a member of the Audubon Society and a contributor to World Wildlife Federation and Frankfurt Zoological Society. I was once a member and chapter officer of the Sierra Club, but quit because of the club’s blatant hypocrisy. . .If nuclear, hydro, solar, wind, and geothermal energy were developed to the ultimate, they still would not fuel cars or trucks. . . .When I was employed by the Eskimos of Barrow, I visited the North Slope to appraise the Prudhoe Bay oil field. My first visit was in August, and the thermometer read 39° F at noon. It was below zero in October while people were working to save the whales. Northern Alaska is a bitter place, which is why almost no one lives there. . . .The greatest menace to North Slope wildlife is an Eskimo riding a snowmobile and carrying a rifle. . . .Also, to the embarrassment of the Sierra Club, caribou stay under the elevated Alaska Pipeline in winter, because the warmth of the oil melts the snow off the tundra. . . .A final bit of perspective: The Prudhoe Bay field, the largest ever found in the U.S., takes up less than half of one percent of the Arctic Coastal Plain. If another Prudhoe is found, plus a few smaller fields, it is highly unlikely that they will cover more than two percent of the plain. So an undeveloped 98 percent will remain for those who like to dream about virgin territory they have never seen.”

In the lead article of the March 1989 TPG is the text of a 1988 speech by Michel T. Halbouty, CPG 10 (see Appendix 9). He discussed “The Role of Energy in the Reindustrialization of America” in which he states:

“There is no shortage in our energy potential. The only shortage we have had has been the desperate shortage of wisdom in the processes by which federal energy and environmental policies were created and enforced.”

Then, there’s Richard Proctor’s Presidential Message in the April 1989 TPG on “Wilderness and the Public Good.” It extolled “Let’s get involved, because others less qualified are shaping our future.” My message was reprinted in AGI’s July 1989 Geotimes, resulting in “more letters to the editor than any article in Geotimes.” AGI Editor Larry Bowlds told me that the majority of letters he received from readers agreed with my view of the need for more balance between society’s need for natural resources and the government’s taking of lands as “wilderness.” But, in subsequent issues of Geotimes, Larry nevertheless printed mostly letters from readers espousing the anti-industry viewpoint. I asked him why he didn’t proportion the yea/nay letters that he printed. He said, “Controversy increases reader interest.” I guess so. I felt that I should write a response to the minority of critics. A shortened version appeared in the March 1990 Geotimes. Larry sent me all the letters received by AGI; I especially value many unprinted
“bravo” letters from AIPG members, Honorary Members, and Presidents, including Allan Bennison, Jim Dunn, Mason Hill, Robert Jordan, Philip LaMoreaux, Harold Kuehnert, Grover Murray, Henry Neel, Ora Rostad, John Sweet, Mo Turner, and “Unk” Unkelsbay.

Finally, past-President James Dunn wrote an article that appeared in 1992 TPG that was reproduced from the National Review, titled “America the Beautiful” (see Appendix 9). And Jim was co-author of the book “Conservative Environmentalism: Reassessing the Means, Redefining the Ends,” published by Quorum Books, 1998. Both works discuss the beneficial effects of industrialization on the environment.

CORDEC Committee

In the Fall of 1970 President Neel appointed a committee to “formulate . . . a policy on methods of achieving compatibility between natural resource development and maintenance of an acceptable environment.”

The initial members of the Committee on Resource Development and Environmental Compatibility (CORDEC), who at their first meeting decided upon the Committee’s name, were:

Robey H. Clark (Mobil Oil Company, Diamond Shamrock Corp.)
Emmett A. Finley (U.S. Geological Survey)
Richard Fountain (International Minerals and Chemical Company)
Jack A. Simon (Illinois Geological Survey)
Earl Cook (Texas A&M University).

Before the California meeting, personal reasons forced the resignation of Richard Fountain from the Committee; his place was taken in the California sessions and in the final report writing by Henry H. Neel. Industry, university educators, and both state and federal government were represented on the five-man committee.

The Committee modified or reduced its charge to one of defining a useful role for the Institute in the public decision-making which will determine the extent of planned compatibility between resource development and environmental quality.

Reduction of the charge didn’t make acquittal easy. It was necessary to analyze the strengths and weaknesses of AIPG in the public arena, to identify the kinds of public decisions in which geology is important, to look at various public-decision mechanisms to see at what point and in what form geologic information can be introduced in an acceptable and useful manner, and to solicit the experience of both geologists and public officials in an attempt to determine the reasons for success or failure in getting geologic information considered in specific decision problems.

The Committee held four meetings, only the first of which was in camera. The other three were fact-and-opinion-finding ventures: first, a two-day meeting in Florida to look at phosphate mining and the Cross-Florida Barge Canal; next, a two-day meeting in Denver with local AIPG members active in decision-making at local, county, and state levels; finally a meeting in California, consisting of a day in Sacramento with state officials from both the legislative and executive branches, and a second day in Los Angeles exploring lines of communication in a large metropolitan government between officials and outside experts.

The final report of the CORDEC Committee titled “The Professional Geologist in Public Affairs” is reproduced in Appendix 9 for the year 1972.

AIPG Representatives at AGI

In 1970, the AGI House of Society Representatives had the following 23 committees, interestingly all with CPGs as Chairmen:

STANDING COMMITTEES

Committee on Committees, William C. Gussow, Chairman
Man's Geologic Environment, James R. Dunn, Chairman
Employees' Retirement Fund, William A. Newton, Chairman
Membership, Vito A. Gotautas, Chairman
Ethics, Frederick L. Stead, Chairman
Professional and Scientific Standards, Harold L. Fothergill, Chairman
Finance, Gordon W. Gulman, Chairman
Professional Employment Standards, Ellis L. Krinitzsky, Chairman
Headquarters Advisory, William D. Chawner, Chairman
Public Relations, Thomas A. Simpson, Chairman
Interprofessional Relations, John B. Ivey, Chairman
Regulatory and Legislative, Arthur O. Spaulding, Chairman
State Section Organization & Affairs, Frank A. Exum, Chairman

ANNUAL COMMITTEES

Annual Meeting, 1970, Jerry B. Newby, General Chairman
Wilbur McMurtry, Vice Chairman & Program Chairman
Nominating, Arthur O. Spaulding, Chairman

AD HOC COMMITTEES

Consultants Register, Clark Millison, Chairman
Oceans, Richard E. Faggioli, Chairman
Evaluation of Geological Departments For California, Howard J. Pincus, Chairman
Taxation of Over-Riding Royalty, Leroy Gatlin, Chairman
Liability Insurance, Frederick L. Stead

JOIN SOCIETY COMMITTEES

AAPG-AIPG Liaison, Larry Sloss, Chairman
Steering Committee for the President's Conference on Environmental Geology, John T. Galey, Chairman
Definitions, A. F. Banfield, Chairman
1970 Annual Meeting, Oklahoma City

Jerry B. Newby, CPG 249, was the Chairman of the Seventh AIPG Annual Meeting held in Oklahoma City. Ian Campbell, CPG 19, State Geologist of California and past-President of AGI and GSA, was awarded the Ben Parker Memorial Medal. (For Ian Campbell’s Memorial, see year 1978). This was the only award this year.

1971 President Robert R. Berg

Robert R. Berg, CPG 35

To summarize the career accomplishments of Bob Berg, CPG 35, we go to John M. Parker’s citation for Bob’s Honorary Membership in 1988:

As one of Bob’s sponsors for AIPG membership in April of 1964, I noted in my letter to the Executive Committee that “He belongs to the select few geologists who are creative and energetic and who maintain high standards of professional work and practice”. Bob gained membership as a charter member, CPG 35, and in five short years he became the institute’s national secretary-treasurer for 1969. By 1971, he had been elected President of the American Institute of Professional Geologists. In 1981, Bob was awarded the Ben H. Parker Memorial Medal, an award granted to those individuals that own outstanding service to the profession.

The years 1969 through 1971 were tough years for geologists and especially for a young institute. U.S. crude oil sold for between $3.09 and $3.39 while Arabian light fluctuated between $1.00 and $1.50 per barrel. Yet, Bob’s leadership on the Executive Committee helped AIPG achieve stature and growth.

Bob’s education includes baccalaureate and doctoral degrees in geology from the University of Minnesota. After receiving his Ph.D. in 1951, Bob joined the California Company and remained there until 1957 when he joined Cosden Petroleum for two years and then practiced as an independent from 1959 through 1967. The reputation he built through those years permitted him to join the faculty of Texas A&M as head of the Geology Department. From 1972 through 1982, Bob was director of the Office of University Research and concurrently served as Professor of Geology. Since 1982, he has been honored by filling the Michel T. Halbouty Chair in Geology at Texas A&M.

Since 1974, Bob has supervised 56 graduate theses and since 1952 has published 84 technical papers, over 50 of which have been authored solely by him. His works include three volumes for which he was editor or co-editor.

His research has been concentrated in three main areas:
1) the origin of foreland mountain structures
2) the origin of sandstone reservoirs, and
3) the origins and effects of hydrostatic and hydrodynamic pressures on oil and gas migration.

Publications that have resulted from this research have become landmarks that have greatly influenced the science of petroleum geology. These include his 1962 paper written about mountain flank thrusting in the Rocky Mountain Foreland, a 1967 paper co-authored with Chuck Tenney on the geology of the Lower Permian Minnelusa oil fields in the Powder River Basin of Wyoming, a 1968 paper with David K. Davies on the origin of the Lower Cretaceous Muddy Sandstone at Bell Creek Field, Montana, and another of his own that same year titled “Point Bar Origin of Lower Cretaceous Fall River Sandstone, Powder River Basin, Wyoming”. Later came a 1979 paper with W.D. Marshall and P. W. Shoemaker on the structural and depositional history of the McAllen Ranch Field in Hidalgo County, Texas, and a 1981 work with M.F. Habeck titled “Abnormal Pressures in the Lower Vicksburg, McAllen Ranch Field, South Texas”. All six of these articles directly contributed to the discovery of new oil and gas reserves.

These accomplishments have also brought Bob renown from other organizations too. Since 1952 he has been a member of AAPG, in which he has served as a Distinguished Lecturer, a Lecturer in Continuing Education, an Associate Editor and a member of the Research Committee. He is a past president (1966) of the Rocky Mountain Association of Geologists and a Fellow of the Geological Society of America. In 1988, Bob was elected to membership in the National Academy of Engineering.

Recollections of AIPG1971
By Robert Berg

Many new state sections consisted of few members and needed encouragement. I decided to visit sections that were remote from concentrations of geologists, such as Denver, Oklahoma City, Houston and southern California, in order to encourage membership and learn their concerns which were somewhat different from the larger sections. I remember visiting the New York section but have forgotten others. I do not know what, if any, impact my visits made.

I hoped to promote state registration of geologists, as had been accomplished in California, because I felt registration was sorely needed, especially in relation to engineering projects. I soon learned not to push these ideas, however, because of the strong and vocal resistance to registration by most petroleum geologists. This attitude seems to have changed remarkably today with many more in favor.
I believed that the profession would benefit by broadening AIPG membership to include more geoscientists, namely geophysicists and some engineers. To that end, I met with the executive committee of the Society of Exploration Geophysicists (SEG) to explore the possibility of joint certification. Carl Savit of Western Geophysical was president of SEG at that time. Our proposal was greeted with no enthusiasm by SEG and gained only a promise to consider joint certification at sometime in the future. Because of this effort we changed our label from “Certified Professional Geologist” to “Certified Professional Geoscientist”, a move that irritated some members. I remember Frank Conselman arguing that we were destroying the Institute with such changes. However, Frank later accepted the idea of an expanded AIPG and supported it during his term as president. No word was received from the SEG, and the concept was not brought to fruition.

We further hoped that the evaluation of educational programs could be encouraged and expanded. Having recently become a professor I realized the benefits of the evaluations. Those universities with strong programs were flattered by the Institute’s blessing and encouraged to continue and strengthen their curricula. Those universities with weak programs could take the results of the Institute’s review to their deans in order to promote more support for their departments. However, some members did not appreciate the poor ratings given to a few geology departments and let the executive committee know their opinions.

A major concern of the Institute has been for ethical conduct and practice. This concern continues to the present as evidenced by recent interesting and provocative discussions in The Professional Geologist. Serious cases of misconduct are handled discreetly by the Board, and are not publicized. Consequently, members sometimes wonder whether the Code of Ethics is ever enforced.

At least one case of possible felonious misconduct was investigated during 1971. A major oil company geologist (and CPG) was involved in a divorce settlement. His spouse related incidents when large sums of cash came to him in unusual ways but were not revealed as assets in the divorce. From circumstantial evidence the source of the money could be inferred. Since this matter was exposed by recorded testimony, our executive committee invited him to explain the circumstances. The defendant wrote that he would not appear because he had moved to a foreign country. He was subsequently removed from the membership.

Much of the Institute business was important although some routine, but every executive committee, I assume, has been badgered by trivial problems. Two questions raised repeatedly during the formative years were especially memorable for their meaninglessness. The first was the doubt expressed by some members about whether professors of geology were themselves professionals and eligible for certification. It is hard to imagine that a teacher of professionals could not be considered professional. The second was a complaint about professors “moonlighting”, or consulting outside of their university duties. Apparently the complainers did not realize that most professors were employed for only nine months and were required to find other work during summers to supplement their academic salaries. In fact, most engineering schools encourage their professors to consult or otherwise work in industry on a part-time basis. The same should apply to all professionals who teach practical courses.

President’s Message

(Bob Berg’s fine paper “Future Education of Professional Geologists” appeared in the December 1972 TPG, and is reproduced in Appendix 9.)

“A Time for Progress”

By Robert Berg

Organizations are a lot like people. They are born, grow, learn and develop to maturity. Then, like most people, they may find a certain satisfaction and security in their past achievements and fail to recognize new opportunity or to accept the challenge of continued growth. The mature stage, or middle age, can be a time of stagnation.

AIPG does not fit the analogy of maturity. Growth continues at a constant rate, there is no deterioration of our structure or standards, and new challenges are met with action. During 1972, the programs of the Institute have progressed with vigor throughout the work of its many committees. All phases of AIPG programs have continued to grow under the leadership of diligent chairmen. No better evidence of our viability exists than the vigorous activity of our members in recent actions to insure the continuance of sound professional practice. The Oklahoma fight to reduce an added tax on natural gas is a prime example of local action on behalf of both the profession and the general public, and moves toward statutory regulation of practice in several states are surely strengthening actions.

But all activity is not necessarily good activity. In order to insure the future of the Institute, action must be directed, and direction means that goals must be established and clearly recognized as desirable for the majority of geologists. One of the continuing problems of all geologists is the fragmentation of professional activity into several organizations. Although AIPG is the leader in professional action we still do not represent all aspects of geological practice, and geologists cannot present a united front for political action.

A new goal was established this year—that of a single professional society to represent all geologists, and the initiative to form such a society came from AIPG. Following the recommendations of the Sloss report for further cooperation between AIPG and AAPG, we have taken a positive step toward the certification of all professional activities in one organization. At the Executive Committee meeting on March 26, 1971, a resolution was adopted which favored the formation of a “single professional society that could represent all geoscientists,” and that resolution has met with widespread approval among geologists.

A meeting of society representatives was convened on October 1 in Houston, and delegates came from eight organizations including AAPG, AEG, AIPG, NAGT, and, most significantly, SEG. The geophysicists have recently developed a professional conscience, primarily because of their disen-
chantment with the California registration law for geologists. Despite this minor point of conflict, all delegates agreed that a single professional society was a desirable goal and that such a society must provide for the recognition of professional specialization.

Before the Annual Meeting in Denver, the AIPG Advisory Board also considered the question of a single society and extended its approval and support of the Executive Committee's actions. Furthermore, the Advisory Board urged the 1972 Executive Committee to pursue this goal.

In order to maintain a position of cooperation with all other professions a new ad hoc committee has been established, a Committee on Professional Liaison. James A. Wheeler of Houston has accepted the chair and will continue to provide the official contact of the Institute with the Professional Division of AAPG as well as with all other professional geoscientists who recognize the importance of a single professional society.

It is apparent that AIPG will continue to provide leadership to reach this most important objective, but what should be the next step in this direction?

The position of AAPG is most critical to the question of a single professional society because the Professional Division, with its 1,300 certified petroleum geologists, represents the largest professional group outside of AIPG. Jim Lewis, President of the Professional Division, has been a proponent of the single society concept from the beginning. He was, in fact, present at the March Executive Committee meeting and assisted in the formulation of AAPG's resolution.

Recently Sherman Wengerd, President of the AAPG, expressed himself in favor of a single professional group, and specifically, in support of further cooperation between AIPG and AAPG's Professional Division (AAPG Bull., Oct., 1971). President Wengerd has included this important matter as the 10th point of his program for the 1971-72 fiscal year of AAPG. Most important, Wengerd suggests that AAPG can free itself of the Professional Division so that "we can go on with our basic work as a scientific association." Wengerd recognizes that professional activities must be separated from scientific activities in order that both can be most effective.

The leaders of AAPG have expressed themselves clearly and precisely. They need to know, however, the feelings of the AAPG membership, and they need the support of the entire membership before any changes can be made in the organizational structure of AAPG.

Many members of the Institute are also members of AAPG, and our opinions and constructive suggestions will be welcomed by the AAPG Executive Committee. We need to let Wengerd know that we favor the consolidation of professional activities in a single organization, and that we also believe AAPG should concentrate on its fundamental work as a scientific society rather than dilute its effort by professional activities.

As AAPG members, express your support of President Wengerd, and contact your local delegates to the AAPG Advisory Council. These are the men who can make the needed changes in AAPG.

A single professional society will not come about by itself. It will take hard work on the part of many geologists and long hours of planning, organizing and negotiation. More important, it will require good will on the part of all geologists and a desire to work with others for ultimate benefits to all.

This essential spirit of cooperation exists today among many professionals—those of AAPG, the AIPG, as well as others. Now is the time for action and for progress.

Public Relations Committee Report

President Berg appointed Tom A. Simpson as Chairman of the Public Relations Committee. As we are all aware, some committees set lofty goals but don't attain them, while others do. Tom Simpson's small PR committee, consisting of himself, Gary Melickian and Bill Knight, was in the latter category. They produced a meaty annual report which is reproduced in Appendix 9. Then a few months later, Lee Kilgore joined the committee and submitted the following letter with additional suggestions for AIPG public relations.

[Lee W. Kilgore letterhead]
February 16, 1972
Mr. T. A. Simpson
Chairman
Public Relations Committee, AIPG
P. O. Drawer O
University, Alabama 35486

Dear Tom:

I am pleased to accept your appointment to the Public Relations Committee. As is usual I am running true to form by being late in replying to your letter of January 4.

I am of the opinion that our best public relations work can be done in the State Sections and in members' localities. It is like charity—it should begin at home. AIPG can best become known by its members taking part in the local affairs such as:

1. Educational programs
   a. Giving talks to science classes
   b. Assist in science fairs
   c. Present mineral exhibits, and
   d. Conduct geology and science field trips
2. Participate in civic affairs
   a. Join civic clubs, take active part and give talks at meetings
   b. Work with the Chamber of Commerce
3. Promote geologically oriented industry
4. Promote geologically related tourism
   a. Geological highway markers and road signs, and
   b. Assist in local tourist association planning
5. Participate in interprofessional activities
   a. Join and take an active part in related professional associations such as A.P.I. and A.I.M.E., and
   b. Act as liaison with any other professional groups
6. Participate and be active in State, County and Municipal affairs
   a. Run for public office
   b. Get appointed to committees, boards and commissions
   c. Attend public meetings and be prepared to speak on geologically related subjects, and
   d. Assist in sponsoring geologically related city, county and state ordinances statutes for Planning and Zoning, Subdivision, Ground Water Control, and Land Use
7. Get involved in Environmental and Ecological Activities
   a. Be prepared on environmental geological problems
   b. Make recommendations to companies and governmental agencies on prevention and reduction of geologically related pollution of air, water, surface and subsurface
   c. Work with municipal and state agencies in environmental geologic hazards
   d. Give talks to schools and civic organizations on local environmental geology and ecology, and
   e. Be prepared to counter arguments by irresponsible environmentalists

8. Work with the news media
   a. Prepare newsworthy articles for newspapers of membership activities
   b. Write articles concerning local geology for publication
   c. Appear on radio and TV programs for talks on geology, and
   d. Furnish geological information to news media wherever possible

In the work of the Public Relations Committee for national affairs it is my feeling that your Special Committees are well chosen and will cover most areas.

I would like to suggest that some of the Special Committee activities and ideas filter down to the State Section level either by special report or through the Professional Geologist or the newly inaugurated Communicator. I note with special interest that it is proposed that the Pittsburgh meeting will be — “focused largely upon the contact between the profession and the public.”

I am enclosing also a copy of the Directory of New Mexico News Media that is very useful when we have press releases or need contact with any of the news media. Other states may have such directories. This Directory is distributed by the Mountain Bell Telephone Company.

I trust that my thoughts are helpful and not repetitious of other sources.

Best regards,

Sincerely yours,

Lee W. Kilgore

1971 Annual Meeting, Denver

Robert M. Lindvall was Chairman of the Eighth Annual Meeting. Surprisingly, there were no awards given this year, and no record of the Program.

President Rudd's term started out fine, but ended in a controversy over a committee report that was rejected. This is explained later.

Neilson's career in petroleum took him across the U.S., mainly with Mobil (Magnolia) Oil Company. Most of his career was in California and Ohio, but he worked with future AIPG Presidents John Taylor and Bud Rue in Illinois in the 1960s. He graduated Hamilton College in New York in 1953 with a B.A., then studied at the University of Wyoming, and obtained his masters degree at the University of Minnesota in 1955.

Although Neilson didn't write a President's Message for TPG, the following speech he made reveals his clear thinking.

"Geology As A Profession"
By Neilson Rudd

(Excerpted from a speech by President Rudd to the Annual Meeting of the Illinois Oil & Gas Association, February 4, 1972)

The words profession or professional are widely misused and misunderstood. Profession is not synonymous with vocation. A person whose life work is installing rivets is not a professional riveter, not in the true meaning of the word. He is a vocational riveter. There are three marks of a true profession. The first is possession of a large fund of specialized knowledge, substantially above and beyond that which one could expect to obtain without extensive study and training. The second mark is the willingness to make use of this knowledge for the benefit of others.

The third mark is the logical consequence of the first two. If the fund of knowledge required of a professional is beyond that which can reasonably be expected of intelligent members of the general public without intensive training and experience, and if the application of this knowledge is vital to the personal and economic well-being of society, who is to judge whether the services are competently performed to the best interests of the public or the client? For example, my knowl-
edge of medicine is probably about average for the general public. I occasionally read the medical columns in the newspapers and magazines, I've spent some time with doctors and medical staffs and I can drop a few polysyllabic medical terms. I don't know much about medicine nor would I have the first idea how to select someone to treat me nor how to judge whether I was being properly treated without some guidance from the medical profession itself. Even experience with a given doctor wouldn't necessarily help since, happily, most of my complaints are rather simple ones. Suitable experience at this level does not guarantee competence at a more involved level of medicine. I would hate to have to have a heart attack in order to determine whether our family doctor was competent to diagnose and treat such an event. If I can't trust my own knowledge and am unwilling to gamble on the test of experience, I must rely upon the willingness of those who have adequate knowledge and experience to provide me with a means of recognizing those who are competent to provide treatment. This means that they are going to have to undertake the responsibility of putting labels on competent practitioners and preventing those who are not competent from using such a label. They are going to have to define what makes good medical practice and enforce it. This is the third mark of a true profession, the willingness to accept the responsibility for self-regulation which is imposed by special knowledge used for the benefit of others.

Of course, some doctors are better than others but when a man hangs out his shingle saying "John Jones, M.D." I can assume that he is in possession of at least some minimum level of knowledge far beyond that which I can expect from members of the general public and that his medical and business practices fall within the standards accepted by the majority of his medical colleagues. I can have this confidence because I know that his M.D. means that he has successfully completed training under professional medical men, in a school accredited by professional medical men, and has received his license to practice and is under the authority of a state board composed of professional medical men.

An understanding of what has happened and is happening in professional geology depends upon an understanding of these three marks of a true profession: the possession of unique and superior knowledge, the willingness to provide services to others based upon this knowledge, and the recognition and acceptance of the responsibility to assure that this knowledge is used to the best interests of the public to whom it is offered. All three marks are essential to truly professional status. It is entirely possible to possess the requisite knowledge and not be a true professional. There are many individuals of great scholarship in all fields who fulfill the first requirement but are content with knowledge for knowledge's sake or for their own personal use and make no offer or profession of their services to the public. The study of the earth is so fundamental to so many of man's requirements and enterprises that professional service has been characteristic of geology from the very beginning; nevertheless, until the early part of this century geology was largely a scholarly pursuit. Commercial geological services were provided primarily by teachers and scholars on a part-time basis. There were relatively few consultants or industrial geological staffs. With some oversimplification it may be argued that, prior to the early 20th century, the science of geology had only one of the marks of a profession.

Then, very rapidly, the search for oil, and to a lesser extent other minerals, created a demand for geological services far exceeding the supply of part-time professors. A new type of geological scientist became important, one who was oriented towards both scholarship and service. Geology had obtained the second mark of a profession.

The third mark has been long in coming. There have always been individual geologists, the vast majority, who were fully professional in their practice and who have accepted not only personal responsibility but who have tried to encourage segments of the profession to accept joint responsibility for proper geological service. Several geological organizations took the first important steps; first, recognizing the problem and second, establishing minimum standards for professional stature and providing a means of identification. For example, election as a Fellow of the Geological Society of America has long been a greatly prized mark of professional accomplishment. But these were only first steps towards attainment of the third mark of a true profession in that they were internal and passive standards, largely unknown outside scientific circles. Anyone could, as they still can in most states, style themselves a geologist and undertake geological employment with no training whatsoever in the field. If a geologist's work was incompetent or resulted in personal or economic damage, that was unfortunate but the profession itself took no responsibility for it.

Only in the last decade have we seen the beginning of full acceptance of the third mark of the profession. Geologists are now recognizing their professional identity and responsibility. Even if they did not do so willingly, it would be imposed upon them. The role and importance of geology in many areas of activity is increasingly being recognized by the public. With this recognition comes a natural public concern about the caliber of the geologist performing the work. But our profession can take pride in the fact that it did not take external pressure to make us adopt the third mark of professionalism. First on the local level and then nationally, geologists have begun to accept the responsibility for judging the competence and regulating the practice of those who claim geology as their profession. That is the significance of the letters AIPG which many of us proudly append to our names. They stand for the American Institute of Professional Geologists, a national organization representing geologists in all fields of endeavor working jointly on mutual professional problems. This organization has, more than any other organization, accomplished the third mark of professionalism for geology. It has provided the "label" by which the non-geological public can recognize those who possess minimum educational, experience, and character requirements for geological practice and means and framework for professional regulation. Certainly the AIPG serves geologists but, more important, it serves geologists in truly serving the public. In accepting this responsibility to society, geology has at last attained the status of a true profession.
“Industrial Employment of Geologists”

Report

In the two-year period 1971-72, three CPGs spent considerable time summarizing over 1,000 questionnaires returned from AIPG petroleum geologists. The three were members of the AIPG Committee on Professional Employment Standards, Ellis L. Krinitzsky, Miles Rader and Louis Unfer, Jr. Their report was submitted for approval to the AIPG Executive Committee at the June 1972 meeting. The report was rejected, mainly as being too biased against oil companies. The ensuing letter writing, sometimes bitter, resulted in Dr. Krinitzsky and Mr. Rader resigning from AIPG. A very unpleasant and untypical end to an AIPG committee! For the historical record, their unendorsed committee report is included in Appendix 9.

Following their report are comments by Past-President Robert Berg, then letters to Ellis Krinitzsky from 1972 President Neilson Rudd and 1973 President Ad Honkala.

1972 Annual Meeting, Pittsburgh

The Institute’s ninth Annual Meeting was held October 13-14 at the Chatham Center, Pittsburgh, Pennsylvania. Bruce A. Prather was Chairman.

The only award was the Parker Medal to past-President and co-founder Allen C. Tester (see year 1967 for citation by Jack B. Graham).

1973

President Adolf U. Honkala

Ad Honkala was ahead of the wave when in 1961 he helped organize the Virginia Association of Professional Geologists, which became the Virginia Section of AIPG in 1964. He has always been active in the Virginia Section, serving as its President in 1967. He was a leading member of the organizing committee for the highly successful 1981 AIPG Annual Meeting in Williamsburg and was Chairman of their Legislative and Regulatory Affairs Committee for many years.

When AIPG was founded, the inspirational leaders, whose names are honored by two other awards, were Martin Van Couvering and Ben Parker. Ad Honkala participated in the organizing committee that met in Oklahoma City in the summer of 1963 to outline the need for AIPG. When AIPG was formed in November 1963, Ad became a member of the first Executive Committee on which he served until 1965. His contributions, which you will never hear about from this most modest of men, were recognized by his Charter Membership as CPG 7.

In 1973, Ad Honkala served as president of the Institute; Ad has never stopped working for AIPG, including work on many committees. It is an inspiration to us all to consider Ad’s devotion to his profession and especially his commitment to the ethical and public service aspects of being a Professional Geologist. Ad’s service to the Institute includes: In 1975, as chairman of the Ad Hoc Committee on Professional Encroachment; from 1974-78 as member of the Regulatory and Legislative Committee, a group which he chaired in 1977; he gave congressional testimony on behalf of AIPG in Washington in 1977 (see Appendix 14); was a 1977 member of the Committee on Plans and Programs for the Future; in 1979 and 1980 as Chairman of the Awards Committee; and Program Chairman of the Annual Meeting in 1981.

Ad Honkala was born and brought up in New Hampshire of sturdy Finnish stock. He earned his B.S. degree in Geology from the University of New Hampshire and went on to gain an M.S. in Geology from the University of Nebraska. Ad now serves on the Alumni Advisory Board to the Geology Department at Nebraska. In 1993, Ad was an AIPG delegate to the European Federation of Geologists meeting in Helsinki, Finland.

His early career was with the U.S. Army Corps of Engineers, where he worked in the Boston and Norfolk Districts from 1942 to 1953, completing his service as District Geologist for the Norfolk District from 1951 to 1953.

In October 1953, Ad became an Independent Geologist in engineering geology and industrial minerals. From 1955 to 1956 he worked as Vice President and General Manager of a sand and gravel firm in Richmond. He went on from there to contract consulting as a member of a consulting team on an earth and rock fill dam project in Turkey from 1956 to 1959. Since 1959, Ad has practiced as an Independent and Consultant, mainly in the field of industrial minerals, with a heavy involvement in the cement industry including work for five major producers.

One of these projects stands out; a limestone and shale quarry and cement plant in Clarksville, Missouri, which became home to the largest rotary cement kiln in the world at that time, 765 feet long. Ad began working on that project...
in 1961. Bud Rue was a member of Ad’s project team, and I was fortunate to be assigned by my firm to supervise the ground-water testing program. The quarry was less than a mile from the mighty Mississippi River. The valley-fill overburden alluvium was connected to the river, and the river was held above local land surface elevations by a navigation lock. The hydrogeologic testing showed that the river was not an operational concern. It was a great experience for a young hydrogeologist to work with Ad and be exposed to his thoroughness during the field days and at dinner each night, and my own career has benefited from this experience ever since. We have since worked with Ad on quarry projects in Ohio, Michigan, South Carolina and Virginia, and I have never ceased to admire his professionalism.

Ad is a founding member of the AIPG Foundation and, along with Bud Rue and Ernie Lehmann, was instrumental in establishing the fiscal policies that got the Foundation back on its feet in 1985. He served as Treasurer of the Foundation from 1985 to 1994 and remains a Trustee.

In 1978 Ad Honkala was asked and gave a talk at the Annual Meeting:

“The Individual Consultant”
By Adolf U. Honkala

This title really suits me, for that’s exactly what I’ve been for some nineteen consecutive years. Actually I was initiated into this field as an independent geologist in October 1953 when I began self-employment for a period of eighteen months until March, 1955 when one of my clients talked me into a management position. This phase terminated in September 1956 when I resumed contract consulting for a New York firm on an overseas assignment in the Republic of Turkey. This contract was completed in June, 1959.

What have I learned from all of this that I can pass on to others who may be individual consultants:

Perhaps the most important is finances. In this year of high interest rates, keep your billing very current and do not be afraid to nudge your client for past-due accounts. By the same token, keep your own accounts up to date.

Incorporation is not, as a rule, an advantage to an individual business unless you seek to create a larger firm in the near future. Seek out the advice of your accountant.

Try to use an accountant who can put your accounts on computer. The IRS is now oriented this way, and you will have less chance of a check.

During these busy times don’t promise more than you can provide in time or scheduling. A day or two either way at the start of a job doesn’t matter too much, as long as you meet the schedule proposed.

I try to seek out good associates to take over areas of work which I cannot cover, and also to provide additional help during periods of heavy schedules. Remember, however, to pay adequate fees and plan the use of associates carefully.

It appears increasingly important to carry liability insurance to cover contractors employed on jobs, even if they are covered. A $100,000 policy costs around $100.00 per year.

As to the problems of competing with large firms, the individual consultant, I believe, need not fear this. I rarely, if ever, cross paths with large firms - only when bidding on nationally advertised programs. The need of individual attention to specialized work will keep you well employed.

As to differences between large and small firms, perhaps the one that stands out the most is exposure. Obviously, the small firm grows by personal contact while the large firm grows by the advertising effect of its large number of employees who create exposure. However, I still do not see this as a deterrent. In all other matters as to finances, work potential, etc. each faces about the same problems, except the small firm or individual usually does not have to worry about large overhead.

I hope these points are sufficient to stimulate discussion and will serve to confirm some thoughts, or add to the knowledge of the individual consultants present here today.

Cooperative Evaluation of Geology Departments

The AIPG program for Cooperative Evaluation of Departments of Geology started in 1968. Through 1973 it had responded to inquiries from 18 schools having graduate geology programs, evaluated 11 of them (62 percent), and approved nine (82 percent of the 11).

This program was established in 1966 as one of the charges to the Committee of Professional and Scientific Standards, with the provision that it was not to be an accreditation procedure. The committee, of which Harold L. Fothergill was chairman for many years, produced a brochure describing the rationale behind the program and the procedures followed.

Recognizing that a strong academic background is a basic element of the high standards of professional geologists, the panel also reviewed the curricula. This program also responded to the fact that employers search for newly graduated geologists who have acquired such education.

The program was a cooperative one, for the department or university must request the evaluation, and must also provide a mass of background material and participate in interviews during the campus visit. The evaluation was made by a three-person panel from that general geographic region, composed of representatives of academia, industry, and government. In addition to absorbing the background material, the panel participated in the two-day campus visit, and in the preparation of the report and recommendations. The report was then reviewed by the Committee on Professional and Scientific Standards and recommendations made to the Executive Committee.

An important fact is that these panelists served without compensation. Expenses (room, board and travel) out of their own pockets. The 26 panelists who served AIPG through 1973 in this very important way were: Allen F. Agnew, H. V. Beck, L. T. Brown, D. A. Busch, F. E. Byrne, Allan Cree, H. L.
THE GROWING YEARS


[Editor: Their results were published by AIPG in 1975 as a Special Publication (out of print), and updated in 1985 as Monograph No. 3—see Appendix 5]

1973 Annual Meeting, New Orleans

The Institute’s tenth Annual Meeting was held at the Bourbon Orleans Hotel on October 12-13, 1973. Louis E. Riez was Chairman, and the catchy theme was “Effective New Exploration Requires Geological Yeomanservice” (ENERGY), or “The Professional Geologist’s Role in Resolving the Nation’s Energy-Environmental Dilemma.” The “Ladies Activities” included A Walking Tour of the French Quarter, a tour of the Bayou Country on the Mark Twain, and breakfast at Brennan’s.

For the first time, two Parker Medals were awarded: One to James Boyd and one to Jerry B. Newby (photo not available). Apollo 17 NASA astronaut (and Caltech and Harvard geologist) Harrison H. Schmitt was the Banquet Speaker (his first of several talks to AIPG, see Index and Who’s Who). His topic was “Evolution of the Moon and Apollo.” The letter of acceptance from his boss, Alan B. Shepard, follows, as does two letters by Harrison Schmitt: One to President Ad Honkala, and one to President Richard M. Nixon on the energy crisis.

Letters from Alan Shepard and Harrison Schmitt

[National Aeronautics and Space Administration letterhead]
Manned Spacecraft Center
Houston, Texas 77058
March 6, 1973
Mr. Adolph U. Honkala
President
American Institute of Professional Geologists
3819 Arklow Road
Richmond, VA 23235
Dear Mr. Honkala:
Thank you for your recent letter inviting Astronaut Harrison H. Schmitt to serve as speaker for the annual banquet in New Orleans on October 12.
Barring operational commitments which could possibly preclude his attendance, Dr. Schmitt will be able to join you for your banquet.
I am enclosing biographical information and photographs of Dr. Schmitt for your use. It is suggested that program officials correspond directly with the Astronaut Appearances Branch in this office to arrange the details of the visit. The telephone number is (713) 483-4910.

Sincerely,
Alan B. Shepard, Jr.
Rear Admiral, USN
Chief, Astronaut Office

[Letter to President Richard M. Nixon]

August 10, 1973
Dr. Adolph U. Honkala, President
American Institute of Professional Geologists
345 South Union
Denver, CO 80228
Dear Dr. Honkala:
Your personal and professional interest in the mission of Apollo XVII is appreciated. The opportunity to participate in the last Apollo exploration of the moon was beyond my expectations. I hope that time will prove that our efforts were worthwhile for science, for the country, and for mankind as well as for ourselves.
As we reach the end of the Apollo Program, I hope that each of us pauses once in a while and realizes that something different in the eyes of history has occurred during the last decade. Our generation has proved that mankind can evolve into the universe if this is its desire. When the troublesome problems of the present are lost forgotten, this, I believe, will be the legacy we leave to the future.
As time and information is available, I will try to keep you better informed of my activities. Please do the same. See you in New Orleans.

Sincerely,
Harrison H. Schmitt
NASA Astronaut

[Letter to President Adolph U. Honkala]
Lyndon B. Johnson Space Center
Houston, Texas 77058
August 10, 1973
Dr. Adolph U. Honkala, President
American Institute of Professional Geologists
345 South Union
Denver, CO 80228
Dear Dr. Honkala:

The opportunity to participate in the last Apollo exploration of the moon was beyond my expectations. I hope that time will prove that our efforts were worthwhile for science, for the country, and for mankind as well as for ourselves.

For the first time, two Parker Medals were awarded: One to James Boyd and one to Jerry B. Newby (photo not available). Apollo 17 NASA astronaut (and Caltech and Harvard geologist) Harrison H. Schmitt was the Banquet Speaker (his first of several talks to AIPG, see Index and Who’s Who). His topic was “Evolution of the Moon and Apollo.” The letter of acceptance from his boss, Alan B. Shepard, follows, as does two letters by Harrison Schmitt: One to President Ad Honkala, and one to President Richard M. Nixon on the energy crisis.

Letters from Alan Shepard and Harrison Schmitt

[Letter to President Richard M. Nixon]

August 10, 1973
Dr. Adolph U. Honkala, President
American Institute of Professional Geologists
345 South Union
Denver, CO 80228
Dear Dr. Honkala:
Your personal and professional interest in the mission of Apollo XVII is appreciated. The opportunity to participate in the last Apollo exploration of the moon was beyond my expectations. I hope that time will prove that our efforts were worthwhile for science, for the country, and for mankind as well as for ourselves.

As we reach the end of the Apollo Program, I hope that each of us pauses once in a while and realizes that something different in the eyes of history has occurred during the last decade. Our generation has proved that mankind can evolve into the universe if this is its desire. When the troublesome problems of the present are lost forgotten, this, I believe, will be the legacy we leave to the future.

As time and information is available, I will try to keep you better informed of my activities. Please do the same. See you in New Orleans.

Sincerely,
Harrison H. Schmitt
NASA Astronaut

[Letter to President Adolph U. Honkala]
Lyndon B. Johnson Space Center
Houston, Texas 77058
August 10, 1973
Dr. Adolph U. Honkala, President
American Institute of Professional Geologists
345 South Union
Denver, CO 80228
Dear Dr. Honkala:

Your personal and professional interest in the mission of Apollo XVII is appreciated. The opportunity to participate in the last Apollo exploration of the moon was beyond my expectations. I hope that time will prove that our efforts were worthwhile for science, for the country, and for mankind as well as for ourselves.

As we reach the end of the Apollo Program, I hope that each of us pauses once in a while and realizes that something different in the eyes of history has occurred during the last decade. Our generation has proved that mankind can evolve into the universe if this is its desire. When the troublesome problems of the present are lost forgotten, this, I believe, will be the legacy we leave to the future.

As time and information is available, I will try to keep you better informed of my activities. Please do the same. See you in New Orleans.

Sincerely,
Harrison H. Schmitt
NASA Astronaut
December 21, 1973

The President
The White House
Washington, D.C. 20500

Dear Mr. President:

The immediate national need for petroleum supplies prompted leaders in fuel and economic geology to convene on December 7th at the California Institute of Technology to examine the alternatives which could help solve the current national emergency.

Recent events, as cited in your speeches to the nation on November 7th and 25th, 1973, have heightened the urgency of the deliberations of your committee.

We conceive that priority problems are three-fold:

1. The immediate crisis of supply that can only be solved by conservation.
2. A need to relieve this immediate crisis by rapidly increasing our domestically available energy supplies.
3. A need for long-term relief from our dependence on fossil fuels which can only be provided by major research and development of alternative sources of energy.

Our examination of the geological framework for solutions to these problems produced the following conclusions:

1. Domestic petroleum resources are the principal source of energy that can provide early relief in our present crisis.
2. The existence of large domestic resources of coal is incontrovertible; however, coal alone cannot give early relief.
3. Domestic petroleum resources are the only source of energy that potentially can provide self-sufficiency within the very short-term that is required.
4. There are good solid geological reasons to believe that great and deliverable quantities of petroleum exist beneath the partially explored and unexplored land and continental shelf regions accessible to this nation.

The committee concluded that a major step can be taken to provide the petroleum required to relieve the immediate crisis of supply. Fully 50 percent of the total domestic area of potential petroleum production remains geologically unexplored. A research program, given top national priority, should be initiated to assess these petroleum resources. We estimate that the assessment of all unexplored areas can be carried out at a cost of approximately two billion dollars ($2,000,000,000) as a concurrent program to industry development and production.

To accomplish the proposed program we recommend that a commission to be known as The Petroleum Resource Assessment Commission be instituted under recommendation 4B.14 of the National Commission on Materials Policy.

We hope that you will give serious consideration to this proposal and the background information we have attached to substantiate and expand upon it.

Sincerely yours,

Harrison H. Schmitt, Chairman
Geological Committee on Petroleum Resources
ly won his point, often to the chagrin of an opponent. No personal intent was involved. Frank simply sought to achieve a goal and using the proper language was one way to do it. His persuasive ability to bring disparate forces and groups together has seldom been equaled. At the same time, he was extremely sensitive to those things he considered ethical breaches in professional affairs of any kind and he would labor endlessly to correct facts or situations he believed injurious to or reflective upon “his chosen profession.” Many of Frank’s so-called arguments were “engagements in language” — a battle of words done for the sheer joy of the competition.

To some he was gruff. To most of us he was shy and soft-hearted. He was a man who loved his family — wife Grace, his children, his grandchildren. His friends covered the country; some were as legendary as he.

Frank’s interests were almost unlimited - geology, astronomy, music, arid lands, goldfish, birds, people, boating, teaching! He leaves a legacy few can equal. The world and mankind are better for his having been here.

He was the recipient of numerous awards — local, regional, national. Noteworthy are the Ben H. Parker Award (American Institute of Professional Geologists) and Honorary Membership (American Association of Petroleum Geologists.)

In his testimonial at the time of Frank’s receipt of the Ben H. Parker Medal from AIPG in 1977, Orlo E. Childs wrote (The Professional Geologist, December 1977, page 18):

“Frank B. Conselman is a man of fierce allegiance to the institutions, the profession, the people, and the cause he has chosen to uphold . . . he is a man of intensity and dedication toward those activities he deems worthy of his efforts . . . Frank’s spectrum always seems wider than most . . . Fortunately for the science of Geology, professional service to that science has always been to Frank one of the highest callings on his . . . list. His talents are such that he could have been a wit, a writer, a poet, a historian, a pilot, an opera critic, a courtly gentleman, or a philosophic world traveling gypsy. In fact, he is all of these, but each role is subservient to his pride in being a geologist . . . As first Editor of the Institute, Frank was part of the original Executive Committee, and is the holder of an Institute Certificate which reads: Certified Professional Geologist, Certificate Number 4.”

Notably, Frank was one of the very select group of individuals to be president of three national organizations—The American Association of Petroleum Geologists (AAPG, 1968-1969); the American Institute of Professional Geologists (AIPG, 1974), and the American Geological Institute (AGI, 1975).

If Frank should hear of these words, I’m sure he would cite a favorite:

“Merely corroborative detail, intended to give artistic verisimilitude to an otherwise bald and unconvincing narrative.”

(Gilbert & Sullivan, The Mikado, Act I)

I loved him, I respected him and I admired him for his great intelligence and for his innumerable contributions to our profession.

In preparing this History of AIPG, I had many telecommunications in 1998 with Grover and Sally Murray (Sally is also a geologist), about Grover’s many boxes of archival records stored at Texas Tech College. Since Frank Conselman’s final years were also at Texas Tech, they found 46 boxes of Frank’s life records. Included was a large box marked AIPG. What a find!

The box contained original letters from the founding years of the Institute. They mailed me the box, along with three boxes of Grover’s AIPG correspondence. And, Sally sent me this prophetic note:

“Dear Dick:

“Brenda (college archivist) and I think these items from Frank’s archival materials could be helpful to you. It was sometime after Frank’s death that his son and daughter decided to sell the house and sent the daughter-in-law to have a garage sale, throw out junk, and get the house ready for the realtor. She is the one who called Grover to come see if some of the books and maps were of any use. Everything she had thrown out was brought to our house (several car loads) and the director of the Southwest Collection came over to select items that he thought should be placed in the archives. The rest was sent to the Midland Energy Library in Midland, TX. Frank’s papers and books are a good example of the statement that one man’s treasure is another man’s trash. If we had been out of town, nothing would have been kept, because the family was under pressure to hurry and get the house cleaned out.

“This sequence of events has always been interesting to me. I guess it suggests that a person’s work of a lifetime can be stored in 46 boxes or that it can be simply tossed away where the elements will eventually turn it into compost. None of Frank’s “stuff” is of monetary value. It just represents evidence of a person who lived a very busy life.

“We hope you have some materials that will be helpful in writing the history. It will be a challenge just to sort through all the pages!”

Sincerely,

Sally Grover

When Frank Conselman received notice of his being the 1977 recipient of the Ben H. Parker Medal, he wrote the following letter to Ian Campbell, CPG 19, Chairman of the AIPG Awards Committee. Also included here is 1977 President John Taylor’s congratulations. This is followed by Orlo Childs’ testimony to Frank and Frank’s award acceptance speech.

[Frank B. Conselman Letterhead]

September 18, 1977

Dr. Ian Campbell
Department of Geology
California Academy of Sciences
Golden Gate Park
San Francisco, California 94118

Dear Ian:

As you can well imagine, I am all a-glow over selection for APGS’ Ben Parker Memorial Award, not only for what the award stands for in terms of the Association’s standards, but because Ben Parker personally was a man whom I admired from the ground up. I had the honor of being his veep when he was president of AAPG, and later of benefiting from his advice and example during the first years of AIPG’s existence. Nothing in professional geology could give me greater delight than the Parker Award, yet it is coupled with a renewed awareness of how very much I lack of measuring up to Ben’s stature.

________
There is another thing about it too, Ian. Your letter was truly a heart-warming experience, and for a man whom I have so long admired as the quintessential geological gentleman to list me as an "old and valued friend" is almost as rewarding as the selection itself. You are a worthy successor to Martin Van Couvering in inspirational quality to the rest of us.

Please express my most sincere appreciation to John Haun and Linn Hoover for their kindness and tolerance, and also to President Jack Taylor and his Executive Committee for a choice which I hope I may grown enough eventually to deserve. And many, many thanks to you personally for your fine letter, which I shall treasure always.

Gratefully yours,

Frank B. Conselman

[Association of Professional Geological Scientists letterhead]

September 27, 1977

Dr. Frank B. Conselman
P. O. Box 4329
Lubbock, Texas 79409

Dear Frank:

May I add my congratulations to those of Ian on your selection for the Ben Parker Memorial Award. But, more than anything else, may I express appreciation for all you have done for APGS and for the geological profession as a whole. I remember saying to those around me that when took over the job of getting the APOS and the AAPG together that there was really no one else that could do that job except Frank Conselman. And why? That has been well demonstrated by your close attention to ferreting out the basic principles of any particular matter, deciding what is right, and at the same time taking advantage of advice of responsible people, and then moving ahead with dispatch without being deterred from the objective. No one else without this kind of makeup and your wide experience in working with people could have accomplished it.

So, the Ben Parker Memorial Award is merely a tangible memento of what you represent to the profession, as it harkens back to its namesake Ben Parker, and what he did for APGS in the days of its initiation.

Ian was most earnest in wanting the opportunity to first advise you of this, which I and the Executive Committee could think of no better way of doing it than from this great and earnest friend, Ian Campbell.

We look forward to seeing you at the Annual Meeting in San Antonio. It was good to see you again in Amarillo.

Yours very truly,

John A. Taylor

The annual designation of a “Ben H. Parker” medalist provides a perfect setting to recognize the contributions of a man like Frank B. Conselman. And I think he will join me in the thought that it also repeats our reminder of the influence we appreciate and the affection we held for him for whom the medal was named.

President Taylor, it is my honor and great personal pleasure to present Frank B. Conselman to you for designation as the 1977 Ben H. Parker medalist.
The Ben H. Parker Memorial Medal
Acceptance
By Frank B. Conselman

An occasion of this sort, involving as it does favorable recognition by one's peers, is of course, vastly gratifying to the honoree. In my case I am honored not only by the fact that this is an award by the Association of Professional Geological Scientists, but by the impressive list of predecessors as recipients of the Ben H. Parker Memorial Award, whose company was the better before I joined it. And I am indeed additionally honored to be presented in such generous terms by a man of the stature, quality and intellectual attainment — as well as charity — of my good friend Orlo Childs.

More important than even these pleasant considerations is the sobering realization that this award carries the name of Ben H. Parker, a friend and inspirational leader whom I have deeply admired for over forty years. Ben Parker was truly a legend in his own time; surely he will be remembered as long as this organization exists because he was a virtually indispensable factor in its conception and initiation.

Ben, who died unexpectedly some eight years ago, would no doubt have approved of our recent APGS revision, for it is making possible the profession-wide unity he had so urgently advocated.

But Ben Parker was more than a legend — he was a man, a warm, friendly, cheerful, highly intelligent, thoroughly honorable, flesh-and-blood man. He had many skills, and made many contributions to scientific as well as professional geology. Many other fine men can be given similar credits, and deserve them, but what made Ben Parker unique was his exemplary and inspirational quality, which upgraded everything with which he became associated, and gave it an aura of integrity and “rightness”. The success of any project seemed assured beyond question if he touched it.

I first crossed Ben Parker's path in 1935, when I was cub breaking in for the old Gypsy Oil Company in the oilfields of southeastern New Mexico and Ben was head of a surface party mapping in the Sacramento and Guadalupe mountains for the same company. Nobody ever saw Ben Parker; we knew he was up there in his tent camp somewhere, because every now and then his bills would filter down from the hills. But even then it was taken for granted he was hard at work on a larger-than-life basis, getting results that were sure to be important, and sure to be right. Even in those younger days, Ben Parker was impressive. He was a leader, and his followers liked being led by him.

I had the privilege of serving as Ben’s vice-president during his AAPG presidency in 1960; other members of our executive committee included such APGS stalwarts as the late Lewis G. Weeks, George V. Cohee, and our incoming APGS President, Grover E. Murray. Watching Ben Parker perform was an educational experience — a lesson in smooth, urbane, polished efficiency. I recall that Ben chaired a joint meeting in Tulsa with GSA and SExG representatives. Ben made the achievement of unity among these previously less-than-harmonious groups seem easy and inescapable.

During the early '60's, before AIPG was founded, Ben was chairman of AAPG's Code of Ethics Committee, which later was transformed into a Professional Affairs Committee consisting of E. E. Rue (later chairman, and now about to become APGS president-elect), Francis Van Tuyl, and myself, together with Ben as chairman. Our inability to get AAPG to act upon our Annual Report was probably the triggering cause for the creation of AIPG. We did not proceed to establish AIPG, however, until we had verified the fact that, in the latter part of 1963, AAPG had no comparable activity in progress.

We met as a steering committee in Oklahoma City in September, 1963. I recall that Bud Rue and our outgoing president, Jack Taylor, were largely responsible for organizing the meeting. My own contribution — and this alone may well qualify me for a medal — was to persuade Martin Van Couvering to come from Pasadena to attend. Ben Parker was, of course, chairman of the meeting, and in retrospect, it appears to have been a remarkably successful one. Under Ben’s leadership we agreed on what we all wanted and made many important decisions, harmoniously and expeditiously. With Ben there all of us had the feeling that what we were doing was necessary, worthwhile and right.

Our founding convention was held on the campus of Colorado School of Mines at Golden, in November, 1963. Ben Parker, as chairman of the Board of Trustees of Mines, supported his president, Orlo Childs, in extending the hospitality and facilities that AIPG enjoyed during its fledgling days on the Golden campus. I recall with shameless pride how Ben and I succeeded in literally cornering Martin Van Couvering at an informal reception at Warren Beebe’s home in Boulder, and getting Martin to agree to accept nomination as our first president.

An early decision was to endeavor to recruit the most prestigious geologists in all phases of geology, so there could be no question of what AIPG stood for — and with people like Ben Parker, Martin Van Couvering, and Orlo Childs for starters, how could we miss? Thus we soon had enrolled personalities with the impeccable reputations of Ian Campbell, Morgan Davis, Michel T. Halbouty (who bankrolled us), Hollis Hedberg, Mason Hill, A. I. Levorsen, Kirtley Mather, Bill Pecora, Wallace Pratt, Lewis G. Weeks, and many others during our initial snowballing stages. They asked not what AIPG could do for them. One of our most important acquisitions, incidentally, was Arthur F. Brunton, who has staffed us from the start. With people like Ben Parker in the pilot house, and Art Brunton in the engine room, we really couldn’t fail and we haven’t.

Ben Parker had a very smooth, relatively painless arm-twisting technique. No one ever said “No!” to a Ben Parker request, and a “maybe” might as well have been a “Yes” by the time Ben was through with it. I remember vividly a long distance call from Ben a few days before Christmas, 1966. The conversation started out like this:

Ben: Frank, how'd you like to have $25,000 cash?

PBC: Fine! Put it in a box and mail it to me first thing in the morning.

Ben: Not only that, but AIPG gets $25,000 too. Now here's all you have to do — etc. etc.
“All I had to do” was to enter and win, under AIPG sponsorship, an essay contest in which it later turned out there were thousands of entries. For reasons that now seem ridiculous, I let Ben talk me into entering this contest, wherein I foolishly fancied I had an angle that might pay off, I wrote and wrote, and Grace typed and typed, all through Christmas week, and we barely beat the December 31st deadline. When Ben got his copy of my opus he assured me that we had a winner, and that if we didn’t get the $25,000, each, the contest was fixed. Coming from Ben, this seemed quite plausible, and strengthened an opinion of my own which my natural modesty was proving unable to suppress.

I didn’t win the first prize, nor any of the other four money prizes. I didn’t get honorable mention, either, this being the reward for the remainder of the top 25 essayists. I did win one of the little plaques given to the top 300, together with an invitation to travel to Chicago at my own expense and buy a $7.50 ticket to a banquet for the winners. AIPG didn’t get a thing. In retrospect, I realize that I let Ben Parker overcome my better judgement, but also in retrospect, I know I’d do it all over again, if Ben asked me. And it seems increasingly possible that Ben was right, as usual, in suspecting that we wuz robbed.

Grace and I remember with nostalgia the many delightful evenings we spent with Ben and Betty Parker in places like Yosemite and New Orleans, Atlantic City and Denver, San Francisco and Biloxi, in our respective homes, and, just before Ben’s death, in Brighton in England.

Ben has been gone for over eight years now, but to those of us who were fortunate enough to have been his friends his memory is fresh and green, and probably always will be. When I think of the difference between the sort of man Ben Parker was and the sort of man I am, I am humble; when I think of the difference between what I was and what I have tried to become under Ben’s tutelage and example, I am grateful. I am deeply grateful, also to all of you who are helping to make APGS what Ben Parker hoped it would become. Thank you for a memorable and wonderful experience.

Happenings in 1974

Two other outstanding speeches by Frank Conselman are included in Appendix 9 for the years 1965, “The Challenge of Professional Geology,” and in 1974 his Presidential Address at the Annual Meeting.

In 1974 our headquarters moved from the Colorado School of Mines to an office building at 622 Garden Court in Golden. Our membership stood at 2,372. Art Brunton prepared an Employment Survey:

<table>
<thead>
<tr>
<th>Industry</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum</td>
<td>56%</td>
</tr>
<tr>
<td>Minerals</td>
<td>24%</td>
</tr>
<tr>
<td>Engineering</td>
<td>12%</td>
</tr>
<tr>
<td>Geohydrology</td>
<td>6%</td>
</tr>
<tr>
<td>General</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

The program for the California Section Annual Meeting held on October 5th at UCLA, had as its theme, “The Professional Geologist’s Role in Environmental Studies.”

Under the general chairmanship of Joe Birman, the following AIPG members made presentations: Art Spaulding on offshore petroleum, Bill Park on liquid waste disposal, John Mann on hydrogeology, Jim Weddle on onshore petroleum, Don Hallinger on public utilities, and Dave Cummings on education. Non-CPG presentations dealt with solid waste disposal, environmental impact statements, and seismic safety.

PUPO Committee (forerunner of APGS)

One year after Frank was President of AIPG, he was president of AGI (1975). In that capacity he was instrumental in the Committee on Planning a Unified Professional Organization (PUPO). This was the forerunner of AIPG’s short-lived name change to the Association of Professional Geological Scientists (APGS) to include geophysicists. In 1980 Frank was Chairman of AAPG’s DPA Agreement Committee and wrote a history of PUPO; he also explained its mission in an article in the May 1975 TPG:

In 1975 the American Geological Institute convened a committee made up of representatives of AAPG, AIPG, SEG, and AEG, for “Planning a Unified Professional Organization.” In addition, Charley Mankin sat in (very constructively) as an observer for the State Geologists. It is important to keep in mind that the geophysicists and engineering geologists were full members of this “PUPO” Committee, and participated actively in its work. I was chairman of the Committee, on behalf of AGI, and doubled as AIPG representative.

The PUPO Committee rassled hard with the various conflicting viewpoints, which could only be reconciled by a series of concessions and compromises. Nobody was completely satisfied, but we achieved a unanimous report, which our respective Executive Committees and memberships officially approved, as did AGI. We felt we had achieved a valid and fair basis for professional unification, BUT -

The agreement required that AIPG change its name to “Association of Professional Geological Scientists.” SExG insisted on the “geological scientists,” and AAPG wanted a change — any change — to avoid appearing to be swallowed up by the old AIPG — for reasons obviously of some importance to AAPG.

In exchange, the various societies agreed to seek unity of qualifications and purpose by using AIPG membership criteria as a sort of threshold basis for professional certification, with the specialized societies empowered to impose an additional specialty certification on top of this common, basic professional certification. In order to administer this, it was assumed that all professionals desiring certification should join AIPG. Somewhere along the line the provision was inserted that AIPG membership must be continued even after specialty certification was established. There were other provisions established to integrate the new professional organization into AGI. The PUPO committee then had itself dissolved (becoming the PUPO Committee) while all members were still on speaking terms.

The honeymoon was soon over. A small group in AIPG, who particularly detested the newly legalized APGS title, circulated a questionnaire on name preference. Obviously the old name was by far the more popular, but nothing had been
said about AIPG's agreement to make the change in consideration of other concessions by the other parties. Nowhere did this questionnaire allude to the fact that restoring the old name would be "reneging on a deal" in a manner that many might consider not appropriate for an "ethical" society.

The repudiation of the PUPO agreement brought about the resignation from AIPG - APGS of the SEG and AAPG representatives, as well as of the AAPG president who signed the original agreement. However, succeeding AIPG executive committees have declined to rectify the matter, and have refused a suggestion by the geophysicists to let the "G" in AIPG stand for "geoscientists," on the grounds that "all these changes" (two) would involve wear and tear on the membership, etc.

After 15 months of discussion, debate, argument, hassle, compromise, legal adjustment, rehash and final tuning, the group came up with a joint solution that was not ideal for any but acceptable to all. Nobody dominated anybody; no one rolled over and played dead; nobody stayed mad very long — it was a good committee and the mutual interaction was educational to all of us. It is well understood that the product is not perfect, but is workable now, and capable of adjustment and fine tuning, as necessary, during the years to come.

The new organization is based on AIPG, deliberately and unashamedly. The principal modifications are structural and semantic and do not impair the attainment of AIPG's purposes, which are also the purposes of the new APGS.

The chief differences are:
1. The name;
2. The use of the terms "geological science" and "geological scientists" in lieu of "geology" and "geologists," as a semantic concession to the geophysicists, who have strong feelings on this point;
3. The expansion of the Executive Committee to include the president and Vice-President of AGI, and the Chairman of the newly-created Policy Board;
4. The creation of a Policy Board to handle (1) long-range planning and (2) coordination of specialty certification practices among those specialized societies wanting additional certification superimposed upon the APGS's basic certification of professional geological scientists.

There are additional minor language changes, some of them adopted for legal reasons, but the AIPG Constitution and Bylaws, as well as the Code of Ethics, remain readily recognizable. Among the problem areas will undoubtedly be grandfather provisions (largely solved) and rare cases of individuals already in one organization but obnoxious to another.

The reorganization will require constitutional and bylegal revision on the part of AIPG, and much inner turmoil. But when the dust clears away, we should have achieved a previously unattained goal - unity among the "geological scientists" of our profession; unity in voice and presentation; unity in professional purpose; and unity in the use of available resources to these ends. We should have more bodies, more brains, more breadth, and more boodle. People such as mining and engineering geologists as well as geophysicists should feel they have a home, and academic and governmental employees should find additional incentives for professional participation. The involvement of AGI representatives in APGS affairs should provide coordination and assistance without in any way permitting dominance, diversion, or distraction.

We have professional togetherness within our grasp, if we really want it. The feeling seems to be widespread that we do indeed want it, and that APGS may well be the vehicle to provide it, and that the time is ripe.

Frank B. Conselman
information with respect to Mr. Tucker’s opinions on the earlier phases of PUPO planning.

The meeting lasted some 4-1/2 hours, including luncheon and, as you can well imagine, there was a great deal of discussion back and forth and pro and con on many subjects. I shall not attempt to give you a play-by-play account, but the upshot was we now have an agreement as follows:

1. AGI will create constitutionally the status of “affiliate,” which in effect is a specially designed classification to cover an autonomous member society formed with AGI’s blessing.
2. The name of the new organization will be “Professional Association of Geological Scientists, an affiliate of the American Geological Institute.” I presentively believe that the word “professional” is out of proper sequence, but everyone liked it for various reasons, so I accepted it provided that
3. The veto power of AGI over amendments to the new constitution and bylaws is rescinded. This deletion has been accepted.

Mr. Tucker has accordingly agreed to draw up the necessary documents for the new organization on this modified basis, continuing to use the constitution and bylaws as a framework. He understands the importance of the time element and has promised to do his best.

While I am not crazy about the new name I can get used to it, and think that otherwise we are ahead in that we have met some of the objections to the proposed system. Executive Committee meetings of both AAPG and SEExG were scheduled for last weekend, and I assume that some sort of tacit approval will be forthcoming from those organizations. Most important, of course, is our own endorsement.

Cordially yours,

Frank B. Conselman

Xc: Mr. Arthur F. Brunton
   Dr. R. Dana Russell
   Mr. James E. Wilson (AAPG)

-------------------

First AIPG Publications (Six) For Sale

Largely due to the efforts of James R. Dunn, CPG 1347, the year 1974 saw the first Institute publications for sale. These were mostly in the series Guides and Suggested Practices. In June these two publications became available: “Organization and Content of a Typical Geologic Report” and “The Professional Geologist as Expert Witness.” Both were revised in 1986 and again in the early 1990s, and were reissued under the AIPG Monograph series. Another four 1974 publications are now out of print (see Appendix five for all AIPG publications).

-------------------

Request from the National Research Council

[Dartmouth College Letterhead]
May 30, 1974
Dr. Frank B. Conselman, President
American Institute of Professional Geologists

Dear Dr. Conselman:

The meeting last some 4-1/2 hours, including luncheon and, as you can well imagine, there was a great deal of discussion back and forth and pro and con on many subjects. I shall not attempt to give you a play-by-play account, but the upshot was we now have an agreement as follows:

1. AGI will create constitutionally the status of “affiliate,” which in effect is a specially designed classification to cover an autonomous member society formed with AGI’s blessing.
2. The name of the new organization will be “Professional Association of Geological Scientists, an affiliate of the American Geological Institute.” I presentively believe that the word “professional” is out of proper sequence, but everyone liked it for various reasons, so I accepted it provided that
3. The veto power of AGI over amendments to the new constitution and bylaws is rescinded. This deletion has been accepted.

Mr. Tucker has accordingly agreed to draw up the necessary documents for the new organization on this modified basis, continuing to use the constitution and bylaws as a framework. He understands the importance of the time element and has promised to do his best.

While I am not crazy about the new name I can get used to it, and think that otherwise we are ahead in that we have met some of the objections to the proposed system. Executive Committee meetings of both AAPG and SEExG were scheduled for last weekend, and I assume that some sort of tacit approval will be forthcoming from those organizations. Most important, of course, is our own endorsement.

Cordially yours,

Frank B. Conselman

Xc: Mr. Arthur F. Brunton
   Dr. R. Dana Russell
   Mr. James E. Wilson (AAPG)

-------------------

First AIPG Publications, 1974

Largely due to the efforts of James R. Dunn, CPG 1347, the year 1974 saw the first Institute publications for sale. These were mostly in the series Guides and Suggested Practices. In June these two publications became available: “Organization and Content of a Typical Geologic Report” and “The Professional Geologist as Expert Witness.” Both were revised in 1986 and again in the early 1990s, and were reissued under the AIPG Monograph series. Another four 1974 publications are now out of print (see Appendix five for all AIPG publications).

-------------------

Request from the
National Research Council

[Dartmouth College Letterhead]
May 30, 1974
Dr. Frank B. Conselman, President
American Institute of Professional Geologists

Dear Dr. Conselman:

The meeting lasted some 4-1/2 hours, including luncheon and, as you can well imagine, there was a great deal of discussion back and forth and pro and con on many subjects. I shall not attempt to give you a play-by-play account, but the upshot was we now have an agreement as follows:

1. AGI will create constitutionally the status of “affiliate,” which in effect is a specially designed classification to cover an autonomous member society formed with AGI’s blessing.
2. The name of the new organization will be “Professional Association of Geological Scientists, an affiliate of the American Geological Institute.” I presentively believe that the word “professional” is out of proper sequence, but everyone liked it for various reasons, so I accepted it provided that
3. The veto power of AGI over amendments to the new constitution and bylaws is rescinded. This deletion has been accepted.

Mr. Tucker has accordingly agreed to draw up the necessary documents for the new organization on this modified basis, continuing to use the constitution and bylaws as a framework. He understands the importance of the time element and has promised to do his best.

While I am not crazy about the new name I can get used to it, and think that otherwise we are ahead in that we have met some of the objections to the proposed system. Executive Committee meetings of both AAPG and SEExG were scheduled for last weekend, and I assume that some sort of tacit approval will be forthcoming from those organizations. Most important, of course, is our own endorsement.

Cordially yours,

Frank B. Conselman

Xc: Mr. Arthur F. Brunton
   Dr. R. Dana Russell
   Mr. James E. Wilson (AAPG)
may not prove to conform to the consensus:

1. Professional geology suffers from a lack of readily-recognized standards of identification, externally to a major degree and internally to a lesser degree. We still lack a valid public image.

2. As a consequence of (1) above, the profession is subject to continuing encroachment by engineers on the one hand and ecologists on the other. All of these people feel justified in extending their assumption of expertise into the field of geology. This is particularly obvious in land use planning and in multidisciplinary projects.

3. As a further corollary to the above, we find little recognition of the relevance of geology in the planning and management of governmental programs.

4. Geologists associated with the extractive industries, and eventually all geologists indirectly, are about to feel the effects of the punitive attitude adopted by legislative and political agencies toward industry itself. The unreasonable urge to kill depletion allowances at a time when they are most needed as exploration incentives is an obvious case in point.

5. The ability of professional geology to meet national needs is also greatly handicapped by overreaction to the sometimes exaggerated precautions and prohibitions imposed by the environmentalists. A balance must be struck.

In summary, professional geology needs a voice, and this voice must be listened to attentively. In order to justify this attention we must be sure that what we have to say is scientifically and professionally sound and ethically motivated.

There are of course many fields where scientific geology would benefit from the availability of new or additional data, as for example deep stratigraphic information within onshore basins, but these presumably are not the details that you would solicit from AIPG, which is devoted to professional rather than scientific matters.

I trust the foregoing will be useful pending a more broadly based study, which I shall ask the Institute to undertake. Please do not hesitate to call on us for any further information or commentary you may consider useful.

Cordially yours,

Frank B. Conselman

cc: AIPG Executive Committee
(with attachment)
Mr. A. F. Brunton
Mr. Charles F. Withington

Linn Hoover

Thursday, October 31
9:00 A.M.-5:00 P.M.
Executive Committee Meeting, holiday Inn
3:00 P.M.-Registration, Holiday Inn
6:00 P.M.-Cocktail Party, Holiday Inn

Friday, November 1
Colorado School of Mines, Green Center
9:00 A.M.-General Program, Petroleum Hall
Colorado School of Mines Centennial Year Program:
Outlook for the Future
Welcome to Colorado School of Mines President,
Guy T. McBride, Jr.
The Professional Geologist in Mineral Exploration and Production, Raymond C. Robeck
The Professional Geologist in Energy Resource Exploration and Production, Robert E. Chancellor
The Professional Geologist in Environmental, Hydrologic and Engineering Geology, Charles S. Robinson

Coffee Break
Discussion
Audience and Panel of Speakers
12:00 Noon - Luncheon, Friedhoff Hall
2:00 P.M.- General Program, continued

Introduction
The Professional Geologist in a State Survey, John W. Rold
The Professional Geologist in a Federal Survey, Peter R. Rose
The Professional Geologist in Politics, George H. Fentress
The Professional Geologist in Education, John D. Haun
Coffee Break
Discussion
Audience and Panel of Speakers
7:00 P.M.- Annual Banquet, Friedhoff Hall
Speaker: Hollis M. Dole, Colony Development Operation

Saturday, November 2
Colorado School of Mines, Green Center
9:00 A.M.-Annual Business Meeting, Petroleum Hall
“State of the Institute”, President Frank B. Conselman
National Committee Reports
A good way to get to know about this remarkable man is by reading the following citation by his friend and colleague past-President John T. Galey. Arthur Spaulding was the first recipient of the AIPG Public Service Award in 1983. The name of the award was fittingly changed in 1992 to the “John T. Galey, Sr., Memorial Public Service Award.” Here is John’s tribute to, and biography of, Art Spaulding:

Since service to the public is a primary purpose of AIPG, it is incumbent that the Institute award outstanding “public service.” We honor tonight a member who exemplifies this in the highest degree.

Our honoree was graduated from Caltech with a B.S. in Geology in 1949 and promptly went to work for Shell Oil as an Exploitation Engineer in various California oil fields. The company, recognizing his skills in science, sent him to Houston on a technical assignment in 1954-55 to do a report on the main producing reservoir at Weeks Island, basically a sedimentation study of continuity. He returned to Ventura in 1955 and then to the Four Corners Area in 1957, where he terminated to return to Caltech and obtain an M.S. in Geology in 1958. When he emerged with assorted new ambitions, he was greeted by the surfeit of Geologists and no jobs after the Suez Crisis. He spent the next 15 years in public service, the theme of which should be “Put a Geologist in the right place at the right time, and the sky's the limit.”

For a short but crucial time he was in City Hall, Los Angeles, as an Administrative Geologist, working for the city's Petroleum Administrator, who knew a great deal about City Hall but nothing about the oil business. His job was to keep him out of trouble from the technical side, while he kept the brush fires of politics under control. This job was fundamental to his later employment with the city as, when the Petroleum Administrator's job opened up in 1962 under Sam Yorty, he was the one they thought of.

In the meantime, 1959-62, he went to work for the California State Board of Equalization as Senior Petroleum and Mining Appraisal Engineer, evaluating oil and gas fields and mineral deposits. A measure of the efficacy of his work there was when he returned to City Hall in 1962, the board hired two men, one of whom was Bob Paschall, to take his place.

His fruitful and formative years, however, began in 1962 as Petroleum Administrator for the city and he has always liked the metaphor that the council chamber was the crucible in which is abilities were fired. Much was done from 1962 to '73 and some day he should write a book about those years, so that the record will be well preserved.

The long and short of his work in City Hall is that Sam Yorty, the City Council, the CAO and he inherited a moribund oil program in the city which is located over one of the world's great petroleum producing provinces, revitalized it, and set new records for urban drilling and exploration.

To quote from a resolution of City Council of Los Angeles of September, 1973. “Whereas, oil well drilling was on the verge of extinction in the city in 1962 and production amounted to only 15,000 bbls./day from the urban portions of the city and under his guidance the pace of exploratory drilling increased dramatically and production rose to a peak of 60,000 bbls./day in 1968 and oil reserves increased accordingly; and whereas he was in part responsible for oil income to the city of more than $30,000,000 during his tenure; and whereas, revenues of half a billion dollars have been generated by urban oil well drilling in the city.” The best part was the people of Los Angeles sustained no environmental degradation and were outspoken in their praise. What all this took was a receptive city and someone who knew the business and could translate it understandably.

The advent of the environmental era along with the natural decline in drilling activity took its toll, and in 1973 he left the city, essentially to continue the same kind of missionary work as an emissary of the oil industry. For about a year he managed an offshore drilling environmental assessment study for the Western Oil & Gas Association, then went to Denver to manage the Rocky Mountain Oil and Gas Association. Exactly a year later he returned to Los Angeles to manage the Western Oil and Gas Association as Vice President and General Manager. He has been there ever since, constantly embroiled in environmental battles and management problems but always clinging to the unassailable imperative to tell the truth about the oil business and success will follow. He has carried this on in numerous occasions to committees of the U.S. Congress.

His service to AIPG began shortly after its founding. He was the first President of the California section, after which he became a National Board Member. He was Editor of TPG for two years (1967-68). He was elected President in 1975. His principal contribution during that year was to get AIPG immersed in politics and utilize Jim Hamersley. His last effort in AIPG was to organize a program for the annual meeting in Pasadena.

Our honoree served with distinction in World War II, was wounded and decorated while in General Patton’s Third Army.

Elsewhere, he has been active in AAPG, serving as President of the Pacific Section in 1972-73, and is a member of several national committees. He is currently on the AAPG Industry Liaison Committee. He is a member of AIME and is 1975 President Arthur O. Spaulding

Arthur O. Spaulding, CPG 29

THE GROWING YEARS

1975 President Arthur O. Spaulding

1975

Arthur O. Spaulding, CPG 29
now a Director of the Los Angeles Basin Chapter of SPE. He was President of the Caltech Alumni Association in 1972, just for a change of pace.

I am extremely pleased and honored to present the first AIPG Public Service Award to one who is richly deserving of it, Arthur O. Spaulding.

**Congressional Testimony**

Art Spaulding was the first of 18 CPGs to give congressional testimony in the turbulent years 1975-1989. These dedicated geologists are listed in Appendix 9. However, because of the length of the testimonies, most are not printed herein, but can be found in TPG for the year indicated. Art went to Washington, D.C. to explain the geologic realities to essentially laymen in the Senate. Art talked on the Outer Continental Shelf Lands Act, and on Management of Public Lands for Oil and Gas Leasing. Months later, Kenneth H. Crandall, CPG 590, also gave testimony for AIPG on this subject.

Also in 1975, Edith McKee, CPG 737, represented AIPG in testimony on a bill to regulate coastal zone management before the House Merchant Marine and Fisheries Committee (HR 3981). Other distinguished witnesses most are not printed herein, but can be found in TPG for the year indicated. Art went to Washington, D.C. to explain the geologic realities to essentially laymen in the Senate. Art talked on the Outer Continental Shelf Lands Act, and on Management of Public Lands for Oil and Gas Leasing. Months later, Kenneth H. Crandall, CPG 590, also gave testimony for AIPG on this subject.

Edith's opportunity to testify had been arranged by our Legislative Counsel during a previous visit to Washington by Edith, at which time our counsel arranged for Edith to meet with other governmental officials. Edith was appointed the first geologist member of an FEA advisory committee.

Early in his presidency, Art wrote the following letter to President Gerald Ford:

[ Chuney Ford letterhead]
January 29, 1975
President Gerald R. Ford
The White House
Washington, D.C. 20500

Dear Mr. President:

Perhaps it's too late to offer some constructive information in support of your program to make the United States once again self-sufficient in energy. The very heart of your program involves the discovery and development of new earth resources, and I wish to assure you that United States geologists are not only central to that project but also are available in sufficient numbers to do it and are committed to that same objective.

The American Institute of Professional Geologists (AIPG) admittedly represents comparatively few (less than 10 percent) of the nation's geologists, but if you examine the membership (2300 plus or minus), you will find it to be composed of eminent scientists and professionals unlike all other geological organizations. Our interest is to make the practice of geology reputable and flawlessly dependable.

America faces a decade of mineral shortages, not only in oil and gas, unparalleled in contemporary history. It is vital that the American people recognize their irrevocable attachment to mineral production, especially oil and gas, for their comforts, social well-being, and most importantly freedom. We of AIPG and speaking for the entire geologic community pledge our unremitting efforts to restore the United States to energy independence and maintain the supremacy of America in international relationships.

Sincerely,
Arthur O. Spaulding
President

**Speech at the White House**

Geologists in Governmental Administration

By Arthur O. Spaulding, President
American Institute of Professional Geologists
(An AGL-Sponsored Meeting)
July 21, 1975

Geologists enjoy their principal reputation in mineral exploration and development. Not so well known, but becoming increasingly prominent is the practice of geology in land use planning and preservation of environmental values. Upon reflection, what more suitable discipline is there to deal with earth-related social problems.

It has been my fortune to have served the City of Los Angeles as an administrative geologist and as an administrative officer for nearly 12 years. During that time I have had the opportunity of watching the evolution and acceptance of geology as a vital tool in solving complex urban dilemmas related to both land use planning and oil and gas exploration. In every case environmental considerations, primarily those related to public convenience, health, welfare and safety, were paramount and intimately associated with a deep understanding of geology.

The Geologist in Urban Planning

a. Land Use

Dr. Richard H. Jahns, then of Caltech, was the chief architect of the City of Los Angeles' current land use planning requirements. His connection with the City came about as a result of the rapid growth of the City and surrounding communities into geographical areas noted for their unstable geology. Without a geologist as an adviser, the City would have sustained limited growth, loss of property values and, indeed, loss of life itself.

Heavy rains in the decade of the 1950s in Los Angeles caused land and mud slides in the hilly portions of the City which had been developed with no regard to their unstable geological conditions. The principal example of such instability was at Portuguese Bend in the Palos Verdes Peninsula where a large landslide destroyed property of enormous value. After many houses had literally been watered off their foundations, the City adopted the novel building code procedure of requiring a land developer to submit a geological report where there was prospect of geological hazards. Now, before building may be approved, a specially appointed review commission must examine the land beneath the pro-
posed tract and be assured of its geological stability. This emphasis upon geology in land use planning has become commonplace in California, and has resulted in the licensing of geological practice throughout the state.

b. Oil and Gas Exploration

Los Angeles is not only unique in furnishing the origin for geology in land use planning, but in addition it is among the few urban areas in the world to be situated on top of the most prolific (on a per acre basis) petroleum producing province yet discovered. The consequence has been to create a city planning device to permit oil and gas operations throughout the entire city, including its most densely populated portions and exclusive residential areas, while, at the same time, preserving the environment in which these operations take place. Central to the success of these planning procedures has been the knowledge and practice of geology.

Prospects for finding large accumulations of hydrocarbons beneath the downtown portions of Los Angeles have always been considered excellent. For decades, urbanization of the surface rendered access to these prospects either physically or legally impossible or quite uneconomical.

The first aggressive steps to drill in the City were taken after World War II when provision was made in the City’s Comprehensive Zoning Plan to establish oil drilling districts. Limited operations followed with tantalizing results. It remained for a geologist to assume command of the City’s regulatory program and institute new practices and procedures leading to the discovery of truly significant oil and gas reserves beneath the City. The key to the success of the new program was core hole drilling by which oil and gas might be found but produced only at a later date after all environmental safeguards had been imposed by means of zoning requirements.

The success of the City’s enlightened drilling program may be summarized as the discovery of hundreds of millions of barrels of oil and three to four times as much in dollars for the oil operators, property owners, and taxpayers with no sacrifice of environmental values.

The Geologist in Oil and Gas Lease Administration

Many of the properties involved in oil and gas development in the City of Los Angeles are owned by the City and were leased by the City in order to share in the proceeds of production. The nature and terms of the City’s leases were principally the outgrowths of geological advice. As the United States contemplates Outer Continental Shelf leasing policy, we urge that its very keystone be proper geological understanding, both as to the quality of geological prospects and exploration and development requirements.

Proposals are now before Congress to change current OCS leasing procedures. Nearly all of them would inject the federal government more deeply into drilling and development and investment decisions and render oil and gas operations a more regulated enterprise.

What most of these proposals do not consider is the high risk of failure associated with petroleum discovery. Only geologists and those involved in exploration and production have a true appreciation for the immensity of this risk and the means of anticipating it.

As geologists, we believe OCS lands should be made available with the most urgent priorities to furnish perhaps the last very large unexplored region close to the U.S. market place where substantial additions to U.S. petroleum reserves may be found. At the same time, it is our opinion that in the formulation and execution of policies connected with OCS leasing geologists should occupy a most prominent role.

Five More Publications

Following the sales success of AIPG’s first publications in 1974, the Institute produced five more for sale in 1975. Unfortunately, all are now out of print (see Appendix five for titles). The methods of collecting the data for “College Curricula for Professional Practice of Earth Sciences” was helpful for the reformatted 1985 pamphlet “Program of Cooperative Evaluation of Geology Departments,” which is still available. The Institute changed the emphasis from what courses a professional geologist should take, to which U.S. geology departments offer adequate courses. See also Lee C. Gerhard’s 1983 paper on academia in Appendix 9.

1. Presented at the White House at an AGI-sponsored meeting with staff and reports. (Art later reported disappointment with the “laconis” reception).

Second AAPG - AIPG Agreement

On March 20, 1975 AIPG President Arthur O. Spaulding and AAPG Merrill W. Haas executed the following agreement. The agreement was ratified by both Executive Committees in Dallas in early April.

THIS AGREEMENT, made by and between the American Institute of Professional Geologists (AIPG) and the American Association of Petroleum Geologists (AAPG).

WHEREAS, The American Institute of Professional Geologists, a Colorado corporation, is interested in contributing to the unification of the geological profession and is therefore contemplating the restructuring of its organization so that AIPG will be designated as the Association of Professional Geological Scientists (APGS); and

WHEREAS, AIPG and AAPG, a Colorado corporation, currently are both engaged in separate programs involving the certification and professional interests of geologists; and

WHEREAS, the accomplishment of the mentioned restructuring of AIPG involves the amendment of its Articles of Incorporation, the revision of its Constitution and By-Laws and the undertaking of related matters which will entail substantial effort; and

WHEREAS, AAPG wishes to contribute substantially to the unification of the entire profession of geology through consolidation of its specialty certification program with the
general certification engaged in by AIPG, and to be undertaken by APGS; and

WHEREAS, AIPG and AAPG wish to assure each other in their undertakings and agreements in the event that such restructuring of AIPG is, in fact, undertaken and APGS, operating under that new name under Colorado law, undertakes its general certification activity as a continuing program;

NOW, THEREFORE, WITNESS: That in consideration of the foregoing premises and their respective promises set forth herein, the parties to this Agreement mutually agree as follows:

1. AAPG agrees that if AIPG, within one (1) year after the signing of the Agreement is restructured in the manner described in the premises and the second paragraph of this Agreement, changes its name to Association of Professional Geological Scientists, and undertakes a program involving the general certification of geologists, AAPG will continue its program of specialty certification of petroleum geologists, with the added requirement that new applicants be certified as Professional Geological Scientists by APGS for so long as the restructured organization of AIPG, to be known as APGS, or its legal successor, by whatever name, continues to have a program involving the general certification of geological scientists, with the exception of applicants who are not citizens of the United States.

In that regard, AAPG further agrees that it will actively encourage and support membership in APGS.

2. AIPG agrees, upon the execution of this Agreement, to undertake the amendment of Articles of Incorporation as a Colorado corporation; the amendment of its Constitution and By-Laws; the execution of a Memorandum of Agreement to be signed by AAPG, AIPG and certain other interested member societies of the American Geological Institute; the change of its name to Association of Professional Geological Scientists (APGS); and will conduct its general certification program as Association of Professional Geological Scientists (APGS).

IN WITNESS WHEREOF, the undersigned have executed the foregoing Agreement, subject to ratification by their respective Executive Committees and the Executive Committee of the Division of Professional Affairs of the AAPG.

Merrill W. Haas
President, AAPG

Arthur Spaulding
President, AIPG

California Section News

Art Spaulding was the main founder of the California Section of AIPG in 1964, and was its first President. Eleven years later when Art became President of AIPG, the California section was still very active. The 11th Annual Meeting was held in Bakersfield and included the following speakers:

Dr. Burdette A. Ogle, Petroleum Exploration Consultant, Santa Barbara. “Energy-Minerals-Development: The PROS Versus the CONS or ‘Let’s Get Them Before They Get Us!’”


Dr. C. M. Swinney, Manager, Energy Resources, Southern California Edison Co., Los Angeles. “The Economics of Coal”.

Francis J. Barker, Vice President, Natural Gas and Gas Liquids, Union Oil Company of California, Los Angeles. “The Energy Crisis From the Producer’s Point of View”.

Your Voice Be Heard*.

The late Dr. Ogle’s hard-hitting paper is reproduced in Appendix 9 for 1975. Later, Art was the Keynote Speaker at the 15th Annual California Section Meeting. Parts of his address are included in Appendix 9 for the year 1979.

AIPG Legislative Counsel
James U. Hamersley

President Spaulding hired our first and only Legislative Counsel, who served from 1975 to 1984.

Jim provided the Institute with advice and legal expertise; he monitored legislation and regulatory proceedings, served as liaison to selected agencies and provided comprehensive reports on policies and hearings with potential geological impact. In addition, he provided counsel on legal matters and determined legal implications of AIPG actions. Jim had particular expertise in legislative activities, federal government regulatory proceedings and trade association legal matters. He had knowledge and experience in the areas of energy, natural resources, environmental law and related service industries, as well as in matters affecting trade and professional associations such as AIPG.

He received his Bachelor of Arts degree in International Relations from the University of Utah, Salt Lake City, in 1965; his Master of Arts in Political Science from Denver University, Denver, Colorado, in 1968; and his Juris Doctor from George Washington University, Washington, D.C., in 1970.

An author and columnist, Jim was a Staff Assistant to Senator Frank Church in Washington, from 1968 to 1969. From 1970 to 1972, he was Attorney/Advisor to Federal Power Commissioner Albert B. Brooke, Jr., Washington, D.C. He then worked as an attorney for Peoples Gas Company, Chicago, Illinois, before starting his private practice in Washington.

Jim Hamersley’s experience in Washington, D.C. is impressive. After a B.A. at the University of Utah and an M.A. at Denver University (in Political Science), Jim earned his Juris Doctor at George Washington University in 1970. Before becoming an independent consulting attorney in Washington in 1973, Jim was an attorney with the People’s Gas Company in Chicago, Advisor to the Federal Power Commission, a newsman for KBOI Radio-TV in Boise, an instructor in Government at Roosevelt University in Chicago and Northern Virginia Community College in Annandale, Virginia. Jim was our first “Man in Washington” and set the pattern for AIPG’s Washington Representatives that followed.

In 1982, AIPG appointed Russell G. Wayland to be our first salaried Washington Representative. Russell’s activities gradually made Jim Hamersley’s higher paid services less cost-effective.

1975 Annual Meeting, Tucson

The 12th AIPG Annual Meeting was held at the Sheraton Pueblo Inn, Tucson, Arizona, on October 30-November 1, 1975. Walter E. Heinrichs, Jr. was Chairman, with Ben F. Dickerson III, and William M. Greenslade Vice-Chairmen, and Theodore H. Eyde Program Chairman. The Banquet Speaker was Harrison H. Loesch, Minority Counsel Senate Interior and Insular Affairs Committee. One field trip was offered, to the Twin Buttes ANAMAX Mine. A spouses’ tour to Nogales, Mexico was offered. No awards were tendered this year.

Although not mentioned in the Program, the meeting theme was announced at the meeting: “Geologists, tell it like it is—to the Public, our Lawmakers and Ourselves.” The Program follows.

Friday, October 31
No host breakfast
8:00 A.M. - 12:00 Noon REGISTRATION

Session I
How to Sell Geology — Can We Learn
From the Corn Flake Peddlers?, Moderators - Maurice H. Brady and Kenneth J. DeCook

AIPG Legislative Counsel James U. Hamersley

Legislative Counsel James U. Hamersley

WASHINGTON, D.C.
9:00 A.M. - 10:00 A.M. - Motivational Consultant - Joel H. Weldon, “The Science of Selling You and Your Ideas”
10:00 A.M. - 10:30 A.M. - Coffee Break
10:30 A.M. - 11:00 A.M. - Loring K. Green - Dean Witter, Inc. - “What Future Has An Unemployed or Underemployed Geologist?”
11:30 A.M. - 2:00 P.M. - Luncheon and Business Meeting
2:00 P.M. - 5:00 P.M. - Twin Buttes Field Trip - ANAMAX Mining Co.
6:30 P.M. - 7:30 P.M. - Poolside Social Hour - Cash bar
7:30 P.M. - Banquet - Harrison “H” Loesch, Minority Counsel, Senate Interior and Insular Affairs Committee

Saturday, November 1

Session II

To Our Lawmakers - How to Communicate With Your Legislator, Albert J. Perry and William M. Greenslade - Moderators
9:30 A.M. - 10:00 A.M., Priscilla Robinson - City of Tucson Lobbyist “How To Lobby Effectively” or “Anyone Can Learn This Popular Leisure Time Activity”
10:00 A.M. - 10:30 A.M. - Coffee Break
10:30 A.M. - 11:00 A.M. - Jim Richardson - President, Arizona Mining Association, “How Trade Organizations Can Influence Legislation”
11:00 A.M. - 11:30 A.M., John Lacy - Verity, Smith, Lacy, Allen & Kearns, “The Role Of Outside Counsel In Drafting Legislation”
11:30 A.M. - 1:15 P.M. - Luncheon - Cash Bar

Session III

To Each Other - Collective Bargaining for Professionals: Are Professional Societies Enough?, James D. Sell and Jerome J. Wright - Moderators
1:30 P.M. - 2:00 P.M. - Hal Ammond - Association of Scientists and Professional Engineering Personnel, “Collective Bargaining for Geologists - What Does The Future Hold?”
2:00 P.M. - 2:30 P.M. - Wallace McGregor - President, NW Mining Association, “Who Helps The Independent Geologist?”
2:30 P.M. - 3:00 P.M. - COFFEE BREAK
3:00 P.M. - 3:30 P.M. - Bryan Cowan, “The Function Of An Umbrella Organization Such As ACESA In Professional Development”
3:30 P.M. - 4:00 P.M., Robert S. Shoemaker, “Role Of The Professional Society In Career Development” or “The Only Way To Fly”

November 6, 1975
Mr. Walter E. Heinrichs, Jr.
P. O. Box 5964
Tucson, Arizona 85703

Dear Walter:

Before too much time escapes I am writing to tell you how much I enjoyed our Annual Meeting this year. I believe I can speak, not only for myself, but for the Executive Committee and all those who attended, that the event which you and your Committee prepared for us was by far the outstanding Annual Meeting in our recollection. I have just talked to Bob Berg, one of our former Presidents, who attended the meeting, and he affirms everything I have just said.

The reason that I feel so positively about your meeting is that, virtually for the first time, the subjects which were discussed or otherwise presented by your speakers were outward looking in their context, rather than internal matters, generally those associated with housekeeping. During my tenure I have attempted to change this internal attitude of AIPG toward external affairs, and to a limited extent I think we have done that. The reflection of this attitude in your program was its feature that I admired so much.

Would you kindly convey my thanks to your Committee and tell them how pleased I am that everything went so well. I shall look forward to further meetings with you and your participation in AIPG’s affairs at an early date, and on a continuing basis. In the meantime, please accept my sincere congratulations for such a fine program and its exemplary execution.

Kindest regards,

Arthur O. Spaulding
President
1976
President John D. Haun

The following biography and allocades were excerpted from John’s citationists, co-workers and friends James A. Barlow, Jr., John B. Curtis and Ross L. Shipman. John was awarded the Parker Medal in 1983, Honorary Membership in 1998, and AGI’s Ian Campbell Medal in 1988. He was a great help in preparing this History of AIPG, as he would peruse his collection of all TPGs — more than 400 — to help locate information on people and events. Thank you, John.

The time and talent John gives in service to our profession are immense. A few examples will illustrate. He has been president of the American Association of Petroleum Geologists, editor of the Bulletin, and recipient of the Association’s highest honor, the Sidney Powers Memorial Medal; secretary, first vice-president, editor of The Mountain Geologist, and president of the Rocky Mountain Association of Geologists; secretary-treasurer, vice president and president of the American Geological Institute, and recipient of that Institute’s highest honor, the Ian Campbell Memorial Medal. John was a member of the National Petroleum Council and served a ten-year term as commissioner, vice-chairman and chairman of the Colorado Oil and Gas Conservation Commission. These contributions were not made in a linear fashion, but rather while John was also a professor, researcher, and active petroleum exploration consultant! John has been a leader on the Potential Gas Committee for over 30 years, readily sharing his knowledge, laughter and insight.

John Haun was born March 7, 1921, in Old Hickory, Tennessee. His education at Berea College was interrupted by four years in the U.S. Coast Guard and at the Coast Guard Academy. He returned to Berea and received his A.B. in geology in 1948. Interestingly, John and our 1979 President Bud Rue were the only two geologists graduating Berea in 1948. Haun came west to Wyoming and earned his M.A. in 1949. In 1953 he received the first Ph.D. in geology ever awarded at that school. His professional experience started as an exploration geologist with Stanolind (Amoco) in 1951 and 1952. From 1952 to 1957 he was with Petroleum Research Corporation and became a vice-president of that organization. From 1955 to 1980 he was a professor at the Colorado School of Mines. Haun achieved emeritus status in 1983. Since 1957 he has been an active partner in Barlow and Haun, Inc.

Haun served AGI for thirteen years from 1972 to 1985. He was continuously involved in committees and as an officer, serving on the Publications Committee, the Governing Board twice, as secretary-treasurer, and as vice-president. His service to AGI culminated but did not end with his presidency in 1981-82.

One of John Haun’s unique skills is as a writer and editor. John became the first editor of the Rocky Mountain Association of Geologists’ scientific publication, The Mountain Geologist, in 1963. He remained as an associate editor for 14 more years. He was also an assistant editor for the monumental Geologic Atlas of the Rocky Mountains. He edited the AAPG Bulletin for four years and was associate editor for four more years.

Haun became RMAG president and an honorary member in 1974. His many AAPG activities culminated in his being elected president for 1979-80 and as an honorary member in 1984. His interests in the profession of geology led to his election as president of the American Institute of Professional Geologists in 1976.

John Haun’s long term service to the profession is broad as well as deep. He has influenced the professional lives of students, teachers, authors, researchers, and oil and gas explorationists and has enriched professional and scientific societies, state and federal agencies, and institutes.

Presidents Message “Professionalism and the Geological Scientist”

By John D. Haun

An educated geological scientist who is paid for his work is a professional! Professional lawyers, medical doctors, geologists, or plumbers are concerned with (1) the adequacy and quality of their education or training, (2) the length of time and breadth of their experience, (3) methods of measuring competence and of assuring that this competence is maintained, (4) working conditions and levels of compensation, (5) governmental and organizational systems of licensing or certification, (6) public recognition of their role and importance in society, and (7) the promulgation of laws and regulations that, on the one hand, protect and enhance the quality of life and, on the other hand, do not unnecessarily restrict the performance of duties and activities inherent in the practice of the profession.

Geologists have been concerned about professionalism at least since the beginning of this century, but active steps to formalize this concern were taken only recently. In the formative years of the American Geological Institute, proposals for a certification program were made. Certification programs, and the attendant activities that a certification program implies, were rejected by AGI because many, if not most, geologists were not convinced that professionalism was an important aspect of their scientific work. An additional reason for rejection by AGI was based on the grounds that such a pro-
gram might jeopardize the non-tax status of several of the member societies. This is an example of laws that restrict the logical progression of activities of an organization.

It is probable, however, that even without restrictive tax laws, the opposition of AGI member organizations would have prevented the development of a certification program—an air of intellectual and scientific purity untainted by concerns of the work-a-day world still dominates AGI philosophy.

In 1963 the American Institute of Professional Geologists was formed and, for the first time, there was a truly national organization whose primary concern was for the professional well-being of geological scientists. In 1966 the AGI House of Society Representatives officially designated AIPG as the Member Society to which all professional matters were to be referred—the impact of this designation, however, is difficult to discern. Several past presidents of AIPG have been presidents also of AGI, thus continuing a rather close and, I believe, mutually beneficial association, despite earlier negative attitudes.

Not to be outdone, the AAPG initiated a program for certification of petroleum geologists in 1964 and this resulted in the formation of the Division of Professional Affairs (of AAPG). Many members of AAPG believed, and still believe, that full membership in AAPG is tantamount to certification. The AIPG has consistently opposed the recognition of specialty certification except within the context of general certification. Most certification programs by other professions and most registration laws reflect this philosophy. Specialty certification may lead to a proliferation of divergent and overlapping programs and thereby dilute the impact of a more general or profession-wide certification.

In the summer of 1965 the AAPG Executive Committee voted to combine the AIPG certification program with that of AIPG. This precipitated such an uproar within AAPG that the Executive Committee was forced to rescind their action. Sporadic efforts to combine these certification programs were finally brought to fruition in 1975 by the signing of an agreement between the two organizations. This agreement was ratified by the AAPG Division of Professional Affairs by a vote of 811 to 142. The agreement called for the formation of the Association of Professional Geological Scientists which, when formed would admit as certified members all those Certified Petroleum Geologists who so desired. On January 1, 1976, the APGS was formed as a result of the 834 to 405 vote of AIPG members. All former AIPG members are automatically members of APGS. To date (February 16, 1976), 373 Certified Petroleum Geologists have made letter application to join APGS.

Our second goal has been to increase membership. The number of AIPG members has been on a plateau of 2,200 for several years. We cannot, in good conscience, claim to speak for the entire profession with such a small membership. The encouraging influx of Certified Petroleum Geologists is certainly welcome, and we hope this will create new vigor on the part of our Membership Committee and, in fact, all members in the drive for a more broadly based representation of our profession.

The general area of specialization (January 1975) is as follows:

<table>
<thead>
<tr>
<th>Field</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum</td>
<td>56%</td>
</tr>
<tr>
<td>Minerals (other than petroleum)</td>
<td>23%</td>
</tr>
<tr>
<td>Engineering</td>
<td>12%</td>
</tr>
<tr>
<td>Geohydrology</td>
<td>6%</td>
</tr>
<tr>
<td>General</td>
<td>2%</td>
</tr>
<tr>
<td>Marine</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Despite the rocky road we have traveled and the painful compromises we have made, we have now reached our primary goal—a unified professional organization.

It is difficult to arrange, in order of importance, the activities of our various committees and Sections. Most of the active and more dynamic leaders of the geological sciences are members of APGS and it has been through their efforts that the Association has had an impact far greater than membership numbers would imply.

We are the only geological organization with a paid legislative counsel in Washington. We have presented oral and written testimony on a variety of legislative bills introduced during the past several years. The effectiveness of this activity is, and always will be, subject to question, but it’s a fact that we will not be effective if we do nothing.

Appointments to administrative positions and commissions, oversight reviews, and actions of regulatory bodies are also subject to our review and action. The Executive and Legislative Committees, in cooperation with our legislative counsel, coordinate these activities.

We are concerned with the education of future earth scientists. The Cooperative Evaluation Committee is charged with the organization and supervision of departmental evaluations and the listing of approved departments for use by industry, graduate schools, and APGS in the evaluation of educational competence. Yet to be devised is a system of periodic review to examine the continued excellence of previously approved departments. These approvals are not now the equivalent of accreditation by such associations as the Engineers Council for Professional Development and an unanswered question is the extent to which we wish to formalize and codify this function. As with other professional activities, there is entrenched and sometimes bitter opposition to accreditation programs.

Limitations on the activities of the Public Affairs Committee are inherent to similar committees in most organizations that do not retain professional counsel in public relations. More can be done, but the extent to which a volunteer membership can make a dynamic contribution to public recognition has been proved to be marginal at best. Perhaps...
in the future we can retain public relations counsel similar to our present legislative counsel. Meanwhile, events such as our White House Conference and the several Governors’ Conferences illustrate the kinds of activities that derive public recognition.

We have a committee concerned with the geological aspects of the environment. These activities overlap, to some extent, those of the public affairs and legislative committees. Other committees, in addition to those already mentioned, are charged with responsibilities consistent with their titles: Annual Meeting, Awards, Employee’s Retirement Fund, Ethics, External Appointments, Finance, Nominating, Professional Guides, and Professional Employment Standards. Additional ad hoc committees are constituted as the need arises.

Complementary committees have been established in the Sections to maintain and enhance our professional activities at the state and regional level. In fact, it is quite probable that our most effective actions are the result of Section activities.

The responsibility of the APGS Executive Committee is to promote activities that will reflect the broad objectives of our Association and at the same time be focused on attainable rather than quixotic goals. This is a delicate balance in view of the fact that most of our accomplishments will be the result of the work of volunteers.

In summary, you are aware from this review that APGS is a dynamic organization. We welcome your membership as an indication of your desire for certified professional recognition; we hope that you will be an active participant in the work of your Section and in the national committee structure.

**Congressional Testimony by Five CPGs**

After the first congressional testimony by Institute members last year (Art Spaulding and Edith McKee), 1976 saw a significant increase as five CPGs appeared before national bodies. These conscientious and concerned members were Walter Heinrichs, Jr., CPG 688, and Fred L. Stead, CPG 567, who both spoke on “Federally-Owned Mineral Lands;” Fred also traveled to the Democratic National Platform Committee to make Recommendations on the “U.S. Mineral and Energy Resource Policy;” a few months later President-elect John Taylor presented the same Recommendations to the National Republican Platform Committee; Howard Hansen, CPG 1522, gave testimony on the “Outer Continental Shelf Lease Sale;” and our fourth President John Gale spoke to the U.S. Senate on “Why We Have a Natural Gas Shortage, and Why it Must Not Continue.”

Fred Stead’s testimony contains a recommendation “that all proposed withdrawals of public lands now under consideration be held in abeyance until thorough and complete mineral investigations have been made in these areas.” Further comment was made regarding rules and regulations and public-land supervision. As a result of this testimony, APGS was asked by the U.S. Department of the Interior to submit criteria for investigation of lands proposed for withdrawal from mineral entry. President Haun recommended phases of a thorough investigation be prepared and submitted. This is an example of our constant effort to influence legislation and to modify regulations that effect the geological profession and, in fact, all Americans.

**Greatest Surge in Membership**

When APGS (Association of Professional Geological Scientists) came into being—January 1, 1976, all AIPG members automatically became members of the new Association in what was essentially a name change. For a limited time, all full members of AAPG, the Society of Exploration Geophysicists (SEExG) and the Association of Engineering Geologists (AEG) were permitted to become certified members of APGS on request without complete review of their qualifications. This “new” Association broadened the membership to include all professional geologists and geophysicists. The result was an immediate 32 percent increase in certified membership (during the 1976-1978 period), the largest increase in AIPG history (896 new members were added in 1976 alone, 1,679 from 1976 to 1978). (This “open membership” was discontinued on December 31, 1977). For the first time in our 12-year history our membership passed 3,000. By 1979 the membership growth rate had declined and the minority of members who objected to the new APGS organization began to gain allies, culminating in a return to the original AIPG name.

**1976 Annual Meeting, Denver**

Our thirteenth Annual Meeting was chaired by President-Elect John A. Taylor. It was held at the Denver Hilton Hotel, back-to-back with the Annual Meeting of the Geological Society of America. AIPG was November 6-7, GSA was November 8-11. R. Dana Russell received the Parker Medal. The Annual Meeting Report follows:

**Advisory Board Meeting**
**November 6, 1976**

Chairman John A. Taylor presided at a meeting of the Advisory Board of the Association of Professional Geological Scientists held at the University Club, Denver, Colorado, on November 6, 1976.

Chairman Taylor called the meeting to order at 8:45 a.m. and requested a call of the roll of delegates. Official delegates or alternates present were:

- Michael R. Rector (California)
- J. C. Thompson (Colorado)
- Garald G. Parker (Florida)
- Wilson G. Harris, Jr. (Illinois/Indiana)
- J. W. Eggers (Louisiana)
- Thomas W. Bastien (Minnesota/Wisconsin)
- William R. Speer (New Mexico)
- Kurt E. Lowe (Northeast)
- John S. Fryberger (Oklahoma)
- Donald Senovich (Pennsylvania)
- Grover E. Murray (Texas)
- Wilber H. Smith (Utah)
- Stuart P. Hughes (Virginia)
- Peter Lessing (West Virginia)

The Minutes of the Advisory Board meeting of May 22, 1976 were approved.
Requirements for Associate Affiliation

Both the Northeast and Pennsylvania delegates expressed the opposition of their sections to certain Bylaw requirements for Associate affiliation. The two Sections had provided for Associate affiliation with the Sections prior to the time that such affiliation was allowed on the national level. It was the opinion of the Sections that all Section Associates should be granted national Associate status without the need for reapplication.

Motion: Lowe  Second: Senovich

The Advisory Board recommend to the Executive Committee that all Associates affiliated with Sections prior to the enactment of the new Bylaws on January 1, 1976, be granted Associate status in the Association without reapplication.

Motion carried

Lowe requested that the “grace period” between the time an Associate fulfills the experience requirement for certification and the date he must make application for certification be extended.

Motion: Lowe  Second: Eggers

The Advisory Board recommend to the Executive Committee that the Executive Committee submit the following amendment to the Bylaws to the membership for vote: “An amendment to Article I, Section 9, Paragraph D.2) to change ‘six (6) months’ to ‘one (1) year’.”

Motion carried.

Legislative Activity

Chairman Taylor called upon James U. Hamersley to summarize APGS legislative activities during the past year. Hamersley reported that the Association had provided testimony to governmental agencies on three occasions; had made an extensive review of proposed EPA Underground Waste Water Injection Rules; had presented a proposed Mineral and Energy Resource Policy to both the Democratic and Republican Platform Committees; and had held four open Washington luncheons. He noted that the Association had concentrated much of its efforts on the Executive branch, particularly the secretariat, during the past year. He is recommending that APGS concentrate its efforts on the legislative branch in the coming year. He predicted that tax reform and energy and natural resource reform would be two major items of importance to APGS in the near future. Agnew, as a member of the Legislative Committee, noted that this committee needs much more input from the members and the Sections. Senovich suggested that APGS concentrate much effort toward having individual members correspond with their respective senators and congressmen on specific problems.

Hughes reported that the recently enacted BLM Organic Act is expected to have considerable impact on the profession. The Act provides for advisory boards and committees, and Hughes urged APGS to contact the BLM with recommendations for appointments to these boards and committees.

Chairman Taylor noted that it appeared to be the sense of the discussion that the Advisory Board recommends much greater legislative and regulatory activity on the part of the Association, and a considerable increase in direct communication with the Sections and the individual members. It appears to be the sense of the discussion that the Board approves the recommended activities as outlined in the Legislative Committee report and in Hamersley’s memorandum.

Lowe suggested that the concerns of members in different areas of the country are often in opposition on specific questions. Some members may find an APGS policy in opposition to public land withdrawals or to forced divestiture by oil companies to be counter to views of these members unless more information is distributed.

Paul Hilpman suggested that APGS concentrate some effort toward the proper education of students majoring in other than the geological sciences. Many of these students enroll in geological science courses to fulfill a science requirement, and it is here that they should learn about the difficulties in exploration for mineral and energy resources and be made aware of the importance of the geological sciences to all phases of public and private activity.

Divestiture

Chairman Taylor noted that the question of forced divestiture for the petroleum companies had been discussed at the May 22 Advisory Board meeting and that the Legislative Committee had reported that it did not have sufficient information to determine the effect of divestiture on the profession. The Advisory Board had charged itself to develop such information. President Haun noted that SEExG had published a statement on horizontal divestiture and suggested that this statement be published in the newsletter with a request for comments from the members. Eggers suggested that statements on both horizontal and vertical divestiture be published with a request for comments and opinions regarding the stand to be taken by APGS.

Motion: Fryberger  Second: Eggers

The Advisory Board recommend to the Executive Committee that information on both vertical and horizontal divestiture be published in the newsletter and that members be asked for comments and opinions relative to the position to be taken by APGS on the matter.

Motion carried with one nay vote.

Advisory Board Delegates

It was noted that the Bylaws require that Advisory Board Delegates be the President of the Section or his designated representative from the Board of Directors or Executive Committee of the Section. It was suggested that many Sections would prefer to have the past president of the Section acting as delegate.

Motion: Lowe  Second: Jacobeen

The Advisory Board recommend to the Executive Committee that the Bylaws be amended to provide that the Advisary Board Delegate be either the President or immediate Past President of the Section.

Motion carried.

Chairman Taylor adjourned the meeting at 12:30 p.m.
It was voted that the President frame a resolution relative to the appointment of the Assistant Secretary of the Interior for Mineral and Energy Resources stating:

1. The importance of the position in view of our growing shortage of strategic resources.
2. The training and experience needed by persons being considered for appointment to the position.
3. The Association does encompass the entire spectrum of the requirements for the position.
4. The Association is ready to assist in determining the qualifications of persons being considered and is prepared to make recommendations of persons for appointment.

It was suggested that the Association expand its activities relative to appointments in the new administration to cover the entire secretariat, particularly appointments to ERDA

Michael R. Rector read the report of the Committee on Cooperative Evaluations.

James U. Hamersley read the report of the Legislative Committee; President Haun read the report of the Professional Guides Committee; and J. W. Eggers read the report of the Public Affairs Committee. President Haun adjourned the meeting at 3:00 p.m.

Committee Reports

Professional Guides for Geologists Committee

James R. Dunn, Chairman

This is a brief report concerning the progress of the Professional Guides for Geologists Committee.

1. The guide, “Appraisal of Metallic or Reserves,” is undergoing its third revision and should be completed sometime in the spring of 1977.

2. The guide, “Logging of Rock Core for Engineering Purposes,” got bogged down when a change in offices in the AEG apparently created some misunderstanding and hence a loss of coordination between AEG and APGS. The work is now on track and the guide should be completed sometime this winter. A thorough and much appreciated critique of the draft document has been received from the engineering group of the Geological Society of London, which published a similar document in 1970. Their document is currently in the process of revision.

3. The APGS Ethics Committee has started a guide to address special ethical problems which are not specifically covered in the APGS Code of Ethics. The areas which are to be addressed are mainly where tradition impinges on ethics, for instance, some activities may be considered ethical by colleges but not state geological surveys, and so on. Hopefully the great areas between what may traditionally be considered to be ethical and unethical along with the rationale will be better defined for mining, petrole-
um, engineering, teaching and other geologists.

The Committee would appreciate receiving any further ideas or help.

**Jack Colle**, President
Texas Section of APGS

---

**Cooperative Evaluation Committee**
**Harold L. Fothergill**, Chairman

The Wright State University evaluation has been completed and a copy of this report was mailed to the Executive Committee on June 2, 1976. Since that date, no official action, taken by the Executive Committee, has been advertised.

Fort Lewis College of Durango, Colorado has forwarded a request for evaluation. A brochure with a letter explaining our proposed method of evaluation has been sent, but we have received no reply from them as yet. **Bob Weimer** will be the chairman of this panel.

---

**Professional Employment Standards Committee**
**Gary A. McDaniel**, Chairman

This is to inform you that since my appointment as Chairman of the Professional Employment Standards Committee by your letter of December 19, 1975, that I have received no correspondence nor telephone calls or other inquiries with respect to the Committee.

I can only assume that times are so good that our members are too busy making money to worry about the inequities in employment.

Should the Executive Committee desire this Committee to perform any services, please advise.

---

**Committee on Geology in the Environment**
**Murray McComas**, Chairman

The APGS Committee on Geology in the Environment, comprised of **Bill Creath**, **Peter Lessing**, **Joe Martinez**, **Bob Ryan**, and **Murray McComas** (chairman), respectfully submits the following report for 1976.

1. The Committee name should be changed to Environmental Geology Committee. The title, “Committee on Geology in the Environment,” is unnecessarily long and cumbersome.
2. The main problem in environmental geology is lack of communication on one hand and issuance of “how to do the geology” books to lay persons on the other hand.
3. Communications can be improved by:
   a. making and presenting films of slide shows illustrating pertinent geologic problems.
   b. preparing free pamphlets illustrating environmental geology problems.
   c. presenting two or three day symposia on appropriate topics with speakers chosen on the basis of experience in solving major problems involving geology.
   d. preparing short courses for such diverse groups as realtors, lawyers, governmental officials, or bankers.
4. Communication between the geologist and the public servant should be on the basis on not trying to make an instant geologist out of a planner or other data user, but in illustrating the presence of geological problems which can be solved by the professional geologist. All too frequently the lay user of geologic data can acquire enough free maps and handouts to get in trouble.
5. A question regarding communication with the public is how much free advice should the professional geologist provide to planning agencies, city councils, or developers. Is the environmental geologist a public servant? This question relates to the Committee on Geology and Public Affairs.

---

**1977**

**President John A. Taylor**

---

John A. Taylor, CPG 237

---

Jack Taylor is a native of Oklahoma, and obtained his B.S. (1946) and M.S. (1949) in geology at the University of Oklahoma. Almost his entire professional career was with Magnolia Petroleum Company and Mobil Oil Company, mainly in Louisiana, Texas, Illinois and Oklahoma. Jack was a member of the Executive Committee in 1967 and in 1976; he attended the first AIPG Organizational Meeting in September 1963 in Oklahoma City; was the Annual Meeting Luncheon Speaker in 1966; and was Chairman of the 13th Annual Meeting in 1976. Jack was also active in AAPG and was awarded their Honorary Membership. Jack gave congressional testimony on behalf of the Institute in Washington, D.C. in 1976 and 1977 (see Appendix 9). From 1961-63 Jack was Technical Advisor to the Governor of Oklahoma.

Jack has many interests, and he doesn’t know how to retire. In the late 1980s he was Chairman of the American Symphony Orchestra League in which he was the main force that raised $87 million for its benefit. Also in the 1980s he started a hydrogeology school in Oklahoma City to help train recently unemployed petroleum geologists. In 1992 he wrote...
the bill and pushed Oklahoma legislators to create the Commission on Marginal Producing oil and Gas Wells.

President's Annual Review
December 3, 1977

Introduction

As we close out the 1977 administration of the APGS and look forward to the one on-coming in 1978, it is well that we do that here at the famous Old Menger Hotel in San Antonio, Texas. Why? Like the APGS, San Antonio as the charming capitol city of the South Texas area combines most of the spectrum of geological practice: coal, oil, gas, uranium, and others, and we stand here directly above the tremendous Edward limestone water supply aquifer. And, as for oil and gas we see classic strand line production to the south in the Jim Hoggs-Duval County areas, salt domes along the coastline, and the famous Luling-Balcones Fault System directly east from here. The history of geologic practice and exploration goes very far back in the South Texas area. I think back fondly to my days in San Antonio in the late 40's and early 1950's when we all made those long runs down to Seeligson, Premont, LaGloria, Duval County, and “the Valley.”

The APGS Texas Section has done a marvelous job with this convention under the direction of Wayne Wood, with an outstanding program put together by Tom Barber and all the other committee chairmen who did so well in making this an outstanding annual gathering.

The Strength is in the State Sections

I had the opportunity to travel throughout the United States, visiting numerous state sections, a number of which was during the course of their annual meetings. It certainly brings home an important principle of APGS activity, that the real strength lies in the state sections. I have always considered that the basic principle on which APGS was formed was that it essentially is a confederation of state sections and that the real activity, proposals, ideas, and movement should come from the state sections. APGS will be only as strong as those constituent areas remain active and indeed become more active. The national officers can hope to do no other than offer guidance in policy for the good of all in an attempt to focus the views and overall thrust of the total state section effort. We must encourage the state sections to become even more active in carrying their views forward so that the accomplishments of one particular area may be conveyed and recommended to other areas with the national officers and Headquarters acting as the coordinating agency. Headquarters and the national officers cannot do the job — the individual APGS members must get the job done by making themselves known through their state president and through the advisory board.

Take Colorado for instance — the current issue of the Professional Geologist carries an excellent program of “position papers” and actions with in-depth discussion of legislation at the national level. Colorado has also been quite effective at addressing matters of federal land withdrawal, an area in which they have had much experience. Their strong liaison with the Denver-based USGS personnel provides much opportunity for all of us to enjoy productive input to USGS and similarly instructive output therefrom, not to mention the useful liaison afforded.

Look at Oklahoma. We all have benefited greatly from its leadership in state and federal securities matters owing to their activity in helping promulgate new laws with appropriate regulations in that state.

Turn to California. Their work in geologic hazards and state registration have provided us all models of action to follow, and to consider, and to profit from their experience.

West Virginia and Pennsylvania have lent us good instruction in certain environmental problems. Now, I will stop here, but I believe my point is clear.

Legislative Activity

At the 1976 annual meeting in Tucson the members voted that they wanted a continuation of and indeed more legislative activity by APGS. This we set out to do, and I believe we have been successful. We already had a good history of legislative activity set during the previous administrations especially the past two years. The widening of the Legislative and Regulatory committee under the leadership of Ad Honkala and coupled with the representation by James Hamersley, the on-site Washington representative, led to considerable success in 1977. I believe it fair to say, “we really got with it” and had an effective and significant impact on numerous bills by our representations. The President made numerous trips to Washington during 1977 as part of this activity.

The Earthquake Hazards Reduction bill, HR35, S126, became law with our testimony from Father Skehan being referred directly to and used during the floor debate on the bill. Our work accomplished the changing of the bill to direct attention to areas of the country that had not been considered in the past nor was going to be in the future. Furthermore, as a result of our testimony we were invited to “be on call” so to speak to provide professional testimony in other matters at future hearings of an earth science nature and perhaps also act as an advisory group.

We were particularly effective in the strip mining bill which rose out of HR2, S7, and became law. Even after the bill arrived at the Conference Committee, we were able to effect changes in that bill, especially that regarding the practice of geology and definition of geologist. The strip mining bill may be one of the two or three most important bills having to do with mineral supply in this country during this century. And without that APGS activity, geologists per se, in essence, would have been disenfranchised from their proper placement in professional practice as defined within that bill. Without APGS action this is the way it would have been. To our knowledge we were the only agency to accomplish any changes in this bill in its later stages through Congress and especially to accomplish that in the Conference Committee is highly unusual. We have continued to be busy after passage of the Act in addressing the regulations that have been drafted. The President and TS Ary were active in this bill and appreciation is expressed to Stu Hughes and Fred Mullin for their input. We have continued to work with government
agencies and in providing statements and testimony on the regulations. Art Brunton has been especially active in this.

We were active in the Alaskan Lands bill, HR30, 1652, S1782, 449, and 1500 by providing testimony.

We were especially active, and effective in the Deep Sea Bed mining bill HR3350, 3562, and S2200. Ad Honkala and John Moses provided original testimony followed by a statement from TS Ary. Aside from addressing ourselves to the mineralogical aspects and exploration and technical phases of this bill, we were able to point out certain economic and dangerous political implications of its passage to the United States among the 77 nation group. We believe it fair to claim that our testimony contributed to the deferral of action by the U.S. Government.

The Mining Law Reform bill, HR9292, 5831, S1248 provided opportunity for Senate hearings and further hearings in the field. TS Ary provided excellent testimony.

We were quite active on the Outer Continental Shelf bills, HR1614 and S9 in providing testimony in both Senate and House hearings. A great many agencies and groups testified on these bills, but we believe it fair to say that APGS has a significant part in the overall testimony in effecting a “second look” at these bills and a deferral at least until next year for a better review. The President and John Galey provided testimony in this area plus additional contacts and input throughout the year.

The Alaskan Wilderness Act, HR39, provided opportunity for APGS statements and testimony by TS Ary.

The National Heritage Trust remained under active surveillance by APGS with input being done informally. Stu Hughes was active in this area in providing information to the markup committee.

APGS filed a lengthy statement on the BLM Organic Act - 5507.

On Natural Gas Deregulation S256, HR687 (Pearson-Bentson), APGS provided considerable input and informal statements and the President and John Galey were active with key congressional representatives and other throughout the year.

APGS filed statements in the ERDA authorization act, S36, 37 and 266.

APGS provided a series of input papers, primarily organized through certain other groups and individuals on organizational matters, authorization, and authorities inherent in the structure of the Department of Energy.

On the National Energy Plan (Carter’s Energy Bill) APGS carried out an extensive program of representations and document preparations throughout the year much of it being provided to Dr. Schlesinger’s office by personal representatives and even in one case provided material for a direct audience with President Carter. This activity was continued right through into December. We believe we were especially effective in this area through many people, most of whom must remain nameless.

The Mineral Leasing Act, HR5709 (Udall’s Trojan Horse vertical and horizontal divestiture bill) remained under active surveillance when it first surfaced and continues to be so.

APGS remained active throughout the year on land withdrawal actions, prepared statements to appropriate authorities on the liabilities of much of this action along with constructive criticism on corrective actions that should be taken.

The APGS has just submitted statements to the EPA on water policy and underground water contamination rule making prior to the November 28 deadline.

Communications continued between the APGS President and the Secretary of the Interior regarding the Directorship of the USGS, a point of great concern to most earth scientists, and rightly so.

I hope you will indulge me by my lengthy discussion on legislative activity for which considerable details are available in the various President’s Reports issued throughout the past year, and I thusly will not attempt to go into the significance of the various bills in the short time provided for my report here today. However, I believe it fair to say we have been quite active in legislative activities the past year and have stepped forward more firmly in addressing legislation in a constructive and effective manner. Effective legislative activity is “getting with it” and mixing it, much of it is not glamorous, doesn’t necessarily lead to a great deal of conversation, but is done by quiet, effective, hard work by our many APGS members and especially those of the Legislative and Regulatory committee which has been so effective throughout this past year working in concert with our Washington representative, Jim Hamersley. Indeed, it may be we have let some of our other programs languish a bit in this attempt to be effective in many legislative areas, but this was an extremely critical time in our Nation’s history and was a time, if we had to drop something in order to address the issues on the Hill in Washington it was well that we did just that in 1977.

Committee Work

I will not endeavor to go into a detailed discussion of the committee work as it will later appear by individual committee reports in the Professional Geologist. I would like to touch on some highlights though, especially that of the on-going Ad Hoc Committee on Plans and Programs for the Future under Ed Rue, our incoming President-Elect. An interim report has been filed and the committee work will continue into 1978. That committee’s charge was not so much as to plan for the future as it was to look ahead 5, and 10 years into the future and decide what we would like APGS to be then, and what is it going to take to get there. If some of us sometimes feel APGS does not plan well I merely direct your attention to the “goals report” contained in the special edition of The Professional Geologist several years ago and look to see how we have come along. A good exercise is to take a pencil, go back to that report and check off all of the multitude of objectives we have met and how we have met them. I believe you will be very surprised to see how well we have achieved almost all of the goals set forth in that very well done report. It is a good exercise and I invite your attention to it for the good feeling it will give you as to what APGS is capable of doing and has done.
I especially want to cite the activity of the Policy Board which has achieved an excellent series of goals and organizational structuring that should prove to be an excellent structure to communicate both outward and receive flow of advice inward from our various member societies. I personally have field from the very beginning that the Policy Board could be one of the most effective instruments for reaching out to all of our member societies and to enjoy benefit from the advice, counsel, and action of these societies. I urge our predecessors to invest this important group with addressing our needed activity in position papers, and U.S. mineral policy, and concerted PR in advancing the states and public acceptance of the earth sciences and what they are doing in the public good. I believe the membership will be very interested in the forthcoming committee report in The Professional Geologist on the workmanlike job being done in setting the structure for activity in 1978 and beyond.

The Professional Guides Committee has three new guides in preparation with one new one just published with a continued good run on supplies throughout the year.

Public Affairs has received excellent airing under Father Skehan and especially with the very good work by Mr. R. T. Chew. The groundwork they have set this past year should spring forward to even more effective representations this next year.

Salary Survey

Joe Fritz has done a good job putting together a salary survey questionnaire which borrows heavily from his personal experience in that area and in previous activity thereof. The pros and cons of whether this should be done or not, and how, remains yet to be decided but at the moment, there appears to be some question as to whether this is entirely needful. The new administration may wish to discuss the question further.

The Divestiture

The Divestiture matter will carry over into 1978 with a need for our membership to be more informed on the actual technical aspects of vertical and horizontal divestiture. It may appear that we have dilatory in coming to grips with this extremely important question and this is not to imply that APGS in 1977 has not considered this question unimportant. We had hoped to proceed in a methodical fashion informing our membership, which has been done principally on horizontal divestiture through the excellent work by the SEG. Considerable material has been gathered and the basis for a good questionnaire has been prepared by Joe Fritz. We thusly refer on to the oncoming administration, a recommendation that firm activity be immediately fostered in this area.

Membership

On November 30, we see our membership has spun past the 3,500 level with 491 new members in 1977. This was the last year for members to be received under the reciprocity agreement and many new members have availed themselves of this opportunity. We also continued to enjoy a strong influx of members from the AAPG/DPA. We also welcome Arizona as a new section.

Recall that firm activity be immediately fostered in this area.

The investigation of PR representation, what it may do, and how it may be useful to APGS is an area that needs attention. I personally have always felt that PR takes care of itself if an effective job is being done and if our various state sections are active in making themselves known. However, the matter is especially important and should be discussed further.

A strong effort should be made to further the activity of the Policy Board for enhancement of communication both outward and inward with the member societies and especially for harnessing the effective reservoir of talent in those societies.
Closing Statement

This past year, as President of our APGS, I have had a wonderful opportunity to communicate with many of you and to see even more directly the effective work done in many areas of APGS. We all look forward to 1978, and beyond, under the leadership of Grover Murray, a person who has had many outstanding effective areas of work and service to his credit in science and in its effective administration. He is a proven spokesman and top flight administrator. I know that APGS and all of us will profit greatly by his very considerable talents and his leadership.

I also have nothing but the highest regard for the very effective Executive Committee team and the Headquarters office under the direction of Arthur Brunton in accomplishing representations for APGS this year. Rather than cite them individually how can one do more than simply say it’s been great working with each of them in doing the job for APGS this year for each of you.

Congressional Testimony by Six CPGs

Year 1977 saw our greatest involvement in national politics. The Ford and Carter administrations unleashed a bevy of proposed new regulations that mostly would restrict development of natural resources. Our esteemed representatives were past-President John Galey and current President John Taylor, each testifying on the “Outer Continental Shelf,” James Skehan, S.J., CPG 1505, on “Hazards of Earthquakes;” past-President Ad Honkala on “Deep Seabed Minerals;” TS Ary on proposed withdrawal of “Alaska Lands;” and Kelsey L. Boltz, CPG 1626, on “Mining Law Reform Bill.” All these testimonies are in TPG for 1977.

APGS Policy Board

The APGS Policy Board came into being at the direction of President John Taylor in 1977. Its eight-man membership consists of two appointees each from AEG, SExG, AAPG and APGS. The duties of this board are:

1. Make recommendations to the Executive Committee with respect to the external relations of the APGS with other Member Societies of the AGI.
2. The Policy Board shall coordinate the specialty certification activities of the other societies of AGI.
3. Shall review and recommend long-range objectives for consideration by Association as professional organization.
4. Shall undertake such additional studies as may be requested by Executive Committee that are not normally within the purview of the Advisory Board.

The first appointed Chairman of the Policy Board was Richard Lemke, CPG 336, who co-represented AEG. Other CPGs on the Board were Richard Jahns and Jack Simon, representing APGS, and Dean Grafton (1984 AIPG President), co-representing AAPG. Lemke’s committee members produced a list of seven Recommended Program Elements:

RECOMMENDED PROGRAM ELEMENTS OF THE POLICY BOARD

First Priority

1. Develop strategies and mechanisms for effective input of geology in appropriate legislative policy deliberations and other decision-making actions at local, state, and national levels. Advise Member Societies of any conflicts that might exist so that a reasonable coordinated submission of ideas by APGS and/or Member Societies might be achieved.
2. Consider mechanisms for assuring that state registration of geoscientists does not have serious impact on mobility of practitioners or that constraints on universal practice are reasonable.
3. Promote the concept that APGS standards for membership, which are roughly equivalent to existing and proposed legislation for registration in many states, are indeed equivalent and, therefore, could provide the alternative to registration or licensing by state boards.

Second Priority

4. Have APGS act as a clearing house for information concerning government actions at both federal and state levels, if practical.
5. Learn which environmental organizations and individuals are actively working at cross purpose to the concepts generally held by APGS and Member Societies in respect to mineral and energy development and develop strategies for countering the adverse actions of these groups. In addition, develop strategies for submission relating to government appointments to insure that appointees have expertise in the subject field.
6. Encourage local chapters of affiliated societies to help determine what the policy of APGS and Member Societies should be in respect to warning the public of possible natural and manmade geologic hazards.
7. Encourage local chapters of affiliated Societies to develop methods for effectively working with school children and their teachers which will result in a better understanding by them of the important role that geology plays in their present and future existence.

The Policy Board Chairman for 1978-79 was Fred Stead, CPG 567, who in 1978 wrote to the Executive Committee:

“For the past several years each participating society has apparently secretly harbored the same suspicion that all our individual efforts at lobbying and public testimony could have been much more effective if an organized and coordinated approach had been made on behalf of all the geoscientists. Because all Societies are now primarily concerned with Legislation and Regulation activities at the national level, it is now believed the major thrust of the Policy Board should be coordinating these activities.

“The geoscientists of this nation need an official spokesman. To remedy this the Policy Board suggests that a prominent member from our profession, preferably a retiree, might be persuaded to act on behalf of all geologists and geophysicists. It makes sense that a single representative, articulate and informed, could do much for the objectives and
image of the earth sciences. The proper representative, giving testimony at Federal and State hearings, could rightfully claim to represent 30,000 geoscientists and then command the attention his testimony would rightfully deserve.

“It is interesting to note that the APGS already has Jim Hamersley in Washington to screen the pending legislation and arrange for testimony at various hearings. The APGS Policy Board is in position to provide the liaison between the various societies. The missing piece in this three-pronged approach is an official spokesman to complete the team. It is further proposed the expenses of this spokesman would be borne by all societies under special funding. (It has been estimated these expenses would not exceed $7,500 per year). It is therefore the recommendation of the APGS Policy Board that this matter be explored fully with AAPG, SExG, and AEG. It is hoped that such a program might be implemented during 1979.”

Respectfully submitted,
Frederick L. Stead, Chairman
APGS Policy Board

**Public Affairs Committee**

This committee was noticeably active in 1977. Of course, it’s the people who make the difference between a committee that is exciting, and one that just goes along as it did in previous years. The members of the PA Committee included John Elliot Allen of Portland State University, Terry Bills of Louisiana, Layton Binon of North Dakota, Randall Chew III of Colorado, Gordon Everett of Maryland, Edward Hall of California, Frank Jacobeen of Virginia, Dan Miller of Wyoming, Robert Montieth of Wyoming, Robert Ostrander of New York, Al Saterdal of Colorado, James Skehan of Weston Observatory in Massachusetts, Clay Smith of New Mexico, Art Spaulding of California, and Derek Tatlock of Pennsylvania. Chairman Jim Skehan wrote a report summarizing the view of some of the members. First, the charge to the committee, then comments by Art Spaulding, then Jim Skehan's report.

**PUBLIC AFFAIRS COMMITTEE CHARGE**

1. Initiate programs to increase public interest in, and knowledge of the role of geological scientists in the nation’s life.
2. In cooperation with Sections, develop a list of speakers who are available to appear before groups of laymen, or groups of non-geological scientists and engineers.
3. Cooperate with high-school earth science teachers in the presentation of factual information relative to the professional aspects of the geological sciences.
4. Initiate articles in newspapers or national magazines, interviews on TV and radio, etc. News stories could be derived from talks given at meetings or from testimony given before federal and state legislative bodies.
5. Initiate governor's conferences on environmental, land use, energy, and similar subjects. This might be done in cooperation with the Committee on Geology in the Environment.

The Public Affairs Committee charge had been received from President John A. Taylor and a memorandum sent to each of the committee members by March 31, 1977. The charge was annotated by the chairman and suggestions made with respect to soliciting their ideas for a program that could reasonably be implemented during the current year. Each of the committee members, in response to John Taylor's request, was asked to submit a monthly report of the status and activity of our committee together with copies to John Taylor and Grover Murray, the latter serving as liaison from the Executive Committee to the APGS Public Affairs Committee. Each of the committee members responded with excellent
suggestions. The pertinent parts of these letters which are most meaningful to me have been marked and starred.

A refreshing response from each of the committee members but especially from Art Spaulding and Derek Tatlock, was the expression of frustration as to how a committee such as ours can actually implement these charges since it is basically up to the individual. Each said essentially the same thing in different words. Derek Tatlock summed it up: “It has been my crusade in recent years to motivate and stimulate geologists to appear in public to talk about oil and gas and other mineral supply problems. So anything you can promote compatible with this view would be my recommendation.” Tatlock made the specific recommendation “ideally this charge is the responsibility of all professional geologists to include these charges within his or her personal goals.” He goes on to suggest that we might print the Public Affairs Committee charge in the PROFESSIONAL GEOLOGIST urging our members to carry out these ideas. I would like to hear from the Committee and get a volunteer to edit and annotate or otherwise adapt the charge to the general readership. I will review it for the Committee and send it to the Editor on behalf of the Public Affairs Committee.

Alternatively, each publication could include an article on “How to Effectively Communicate” because in reality we are trying to overcome “communication problems.” The Technical Editor of the Wyoming Survey, who responded in part for Dan Miller, made the specific recommendation that we are putting the “cart before the horse” since our charges seem to neglect the research and evaluation portions of the process. His comment and his recommendation that we RACE (Research, Action, Communication, Evaluation) is a difficult and fairly long-term program as I see it. As regards research, he suggested we ascertain geology’s public image, the needs of each of our various publics (legislators, teachers, students, the mass media, etc.) and what is being done in the public arena by others before even beginning a program like this.

While what he says may be largely true, it seems to me that the straightforward approach by Spaulding, Tatlock and other members of the committee is a pragmatic one and one that at the individual level can be successful in the short term and therefore achieve the corporate desired results.

Another of the charges that struck a responsive note with several of the committee members was charge number five and one that at the individual level can be successful in the short term and therefore achieve the corporate desired results.

Another of the charges that struck a responsive note with several of the committee members was charge number five and one that at the individual level can be successful in the short term and therefore achieve the corporate desired results.

While what he says may be largely true, it seems to me that the straightforward approach by Spaulding, Tatlock and other members of the committee is a pragmatic one and one that at the individual level can be successful in the short term and therefore achieve the corporate desired results.

Another of the charges that struck a responsive note with several of the committee members was charge number five and one that at the individual level can be successful in the short term and therefore achieve the corporate desired results.

While what he says may be largely true, it seems to me that the straightforward approach by Spaulding, Tatlock and other members of the committee is a pragmatic one and one that at the individual level can be successful in the short term and therefore achieve the corporate desired results.

Another of the charges that struck a responsive note with several of the committee members was charge number five and one that at the individual level can be successful in the short term and therefore achieve the corporate desired results.

While what he says may be largely true, it seems to me that the straightforward approach by Spaulding, Tatlock and other members of the committee is a pragmatic one and one that at the individual level can be successful in the short term and therefore achieve the corporate desired results.
John C. Kraft of Delaware, Edward Hall of California, and John Wolfe of California.

Frank Conselman was awarded the Ben H. Parker Memorial Medal. The citation by Orlo Childs and Frank's acceptance speech are reproduced in Frank's presidency year, 1974.

1978
President Grover E. Murray

Grover E. Murray, CPG 94

Year 1978 was a relatively uneventful year, but it was lead by a true gentleman's gentleman, and one of the most academically impressive. Grover received the Institute's first Honorary Membership in 1984, and the Parker Memorial Medal in 1990. He also was President of AAPG, AGI, SEPM, and Texas Tech College; and was awarded the Ian Campbell Medal of AGI and the Sidney Powers Medal of AAPG. The tributes by his two AIPG citationists, M. O. Turner and Charles Mankin, are echoed by us all.

1978 President Grover E. Murray

Citation for Grover Murray
First Honorary Member, 1984

For the first time in its 21-year history, AIPG will tonight confer Honorary Membership on one of its most distinguished and illustrious members, Dr. Grover E. Murray of Lubbock, Texas.

In singling out Grover Murray for this honor, Mr. President, we also honor AIPG in the same sense that, as President James Monroe pointed out when he observed: “a National Honor is a national property of the highest value.” And so here tonight we bring together this unprecedented badge of Honorary Membership and AIPG's contribution of true national property from all the earth sciences so that both AIPG's honor and Grover Murray, the person, are truly “property of the highest value.”

The most important criterion set out by the Executive Committee and Members of AIPG for this award was to identify that one person in our membership who clearly possessed this exemplary record of distinguished service to the profession and to the Institute. The qualifying word herein is “exemplary.” The Committee adoption of Webster's definition of “exemplary” is apparent as it clearly sets a mark for others to meet in the years ahead.

“Exemplary” according to Webster “is serving, or fitted to serve as a model or example worthy of imitation;” (2) Also, “Serving as or furnishing a warning example!” Thus, AIPG's granting of Honorary Membership in the future will only be made to other Members who also have proven to be worthy examples of exemplary service.

For many years many of us have taken great pride in sharing Grover Murray's outstanding achievements and accomplishments. Without question we are assured that he is indeed AIPG's best example of dedicated and exemplary service because even today, after a career of 50 exciting years as a University Professor, author, editor, businessman, corporate executive, a geologist serving on countless professional, business, academic and governmental boards, agencies, commissions and bureaus, Grover Murray is today as he was yesterday and for these past five decades, still in service. Today he is actively working in his chosen profession, for his devoted family, yet always advancing the vital interests of this Institute.

It is with great personal pleasure I can remind you who already know him, that Grover Murray is clearly a man's man, a geologist's geologist and a friend's friend. His life of devoted service to the profession has taken him from surveying both polar ice caps to his celebrated works as a director of the International Center for Arid and Semi-Arid Land Studies, which he founded. He has undoubtedly published more volumes than many geologists have in their libraries and it's also quite possible he has edited more bulletins and publications than many of us have read.

Within these past 10 years Dr. Murray has already received many coveted and highly valued honors and awards from other societies. When AIPG confers its first Honorary Membership to Grover Murray here tonight it does so gratefully and with much appreciation to Grover for his many years of distinguished leadership and dedicated service. We
are principally in his debt however for his service in the years yet to come in which he will become the best example of devoted service to our profession.

Mr. President, from my own long and warm personal association with Grover Murray, I am pleased to join you, the members of the Executive Committee and all our other colleagues throughout AIPG in attesting that the life and times of Grover E. Murray are truly worthy of imitation for each of us as well as for those who follow in all the years ahead.

M.O. Turner, CPG 1046

Citation for Grover Murray,
Parker Medal, 1990

A North Carolinian by birth, Grover received his Bachelor of Science in Geology from the University of North Carolina in 1937. He completed his graduate studies at the Louisiana State University, receiving his Masters' degree in 1939 and his Ph.D. in 1942. He then embarked upon a professional career in geology that, to date, has spanned almost five decades.

While completing his dissertation, Grover joined the Magnolia Petroleum Company where he gained his first experience in applying his academic training to the search for petroleum. That experience served him and his students well in his later academic career.

In 1948, Grover entered an academic career that was to span 40 active years. This career began at his alma mater, Louisiana State University, where he was appointed Professor of Stratigraphic Geology and Director of Research for the Louisiana Geological Survey. During his tenure at LSU, he served as director of geology field courses, chairman of the department, director of the National Science Foundation field studies in the Sierra Madre Oriental and the Parras basin in northeastern Mexico, Vice President and Dean of Academic Affairs, and finally Vice president of the Louisiana State University System. He also found time to serve as Visiting Professor of Geology at the University of Texas and to direct their field courses in East Texas. He maintained a close working relationship with the petroleum industry through his consulting with several domestic and international companies, and his advisory service on petroleum matters with foreign governments.

In 1966, Grover was appointed President of Texas Tech University and Professor of Geology. In 1969, he was given additional responsibility as President of the School of Medicine. He concluded his 40 years of active academic service in 1988 when he was given the titles of President Emeritus and Professor Emeritus at Texas Tech.

During his long and distinguished career, Grover shared his talents with all the major geological societies and organizations. He served as president of the AIPG, AAPG, AGI and SEPM. He participated in and chaired countless committees, boards, and commissions of national and international organizations concerned with a broad spectrum of scientific and professional matters in the geological sciences. His service in each of these activities was long and substantive. He served on the American Commission on Stratigraphic Nomenclature for a dozen years, the Geological Society of America in various capacities for more than 20 years, the American Association of Petroleum Geologists for more than 45 years, and as a charter member of our Institute from its founding to present.

Grover is equally at "home" in the boardroom as he is in the classroom. He has served on the boards of several petroleum companies, including Ashland Oil, Inc., where he played an active role in the growth and development of that corporation for more than a decade. His knowledge of the petroleum industry and his management skills were put to good use on several major committees of that board.

During his career, Grover has made numerous important contributions to the scientific literature of geology. His most important contributions have come from his fundamental research on the Gulf Coast basin. These studies culminated in 1961 with the publication of his classic treatise on the Gulf and Atlantic basins, which remains to this day a required reference for anyone conducting geological studies in this region.

To say that Grover has served the science and profession of geology well is to state the obvious. His dedicated service has been recognized with dozens of honors and awards. He is an honorary member of most of the geological societies, including being named the first honorary member of AIPG in 1984. He received the AAPG's highest honor, the Sidney Powers Medal in 1983, and AGI's highest honor, the Ian Campbell Medal in 1989.

A modest man, Grover is quick to recognize others who have contributed to his success. However, his boundless energy, his skill in communication, and his organizational abilities coupled with his sense of dedication to public service clearly set him apart from his other distinguished geological colleagues.

Charles J. Mankin, CPG 1415

[APGS (1976-79) 1978 President Grover E. Murray]

January 16, 1979

[APGS Letterhead]

Dear Grover:

I know I have not thanked you properly for the service you rendered the profession as President of APGS, nor have I properly expressed my appreciation for that opportunity to work closely with such an able administrator. I want you to know that you made the work of the headquarters staff much easier and more enjoyable for your having been President.

Sincere regards,

Arthur F. Brunton

| 100 |

---
Speech: “The Responsibility of a Geologist to His Profession”

Grover Murray delivered this speech to the Second Annual Meeting of the AIPG Texas Section in Abilene, in September 1966; it is included in Appendix 9.

Legal Action Committee Report

Feelings among exploration geologists were running hot on the federal government's removing more and more lands that may contain valuable minerals. Frederick Stead was chairman of this AIPG committee, with members Kenneth Cummings, Al Saterdal and Art Brunton. They presented their views to the Executive Committee at the 1978 Annual Meeting. The title of their report, published in TPG, is “The Taking of Federal Lands.” This no-holds-barred report is reprinted in Appendix 9.

Memorial to Ian Campbell

1899–1978

by Gordon B. Oakeshott, CPG 45

Ian Campbell, CPG 19

Ian Campbell, one of the most widely known geologists in our profession, died in San Francisco on Saturday, February 11, 1978, at the age of 78. A scholarship, in his honor, has been initiated by the American Geological Institute.

Ian had had a severe bout with cancer in 1965 but had overcome and he and his wife, Catherine, had enjoyed 12 years of remission. Last fall he suffered a recurrence but, fortunately, was able to stay at home in their beautiful view apartment atop Nob Hill until hospitalization during his last week.

Ian was born in Bismarck, North Dakota, graduated from the University of Oregon in 1922, and received his Ph.D. in geology from Harvard University in 1931. As a boy of 17, he volunteered for duty in World War I and was sent to France as an ambulance driver. In World War II, he was on the Selective Service Board and was also with the University of California's Division of War Research at the Navy Radio and Sound Laboratory at San Diego.

During his graduate years he spent a season with the Wisconsin State Geological Survey, worked briefly for Vacuum Oil Company (now Mobil), studied at Northwestern University, taught at Louisiana State, and was a teaching fellow in Mineralogy at Harvard while working on his doctor’s degree.

I first met Ian in 1931 when he gave his first public lecture at the California Institute of Technology (Cal-Tech) on his work in the Grand Canyon. He had just been appointed Assistant Professor in petrology. In 1937, he led an expedition, sponsored by the Carnegie Institution and Cal-Tech, down the Colorado River through the Grand Canyon. He stayed at Cal-Tech for the next highly-productive 28 years. He was a superior teacher of petrology, mineralogy, field geology, and economic geology - with emphasis on the industrial minerals - who became known and loved by literally thousands of students who appreciated the personal attention and interest of their professor. Ian never failed to help a student or a colleague, or refused to serve on a committee!

During his Cal-Tech years, besides teaching and counseling, Ian carried out assignments for the U.S. Geological Survey and the Carnegie Institution of Washington, and, in later years, served as Executive Officer of the Department of Geological Sciences. His services were constantly in demand as a consultant in economic geology and in engineering geology, before the latter term was in general use. Through this period he associated himself with numerous professional and scientific societies. He carried on a voluminous correspondence until his final days, when, seriously ill, he expressed regret that it was not possible to personally acknowledge all the cards and letters from his many well-wishers.

An outstanding teacher, a competent geologist in every field in which he chose to work, and a good writer and talented speaker, Dr. Campbell found that research, publication, and administration had to take lower priorities. His professional associations, including deep involvement in most of our geological societies, public service at the local, state and national level, and personal contact and correspondence with hundreds of geologists occupied his prime time. He was one of our leading geo-politicians, in the best meaning of this term. The citation with the Hardinge award from the American Institute of Mining, Metallurgical and Petroleum Engineers in 1963 expressed it well; “eminent scientist, author, educator, and administrator, and for his personal warmth, outstanding leadership, and devoted service to the profession.” Again, in 1970, the Ben H. Parker award of the American Institute of Professional Geologists (Campbell was CPGS No. 19), and the Public Service Award of the American Association of Petroleum Geologists were highly-prized and well-deserved.

In 1959, Ian Campbell was appointed Chief of the California Division of Mines, and State Mineralogist (State Geologist). During that decade, he reaped the awards and honors due a lifetime of service to the profession. Among national offices, he was president of the Geological Society of America, the Mineralogical Society of America, the Association of American State Geologists, and the American Geological Institute. In California, he was made an Honorary...
Member of the Pacific Section of the Association of Petroleum Geologists, he was a prime mover in legislation for registration and became chairman of the Board of Registration for Geologists and Geophysicists, was the secretary of the State’s Geothermal Resources Board, and was chairman of the State’s Advisory Committee on Geographic Names.

For the Division of Mines and Geology he was a leader in establishing its geochemical and geophysical sections, he guided us into the first “urban” (engineering) geology and “environmental” programs, and he greatly enhanced our national image as a state geological survey.

Dr. Campbell leaves his wife, Dr. Catherine C. Campbell, of San Francisco; son, Dugald of Whittier; sister, Mrs. Flora Houck of Palo Alto; and two grandchildren.

The profession of geology, and geologists, are the better for the life of Ian Campbell, and we shall all miss him.

1978 Annual Meeting, Albuquerque

The Annual Meeting was held at the Sheraton Old Town Inn, Albuquerque, New Mexico, November 30 - December 2, 1978. The New Mexico Section is to be congratulated for getting together a timely, meaningful and provocative meeting for the 100 plus members attending. Responsible for the meeting were: John W. Shomaker, General Chairman, John W. Shoemaker, Ben Donegan and William R. Speer, Program, and Vincent C. Kelley, Field Trip. The proceedings of the meeting started with the business part of the meeting first, followed by papers of the technical sessions.

Advisory Board Meeting

The meeting of the Advisory Board was held on November 30th. Chairman Edward E. Rue called the meeting to order at 8:30 A.M. Official Delegates for 1978 representing seventeen Sections were present, as well as Official Delegates for 1979 representing thirteen Sections.

The first order of business was the election of four representatives from the 1979 Advisory Board to the APGS Executive Committee for 1979.

Chairman Rue reported the tabulated results of the Plans and Programs Committee September 1978 questionnaire sent to all members of the Association. He noted that 900 of the 1725 members answering the questionnaire preferred the name American Institute of Professional Geologists for the Association. Of those members answering, 64.1 percent accepted the suggested definition of geology, and 59.9 percent favored registration.

It was moved and seconded that the Advisory Board recommend to the Executive Committee that an amendment to the Constitution to change the name of the Association back to American Institute of Professional Geologists be presented to the membership for vote. The motion carried unanimously.

There was considerable discussion of the matter of legal registration, with many Sections reporting the status of current registration laws or the status of proposed laws. Chairman Rue noted that he intends to appoint a Committee on Registration to prepare and circulate a more definitive questionnaire to the membership. Alabama and Tennessee reported serious work being done in those two States on registration bills.

Wyoming reported that the Bureau of Land Management has instituted new regulations requiring surface inspections of all new drilling and mining sites by an archeologist approved by the Smithsonian Institute. The new regulations are causing serious delays and cost increases because of a lack of approved persons to perform the inspections.

It was moved and seconded that the Advisory Board recommend to the Executive Committee that the matter of archeological inspections be referred to the Legislative and Regulatory Committee for investigation and possible action. The motion carried.

It was moved and seconded that the Advisory Board recommend to the Executive Committee the appointment of a committee to review existing State and National rules and regulations for the purpose of having geological scientists declared qualified to perform certain required work. The motion carried.

It was moved and seconded that the Advisory Board go on record as commending the Legislative and Regulatory Committee for outstanding service to APGS and to the profession. The motion carried unanimously.

It was moved and seconded that the Advisory Board recommend to the Executive Committee that the names of applicants for membership and the names of approved new members be published no less often than bimonthly. The motion carried.

Chairman Rue adjourned the meeting at 12:30 P.M., November 30, 1978.

Annual Business Meeting

The 1978 Annual Business meeting of APGS was held on December 2, 1978. President Murray called the meeting to order at 8:45 A.M., and discussed the activities of the Association during the past year.

It was moved and seconded that the Bylaws of the Association be amended as follows:

Amend ARTICLE I. Membership, Section 3-Qualifications, Paragraph C. Personal Integrity, Subparagraph (1) to read as follows: “A sustained record of adherence to highest professional and ethical standards attested by at least five (5) professional geological scientists, at least three (3) of whom are members of the Association, having present knowledge of the applicant’s qualifications, integrity and conduct, and;” The motion carried unanimously.

President Murray noted that the Executive Committee had resolved to present a constitutional amendment to the membership for vote that would change the name of the Association to “American Institute of Professional Geologists”.

It was moved and seconded that the members at this Annual Meeting endorse the proposed amendment to the Constitution. The motion carried with one nay.

Secretary-Treasurer Takken reported that the Association is financially solvent, and that the year 1978 will end with a balanced budget.

It was moved and seconded that the Association adopt the following resolution:
RESOLVED THAT, in order to achieve the goal of the President of the United States to increase coal production by 1980, this Association urge president Carter and the Congress to direct appropriate agencies of the Federal government to take all actions necessary to ensure a more swift development of the Nation’s coal reserves, and specifically to remove or modify those regulations that unreasonably inhibit such development. The Association of Professional Geological Scientists offer their services to achieve these aims at the earliest possible date.

The motion carried unanimously.

The foregoing resolution will be sent to President Carter over the signatures of President Murray and President-elect Rue.

President Murray expressed his sincere appreciation for the services rendered by other members of the Executive Committee, and those members who served unselfishly on the standing and ad hoc committees of the Association. He noted that the activities of the Legal Affairs Committee have heretofore been limited to the State of Colorado, but have now been expanded to all States.


The Technical Session of the Annual meeting included six concerned speakers on the theme: “Government Regulation—Bane or Blessing.” In addition, the Banquet speech, “An Approach to Regulatory Reform,” by Senator Harrison H. Schmitt, continued the theme. The text of all these speeches are included in the December 1978 TPG, and Dr. Schmitt’s speech is included in Appendix 9. In addition to the Technical Session speeches, Bud Rue organized a Consultants Workshop.

Technical Session Program
“Regulatory Outlook for Mining” by J. Allen Overton, President, American Mining Congress

“Issues Affecting Western Coal Development” by Charles W. Margolf, Director of Western Coal Operations, W. R. Grace & Co.

“The Scientist in the Politics of Energy” by Richard A. Bulgin, Executive Director, Associated Nuclear Consultants of America, Ltd.

“Exist and Coexist” by Robert D. Gunn, President, AAPG

“The Economic Costs of Regulation” by Richard W. Everett, Vice President, Chase Manhattan Bank

“The Coercive Utopians: Their Hidden Agenda” by H. Peter Metzger, Ph.D., Public Service Company of Colorado

The Parker Memorial Medal was Awarded to John T. Galey, Sr. (1968 President).

The Ben H. Parker Memorial Medal
Testimonial to John T. Galey
By John T. Rouse

In recognition of his many contributions to the Association of Professional Geological Scientists and its fore-runner, the AIPG, to geology and to mankind, we are honoring John T. Galey with the Ben H. Parker Memorial Medal.

John is a Charter Member of our Association. Immediately upon joining, he became a hard working member, as evidenced by his total commitment to committees on which he has served and continues to serve, as well as offices to which he has been elected, such as first President of the Pennsylvania Section (1966); Advisory Board Delegate (‘66 and ‘67); Executive Committee (1967), and National President in 1968. He did not hibernate after his presidential term expired but continued to contribute much to all of us as a member of the Policy Board (1969 through 1971); Legislative and Regulatory Committee (1978-78). He is always ready to provide expert testimony for the Association, geologist and industry, and has testified before federal committees in Washington.

And what are the other activities of this capable and personable man? He believed geology was a requisite for sound city planning. In 1971, he organized securing funding from the National Science Foundation, and chaired the President’s Conference on Environmental Geology at Airlie House, Virginia. Here geologists, architects, engineers, and planners worked two days in concentrated sessions, developing a comprehensive plan for a new town that was to reach a population of 300,000 in ten years.

The American Association of Petroleum Geologists honored John in 1974 with the Distinguished Service Award in recognition of his work to advance the goals of the AAPG. Largely through his efforts, the affiliated societies of Appalachian and East Coast areas were brought together as the Eastern Section of AAPG. He was its first President.

The Pennsylvania Gas Association, of which he has been a Director for twenty years, has made him an honorary Life Member. He chaired its committee to design and install the Natural Gas Industry exhibit in the William Penn Memorial Museum in Harrisburg.

John was one of the founders of the Pittsburgh Geological Society, served as President in 1948, organized, chaired and edited the Appalachian Basin Ordovician Symposium. He was subsequently made an Honorary Member.

A man of so many talents and interests is in demand to participate in Pittsburgh civic organizations, such as the Carnegie Museum of Natural History, of which he has served two terms as a Trustee.

A native of Pennsylvania, he is the fourth generation of independent oil and gas operators who started in 1860 on Oil Creek, Pennsylvania. After earning a B.S. Degree in Geology at Princeton University in 1932, he did graduate study in Geology and Petroleum Engineering at the University of Pittsburgh prior to starting his successful career as an independent gas producer and consultant. His discoveries include several Oriskany gas pools in Pennsylvania, West Virginia, and Ohio; the first Oriskany gas in western Pennsylvania (1935); and the first Oriskany gas east of the structural front in Pennsylvania (1953).

President Murray, it is my pleasure and honor to present to you a true geologist, a natural gas finder and a gentle-
man—John T. Galey, for designation as the 1978 Ben H. Parker Medalist.

Acceptance of Parker Medal
By John T. Galey

This is both one of the greatest surprises and greatest honors in my life. Now I know the reason Grover Murray offered congratulations when I saw him in Washington in September and again before this dinner.

The words John Rouse has spoken make me realize more than ever how much my life is built upon the labors of my fellow man, both living and dead, and how earnestly I must exert myself to give as much in return as I have received. Thank you.

John T. Galey, Sr.
YEARS OF TURMOIL—NO EXECUTIVE DIRECTOR

1979

President Edward E. Rue

Edward E. Rue, CPG 12

What irony! Sixteen years after being the major force in creating AIPG, “Bud” Rue was finally President, only to have no one at the helm at AIPG Headquarters. Executive Director Art Brunton had retired effective January 1979, after 15 years of yeoman’s service. Thus, Bud, in Illinois, had to rely on a special woman in the Headquarters office to handle all correspondence plus help Editor Russell Dutcher, also in Illinois, insure that TPG got out on time. More about Executive Secretary Deborah Dare later. See Index and Who’s Who for a complete listing of Bud Rue’s accomplishments for AIPG.

First, let’s meet Bud Rue through the words of his citationists John Haun in 1986 and Ad Honkala in 1989:

Since 1979 the Martin Van Couvering Memorial Award has honored AIPG members who have made major contributions of their time and energy to the Institute. It is indeed difficult to find a member who has been more dedicated to the Institute’s development and continuing success than this year’s recipient, Edward E. (Bud) Rue.

When AIPG was formed in 1963, Bud Rue was one of the original organizers and was the first to propose the name of the Institute. He served as Chairman of the Steering Committee, as a member of the Founding Convention Committee and as Executive Director (without portfolio). During the 1960s and 1970s, he served on numerous committees: Academic Qualification Committee, Illinois State Coordinator, Model Law Committee, Illinois Section President, Qualifying Societies Committee, Advisory Board, Legislative Coordination Council, AGI Representative, Professional and Scientific Standards Committee, Nominating Committee, Professional Employment Standards Committee and as Chairman of the Plans and Programs of the Future Committee.

Bud’s many contributions were recognized by his election to the AIPG Executive Committee as Secretary-Treasurer (1967), President Elect (1978) and President (1979). During his term as President, there was no Executive Director, but Bud was successful in reinstating the original name of the Institute, in elevating the ISAG Committee to a more meaningful position and in originating the Consultants Workshops at annual meetings. In the 1980s he was an AIPG Foundation Founder and has served as Vice Chairman of the Foundation (1985-86). Also, he has been a member of the Honors and Awards Committee and served as its Chairman (1981-83, 1985).

In addition to his AIPG activities, Bud has served on many committees of the AAPG (candidate for Secretary, 1971), AGI and the Illinois Geological Society (President, 1955). He was the first person to receive a certificate as a “Qualified Professional Geologist” in Illinois (1962). He has been editor of field-trip guidebooks and of the “Illinois Professional Geologist.” He is a Fellow of the GSA; a member of the Illinois Basin Chapter API (Board of Advisors, 1955-72); Illinois Basin Chapter, SPE; Illinois Oil and Gas Association (President, 1960-63, Honorary Member, 1971); IPAA (Director, 1968-Present), Indiana-Kentucky Geological Society; Mid-Continent Oil and Gas Association (Board of Directors, 1960-76); and the State of Illinois, Oil and Gas Advisory Board 1963-65).

Bud’s community activities have included the position as Elder Trustee of the First Presbyterian Church, Mount Vernon, Illinois (1961-67), member of the Rotary International and the Mount Vernon Airport Authority Board (1986-continuing).

Bud is a native of Danville, Kentucky, where he began his college education at Centre College. In 1944 he received his Commission in the United States Naval Reserve at Northwestern University and married Fay Bright, his high school sweetheart. After serving as a Gunnery Officer aboard a Destroyer Escort, he returned to school at Berea College, Kentucky. (He and I were the only two geology majors at Berea to receive our A.B. degrees January 23, 1948.) Bud then attended graduate school at the Colorado School of Mines where he received his M.S. degree in Geological Engineering in 1949.

From 1949 to 1953 Bud worked as an exploration and development geologist for Magnolia Petroleum Company (now Mobil Oil). He has remained in Mount Vernon since leaving Mobil and has been a consulting geologist, independent oil and gas producer and an investor in mineral deposits and real estate. He is the senior member of Rue and Daniel Associates, General Manager of Bufay Oil Company and CEO of Edw. E. Rue, Inc.

Bud and Fay have three children (Fayette, Jon R. and Georganne) and five grandchildren. Despite their many business and family activities, Bud and Fay manage to spend several months each year sailing in the Bahamas.

For his outstanding dedication to the development of AIPG; his many additional contributions to the geological profession, to the State of Illinois and to his community; we are proud to present the Martin Van Couvering Memorial Award to Edward E. Rue.

John D. Haun, CPG 136

The pleasure of recognizing and presenting Edward E. Rue, CPG 12, to this gathering and to President Proctor for the Honorary Membership Award is only surpassed by my person-
al satisfaction in knowing the Awards Committee has selected one so deserving.

To trace Bud's career and separate distinguished professional achievement from everyday performance is difficult indeed. It appears, without question, however, that success in achieving recognition for the profession and the professional geologist ranks at the top. This began for Bud before AIPG was formed when he helped to achieve the Qualified Professional Geologist recognition in Illinois, as support for petroleum geologists' activities within the state. For his achievement he was awarded the first Certificate to be issued in 1962. During this period the Virginia Association of Professional Geologists was active and Bud consented to speak to us on the Illinois story at our annual meeting at Roanoke in the fall of 1962. This was my first acquaintance with Bud Rue. One can see the idea of AIPG was already in the background.

Despite prospects that the AGI Professional Standards Committee was an opportunity for the professional geologist nationwide, Bud Rue was one of the first to recognize its limitations. Therefore, Bud helped organize the Oklahoma City 1963 meeting which laid the groundwork for AIPG and is recognized for proposing the name of the Institute. Bud Rue served as Chairman of the Steering Committee, as a member of the Founding Convention, and as Executive Director (without pay while helping to organize the office for a permanent Director).

Since the Institute's organization Bud has served in all the key offices: Illinois Section President, Advisory Board Member, elected to the AIPG Executive committee in 1967 as Secretary-Treasurer; as President-Elect in 1978, and as President in 1979. One of Bud's great attributes is the ability to say "let me think about that" at the proper moment. So many times change has resulted - an example, the return to the original name by the Institute. The story does not end here for in 1981, along with Jim Dunn and Grover Murray, Bud helped form the AIPG Foundation. Bud has served as Vice Chairman since 1987.

In 1986 Bud Rue was awarded the Martin Van Couvering Memorial Award at which time John Haun, the Citationist, wrote, "It is indeed difficult to find a Member who has been more dedicated to the Institute's development and continued success than this year's recipient, Edward E. (Bud) Rue." The echo has lasted three years for it rings clearly tonight by Bud's selection to Honorary Membership.

How does a person like Bud find time to make a living? Well, our honoree has done a remarkable job of that. Bud matriculated at Centre College, Danville, Kentucky in 1943 majoring in mathematics; in 1944 as a result of military service at Northwestern studied Naval Science, and obtained an AB degree in geology from Berea College, Berea, Kentucky, in 1948. This was followed by study at the Colorado School of Mines where he received an MS in geological engineering in 1949. Bud's military experience was as a USNR, Lt. Jg. Gunnery Officer aboard the USS Clarence L. Evans (DE 113) from 1943-46. He started his geological career in 1949, when employed by Magnolia Petroleum Company as a Geologist in Exploration, Development and Secondary Recovery. Since leaving Magnolia in 1953 he has been a consulting geologist and independent to this date. Besides being an outstanding petroleum geologist, Bud Rue is a very competent structural geologist as well, and is active in industrial minerals specializing in aggregates. Bud is the Senior Member of Rue & Daniel Associates, and also operates as Edward E. Rue, Inc., and Bufay Oil Company.

As a consulting geologist and independent oil and gas producer Bud has been most successful. In the petroleum field Bud's peers have recognized this and have elected him to numerous key posts. For the Illinois Oil & Gas Association, Bud has served as Chairman of the Production and Engineering Committee, 1956-60, on the Board of Directors since 1958, President 1960-63, and was named Honorary Member in 1970. Bud is a member of the Indiana-Kentucky Geological Society, the Kansas Geological Society, and served on the State of Illinois Oil & Gas Advisory Board, 1963-65. Nationally Bud is a member of the American Association of Petroleum Geologists; Fellow-Geological Society of America; Member, American Institute of Mining, Metallurgical and Petroleum Engineers; and Senior Member, Society of Petroleum Engineers.

Achievements within the profession are not alone for Bud Rue. He has served as Elder-Trustee for the First Presbyterian Church for Mt. Vernon, Illinois, from 1961-67. He is a Paul Harris Fellow of Rotary International. Bud served on the Mt. Vernon, Illinois, Airport Authority Board from 1986-88. An enthusiastic sailor, he is a member of the Hopetown Sailing Club, and Sand Banks Yacht Club of Treasure Cay, Abaco, Bahamas.

While Bud's interest in geology was being piqued at Berea College in 1943 in a course on Geography 101 by Dr. Wilbur Burrough, his real interest was Fay, his high school sweetheart. They were married after Bud's graduation from Midshipman's School. Bud and Fay have three children and seven grandchildren.

President Proctor, it is indeed an honor and a privilege to present one so deserving as Edward E. (Bud) Rue of the criterion for Honorary Membership which states that person being one “who clearly possesses that exemplary record of distinguished service to the profession, and to the Institute.” Of this, there is absolutely no doubt!

Adolf U. Honkala, CPG 7

“WHY AIPG?”

By Edward E. Rue, President

The number of applications for membership received during the months of April, May, June and July of this year set individual and group records dating back to the early years of the Institute. This includes those applications requiring full processing, excluding reciprocity applications. The number of these applications received in the first three months of 1979 was up 33 percent from the last five year average. However, the applications received in the last four months represent a whopping 143 percent increase over the previous five year average. The running averages for the same four month period since 1973 are as follows: 32, 30, 28, 19, 51 and 78 applications received in 1979. These statistics
give an early and graphic clue that AIPG is active and growing stronger.

This is definitely no time to be complacent, however, so I am asking each member of the Institute who knows someone that should be with us and is not, to get that person an application form. A card, letter or phone call to Mrs. Dare at Headquarters will get one out fast. The Institute can reach maximum effectiveness only when it represents a more substantial plurality of our profession.

Various reasons have been offered to explain to other geologists why it is important for each qualified geologist to join and support the Institute. Almost all geologists have recognized their scientific obligations by joining one of the scientific societies. This adds immeasurably to their scientific and social development and is a requirement for membership in AIPG.

The American Institute of Professional Geologists was established after a five year study period in which all aspects of the professional practice of geology were considered. There was the AGI Professional Standards Committee, the AAPG Professional Standards Committee, the Illinois Geological Society, the Iowa Geological Society, the Missouri Geological Society, the Virginia Geological Society, and others, all studying the same problem.

The result was contained in the 1962 report of the AGI Professional Standards Committee which concluded that a separate, purely professional organization was needed and necessary to handle the professional affairs of geologists. They emphatically stated that this group should represent all branches of geology to prevent the separation and dilution of purposes. All other study groups agreed overwhelmingly.

From the beginning there was undeniable evidence that the leading geological scientists were solidly behind the fledgling Institute. Of the 743 Charter members, there were 31 geology department chairmen, 28 company vice presidents, 27 chief geologists, 23 exploration managers, 20 company presidents, 13 state geologists, and six deans of colleges.

Then why should all qualified geologists support the one organization devoted to the business, political and social aspects of all branches of the geological profession?

The members of the American Institute of Professional Geologists have acknowledged that they believe in the self-control of the profession in which they practice. The more we as individual geologists take charge of the profession, the less influence will be exerted by outside interests. As more geologists accept the responsibility of self-control, a greater degree of public respect and confidence will develop which will increase our professional authority and, in turn, bring a more honestly-earned and truly-deserved professional pride.

In the beginning there was much less evidence of the tangible rewards of membership in the Institute. In some quarters, there was doubt that the young Institute would survive. We have survived indeed and even our intangible adversaries found long ago that we are here to say. But what are the rewards of membership in AIPG?

As a member of AIPG, you will be recognized in Washington, D.C. and the state capitals as a well-trained, experienced and professionally alert geologist whose ethical conduct can be relied upon. Recognition and respect for our name was earned by other dedicated geologists whose bearing and character were utilized to improve the profession.

Our Consultants Committee provides a forum for the discussion and determination of problems concerning consultants and consulting firms. The relationship of government agencies and consultants, proper and effective expert testimony, evaluation of mineral properties and many other subjects are discussed at special Consultants Caucuses during our Annual Meetings.

Our Employment Survey Committee provides discussions of salaried employment.

Our Professional Guides Committee provided information, outlines and instructions in the performance of geologic evaluations and investigations and publishes a manual of various procedures.

Our Legislative and Regulatory Committee can be counted on for support when a member sees the need for correcting improper laws and regulations affecting geology or geologists. In the geologic field we have no equal to the effectiveness of this group. As a geologist, you may be vitally affected some day. This committee stands ready to help, with a fine track record of accomplishment.

Our Legal Action Committee is alert to counter moves by rule-making and regulatory bodies that have harmed individual geologists. The legal foundation with which they are in contact has an almost perfect record.

Our Registration Alert Committee keeps a running log on state registration bills and proposals. The maintenance of reciprocity is the prime concern so that an individual geologist can practice from state to state with a minimum of difficulty. We neither oppose or support state registration unless assistance is requested by our state sections. We will oppose all proposals that are not good for all geologists.

Our Ethics Committee investigates alleged breaches of ethics so that the reputation of the individual geologist and that of the Institute is clear of those who would practice unethically.

All in all a tremendous amount of other geologists’ time and money have been expended to give the members something that is worth far more than the dues that are paid. Even if you cannot avail yourself of these services, think about supporting the geologists who are working hard to bring a greater degree of public respect to your profession.

[Letterhead]
September 14, 1979
FOR IMMEDIATE RELEASE
EXPERT GROUP SEES U.S. MINERAL OUTPUT IN JEOPARDY: FAULTS GOVERNMENT POLICIES
By Bud Rue, President
Golden, Colorado, August, 1979: The United States' only professional geologic organization strongly urges adoption of constructive mineral policies to prevent future economic dislocations.
The American Institute of Professional Geologists has issued a Mineral Resource Position Statement that shows the basic requirements of a sound national policy to develop our national resources while recognizing environmental needs.

The Institute stated that current government policies threaten to leave the United States vulnerable because supplies of many mineral commodities are uncertain or costly. We find ourselves in a similar plight with energy supplies. The Institute states, “the cumulative effect of all government policy has been to discourage the development of domestic mineral materials.”

The statement says that more than 50 percent of the amount used of 18 major mineral commodities is imported. The commodities range from bauxite, the source of aluminum, to platinum group metals critical in modern electronics. “For the United States to rely unnecessarily on foreign nations for mineral commodities is hazardous indeed,” AIPG declared.

Some policies suggested by AIPG to encourage U.S. mineral development are the following:

1. The government should encourage exploration for and development of domestic mineral supply sources through easier access to Federal lands, changes in the designation of Federal lands, automatic Congressional reviews of wilderness areas, compensation for communities affected by mineral production, revision of the public hearing process so that the long-term interests of the nation can be represented, and continuation of depletion allowances and tax incentives to encourage investment.

2. Encourage environmentally acceptable and economic mineral extraction methods to include multiple land use and tax incentives for mined land reclamation, encourage underground mining, use the space thus created, provide for research into new methods of mineral transportation.

3. Encourage recycling of mineral waste materials through concentrated research and economic incentives such as tax relief, special freight rates, and community compensation.

4. Continue stockpiling of essential minerals, including petroleum. The Institute states that all mineral resource policy should be “consistent within the framework of a mineral resource conservation ethic that acknowledges the importance of minerals to the future well being of the United States.”

The geologist’s organization urged the Federal government to sponsor a conference to define a mineral resource management policy for sound and constructive development of domestic minerals. The Institute stated that mineral policy must be based on a realistic assessment of the knowledge of mineral resources and the technology to bring them into use.

**APGS Changed Back to AIPG**

The short-lived name change of our Institute, 1976-79, was overdue based on a poll of the members. With 64 percent of the total membership (3707) relying to the ballot, 89 percent of the vote received was cast in favor of changing the name from the Association of Professional Geological Scientists to American Institute of Professional Geologists and 11 percent of the vote received was cast against the change.

President Rue later summarized the feelings at that time, reproduced in the next two paragraphs.

“We traded the name AIPG to APGS in 1976 to consolidate the certification of AIPG with the Division of Professional Affairs of AAPG, and supposedly, the support of the Society of Exploration Geophysicists (SEG), many of whose members could not qualify as geologists. The “earth science” moniker was never accepted by AGI but was applied to us in the closest major vote, and most controversial, ever taken by the AIPG membership. When the name was changed back four years later some small groups cried “Foul,” but the DPA of AAPG voted overwhelmingly to reconfirm the principles of the AAPG-AIPG agreements regardless of the name change, about 88 percent for and only 12 percent against. The vote was even more one-sided in AIPG.

“We were together and had our name back—confirmed by a vote of both the DPA of AAPG and AIPG. Later the Executive Committee of AAPG cancelled the agreement unilaterally. But that’s what can happen when your election of officers and bylaws are controlled by someone else’s executive committee. Actually, DPA of AAPG only accounted for less than seven percent of all AAPG members in the United States. One could say that if the 43,000-member AAPG, in over 20 years, could only get seven percent of its members interested enough in the professional affairs of geologists, to join the DPA, then just maybe, they ought to dissolve the DPA in favor of the much larger, broader interest and far more democratic AIPG. AAPG’s own elite study committee recommended this in 1972. This would also be in line with AGI’s recommendations to prevent the duplication and dissolution of professional effort.”

**“Who’s Running AIPG Headquarters?” Executive Secretary Deborah Dare**

When Art Brunton retired in January 1979, 23-year-old Deborah Dare was hired. Debbie had previously owned her own secretarial service, so knew something about running an office. And run it she did, from January 1979 to mid-1980. While Art Spaulding was leading the search for a new Executive Director (1979-81), Debbie, with a part-time assistant, handled all office correspondence (except for the months in 1980 when she shared the work with Executive Director Stuart Hughes). Also of great help in this trying period were several local CPGs who visited Headquarters often, including Bill Newton, Andy Alpha, Jay Marks, and Art Brunton.

Many feel that Deborah did not receive credit or recognition for her service to AIPG. One good thing did occur: an office romance blossomed into marriage; Deborah and Advisory Board member Bobby J. Timmons were married in 1980, and moved to Florida.
The new AIPG logo was designed by William Atlee, CPG 2861, based on the original 1964 logo. For the first and only time, the National Academy of Sciences sent a representative to the fall AIPG Executive Committee Meeting, Laurence L. Sloss, CPG 1546.

1979 Annual Meeting, Lafayette, LA

The 16th Annual Meeting of the AIPG was held at the Holiday Inn North in Lafayette, Louisiana, September 19-22, 1979. It was held in conjunction with the Festival Acadiens on Saturday and Sunday, September 22 and 23. The Festival Acadiens is a food festival and is a tradition in Lafayette. This festival was to be just the thing to end an outstanding annual meeting!

The General Chairman was A. J. Gaudin and the Program Committee consisted of J. F. Cooper, Bill Eggers, and Vito Gotautas.

The theme of the meeting was “Waste Disposal - Approaching a National Crisis?” There was an impressive group of nationally recognized speakers addressing the subjects of disposal of salt water, the disposal of nuclear wastes and the disposal of chemical wastes.

There were several tours and events. One of the most interesting activities was the Salt Dome Tour. The 1979 Annual Meeting Committee outdid themselves in arranging these tours as few trips into the salt domes are allowed. The trip involved a one-hour drive from Lafayette. Upon arrival at the mine, there was a short talk describing the geology of the salt domes and the mining methods. Then the tour descended by elevator to the working level, 1,365 feet below the surface. The mine galleries are large (50 feet wide and 25 feet high).

There was also a relaxing trip to the Atchafalaya Basin. This trip was planned so that both the geologist and spouse can enjoy the tour. Then the tour took a drive through “Cajun Country” to St. Martinville where a stop was made at Evangeline Oak on the Bayou Teche. The next stop was in New Iberia with a tour of “The Shadows,” one of the many Antebellum homes in this area. The next leg of the tour was south of New Iberia to the marshland and on the surface mound of one of the five island piercerent salt domes.

There were several events planned for the spouses. Wednesday afternoon was a Ladies Mardi Gras Luncheon and on Thursday was a tour of an Acadian Museum. Friday afternoon was a Barbeque and Cajun Band activity for both members and spouses.

The Banquet speaker was Dr. Daniel N. Miller, Jr., State Geologist of Wyoming. The subject of Dr. Miller’s presentation was “Geologists at the Interface” or Who are those other people, a slightly humorous but realistic characterization of the many roles that geologists play with elaboration on regionalism, and the interaction between educational- scientific-professional-and-governmental organizations.

First Martin Van Couvering Award

The only award this year was the first Martin Van Couvering Memorial Award given to future President Larry D. Woodfork. There was no formal citationist.

1980 President James R. Dunn

Our illustrious sixteenth president was the founder of the AIPG Foundation and the driving force in creating AIPG publications for sale. He was co-author of two AIPG publications in 1974 and one in 1977 (see Appendix 5). His eloquence as a writer can be found in several other publications: First, Jim wrote on “Motivation and the AIPG” in 1968 (see Appendix 14). Then review his 1983 letter reproduced herein for the year 1970 under the topic At Issue: Natural Resources vs. Environment; his theme is concern over environmental excesses compared to keeping the U.S. economy strong. Jim’s 1973 “Join the World” is reproduced below, as is his 1980 “The State of AIPG”; in 1992 his thoughtful “America the Beautiful” is given in Appendix 9; and finally there’s Jim’s 1996 book “Conservative Environmentalism: Reassessing the Means, Redefining the Ends,” 188 p. (Quoram Books).

The following is the citation for James R. Dunn, 1982 Van Couvering Award recipient, as written and delivered by James Davis, former New York State Geologist.

There are few occasions in the affairs of geology in which broad sweeping categorical statements are either appropriate or precise. However, when we consider the contributions and accomplishments of James R. Dunn, grand and inclusive statements are necessary to describe his career.

Mr. President, I am both flattered and pleased to be the citationist and thus to participate in conveyance of this prestigious Van Couvering Award to James R. Dunn. Jim has been a very good friend of mine during the last twenty years.
He has been a very good friend of this Institute throughout its entire lifespan. It is gratifying to formally recognize Jim for his leadership contributions and accomplishments as a researcher in the applied earth sciences, as a teacher of students of economic geology, as a leader of this society, and as an exemplary professional in the practice of geology. These certainly are sweeping and categorical statements, but, of course, they are appropriate, as well.

Jim has authored over 100 publications and journal articles during his distinguished career. Through his broad activities he has achieved membership in over twenty professional societies and mineral-related trade organizations. In addition to his terms as Vice-President and President of this Society, and President of the AIPG Foundation, Jim has also served as Chairman of eight important committees and as a member of seven others.

Jim is an excellent field geologist. He is registered in four states and certified by AIPG. He and his colleagues have solved knotty problems in the intensely folded and faulted carbonate sequences of the Hudson Valley. Such work has made selective quarrying for Portland cement rock practical in this complex terrain. Jim has contributed to State geologic mapping both in California and in New York.

Jim is a renowned economic geologist. He has an incisive knowledge of industrial minerals including cement rock and aggregate materials. In addition to extensive knowledge of markets and deposits, Jim and his students have done pioneering laboratory research on the degrading effects on aggregate soundness of ordered water molecules associated with argillaceous materials. Jim has also done fundamental work on mineral value appraisal techniques for property assessment, exploration techniques, and surface mine reclamation.

In a philosophical vein, Jim has provided leadership in the characterization of the importance of resources availability to our society. He has spanned the distance between applied geology and the profession of land use planning and has made insightful contributions to that field. His work on both AIPG Mineral Policy Statements and on the National Academy of Sciences Committee on Surface Mining and Reclamation have had a significant influence.

In 1960, Jim created the James R. Dunn and Associates consulting firm which has evolved into Dunn Geoscience Corporation. He has served as Chairman of the Board of the Corporation since 1971. He and his able president, William Cutchliffe, CPG 1348, have gathered a first-rate staff and have led this staff to provide effective services to their clients. In addition to services to mineral companies, Jim and his associates have provided leadership services to government and important mineral trade associations. For the past decade the firm has also provided ground water supply and protection services.

In the area of professional standards, Jim has provided leadership in meaningful directions in terms of approaches to certification and registration, ethical relations with clients, and development of the important Guides and Suggested practices Series of the AIPG.

In conclusion, Jim Dunn stands out as a leader from whose association we have all benefited. He possesses the three-fold characteristics of excellence which are indispensable to leadership in our profession: vision and ideas; integrity; and commitment and motivation.

Jim, I’m certain that I speak on behalf of all of our colleagues in the AIPG when I say to you that it is a pleasure to know you, to work with you, and to learn from you. We all take great satisfaction in your acceptance of the Van Couvering Award in 1982.

“Join the World”
By James R. Dunn

When President Ad Honkala visited the New York State Section in May 1973, the program related to the professional geologist’s responsibility regarding environmental problems. Jim Dunn expressed his views to Ad in response to the program and, at Ad’s urging, wrote the following letter. It points out not only the costs but also the gains in becoming actively involved—not just in AIPG but also in scientific societies and trade organizations. The letter follows.

May 23, 1973
Dear Ad:

Since our meeting Tuesday night, it has occurred to me that it could be of value to AIPG to review some of the reasons for the greatly increased use of geology in New York State since 1960, along with the philosophical and economic justification for the DGC participation in the religious spade work leading to much of the increase.

First, philosophy and economics. As you realize, DGC (Dunn Geoscience Corporation) is extremely active in AIPG at several levels. We are also active in other technical societies as well as trade organizations. The justification for being in trade organizations (such as aggregate producers or mining company organizations) is self-evident, although most geologists still seem reluctant to join such groups. We justify membership in certain other organizations as being a part of one’s professional and scientific development, even though there is no discernible economic return to DGC.

Our strong interest in AIPG is economically and philosophically justified with these statements: First, we are all, I believe, interested in being good professionals. Our long-term self-interest is served by strengthening the profession of geology. Good professional geologic work anywhere helps us in the long run, whether the good work is by professionals in industry, government, by teachers, or by other consultants (including direct competitors). We also feel that the converse is true. (Incidentally, I do not consider this philosophy to be unique, having heard similar expressions from members of large engineering firms.)

We do have a problem at times in that we may get carried away in our zeal and run up exorbitant costs. Nevertheless, in the long run we feel that the money is well spent, although many businessmen may not agree.

Now, how has the use of geology increased in New York State—and, more important, why?

1. In 1960 the N.Y.S. Department of Transportation first required annual source reports for all quarries in the State that wanted State acceptance. This was pushed by a geologist (Paul Bird) in the Department of Transportation who saw such reports as a means of getting better quality control for stone products in the State. However, he was able to push it only because there were people who were ready, willing and able to do the work that was involved. Currently all sand and gravel and crushed stone operations in the State, nearly 300, must make annual reports about what they plan to produce for the year, and most such reports
are prepared by geologists.

2. The Department of Environmental Conservation, the State Education Department (in which the Geological Survey is lodged), and the Department of Transportation all have substantial and expanding geologic staffs. In addition, I sense a steadily increased prestige for geologists in this state. I think that our existence, our numerous activities on behalf of our profession and of trade organizations, as well as our reputation as consultants have probably been beneficial to the status of geology in the New York State government.

Specifically, some examples of some areas where we have made contributions: (1) editing and analyzing new specifications for mineral aggregates; (2) writing specifications for mineral aggregate for the State University Construction Fund; (3) drafting and editing of the new Department of Transportation source-report instructions for mineral aggregates; (4) analyzing and helping to draft the new Mined Land-Use Law, currently before the legislature (and, incidentally, helping to write the implementing documents needed for the existing Pennsylvania law).

Clearly, such work is in our self-interest, both short-term and long-term. But, the only real justification for our influence is that the activities are in the long-range public interest. Our basic belief is that greater use of geology properly done is in the public interest. And greater use by any group of competent geologists is in our own long-term interest.

Our considerable concern with the quality of professional geologic education and professional geologic practice is within this philosophical context. Good geologic work by any geologist helps us, because it is in the public interest, it advances the profession, and it leads to more work. Anything we can do to increase the prestige or the level of competence of geologic professionals helps us.

You might be interested in seeing some of our committee activities. These committee activities serve the following purposes: (1) they keep us abreast of the field in addition to helping to shape latest thoughts in many areas; (2) they lead to many good contacts, and (3) they increase our “sociologic strength.”

We do not feel that our approach is at all novel. Much of what we do is old hat for engineers. But it is a source of never-ending surprise to see the extent to which geologists fail to “join the world” (even though they want to), and fail to see and do the things that have been perfectly obvious to other professionals, such as engineers and architects, for over fifty years.

We do not pretend to have all of the answers. Our feeling is that as professionals we are quite good in some areas and that our firm’s ranking is good. But most important and absolutely essential is the prevailing realization that we are still not good enough. We are nowhere near as good businessmen as we should be; we need to improve our budgeting of work, our public relations, and our means of constantly updating our level of technical competence. We have much to learn, particularly from engineers, about practice. Our philosophical base, however, keeps us fluid and dynamic, although we are in a semi-continuous state of future shock. But those who respond to the philosophy are never bored!

Perhaps in our approach to practice, some others might find some value. And, perhaps, other professional geologists can help us be better.

Sincerely,

James R. Dunn

This is a review of some activities by AIPG in 1980 and some trends in AIPG.

The year 1980 saw major changes at the Headquarters office in Golden. We now have an Executive Director, Stuart Hughes, and a P.R. person, Ruth Anna; and a new secretary, Jean Smith, was hired. Our fine Executive Secretary, Deborah Dare, resigned for health reasons. Headquarters is getting on with the business of administering AIPG. Headquarters has been analyzing costs along with new ways of increasing revenue, such as accepting advertisements in TPG and in AIPG’s directory. Among other things, Headquarters is recording AIPG traditions so that in transition periods such things do not get lost in the shuffle. Headquarters is also analyzing ways to reduce the workload on the Executive Committee and on the officers.

The changes at headquarters were matched by changes in AIPG in general. This year has seen increased activism, a higher national visibility, growing pains and some semi-continuous introspective reassessment.

An AIPG Foundation has been created. Its purpose is for public and professional geologic education. Writing and revision of Guides and Suggested practices will be financed through the Foundation along with public education about resources. Funding will be from volunteer contributions from within and from outside of AIPG. The details of its IRS status have not been completed, so we are not yet encouraging contributions.

Several position papers have been written or are in process. One particularly timely subject, the “Oil and Gas Position Paper,” has been widely distributed nationally to the press and to legislators. Originally the product of the Colorado Section, it was reviewed and revised nationally and republished as a national position statement.

At the request of Governor Jay S. Hammond through Dr. Ross G. Schaff (AIPG), State Geologist of Alaska, AIPG wrote a position paper on the Alaskan lands issue which was before Congress. The paper was widely distributed and was undoubtedly a factor when the bill was debated in the U.S. Senate. The Alaskan lands paper was the basis of an open letter to Congress on the “Resource War,” a letter that was endorsed by over 130 union leaders in New York, by John Dyson, head of the New York State Power Authority, the American Farm Bureau, the New York Farm Bureau, the New York Dairy Cooperative Association, the National Council for Environmental Balance and others. A letter to the editor on the subject of the Alaskan lands issue, by Russ Slayback, was published in the New York Times.

AIPG had three members (Al Agnew, Grover Murray, and Jim Dunn) at an AGI press conference in the national Press Building in Washington D.C. on the subject of the “Resource War” and the U.S. position on metals. AGI’s plea to the presidential candidates to state their positions on resources was answered only by Governor Reagan. AIPG’s position regarding Federal land policies was reported by Jim Dunn at the LASER (League for the Advancement of States’ Equal Rights) conference in Salt Lake City at a panel which
YEARS OF TURMOIL—NO EXECUTIVE DIRECTOR

Executive Director Stuart P. Hughes

Included Russell C. Babcock, Jr., President of the Northwest Mining Association and Bear Creek Mining Company, William Dresher, Dean of the College of Mines at the University of Arizona, and Jerry Haggard, a resource attorney from Phoenix, Arizona.

New committees have been formed to write position papers on ground water (Russ Slayback, Chairman), hazardous wastes (Chip Groat, Chairman), and environmental resources (Bill Park, Chairman). In addition, at the request of AGL, a new committee has been formed under A. G. Everett to determine what to do about the problem of access to Federal lands for scientific and educational purposes, since many teachers are finding it increasingly difficult to take students to areas of geologic interest and students are finding it increasingly difficult to get into potential thesis areas.

The very active Colorado Section wrote a position paper called “Metals” which was done in their usual professional, sophisticated manner. Discussion is underway to determine if it might be reviewed and published nationally.

An Annual Meeting Guide is nearing completion as is a Consultant’s Director.

On March 10, following a Washington meeting of the Advisory Board and Executive Committee, AIPG held a “Fly-In” in which they met for two sessions with Congressmen and other government leaders in the Rayburn Senate Office Building. The people from Congress were given copies of AIPG’s “Oil and Gas” and “Mineral Resources” position papers along with papers by John Rold (minerals), Bill Fisher (energy), Russ Slayback (ground water) and John Ivey (engineering and environmental geology). AIPG offered professional assistance on matters of earth resources to government decision-makers without remuneration of any kind.

AIPG’s Legislative and Regulatory Committee sponsored a luncheon that day at which Joan Davenport of the Department of Interior spoke to about a hundred attendees. We considered the “Fly-In” a success and another one is planned for 1981 under President Rold.

Under the able direction of our new P.R. person, Ruth Anna, AIPG has received far more publicity than ever before. The publicity was in the form of several press, radio, and TV interviews and press releases leading to newspaper articles published by papers over the whole U.S. Ruth also is finalizing a draft of a public relations guide for AIPG.

The Executive Committee is considering affiliating with other technical societies such as the Association of Engineering Societies. Such organizations have positions which are similar to AIPG’s and cooperating with them is a potential way of multiplying AIPG’s strength.

As a result of the new activism, the Executive Committee has been very concerned that to whatever extent possible, AIPG’s public positions represent the views of most of its members. To increase this probability, the Executive Committee feels that the procedures for position papers should be as follows:

1. Decide what subject to cover and select a committee chairman to be responsible for the document.
2. Ask for volunteers through TPG to write or review the document and enable all volunteers to participate.
3. Once written, send manuscript out for review to all section presidents.
4. Collate comments and rewrite as required by the position statement committee.
5. Submit position paper to the Executive Committee for final revision as required, and for approval.

We feel that this gives us maximum assurance that we have the input of the most knowledgeable and interested members of AIPG and also that any position taken is reasonably representative of the views of most AIPG members.

For somewhat similar reasons, the Executive Committee is suggesting a constitutional change which will increase the size of the Executive Committee representation of the Advisory Board from four to six. The Committee recommends, further, that the Advisory Board representatives serve staggered two year terms, thus assuring that three experienced members will be on each new Executive Committee. These changes should give us better representation from the membership.

As for the future, where is AIPG going? A committee under Bud Rue is analyzing AIPG’s goals and objectives and will be reporting their findings to the Executive Committee. Meanwhile, whatever direction AIPG takes in detail, we feel that AIPG will continue to grow and strengthen, will become more active and dynamic, and will achieve even higher visibility and influence. Commensurate with AIPG’s greater influence on the geologic profession and on public policy, we must be sure that the actions of the Institute reflect responsible and professional attitudes. In conclusion, the Executive Committee feels strongly optimistic that AIPG will continue to improve as a force in the United States as well as within the profession.

Executive Director Stuart P. Hughes

1979 President Bud Rue asked Stuart Hughes to be AIPG Executive Director and relocate from the east coast to Golden. Effective February 1980 Stu became our Executive Director at Headquarters, with Deborah Dare as Executive Secretary. A few months later Deborah and her new husband Bobby J. Timmons moved to Florida. Stu ran the office with a part-time secretary, Jean Smith. After some misunderstandings between Stu and members of the Executive Committee, Stu resigned effective February 1981. Art Brunton became “Interim Executive Director” from February to May 1981, at which time Vic Tannenhill became Executive Director.

Stu was born in East Lansing, Michigan in 1925 and obtained his B.A. in Geology in 1956. From 1943-45 and 1950-54 Stu was in the U.S. Army, in Field Artillery during World War II, and later performed photogrammetric surveying. He then worked for the U.S. Forest Service for most of his career, in mining valuation. Stu became a consultant and lives in Missoula, Montana.
First AIPG Governmental Affairs Conference

The Spring of 1980 saw our first Governmental Affairs Conference, nicknamed the “Washington Fly-In.” Its two purposes continue: 1. To educate Congress and its staff and the Federal agencies on the goals, aims and activities of AIPG, the value of geological information in their decision making and the importance of geology and geologists to their mission; 2. To allow our members to personally meet their Congressional Delegation and key Federal Agency personnel, see how they operate and learn how to interact with these decision-makers who are so critical to our profession.

Delegations of five to eight members typically visit each of those Federal agencies whose activities impact geologists or who hire geologists. Members or groups of members having the same Congressman or Senator can arrange individual visits.

Several CPGs in the Washington, D.C. area arrange for the hotel and meeting room, in addition to contacting congressional staff. Recognition should go to Gordon Everett, Ad Honkala, William Murray, Elisabeth Newton, Russ Wayland, Kenneth Weaver, Allen Agnew, David Applegate and Jim Shotwell, among others.

In addition to congressional staff and aides, past Fly-Ins have invited, and enlightened, such organizations as DOE, USGS, FEMA, Sierra Club, National Research Council, National Science Foundation, and the U.S. Forest Service.

New AAPG—AIPG Agreement, 1980

The following text documents the final Agreement between AAPG and AIPG. The first letter from AAPG includes the Agreement signed January 9, 1980; the second letter from Jerome J. C. Ingels of AAPG discusses the Agreement; and lastly, excerpts from an excerpted letter to Frank Conselman gives William Newton’s (1980 AIPG Vice-president) heartfelt viewpoint concerning the Agreement.

[American Association of Petroleum Geologists Letterhead]

To: Division of Professional Affairs
From: Herbert G. Davis, President
Subject: Poll of Membership Regarding:
1. AAPG-AIPG Agreement
2. 1980 Directory

Dear Member:

The Executive Committee of the Division of Professional Affairs is requesting you complete the enclosed ballot and return it in the stamped, addressed envelope to the Ballot Committee Chairman.

1. The current AAPG-AIPG Agreement dated June 20, 1975, needs to be renegotiated in view of the recent name change of APGS back to AIPG. A copy of a new Agreement to be entered into between AAPG and AIPG is enclosed for your information. Please review it and indicate if you agree or disagree on the enclosed ballot.

The DPA Executive Committee recommends approval to continue the relationship of cooperation that has developed between the AAPG and the AIPG and the strengthening of our profession by having one umbrella certifying body.

2. The Division’s 1977 Directory is outdated. We are recommending that photographs be eliminated in the 1980 Directory to reduce costs and expedite the printing at Headquarters. It is also anticipated that additional data and qualifications could be added to the member’s individual listing.

The DPA Executive Committee recommends approval of eliminating the photographs in the 1980 Directory. Only ballots received at Headquarters by December 7, 1979, will be counted. The poll will be tallied, and recommendations based on the results will be made by the Division of Professional Affairs’ Executive Committee to the AAPG Executive Committee.

Enclosure

AGREEMENT

This Agreement is entered into between The American Association of Petroleum Geologists, a Colorado corporation, (“AAPG”) and The American Institute of Professional Geologists, a Colorado corporation, (“AIPG”).

AAPG and AIPG entered into an agreement on or about June 20, 1975. That agreement dealt with the following matters, among others:

a. certification of petroleum geologists by AAPG,
b. amendment of its Articles of Incorporation by AIPG,
c. change of name of AIPG to the Association of Professional Geological Scientists,
d. the conduct by AIPG, renamed the Association of Professional Geological Scientists, of a general certification program for geologists.

The Association of Professional Geological Scientists (APGS) has now changed its name again to the American Institute of Professional Geologists (AIPG). The executive committees of both parties desire to continue the relationship of cooperation which has existed between the parties and therefore desire to enter into the agreement set forth herein.

THEREFORE, in consideration of the promises, covenants and agreements contained herein, the parties agree as follows:

1. AAPG will require as a condition for certification by AAPG as a certified petroleum geologist that an applicant be certified as a professional geological scientist by AIPG.

2. Persons certified by AAPG as certified petroleum geologists prior to the date of this agreement, or who have applied for such certification prior to the date of this agreement, will not be required to be certified as professional geological scientists by AIPG, now or in the future, in order to retain their certifications by AAPG as certified petroleum geologists.

3. AAPG shall revoke its certification as a certified petroleum geologist of a person so certified, excluding those persons described in paragraph two above, if such person does not retain certification by AIPG as a professional geological scientist.

4. The certification of foreign nationals by AAPG as certified petroleum geologists or the certification of foreign nationals by AIPG as professional geological scientists, or the continued certification of foreign nationals as either or both, shall not be governed by the terms of this agreement and this agreement shall in no way apply to such
certification for foreign nationals.

5. Each party hereto releases the other from any liability which has arisen or which may arise from any past agreements made between the two parties to this agreement.

6. This agreement may be terminated by either party. Such termination shall occur six months from the date of the receipt by the nonterminating party of notice sent by the Executive Committee of the terminating party of such terminations. In the event a party should cease to have an Executive Committee, notice of termination may be given by the person or committee at that time performing the function of the Executive Committee of the terminating party.

Dated: January 9, 1980.
The American Association of Petroleum Geologists
By John D. Haun, 2-24-80
The American Institute of Professional Geologists
By James R. Dunn
APPROVED:
Division of Professional Affairs of the American Association of Petroleum Geologists
By Herbert S. Davis

[American Association of Petroleum Geologists Letterhead]
February 18, 1981
Dear Committee Member:
Re: “AAPG - AIPG” Agreement Review Committee
At the Board of Delegates’ Meeting at the 1980 AAPG National Convention in Denver, a review of the current AAPG-AIPG relationship was requested and approved by the House of Delegates.

A review by representatives of the House of Delegates, the DPA and the AAPG Executive Committee indicates that there is a lack of knowledge among members concerning the agreement, its requirements, and how the agreement affects members of the DPA-AAPG.

In an effort to clarify and inform the AAPG-DPA membership, preparation of a brief report outlining the various aspects of the relationship was authorized for dissemination to the membership. The AAPG-AIPG Agreement Committee, of which you are a member, has been formed to prepare this brief review. The report is to be prepared for the President of the Division of Professional Affairs and the information is to be disseminated to AAPG members either by direct mail or publishing.

The members of the committee are as follows:

Frank Conselman - Chairman
Orlo Childs
Eugene Greenwood
Lee H. Meltzer
Charles Mankin
William A. Newton
Robert Sutter

Abilene, TX.
Tucson, AZ.
Midland, TX.
New Orleans, LA.
Norman, OK.
Denver, CO.
Lafayette, LA.

Frank Conselman has agreed to act as Chairman and will coordinate and compile the material into a final summary. Please forward your written ideas and comments to him at your earliest convenience. It is our intent to have a final draft ready for publication by March 31, 1981.

The primary purpose of this report is to set out the different view-points and the day-to-day effects on the AAPG membership. Opinions have and will continue to differ; it is not the purpose of the report to necessarily come to a unanimous conclusion or recommendation, but rather to briefly report the differences, facts, conclusions, and any recommendations.

For your information, I am forwarding copies of the AAPG-AIPG agreement, the recent ballot letter, and results. In addition, based on correspondence and discussions with AAPG members, there are several points that continue to arise in discussions. For your information I have listed the major points mentioned to me. I think the committee should consider but not necessarily limit their comments to these items.

1. Existing factual requirements of agreement, i.e.
   The mandatory membership in AIPG
   a. Pre-certification by AIPG prior to AAPG certification.
   b. The mandatory requirement for continued membership in AIPG to remain certified by AAPG.
   c. The additional dues cost on an individual basis.

2. The potential loss of dues to DPA/AAPG.

3. Effect of continued controversy on Division of Professional Affairs and AAPG membership.

4. The AAPG is fully capable of and should assume full responsibility for certification of its members rather than farm-out its responsibilities.

5. The need for two-step certification by two organizations.

6. The original agreement not followed.

7. The need for continued cooperation between all organizations representing geologists and other earth scientists.

8. A unified approach is needed.

9. Possible solutions for resolution of differences.

Sincerely yours,
Jerome J. C. Ingels

City of Los Angeles
Resolution of Appreciation to AIPG

Some 14 years after the AIPG Jahns Committee report on the geologic hazards to the City of Los Angeles (see Appendix 9, year 1966 for the report), the City Council formally presented this Resolution to AIPG. California representative Cliff Gray, CPG 378, accepted the Resolution on behalf of the Institute and the members of the Jahns committee.

City of Los Angeles
State of California
Resolution American Institute of Professional Geologists

WHEREAS, it is recognized that the practice of the geological scientist is a profession, and the privilege of professional practice requires professional morality and responsibility, as well as scientific knowledge on the part of the practitioner, and

WHEREAS, the American Institute of Professional Geologists was founded in 1963 for the following purposes:
To establish professional qualifications for the conduct of geological scientists;
To enhance and preserve the standing of the geological scientists as a profession;
To establish ethical standards that insure the protection of the public health, safety and welfare from non-professional practices of the geological sciences; and

WHEREAS, the city of Los Angeles called upon AIPG in 1966 to study and make recommendations on the practice of geology within the city; and

WHEREAS, AIPG has made significant contributions to the competent practice of geology in the city of Los Angeles especially as it relates to geologic hazards and the safety of the people of Los Angeles; and

WHEREAS, largely as a result of the efforts of the American Institute of Professional Geologists and the city of Los Angeles the recognition of the profession of geology and the precepts for its regulation were established in the state of California in the year of 1968; and

WHEREAS, AIPG, as a national organization with nearly 5,000 members, seeks to ensure the professional competence of geologists.

Now, therefore, be it resolved that by adoption of this resolution, the Los Angeles City Council expresses its appreciation to the American Institute of Professional Geologists for valuable public service and wishes AIPG success in achieving its objectives.

I HEREBY CERTIFY that the forgoing resolution was adopted by the Council of the City of Los Angeles at its meeting held September 12, 1980.

RESOLUTION BY

John Ferraro
Councilman 4th District

John Ferraro
President of the Council

SECONDED BY

Ernani Bernardi
Councilman 7th District

Rex E. Layton
City Clerk

1980 Annual Meeting, Mobile, Alabama

The 17th Annual Meeting was held September 24-27. Jack Bryan was Chairman and Travis Hughes was Program Chairman. The Parker Memorial Medal was awarded to Howard E. Rothrock (AIPG co-founder) and the Martin Van Couvering Award was given to Harold L. Fothergill. (Photo not available).

Howard E. Rothrock
John Rold’s gratifying life story is told by his colleague John Haun, who was citationist for the 1996 John T. Galey Public Service Award, and for the award of Honorary Member in 2002:

It would be difficult to find a more deserving recipient of the Public Service Award than John Rold. He served as Colorado State Geologist for 23 years. He has devoted the last four years in service to the general public as a consultant “committed to aiding proper development.”

John Rold reestablished the Colorado Geological Survey after a 40-year hiatus and built it into a highly respected research and service organization. He foresaw that time-honored functions of state geological surveys (mapping and resource appraisal) though still necessary, no longer adequately define concerns of the 1980s and 1990s. The key word in the minds of most citizens is environment.

When gas from a long-abandoned water well burned a lumber yard years ago, John and his staff determined the source of methane that caused the fire and helped cool the local officials. When ski resort owners proposed developments in areas of obvious landslides and avalanches, John recommended alternatives, or abandonment of projects. Results of expansive shales studies affected numerous Front Range housing developments. Pioneering studies involving geothermal resources, coal-bed methane, coal resources, mine subsidence, seismicity, radon, radioactive and municipal waste disposal form an incomplete list of services to the general public.

The overnight train ride to St. Louis with several of the company’s old hands, meeting geologists from around the country, hearing heralded experts share their latest scientific findings in technical papers, mingling with the giants of the profession, and the forays to the innumerable and interminable service company hospitality rooms, all made an indelible mark on my impressionable mind. Since then I’ve probably attended as a member, committeeman, or officer nearly 100 annual meetings of variable size, substance, and success. During that time I’ve given considerable thought to what makes a successful meeting, why people attend, and what benefits accrue from a meeting.

Though it sometimes seems the annual meeting almost lapses into a “tribal ritual,” each of us is motivated to attend for various reasons and do gain definite benefits from a well-planned, well-run meeting.
In light of AIPG’s upcoming Annual Meeting in Williamsburg, October 21-24 and the associated Washington, D.C., Public Affairs Conference October 19-20, I would like to view these motivational factors and benefits in more detail.

Conduct of Institute Business. Although most constitutions require a business meeting, the low attendance at most Annual Business Meetings proves this to be an attendance motivator only for officers and a few of the faithful.

Educational Aspects. Although most society Annual Meetings relate heavily to scientific education, AIPG by its very nature relates more to professional education. Scientific and technical papers provide the major drawing card for most attendees at scientific meetings. Good papers related to oil fields or mineral deposits may well be the key to finding similar ones and thus make a geologist successful, rich, famous or all three. Yet our professional sessions or workshops—particularly the consultant workshops—may also allow a geologist to increase his income and be a better geologist and help to improve the entire profession. Certainly the recent Lafayette and Mobile meetings and the planned Williamsburg meeting furnish an excellent mix of the professional and technical aspects of the geological sciences. The adjacent Washington Public Affairs Conference will provide a political educational opportunity not available anywhere else. The combination of Washington and Williamsburg furnishes a fantastic opportunity for cultural and historical education for both geologists and their families. Certainly this combination of professional, scientific, political, cultural, and historical educational aspects is unmatched by any other annual meeting available.

Business Aspects. Many people attend annual meetings to renew old business relationships and make new contacts. AIPG provides those opportunities. Because our meetings draw from such a diverse background of specialties, many geologists make contacts and learn new business and professional wrinkles not commonly gained at a specialty scientific meeting. If you’re doing business as a geologist, you’re heavily impacted by federal political and bureaucratic activities. Many geologists in business for themselves as consultants and as mineral explorers and developers have told me that these socio-political problems present a much greater challenge than the consultant workshops—they may also allow a geologist to increase his income and be a better geologist and help to improve the entire profession. Certainly the recent Lafayette and Mobile meetings and the planned Williamsburg meeting furnish an excellent mix of the professional and technical aspects of the geological sciences. The adjacent Washington Public Affairs Conference will provide a political educational opportunity not available anywhere else. The combination of Washington and Williamsburg furnishes a fantastic opportunity for cultural and historical education for both geologists and their families. Certainly this combination of professional, scientific, political, cultural, and historical educational aspects is unmatched by any other annual meeting available.

Social Aspects. For many geologists and their spouses the social aspects outweigh all others. Renewing old friendships, making new friends with similar interests, eating in fine restaurants, and attending the social parties are major incentives for many. We will match those social amenities with any.

Recreational Aspects. Simply getting away from the office and the daily hectic grind or from the kitchen, the housework, and the children; the opportunity to lay in the sun, visit new places, and actually relax and unwind provide ample justification for many.

Williamsburg, Washington, and the Virginia countryside in the fall will definitely fill that need.

Yes, Annual Meetings not only fulfill a constitutional requirement but can and do provide many educational, financial, and aesthetic benefits. Assuredly the Williamsburg-Washington meeting will more than satisfy those expectations. Why not begin now to make plans for this educational and enjoyable meeting. If your company or agency can’t or won’t send you, why not plan it as this year’s family vacation? Where else could you take a vacation like that which would combine business and pleasure to such an extent—and be tax deductible?

Ad Honkala and the Virginia Committee have worked hard to plan an extraordinary experience for us at Williamsburg. Your attendance itself helps to assure that their and your expectations for an Annual Meeting will be met. We look forward to seeing you there.

“AIPG Around the Country”
By John W. Rold

As I approach the midpoint of my year as your AIPG President, several strong impressions register with me. In that time I probably have talked with and listened to several hundred members and have visited section meetings in Ohio, Illinois-Indiana, the Carolinas, Alabama, Montana, New Mexico, and Colorado. I’ve also talked with and listened to large groups of our members in Colorado, Texas, California, and the Washington, D.C. area. The major impression indicates that around the country we truly have remarkable progress in some areas and serious problems in others.

In the progress areas I see sections which are vibrant and alive. They have almost an evangelistic fervor to improve the profession. They are reacting to legislative and regulatory pressures, but even more importantly, they’re taking their own initiative on legislative programs. Newsletters are being distributed providing excellent communication between members of the section, with national and other sections of the country. In the Carolinas an inactive section has reestablished around a core of dedicated members. Many sections conduct regular, informative, interesting meetings. In some, the ‘81 Annual Meeting is already planned with places, dates, and speakers scheduled. In several, an excellent slate of ‘82 officer candidates has been selected. In these areas the Screening Boards are overworked because geologists wish to become involved in professionalism aspects of geology and they are flocking to associate with an “institute for professionalism.”

In the problem areas I note that many of the section officers are not carrying out their responsibilities to their fellow geologists. Many of these officers view officer or committee terms as a chore rather than an honor and an opportunity to serve and to grow professionally. Elections are not being held in a timely fashion. There are no newsletters. Little if any communication exists between members, with the national organization or with professional geologists in neighboring areas. These areas, therefore, have no representation on the National Advisory Board. They have little say in national poli-
cies and activities. Laws and regulations affecting geologists are passed without adequate geological input. Screening boards are either not in place or have little activity. In these areas geologists see no meaningful way to satisfy their desires to improve the geological profession. Therefore, they see no need to join AIPG and the Screening Boards have little work to do.

Several states contain sufficient numbers of AIPG members to constitute a section (10 is the Constitutional requirement, though 20 is a more viable number); yet they lack the one or two willing spark plugs to establish a section. Alaska, Maryland, Nevada, and Washington all have adequate numbers while Georgia, Idaho, Nebraska, and Iowa have more than the Constitutional requirement. Because they have no section the profession in that state lacks an organized, official mechanism for communication with the legislature, state agencies, or the public on the professional aspects of geology.

Nationally, I see progress and problems also. For various reasons, membership services by the headquarters offices the past year and a half have suffered. Paperwork lag has built up. With the various headquarters changes, the office has lacked stability. Frankly, we have weathered some stormy times. Under leadership of the new director, Vic Tannehill, these headquarters problems will be resolved. Even with those difficulties, marked progress has been made in many areas. Most agree that The Professional Geologist after considerable experimentation shows marked improvement in format and content. The membership directory, though later than we hoped, will also show a marked improvement in format and usability with a significant reduction in cost. It will be up to date as of May, is at the printers, and should be in the mail by June 30. An excellent Annual Meeting is planned for Williamsburg. Early indications show that it may well be the best attended in AIPG history. An interesting, informative Washington Public Affairs Conference preceding that meeting has created considerable interest among geologists. For many reasons, the image of geology, professionalism, and AIPG has improved markedly and we are experiencing an upsurge of membership applications with fewer than normal resignations.

The difference between progress and problems usually results from only a handful of dedicated members who take the initiative at critical times. These few provide the “yeast in the bread” and focus and lead the efforts of the group as a whole. In good times, all of us face many professional and personal demands on our time. When business affairs are rocky or slow, we tend to try harder in our business endeavors, yet in each case, the profession depends on each of us. It will profit or suffer, depending on the “total contribution of those within it.” Each of us might ask ourselves the question “What would the geological profession be like if each person had the same attitude I had and made the same contribution to its welfare that I make?” How each of us answers that question will ultimately determine whether the profession shows progress or problems.

The Professional Geologist

To me one of AIPG’s greatest shortcomings has been its inability to enlist the active support of large numbers of the academic community in the activities of the Institute. Paradoxically many of the acknowledged leaders of academia have been very active and dedicated to AIPG. Looking over the roster of the past Executive Committees I note that seldom have there been less than two academicians on the Executive Committee. Six of our seventeen presidents were from the academic community. Those officers certainly should adequately represent the viewpoints and interests of educators. The current and past Executive Committees have been acutely aware of the importance of education to the profession and deeply concerned with the growing problems facing geological education. My addressing the question should be of no surprise. Salaries, finances, work load, inadequate space and equipment, personnel turnover, and even the education of future educators are only part of the litany of horrors which threaten the very root stock of our profession.

Our current question should be, “How can AIPG best aid in solving those problems?” In the past we had a Cooperative Evaluations Committee who upon invitation visited and evaluated geology departments. It provided a meaningful service to many departments who were interested in improving themselves by correcting the weaknesses or deficiencies determined by an outside professional group’s evaluation. Others, however, reacted defensively to the evaluation as if it were criticism. In the past several years invitations for evaluation dwindled and the committee was restructured and renamed the “Educational Standards Committee.”

This year the committee under Chairman Dick Winar was redirected away from “standards” toward the “problems” of education. Following several letters from and discussions with educators, I asked the committee to “delineate, evaluate and prioritize the problems of geologic education and determine what role AIPG could and should play in helping to solve or mitigate those problems.”

Believing that department heads who wrestle the problems every day should be the most knowledgeable about the problems, the committee decided to seek their advice. It devised a questionnaire to probe those problem areas. After several drastic revisions and a trial run with a selected group of our own members in the academic community, the questionnaire was finalized and sent to all 484 geoscience departments listed in the AGI Directory. The 10-page detailed questionnaire, which requires one to two hours to complete, probes the situation in considerable depth. The 180 responses to date have been extremely gratifying. After a follow-up request, and a return to the normal fall academic schedule, many more will be received.

Hopefully the results of the questionnaire when tabulated and evaluated will define the magnitude and variety of problems and suggest what role, if any, AIPG should follow in their solution and mitigation. At the very least they will provide considerable food for professional thought.

This may well provide a mechanism for AIPG to help to improve the educational aspect of our profession and provide

“Education and AIPG”
By John W. Rold

ROLLING ALONG

1981 President John W. Rold
better liaison with academia, but what can we as individual geologists and State Sections do now to improve the situation?

   Several avenues occur to me. As you consider your local situations and specific problems several others may arise.

   1. Cultivate an awareness of the special problems of geological education and of those institutions and geologists who are responsible for that education in your particular area. Possibly a meeting of your Executive Committee with department heads and academic leaders in your area could initiate a fruitful dialogue and liaison.

   2. Invite professors to speak to Section meetings about their unique problems. Conversely, offer to suggest or furnish experienced speakers or lecturers who might provide an additional or different perspective to students in certain classes.

   3. Actively recruit professors as new Members. Few will argue with our constitutional purposes, but their definition of “professional” and proper professional activities may differ from yours. The more professors in our ranks, the better their representation and the greater certainty their problems will be understood and addressed by an organization designed to attack professional problems. (Approximately 9 percent of our Members are professors).

   4. Insure that professors who are now Members are considered for committee assignments and nominations to office.

   5. Sponsor students and professors on field trips and to professional or scientific meetings.

   6. Recognize and reward outstanding students and professors in your area.

   Geology departments are truly the spawning ground of the profession. Today’s students are tomorrow’s professionals. Anyone who doubts the seriousness of their growing problems needs only a short discussion with a knowledgeable educator to dispel those doubts. As individual geologists and as an Institute whose purpose is to improve, enhance and strengthen the profession, we must come to grips with our educational problems.

---

**Executive Director Victor C. Tannehill**

Vic Tannehill was the only non-geologist to be AIPG Executive Director. A native of Ft. Wayne, Indiana, Tannehill was formerly Vice President and Chief Operating Officer at the Manufacturers’ and Employers’ Association, Inc., Racine, Wisconsin. An experienced association administrator, Tannehill previously held executive positions in business and industry. He has published numerous management skills articles, developed management seminars and taught at colleges and vocational-technical schools.

Tannehill received a B.A. in Business Administration from Wittenberg University, Springfield, Ohio, and has completed work towards his MBA from Michigan State University. He is a member of the American Society of Association Executives, American Society for Personnel Administration, the American Society of Training and Development, and the Administrative Management Society.

The Search Committee headed by Arthur O. Spaulding, should be commended for their diligent and tireless efforts on behalf of AIPG. Search efforts drew over 200 top candidates for the Director's position. Interviews were conducted by committee members around the country. Five candidates were then chosen to be flown to Golden, Colorado, and interviewed by the Executive Committee.

Executive Committee members met well into the night narrowing the field, but did not reach a final decision until the following day. AIPG members can be confident their new Executive Director is a highly qualified association manager.

A debt of gratitude is due the Search Committee and the Executive Committee for giving so much time and labor to our Institute. Search Committee members were:

Art Spaulding - Chairman
Don Carr
Travis Hughes
Ted Off
Larry Woodfork
Ed Stinemeyer
Grover Murray

Vic Tannehill served from 1981 to 1988, and brought computerization of the membership and desktop publishing to AIPG Headquarters. Vic could always be found at the AIPG exhibit booth at ours and AAPG’s Annual Meetings. In the years before his retirement, staff and others observed that Vic seemed to have lost his energy and drive. He is a fan of American war history, and has written several books.
Happenings in 1981

New Executive Director Vic Tannehill was hired. Ruth Anna was hired as Public Relations Coordinator (1981-85) and wrote the AIPG publication “Public Relations Handbook,” now out of print. She stated “public relations is the process of effective communication with every group that may have an impact on our profession. AIPG is obligated to inform the public on geologic matters and to alert the public to the importance of geology in their daily lives.”

Editor Russell Dutcher was asked by the Executive Committee to continue for two more years. The President-Elect was a member of the Executive Committee beginning in 1981.

For the first time, the AGI sent officer representatives to the AIPG Executive Committee meeting that was held in conjunction with our Annual Meeting. The purpose was to provide closer contact between the two organizations. This plan lasted four years. The AGI Representatives were also CPGs. They were Doris Curtis, John Haun, Richard Proctor and Edd Turner (see Index and Who’s Who). Also, AGI’s first Ian Campbell Medal was awarded to Richard Jahns, CPG 289. (Ian Campbell’s (CPG 19) memorial is given under the year 1978 and Richard Jahns’ memorial is given under the year 1983.)

More than 8,000 copies of the AIPG booklet “Metals..Minerals..Mining” were distributed: copies to all Members, 213 to members of Congress, 565 to College Geology Departments, 246 to the media, and 500 sent to the AIPG Colorado Section in appreciation for preparing the booklet.

In 1981 the AIPG Foundation was created (see later). The AIPG College Geology Department Survey Committee submitted their final report (see later), which lead to its publication as Monograph No. 5 in 1985 (see Appendix 5).

The second annual Governmental Affairs Conference (Washington Fly-In) was held on October 19-20 instead of in the Spring, so as to coincide with the Annual Meeting in Williamsburg, Virginia, on October 21-25. Future AIPG President Daniel Miller wrote a thoughtful paper “Future Trends in Professional Geology,” which is reproduced in Appendix 9.

For the first time AIPG membership exceeded 4,000. Future President Susan Landon was 1981 Membership Committee Chairman. She wrote a TPG article explaining that historically, AIPG has had two major periods of growth: “Initial growth of the new organization was strong, but reached a plateau which lasted until 1975. During 1975 several factors resulted in a second period of healthy growth. At that time, AIPG, AAPG, AEG, and SEG developed a reciprocal agreement allowing full members to be ‘grandfathered.’ Also, the political sphere created several situations that made a professional organization more critical to geologists, for example, the registration controversy in many states. Our current membership drive has been successful in increasing the numbers of new applicants. The number of applications received during the first half of 1981 is 70 percent higher than the number received in the first half of 1980. A decrease in the first half of 1981 is a reflection of the reorganization process that has occurred at the headquarters office. During this period our process for approving new members was not efficient. In fact, less than 50 percent of applicants were approved! Vic Tannehill, our new Executive Director, has assured me that this process has been improved and is at present operating at a more efficient level than in past years.”

The AIPG Foundation, Inc.

The AIPG Foundation was formed in 1981. Farsighted members including James Dunn (NY), Ed Rue (IL), and Grover Murray (TX) saw the need to form a foundation that could act as a recipient of tax-deductible contributions, build an endowment, and supplement the activities of the Institute itself. Reorganized in 1985 under Mississippi law, the Foundation is now governed by a board of trustees who serve on a volunteer basis.

The goal of the AIPG Foundation is to establish a one million dollar minimum endowment whose income will be used to fund geologically oriented:

Public Information and Education
Research on Public Issues
Information Forums for Professionals

The Foundation will finance research and dissemination of information on public issues affecting or affected by geology. It will provide grants for teacher education and for sponsorship of informational seminars for local, state, and federal legislators and officials, teachers, geologic professionals, and others.

Research, information, and education will cover a wide range of topics including water availability and quality, geologic hazards, natural resources and their development, waste disposal, land-use planning, and geological education.

The first officers of the Foundation were:
President - James R. Dunn
Vice President - John W. Rold
Secretary-Treasurer - Edward E. Rue
Executive Director - Victor Tannehill

The Foundation was incorporated in 1986 in Mississippi, so as to be distant from AIPG’s Colorado corporation. Joe Fritz of Mississippi became President 1985-87, with John D. Haun Vice President, and Ad Honkala Secretary-Treasurer. In 1987 Ernest Lehmann became President (continuing), with Edward Rue Vice president (continuing), and Ad Honkala Secretary-Treasurer. In 1994 Kelvin Buchanan replaced Ad Honkala as Secretary-Treasurer. Over the years the AIPG Foundation has funded several Institute publications as one of its avowed purposes.

AIPG Foundation Founders

David M. Abbott, Jr. (CO), CPG 4570
Kelvin J. Buchanan (NV), CPG 6058
Russell R. Dutcher (IL), CPG 1644
ROLLING ALONG

1981 College Geology Survey

AIPG Educational Affairs Committee Report
By Edward B. Nuhfer and Richard M. Winar

In the spring of 1981, the AIPG Educational Affairs Committee formulated a ten-page questionnaire to survey the status of geological education at the nation's colleges and universities. One chief purpose of the survey was to determine how professional geologists functioning through AIPG might help with problems affecting geological education. Information was requested that pertained to: a) manpower; b) relations between industry and college geology programs; c) problems affecting the quality of faculty, students, and programs; and d) special problems defined by the departments themselves. In May, 1981, the questionnaire was mailed to the heads of degree-granting departments at 486 colleges and universities. In late August, a reminder letter was sent to those chairmen who had not yet responded. By the end of 1981, 258 responses and 237 completed questionnaires were received. The responses from the 237 completed questionnaires serve as the basis for this paper. The ten-page questionnaire took considerable time to answer; so responses from over 53 percent of the schools contacted constitute an unusually high return for this type of survey.

Who responded?

The returned questionnaires represent excellent geographical distribution. Only four states: Delaware, Hawaii, South Dakota, and Wyoming, are not represented by responses. The geology faculty within the responding schools totals to 2,091, and the number of geology majors at these schools is 24,930. Most of the geology departments are small: about 43 percent have less than five full time faculty; 34 percent have between six and 10 members; 14 percent have 11 to 15 faculty; six percent have 16 to 20 members; and only seven percent have more than 20 faculty. Most of the larger universities have graduate students who assume significant teaching duties but who are not counted as faculty. Undergraduate degrees in geology are awarded by departments with as few as one faculty member to a high of 87 faculty members. Student to faculty ratios vary from two to one to over 250 to one, with about 12 to one being average.

Future manpower from the academic viewpoint

Replies were received during the summer and fall of 1981. Most respondents expressed growth-oriented optimism about future jobs for graduates. The vast majority (80 percent) believed that no oversupply of geology students then existed and that the hiring of geologists would not reach a peak until sometime between 1986 and 1992. However, an even larger majority (83 percent) recognize the potential for cycles of overabundance and undersupply of geologists and favor some attempt to ameliorate the instability historically inherent in the geological profession. Most respondents (86 percent) expressed an acceptance of responsibility for getting students employed in geologically oriented jobs.

In 1981 market demand was very high. Over half of the schools reported they were 90 to 100 percent successful with job placement of graduates with BS degrees and almost 100 percent success for all graduates with MS and Ph.D. degrees. This strong market demand has also drawn from the departments of colleges themselves, and 58 percent of all schools polled (88 percent of the 10 largest departments) feel that the loss of personnel to industry will adversely affect the future quality of their programs. While 55 percent of all schools report losing from 16 to 50 percent of their staff, only 20 percent of the larger schools report such a huge loss of staff. It would appear that larger schools were less affected by staff reductions.

Slightly over 50 percent of both large and small departments polled reported that the future need for geologists would have no influence on their departmental plans concerning the numbers of students who would be graduated or accepted. This reply is perhaps because about 50 percent of the departments had reported that the number of students accepted or graduated was simply out of their control. Thus it would appear that there is more administrative control than departmental control of future geological manpower, and perhaps even more
power over programs, appears to be exerted by college and university administrators rather than by geologist-educators. Can we assume the administrators are reacting more to student demand or fiscal considerations?

Relations between industry and college geology programs

Regular presentations by industry are invited by 54 percent of the departments. At 65 percent of the schools, interviewers are requested to make presentations in order to tell students what companies expect and want from new graduates. An outside “expert in residence” (sometimes in the position of an adjunct professorship) is maintained at only 18 percent of schools; yet such a position is filled at 90 percent of the 10 largest departments. The concept of using outside employed professionals to teach their expertise on a part-time basis was considered at 66 percent of the departments. In turn, only 31 percent of departments have considered providing short courses for working professionals. Only 19 percent of all schools have an advisory board of alumni or industrial representatives; yet 91 percent feel that such a board can be beneficial to fund raising. Only 24 percent of the schools have some type of summer employment or student internship program. It is interesting to note that 40 percent of the larger departments have advisory boards, but only 11 percent of them have internship or job training programs.

Of the departments responding, 64 percent consider professional certification of geologists as beneficial, even though only 17 percent presently have certified professional geologists on their staffs. Others (36 percent), express the opinion that professional experience is a positive factor in the hiring of faculty. However, industrial experience ranks in the lowest priority as a hiring requirement, even behind personality. The dominant requisite for the hiring of faculty is the Ph.D.

Over 80 percent of the colleges encourage or obligate their faculty to publish, and 75 percent encourage or oblige their faculty to procure external funds. Most departments (94 percent) permit faculty to consult, and 79 percent recognize consulting as a good feature.

Factors affecting quality of faculty, students, and programs

In 1981 shortages in university faculty were evident. One of the four most important problems stated by respondents was the need for more and better quality teachers. Industry demand was designated as a significant factor in the loss of faculty at over half the schools. The present (1981) demand for BS level geologists must have also exerted an enrollment decrease in graduate schools. If severe enough, a future shortage in geologists with advanced degrees could result.

The student-to-teacher ratio in most schools is higher (20:1 to 10:1) than the average desired ratios expressed by individual departments (11:1 to 8:1). It would appear that within very small departments (less than three) faculty members must carry abnormally high work loads to provide desired courses for their majors. In addition, demands by the colleges to perform and publish research, and to acquire grant monies places further stress on faculty. Despite the shortages noted by the schools themselves, most are optimistic about their quality, and 62 percent rate their special subfields of emphasis in geology as good to excellent.

Of the responding departments, 62 percent favor screening geology-major applicants, but only about 40 percent presently do so. Of those which perform screening, only one in four will reject more than 20 percent of its applicants.

Only 40 percent of departments admitted having specific criteria to qualify prospective geology majors. Overall, there appears to be no uniformity in terms of courses or curricula that one could term as “universally characteristic” for a degree in geology. This is especially true in the supporting sciences (mathematics, chemistry, physics, biology) but is less true within the major. The courses physical geology, historical geology, mineralogy, petrology, structural geology, field geology, paleontology and stratigraphy-sedimentation are required in most schools. Field courses are not required for a degree in 23 percent of the departments, but 90 percent of the ten largest schools require field courses—and this same percentage (90 percent) of the large departments require field camp. Only 63 percent of the total response indicate field camp is required. Internships and student summer employment programs are actively supported by only about 30 percent and 24 percent respectively of the schools replying.

Questionnaire opinions on departmental evaluation by the AIPG

Clearly, most departments do not wish AIPG to become so autocratic that control over geological education by AIPG would be comparable to control by the American Medical Association (AMA) of medical schools (68 percent were opposed to such control). However, departments overwhelmingly favored both the concept of establishing standards for evaluation and an effort to stabilize the profession so that future graduates are not faced with erratic cycles of job shortages due to saturation of the job market by more geologists than the market will accept. Over 94 percent of respondents favored curriculum evaluation and most respondents indicated that a ranking of geology departments might even be desirable. Most (62 percent) indicated that a system of ranking would be useful to students, prospective employers, and would be helpful in relationships between the department and the local college (university) administration. It is interesting to note that despite the clear margin favoring evaluation (85 percent), respondents were evenly split (50-50) as to whether such efforts would be appreciated by the overall academic community.

Answers of large and small departments

From the questions asked, it generally appears that there are only a very few differences in the answers from all departments and those from only the ten largest departments. Some differences have been mentioned earlier in this report, others follow.

It seems that only 13 percent of the largest schools agree that greater control should be exercised over who enters the profession; whereas 32 percent of all schools expressed a positive feeling about more such screening and control.

Concerning the four major problems affecting geology departments, it may be interesting to note that replies from all schools list the following as the most important problems:
63% – Need more financial support
58% – Wish more and better staffing
57% – Want more and better equipment

While the bigger departments want:
80% – More and better staff
60% – Better students
50% – Better accommodations
50% – Better salaries for staff

If we take some latitude with an interpretation of these percentages, it would appear that the larger departments have; less need for direct financial support but have a greater desire to build bigger and better staffs, and they feel that the quality of their students is not up to par.

1981 Annual Meeting, Williamsburg, VA

The eighteenth Annual Meeting was the Institute's most successful with 200 registrants. It was held October 21-24, and was chaired by John Kent Kane II, with Ad Honkala (1973 AIPG President) in charge of the Program:

**Wednesday, October 21**
12:00 PM - 5:00 PM Registration
2:00 PM - 5:30 PM Advisory Board Meeting
6:00 PM - 8:00 PM Reception

**Thursday, October 22**
7:00 Executive Comm. Business Meeting
8:45 - 9:00 - Opening Ceremonies
8:45 Mr. Tom Houston, President, Virginia Section, AIPG, Welcoming address on behalf of the Host Section
8:50 The Honorable Robert C. Walker, Mayor of the City of Williamsburg
8:55 Mr. Maurice B. Rowe, Secretary of Commerce & Natural Resources, Welcoming address on behalf of the Commonwealth of Virginia
9:00 - 12:00 - Technical Sessions
1:30 - 5:00 - Theme: Energy in the 80's
9:00 Atomic Energy - Dr. Vanaten Price, Chief Geologist NURE Program, Aiken
9:45 Coal - Mr. Carl E. Bagge, President, National Coal Association
10:30 Coffee Break
11:00 Oil and Gas in China - Dr. Lu Liu, Senior Geologist, AMACO Orient Pet. Co., Operations Division
11:45 Questions and Answers
12:00 Lunch
1:30 Eastern Overthrust Belt - Mr. Lynn Harris, Oil and Gas Resources Branch
3:00 Coffee Break
3:30 Petroleum - Dr. Melvin J. Hill
4:15 Synthetic Fuels & Alternate Energy - Mr. Edward H. Blum, Vice President & Exec. Director,

Synthetic Fuels Group, Merrill, Lynch, White, Weld
6:30 Cocktail Party
7:30 Banquet

**Friday, October 23**
7:00 Past Presidents Breakfast
8:00 - 11:30 Consultants Workshop
Theme: "Marketing of Geologic Services"
Panel Members:
William E. Cutcliffe, CPG 1348 President, Dunn Geoscience Corp.
James J. Geraghty, CPG 2038 President, Geraghty & Miller, Inc.
Marshall S. Miller, CPG 2793 President, Geologic Consulting Services
Bobby J. Timmons, CPG 2736 Chief Geologist, Florida Rock Ind., Inc.
10:00 - 11:30 Spouse Tours
11:45 - 1:15 Business Meeting/Lunch
1:30 - 5:30 Williamsburg and Archeological Tours
6:30 Cocktails
7:30 Groaning Board Dinner (Dark suits/long dresses)

**Saturday, October 24**
8:00 - 5:00 - Field trip (optional)
A field trip was made to the Virginia coastal plain. Two non-technical tours were offered: Williamsburg Restoration and Archeological Tour, and a spouses' morning tour of Carter's Grove, and afternoon at the Pottery Shop.
Four awards were given at the Annual Banquet: The Parker Memorial Medals to Robert R. Berg (1971 President) and Ad Honkala (1973 President). Two Martin Van Couvering Awards went to Al Saterdal and James A. Wheeler. Their citations appeared in the November and December 1981 TPGs.

Dinner speaker for the 18th Annual Meeting in Williamsburg, Virginia, was Dr. Robert L. Bates, CPG 827, an internationally renowned educator, author, and lecturer. His banquet speech was titled “View From the Column.” Dr. Bates is the author of a textbook on the geology of industrial rocks and minerals. He was a past President of the National Association of Geology Teachers and a past editor of The Professional Geologist. Since 1955, he has written a highly acclaimed column for Geotimes, and served as a science editor of AGI’s Glossary of Geology.

1982 President M. O. Turner

M. O. Turner, CPG 1046

M.O. Turner recalls 1982:

“For anyone to now suggest that 1982 was actually an important, pivotal year in the life of AIPG would be quite presumptuous—but in a certain limited sense, that’s what I propose. Who could disagree that the original founders, the real prime movers and shakers of the Institute, with clear vision and rock solid determination, had already done an absolutely superb job not only in creating but managing this most excellent professional organization so that by 1982, with over one half of the states already organized in chapters, AIPG was widely recognized and clearly accepted as “the” national organization of professional earth scientists. So, if everything was going so well and nothing was “broke,” what’s to fix? Fine tuning probably sounds better.

“Perhaps it was simply changing times, but the 1982 Board thought it then important to review and address both the “institutional” and “professional” functions of AIPG. As a result, the Board decided to take certain actions in order to more clearly position AIPG as a national organization of professionals—by more clearly defining and concentrating its strength with greater national unity and purpose. Some had the perception that structurally AIPG, even then, was still a federation of three strong regional groups which included the Gulf Coast, California, and the Rocky Mountains, clearly the petroleum producing regions. The role of those in mining, minerals, environmental, governmental and other disciplines, including a significant group on the East Coast, was a tough call, either to stand back completely or referee between the three big boys. But, after the Board recognized the problems of regionalism and under-representation it then found common ground to develop a broader consensus to successfully resolve this lingering problem.

“Following the retirement of Art Brunton as Executive Director, the Board decided to relocate AIPG Headquarters office from atop a windy hill in Golden to a new, more corporate and professional setting with twice the floor space in Arvada, Colorado. And, in an effort to replace the valuable leadership of Art Brunton, the Board retained Vic Tannehill as AIPG’s new Executive Director.

“The new offices included a completely new computer system, three employees and an especially fine meeting room for the Board and other institute activities. The Board also decided to establish the practice of four meetings per year: holding its spring meeting at Headquarters, the summer meeting in Vail, the fall annual meeting, and the winter meeting taking place at the option of the current president.

“Two additional “institutional” efforts of the 1982 Board were both led by Ernest Lehmann, to be AIPG’s President in 1985. After the reshuffling of the Institute’s physical needs, the Board asked Ernie to chair a new Committee on Committees to review AIPG’s basic organizational structure and to recommend changes where desired. Ernie also chaired the formation of the new AIPG Foundation which has now become an enormous asset of the Institute.

“Because there were then so many members who had selflessly made such major contributions of their time, talent and funds in the early formation and later development of AIPG, the Board decided to express the members’ appreciation by recognizing at least some of these great contributions, by creating the Presidential Certificate of Merit. A quick look at the number of early recipients of this honor, 12 in both 1982 and 1983, indicates the Board’s desires to not only try to “catch up” with history by acknowledging many of AIPG’s earlier leaders but to provide a method for each succeeding President and Board to similarly express the members’ appreciation.”

Citation for M. O. Turner, CPGS 1046
1985 Recipient of the Ben H. Parker Memorial Medal
By Grover E. Murray

No one knows what he can do till he tries.—Publilius Syrus, Maxim 7885 (in Bartlett, 1955).
The professional, public and personal activities of the 1985 recipient of the Ben H. Parker Memorial Medal—Marion Orville Turner, better known to us as M.O.—epitomize the counsel and advice of Publilius Syrus and, therefore, have resulted in M.O.’s recognition for “outsanding service to the profession.” The namesake of the Medal, with whom I served on the AAPG Executive Committee and with whom I became close personally, would have been pleased and supportive of the contributions and benefactions of this year’s selectee, for M.O. Turner is, in many respects, an analog of Ben H. Parker.

Born in Magnolia, Texas, September, 1923, M.O. attended public schools in Houston and following service in the Navy in World War II in the North Atlantic, Mediterranean and the North Pacific, he obtained a B.S. in Geology from the University of Houston in 1948. From 1947-54 he was employed by Stanolind Oil and Gas Company, resigning in 1954 as Senior Division Staff Geologist to enter consulting in San Antonio, where he continues practicing today. He has been eminently successful in the search for petroleum in the Texas Gulf Coast and South Texas.

Throughout the years, M.O. has been active in the South Texas Geological Society, of which he was President in 1975; the Gulf Coast Association of Geological Societies; the American Association of Petroleum Geologists; and the American Institute of Professional Geologists, being its President in 1982. Testimony of the magnitude and quality of his professional contributions is reflected in his receipt of honorary memberships in the South Texas Geological Society, the Texas Section of the American Institute of Professional Geologists, the Gulf Coast Association of Geological Societies and the American Association of Petroleum Geologists; the latter association paid tribute to his multiple and thoughtful contributions by selecting M.O. as one of the nominees for President in 1978 and awarding him the Distinguished Service Award in 1981. Currently he is Vice President and President-elect of the American Geological Institute, thereby following in the footsteps of others who have served as presidents of the American Institute of Professional Geologists and the American Geological Institute.

The eminence of his professional career and contributions is fully equaled by his civic and public activities. As an active Republican, M.O. served in various state and national roles including the State Executive Committee and as a delegate to the County, State and National Conventions. In San Antonio his good citizenship has included service on the City’s Planning Commission, the Industrial Development Authority and the energy Advisory Committee. Concomitantly, he found the time and energy to be President and Lieutenant Governor of Kiwanis International; a 32nd Degree York and Scottish Rite Mason and Shriner; Chairman of the Trustees, the Budget and Finance Committees and a Deacon of the Alamo Heights Baptist Church; President of the San Antonio Club; and several terms as President of the Right-to-Life Committees of San Antonio and the State of Texas.

Not the least of his contributions have been his papers on various mineral and energy issues; his direction of causes of action on reapportionment through the U. S. Supreme Court; his advocacy that exploration and development of energy and minerals in wilderness areas on Federal lands were not necessarily in conflict with responsible and prudent conservation and preservation measures, especially his eloquent testimony before the Energy Committee of the U.S. Senate in 1982 on the Wilderness Protection Act; his beneficial inputs regarding energy and regulatory affairs to various committees of the Texas Legislature; his concerns regarding registration and certification of geologists—statewide and nationally; his attention to the protection of individuals from unnecessary and unwarranted governmental intrusions by all levels of government; and his deep concern about the moral issues facing the Nation.

For his professional and scientific success in exploration for petroleum, for his outstanding contributions and services to the geological profession and for his expressed concern and actions regarding the energy welfare and the moral and ethical values of the Nation, the American Institute of Professional Geologists salutes you, M.O. Turner, and expresses its eternal gratitude for your services.

Presidential Message:
“AIPG Background, Objectives and Services Rendered”
By M. O. Turner

AIPG was created in 1963 at the request of the American Geological Institute to meet two essential needs of the earth science professions. Neither of these important objectives could then be fulfilled by any of the 17 technical associations affiliated with AGI. The first requirement was to create a nationwide organization to certify the professional competence and ethical conduct of geological scientists in all earth science disciplines.

And secondly, AGI wanted to structure AIPG so that this new national Institute of “Certified Professional Geological Scientists,” as an IRS 501(c)6 organization, could become actively involved in the legislative, rule making and political processes at state and national levels. Thus, AIPG is the only affiliated AGI organization that is wholly composed of “certified” professional geological scientists from all earth science specialties, each of whom is also a member of one or more of AGI’s 17 “technical” associations. These include AAPG, SexG, AEG, AASG, GSA, SEPM, SME, AESE, GS, GIS, MSA, MAGT, PS, SSA, SEG and SVP.

Within this specialized diversity of the geological sciences, members of AIPG pursue their professional careers in near equal percentages as either Independent, corporate, academic, governmental or industrial earth scientists. Of the other two excellent organizations certifying geological scientists, the highly recognized Department of Professional Affairs of AAPG certifies the professional competence and ethics of petroleum geologists only and the world wide Society of Independent Professional Earth Scientists certifies the integrity and expertise of the independent earth scientist.

Along with DPA of AAPG and SIPES, AIPG members maintain an uncompromising code of ethics, high professional and educational standards and each constantly strives to present the highest examples of the professional application of the geological sciences. AIPG now has over 4,100 members,
many of whom serve on either national committees or within well-organized sections in each state throughout the U.S. At local, state and national levels, members of AIPG are often found either proposing their own ideas of sound, responsible legislation or monitoring and challenging the unending stream of mischievous legislation, rules and regulations inevitably flowing out of Washington and each state capitol.

In all matters, AIPG strives to protect and advance the public interest as well as that of earth scientists on each mineral or energy resource issue whether it surfaces in Washington, D.C. or Austin, Texas.

This degree of awareness is important to AIPG because regardless of one’s discipline, specialty or employment status in geology, the unfettered practice of a successful career is often subject to and sometimes directly threatened by the political interests and activities of others. For example, there is usually a continuing interest by many engineering geologists, some hydrogeologists and various others to “register” geologists in Texas. But petroleum geologists, who compromise a majority of geologists in Texas, seem to be generally opposed to state regulation.

AIPG nationally takes no position for or against “registration,” leaving this decision to each state section. The Institute’s Governmental Affairs Committee in Washington carefully monitors matters like these to prevent burdensome or unwarranted restrictions on the practice of earth scientists. Additionally, it’s long been recognized that many consulting, independent and corporate geologists conducting business with private or public participants practice at the unpredictable pleasure of the SEC. Enforcement of existing regulations by the SEC would likely subject those preparing certain prospectuses and evaluations for these purposes to felony prosecution. These can indeed become quite serious adventures, however, AIPG remains in constant communication with federal authorities in order to anticipate adverse actions by government.

AIPG’s strong network of state sections is also supported by an excellent staff in our Denver Headquarters. The highly talented Governmental Affairs Committee in Washington is chaired by Dr. Gordon Everett who is President of his own consulting firm. His 11 member committee efforts are strengthened by Dr. Russell Wayland, former Deputy Director of the USGS who is now AIPG’s Washington Representative. Attorney James Hamersley (on retainer) is AIPG’s Legislative Counsel in Washington.

AIPG Members have testified as expert witnesses on countless occasions in Washington as well as in Austin and other state capitals, usually in opposition to legislation or a new regulation that is considered onerous and unwarranted. Though AIPG lays no claim to specific legislation that is particularly beneficial to earth scientists, the unfettered right of petroleum geologists geophysicists, engineering geologists and other geological scientists to seek employment and practice responsibly in an orderly political and economical environment is in part due to the continuing efforts of AIPG members speaking out in state houses across the country.

The decision to support or oppose any given issue is determined by the level of AIPG leadership involved. Positions on state issues are naturally determined by state sections, but matters of regional and national importance of geologists and earth scientists in general are acted on by the 12 member national Executive Committee. Realizing the great strength of the opposition, AIPG also maintains an active Public Relations Committee nationally as well as in each state section in order to “educate” the public and enlighten legislators on the important issues.

With regard to AIPG Publications, in addition to the monthly national newsletter The Professional Geologist each state section also publishes its own monthly “bulletin” or newsletter. These monthly journals inform members of the status of all earth science legislation, commentary on current issues, workshops and programs and other general membership information. AIPG also publishes an annual membership directory which includes each member’s professional specialties.

We also offer the popular “Suggested Guides and Practices” for the practicing geologist; we have distributed AIPG position papers on critical issues such as the importance of gaining access for responsible exploration and development on “Alaska Lands,” the crisis developing in “U. S. Mineral Resources,” another on the strategic importance of “Metals, Minerals and Mining.” This year AIPG will publish papers on “Ground Water” and a second on High and Low RAD and chemical “Hazardous Waste Disposal.” These publications are distributed free of charge to each Senator and Representative, staff member, federal committees, agencies, etc., to state and local officials as well as throughout the academic and industrial sectors.

Congressional Testimony

By M. O. Turner

President M.O. Turner’s message in the November 1982 TPG boldly lays out his views, as well as the majority of applied geologists at that time, in excerpts from his Senate testimony, titled “Wilderness Lands” Proposal; (see also previous At Issue discussion by M.O. in 1970):

A decisive struggle for control of one out of every nine acres in the U.S. will be decided next month when the U.S. Senate reconvenes for its “lame duck” session and votes on this highly controversial measure. Enactment of S-2801 will effectively deny the public access to the enormous energy and mineral reserves known to exist under these lands and it will have a serious impact on the careers of the nation’s geologists and earth scientists. Unless defeated, this bill will effectively prohibit leasing and conventional mineral and energy exploration on some 229 million acres of public lands. Not only will the practice of the explorationist be curtailed, but valuation and development by the nation’s mining, petroleum and industrial geologists will also be prohibited. Further, this curtailment will undoubtedly cause a dampening effect on all earth science activities extending even into university classrooms. We now have a serious problem confronting us and I respectfully ask your help in opposing this unreasonable lock-up of these publicly owned natural resources.

While S-2801 specifically refers to designating only 35 million acres as “wilderness” lands a total of 229 million acres of public lands will actually be affected including wilderness
“study” and “planning” areas, RARE II, Forest Service, BLM as well as other public lands which will also be effectively withdrawn. As earth scientists as well as citizens, we must insure that S-2801 is either defeated or becomes fair and equitable so that it represents the highest and best use of these public lands for the minority of the people.

By denial of these vast expanses to the public for multiple use, these areas will become the private preserve of a new American aristocracy, the environmental groups whose current leadership is determined to seize control solely for the private use and privilege of the select few who are fortunate enough to have the time and money available for hiking and back packing. As written, this bill denies access to everyone except hikers or those who fly in by helicopter.

Over these many years, leaders in science and industry have shamefully endured an unending array of environmental hoaxes and frauds perpetrated by these groups, not at least of which includes the lousewort, snail darter and Love Canal fables. Because of these continuing abuses to public decency, it is now time that the nation’s earth scientists demand a higher level of accountability and responsibility from the leaders of the Wilderness, Audubon and Sierra groups. Their statements and positions on protecting public and private lands must be required to meet the same tests of fact, truth and basic responsibility that each of us face daily in the professions, industry, and the academy. As John Audubon was known for his priceless portrayals of America’s native flora and fauna, few realize he found it necessary to always kill the delicate wildlife or bird or animal in order to more faithfully reproduce his subject on canvas. So it is today with the current environmental leadership in their abuse and rejection of fact, responsibility and basic common sense in their unrelenting drive and insatiable desire for power to control public lands.

At the recent Senate hearings on this bill at which Cummings, Lee and I testified, Chairman Malcolm Wallop (R-WY) vigorously denied that the debate over wilderness had become an “emotional” issue, bereft of logic and fact. The clear fact is, however, that the highly professional environmental lobby has now clearly stampeded and overwhelmed both Houses of Congress and the public as well, in their unrelenting drive to secure control over these public lands.

The environmentalists’ new lexicon and rhetoric now refers to the “mega-damage” which will inevitably happen to wilderness areas as a result of man’s presence and that exploration for energy and minerals threatens an “apocalypse” thereby destroying the “pristine beauty” of these “wild and scenic” areas. A classic example of the prevailing level of nonsense was offered by Adam Schultz (SEG geophysicist for the Wilderness Society, Senate Testimony 9-23-82), when he claimed that the heavy boots of wilderness hikers causes undue damage to the sensitive ground cover, thus new regulations should be implemented to require “soft rubberized shoes” for backpackers in order to protect the tender vegetation. Schultz stated that all seismic surveys in wilderness areas will result in permanent damage to wilderness areas and thus their use should be prohibited permanently. Their only purpose, he noted, was to make more “profits” for the already rich oil companies. This is the absurd level of rhetorical nonsense now addressing the wilderness debate by the current leadership of the once responsible Sierra, Audubon and Wilderness groups. These new purveyors of hysteria have orchestrated this cacophony of emotional absurdity because they know it works not only in creating knee jerk outrage from an uninformed public, but they have found when repeated loudly and often enough it buckles knees and weakens vertebra throughout the halls of Congress, especially among those Senators now up for reelection.

During the September 23rd Senate hearing on this bill, the four current top environmental leaders were sitting as a panel, including William Turnage, Executive Director of the Wilderness Society, Russell Peterson, President of the National Audubon Society, J. Michale McCloskey, Executive Director of the Sierra Club and Karen Sheldon, Staff Attorney for the Sierra Club Legal Defense Fund. Committee member Senator Don Nickles (R-OK) then asked for anyone of the four on the panel to tell him “of any instance they knew in which a wilderness area or any of the environment had suffered damage as a result of mineral or energy exploration or production.” No one answered. Senator Nickles then repeated the question again, “Please give me one example of any damage that anyone has caused to the wilderness.” Turnage, Peterson, McCloskey and Sheldon sat as mutes. Again, there was no answer. Senator Nickles asked the same question four times. Not one of these self-appointed defenders of the nation’s wilderness could offer one example or relate one incident of damage to wilderness areas.

AIPG Comments on BLM Proposal

The following letter has gone from President M. O. Turner to the Director of the Federal Bureau of Land Management, Washington, D.C.:

“I would like to take this opportunity to comment on a possible method of rating the favorability of the geological environment of wilderness study areas to contain mineral and energy resources’ published in the Federal Register, Vol. 46, No. 237, Thursday, December 10, 1981, pages 60562-60563. Our organization fully supports the intent of the BLM proposal to provide a mechanism to involve the mineral industry and public in a systematic and useful way in developing a mineral data base as a step in the wilderness study process.

“The development of an appropriate mineral rating system assessment form appears to be a potentially useful approach in developing a data base. However, unless such a system is used in an appropriate way and carefully monitored, potential for misuse and abuse also exists.

“The rating system published as previously cited is similar to other “subjective probability” approaches used in regional appraisal by both government and industry to arrive at a quantitative assessment of the mineral or energy producing potential of an area. The validity of the “subjective probability” assigned to an area in all such approaches is, of course, based exclusively on the personal knowledge, experience and judgment of the presumed expert assigning the probability or rating given the area in question.

“For any such system to be meaningful and useful, it is of primary importance to assure the expertise of the person(s) assigning the rating to an area. Obviously, compilation of numerous ratings for a given area into a composite rating
arrived at by a simple arithmetic averaging of all ratings submitted, without careful monitoring of responses and credentials of respondents, could seriously bias the outcome.

“Thank you for considering my comments. If our organization can be of further service or provide additional advice concerning your wilderness study areas, we will be pleased to do so.”

Other Happenings in 1982

Other events in 1982 included Michel T. Halbouty, CPG 10, and future Parker Medalist, being awarded the Herbert Hoover Medal of America; Elisabeth G. Newton, CPG 4785, and future Honorary Member, was named Chairman of the AGI Women Geoscientists Committee; A. Wayne Wood, CPG 189, and co-founder of Texas Section, passed away in Texas; Ed Nuhfer, CPG 2808, submitted a report on AIPG’s evaluation of college geology departments; a Speakers Bureau was started to provide experts in various subjects to be available at public forums; paid advertising was solicited for TPG as a source of Institute income, but did not materialize significantly until a renewed effort in 1989; 14 committees were formed (from eight of the previous year); Headquarters moved from Golden to 1878 Vance Drive, Arvada, Colorado; at the annual Washington Fly-In, the main speaker was Robert Burford, Director of the Bureau of Land Management. A “Retired” class of membership was first instigated.

AIPG Washington Representative
Russell G. Wayland

From 1982-88, Russ Wayland was our eyes and ears in Washington, D.C. His background is impressive. Russ is a graduate of Harvard University in Geology. He also earned his Master’s and Ph.D. in economic geology from the University of Minnesota. Following Army service in WWII in strategic minerals planning and production, Russ served (1945-48) on the staff of the U.S. Military Governor, U.S. Zone of Germany, advising on non-metallic mining and ceramics industries.

From 1948-52, Russ was involved in helping make German coal available to other countries through the Economic Commission for Europe, and in the corporate reorganization of Germany’s coal industry. He worked as a Staff Engineer, Office of the Director, U.S. Geological Survey from 1952-58 on matters involving mining engineering.

Russ was Regional Geologist, Pacific Region, Conservation Division, 1958-66. From 1966-1978 he was Chief of Conservation Division, U.S. Geological Survey. His responsibilities were principally managerial and decision making, with appearances before Congress and the Interior Department Secretariat.

The Virginia Section of AIPG wished to honor Russ, and decided, in 1993, to create the “Russell G. Wayland Mini-Grant for Teachers.” The following is a letter to one of the recipients, which shows the esteem in which Russ is held.

[typewritten letter]

August 1, 1994

Ann T. Lewis
20 Bel Plains Drive
Fredericksburg, VA 22405

RE: Russell G. Wayland Mini-Grant for Teachers

Dear Ann:

CONGRATULATIONS! You are a recipient of one of three mini-grants awarded by the Virginia Section of the American Institute of Professional Geologists for 1994. Your $500 check is enclosed.

The American Institute of Professional Geologists is a national organization of over 5,000 members, all dedicated to competent and ethical practice of geology. One of the founding principles of the Institute is education, both for our members, and the public. That’s where you come in.

The Virginia Section of AIPG is composed of over 100 members, and for some time, we have been debating the question: “How can we best raise the conscience of the public as to the importance of geology in their daily lives?” Well, we thought about setting up a speaker’s bureau—but we all do that anyway, ready to talk about our science at the drop of a rock hammer. We thought about supporting initiatives at the college level—but there we’d be “preaching to the choir,” i.e., geologists helping established professors and upcoming students. We thought about this and we argued about that. And then—and I’ll give Don Foss credit for it, though everybody seemed to grasp the idea—somebody said, “What about K-12? What about science teachers?”

So, to make this long story short, we decided to put our money where our mouth is. And you’re it. We want you to take our award and create something that wasn’t there before, something that will educate and inspire your students, and hopefully all students across Virginia. You are opening the minds of our children at their most impressionable time. Who better to help us in our education initiative?

Let me tell you about one special member of the Virginia Section. Russ Wayland. Russ has a resume as long as my arm and is widely respected in the profession. Within the Institute, he has received both the Presidential Certificate of Merit, and the prestigious John T. Galey, Sr. Memorial Public Service Award. The latter is awarded to those members with a distinguished record of public service, particularly education. We have named your award in honor of Russ. You want to know what kind of guy Russ is? After our last meeting, when we discussed issuing this year’s awards, Russ donated to the fund named for him!

Each one of our members has donated, through our Section dues, part of your award. We have the utmost confidence in you, and trust you will use it wisely in your endeavor. What do we expect from you? Make no bones about it, we expect a final product. And we want to see it. And we hope that your final product will be made available to
other teachers. We hope that, as we proceed with our initiative, we will be building a resource base for all K-12 teachers in the Commonwealth, and helping our children to understand the essence of our science and profession.

Congratulating you again, I am
Sincerely yours,
Anthony S. Scales, CPG
President, Virginia Section of AIPG

Following are the duties of AIPG Washington Representative:

Maintain surveillance of Federal legislative and regulatory activity, both pending and proposed, that: a. may have impact on the profession of geology; b. may be of special interest to earth scientists owing to their preoccupation with the supply and use of earth mineral resources and concern with geo-environmental problems and geohazards; and c. deal with matters of public interest and national security toward which professional geologists can make significant contributions.

As appropriate, recommend possible positions for the Institute to consider taking on Federal legislative issues or regulatory provisions.

Work directly with and assist in every way possible the AIPG governmental Affairs Committee in Washington D.C. and the AIPG Washington Legislative Counsel.

Be aware of and make recommendations to AIPG to provide witnesses for testimony, or to meet and confer with governmental officials, for the purpose of improving the input of information to the Federal legislative, executive and judicial branches and to serve the national and public interest thereby.

Prepare a bi-monthly column and legislative recap for the AIPG newsletter covering current Federal legislative and regulatory matters.

Help with Institute programs to establish and improve communication with Federal legislative and regulatory bodies and individuals.

Assist in arranging quarterly Governmental Affairs luncheons in Washington and the annual Washington Governmental Affairs conference as well as any other special meetings as might be called for from time to time.

1982 Annual Meeting, Pasadena, CA

The 19th Annual Meeting was held at the elegant Huntington Hotel in Pasadena. (This hotel was so damaged nine years later, in the 1991 Northridge earthquake, that it was razed and rebuilt with similar design, and is now a Ritz Carlton Hotel.) Bruce Barron was the chairman, but only after some hectic months prior to the meeting. The original chairman, Howard Anderson suddenly died in 1981, but his replacement, William Adent had to resign for personal reasons. Bruce bravely stepped in and enlisted the considerable support of past-President and Pasadena resident Art Spaulding; together they produced a memorable Annual Meeting.


The Program Chairman for the Annual Meeting, Art Spaulding, lined up the following outstanding speakers and topics:

Richard H. Jahns, Stanford University “Diablo Canyon—A Bedeviled Project”
Jim Davis, California State Geologist “Geology and the Construction Industry”
Bill Fisher, University of Texas “National Security and the OCS”
Dallas Peck, Director, USGS, Banquet Speaker “Can We Depend on Our Own Resources?”

1982 Annual Meeting Schedule

Wednesday, November 10, 1982
8:00-9:50 - 1982 AIPG Advisory Board Meeting Mirror Room
8:00-Noon - National Committee Meetings Various
9:50 Coffee Break Hallway outside Mirror Room
10:10 1983 AIPG Advisory Board Meeting Mirror Room
Noon-5:00 - AIPG Executive Committee Meeting Garden Room
6:00-8:00 - Cocktail Party/Reception Ship Room and Quarter Deck

Thursday, November 11, 1982
9:00 Welcome/Opening Remarks/”State of the Institute” Message Georgian Room
10:15 Coffee Break Outside Georgian Room
10:30-Noon: - Presentation of Papers Georgian Room
Lunch/Afternoon - Free Time/Trips
6:00-10:00 - Banquet/Awards Viennese Ballroom

Friday, November 12, 1982
7:30 Past Presidents’ Breakfast with Executive Committee Mirror Room
8:30 First Concurrent Workshop Session (Choose one of four) Wentworth Rooms
10:00 Coffee Break Outside Wentworth Rooms
10:30 Second Concurrent Workshop Session (Choose one of four) Wentworth Rooms
12:00 AIPG Annual Business Meeting Luncheon Georgian Room
1:30 Adjournment of Annual Meeting
1:30 1983 Executive Committee Organizational Meeting Mirror Room

1982 saw an experiment in cooperation between AIPG and the American Geological Institute (AGI) in which one or two AGI officers, who were also CPGs, would attend the AIPG Board Meeting. This experiment lasted three years. The AGI Representatives can be found in Appendix 2.
The Parker Memorial Medal was awarded to 1970 President Henry H. Neel, and the Martin Van Couvering Memorial Award was presented to 1980 President James R. Dunn.

**First Presidential Certificates of Merit**

In addition to establishing the Public Service Award with the first awardee in 1983, M.O. Turner’s Executive Committee also established the Presidential Certificate of Merit. Each year, the President of the American Institute of Professional Geologists may award one or more certificates of merit to individuals who, through dedicated and meritorious service, have made an outstanding contribution to the Institute. The award, the Presidential Certificate of Merit, is announced and presented to the recipient at the Annual Meeting Banquet. This first year, M.O. recognized twelve AIPG volunteers who helped the Institute (see Appendix 3).

1983

President Larry D. Woodfork

Larry Woodfork was our nineteenth President. West Virginia Governor Cecil H. Underwood designated Larry D. Woodfork, State Geologist of West Virginia and Director of its Geological and Economic Survey, to be a Distinguished West Virginian at the Survey's Centennial Celebration marking the 100th anniversary of the establishment of the agency. The Distinguished West Virginian award is the highest honor bestowed by the state on its citizens. It is awarded in recognition of the recipient's outstanding achievement and meritorious service in their profession and to the state.

Subsequently, Kentucky Governor Paul E. Patton also commissioned Woodfork as a Kentucky Colonel, the highest honor awarded by the Commonwealth of Kentucky. Commissions as Kentucky Colonel are awarded by the Governor of Kentucky to recipients in recognition of their contributions to the community, state and nation and for special achievements of all kinds. The heritage of Kentucky Colonels dates back to the War of 1812 when the first Governor of Kentucky, Isaac Shelby, issued the first commission of Kentucky Colonel. Later Governors commissioned colonels to act as their protective guard; they wore uniforms and were present at most official functions. The current Honorable order of Kentucky Colonels was founded in 1932 and the colonels act as ambassadors of good will and fellowship for Kentucky around the world.

Woodfork is a native of Vincennes, Indiana. He graduated from Vincennes University in 1959, and holds undergraduate and graduate degrees in geology from Indiana University.

In 1979 Larry was honored to be the first recipient of the new AIPG Martin Van Couvering Award. In 1999 he was awarded Honorary Membership. His citation was by Robert H. Fakundiny. In 2002 Larry was awarded the Ben H. Parker Medal; his citation was Stephen M. Testa.

**Presidents Message**

“My Objectives for AIPG”

By Larry D. Woodfork

As Larry took the helm of AIPG, he explained his objectives in the January *TPG*, here condensed:

This year marks the 20th anniversary of the founding of the American Institute of Professional Geologists. Many things have changed in geology, both as a science and profession, since 1963. The development of plate tectonics theory, its general acceptance, and wide application, have revolutionized our concepts concerning some of the most fundamental geological processes and their resultant products. This theory has had an attendant impact of major magnitude in both academia and exploration for mineral and energy resources.

Along with major advances in theory, there have been tremendous developments in technology which have allowed us to analyze the natural world in much greater detail, from the subatomic level to the scale of the universe. It is now commonplace for geologists to employ sophisticated instruments, such as the scanning electron microscope, to probe the most minute petrographic details. It is also “everyday” to use various types of images obtained from remote sensors carried aboard satellites and spacecraft to synthesize the “big picture” over vast areas of the earth.
Over the same 20-year period our profession has also gone through some rather dramatic changes. During the 1960s a heightened awareness of our environment, its problems, and limitations, became the focus of attention for a number of geologists. The 1970s brought the “energy crisis” and the resultant search for new conventional and unconventional energy resources. Concerns for both the environment and energy resources have posed both challenges and many opportunities for the profession. Currently our profession is experiencing yet another downturn in cyclic “boom or bust” employment for geologists, following recent years of “boom” employment opportunities.

One thing that hasn’t changed over the years is our basic commitment to the original tenets of AIPG certification, and its high standards for education, professional experience, and ethical practice.

However, our maturation as an organization has not been uniformly smooth. There have been some false starts, rough spots, mistakes, and such along the way. The Institute is both at its best and worst a human enterprise, and subject to all of the shortcomings that implies. On balance, the organization has laid a very solid foundation upon which we can and must continue to build and grow.

With that in mind, I have proposed the following objectives to the 1983 Executive Committee as goals which I feel the Institute should strive to accomplish over the next year: Concurrently, I have proposed a budget which reflects this program. The objectives that I have proposed are:

1. We will continue to operate the Institute on a balanced budget. The recent $10 dues increase (the first in three years) will alleviate some of the financial concerns we had last year. However, while the increase allows us to approximately catch up with inflation, it does not provide sufficient new income to undertake many substantial new projects or activities.

2. We must continue to increase membership until AIPG more adequately represents the entire profession than it does at present. A recent U.S. Bureau of Labor Statistics report estimated 60,000 geologists currently practicing in the country. Given that, our current enrollment of 4,400 members does not appear to adequately represent the profession, and a tremendous opportunity exists for continued growth. We also need to balance the composition of our membership to more closely reflect the percentages of geologists practicing in industry, academia, and government.

3. We must make a more vigorous effort to secure additional sources of non-dues income for the Institute. The current ratio of dues income to total income is far too high. We must lower this proportion if we are to achieve a healthier financial posture. The development of our three new short courses on professional topics (expert witness, risk and liability, and technical report writing) is a step in the right direction.

4. We now have 35 approved state sections, with three additional new ones pending. That leaves only one state in the conterminous United States that is not included in our state sections. We should rectify that situation in 1983 and seriously pursue the possibility of establishing AIPG sections in the Canadian provinces. Geologists in Alberta and Quebec have indicated a serious interest in forming sections. I believe that it is both appropriate and feasible to expand the section concept internationally, and we should pursue this goal.

5. We should complete, print, and offer for distribution the three new Institute issue/position papers which are pending (groundwater, hazardous wastes, and radioactive wastes). The old series of suggested guides and practices should be reviewed, updated, re-issued, and vigorously marketed. We should also initiate development of a new issue paper dealing with geological hazards.

6. We must continue to monitor and actively participate in public/governmental affairs on behalf of the geological profession. We need to encourage and aid the state sections with their involvement in such issues at the state and local levels. However, in all of these efforts, we must always assure that our representative function actually reflects the views of our membership. Where a clear consensus does not exist, we need to reflect that honestly by presenting both majority and minority views, or other responsible divergent views, whenever it is reasonably possible to do so. We should always restrict our comments and positions on behalf of the membership to only those issues in which we have enlightened expertise, and those issues which have an impact on the science of geology or its professional practice.

7. We should continue to carefully monitor licensing, registration, or certification of geologists by state governments. The national organization can play an appropriate role in attempting to assure comity, reciprocity, or mutual recognition among those states having or contemplating professional licensing or registration, or in establishing uniform standards or testing procedures. We should not shirk our responsibility to take the lead for our profession.

8. We need to initiate a dignified, professional public relations campaign to make AIPG certification and the CPGS designation well-known and highly-regarded by the general public. One approach could be the placement of advertisements in large-circulation newspapers throughout the country several times a year, depicting in a few simple lines and tasteful, professional layout, that AIPG certification and the CPGS designation stand for the highest standards of competence, integrity, and professional ethics in the practice of geology. The reader of the ad should also be given an opportunity to receive additional information, and we should also encourage our state sections to undertake similar public-relations campaigns in their respective states.

9. We need to expand the capability of headquarters to provide a higher level of support and services for state sections and individual members. That will require some additional staffing. AIPG currently has the lowest staff-to-member ratio of any national geological society, by a wide margin.

I believe these nine objectives are both realistic and attainable in 1983 under constraints which exist for a volunteer organization of our capabilities and financial resources. They serve the needs of our members and the profession as I
perceive them, and are consistent with the fundamental long-range goals of the Institute.

**Other Happenings in 1983**

Other events in 1983 include Larry's awarding a record of 13 Presidential Certificates of Merit to AIPG volunteers who should receive recognition (see Appendix 3).

The first Annual Honors and Awards Booklet was distributed at the Annual Meeting Banquet in Jackson Hole, Wyoming. Prior to this, award citations were sometimes printed in *TPG*.

An attempt was made for the Institute to offer liability insurance to its members, but this didn't come to fruition in a significant way until 1993.

It may be of interest to list the 1983 committees and their members:

**1983 Institute National Committees**

**Annual Meeting Committee**
- Gene R. George, Chairman
- Donald F. Cardinal
- Gary B. Glass
- John J. Pedry
- Richard P. Ortiz
- William N. Barbat

**Constitution & Bylaws Committee**
- Joe Fritz, Chairman
- Todd H. Riddle
- Alan Jackson
- Ralph D. Loughman

**Educational Affairs Committee**
- Edward B. Nuhfer, Chairman
- Paul H. Moser
- Donald W. Levandowski
- Michael E. Davis
- Alan Baharlou
- John Mickelson
- Allen Perry

**Educational Services Committee**
- John O. Maberry
- Perry O. Roehl
- Elizabeth G. Newton
- Jeff Yarus
- Michael R. Rector

**Ethics Committee**
- William H. Park, Chairman
- Linda A. F. Dutcher
- Ralph H. Fellows

**External Appointments Committee**
- Guerry Newton, Chairman
- Donald C. Long
- Leon S. Ditzell, Jr.
- George H. Davis
- G. T. Farmer

**Government Affairs Committee**
- A. Gordon Everett, Chairman
- Jack D. McClelland

**Groundwater Committee**
- George H. Davis, Chairman
- Allen F. Agnew
- Robert E. Bergstrom
- Glen L. Faulkner
- James J. Geraghty
- Jay Herbert Lehr
- Gerald Meyer
- David A Stephenson
- Don L. Warner
- Kenneth N. Weaver

**Hazardous Waste Committee**
- Benton M. Wilmoth, Chairman
- Jeffrey L. Hynes
- Ronald A. Landon
- John C. Mullen
- Herbert B. Eagon, Jr.
- Paul B. DuMontelle
- Harry E. LeGrand
- Peter Lessing
- Albert LaSala
- Dick Benson
- Michael B. Arndt
- Harry L. Crouse
- S. Gonzales
- D. Theodore Clark
- Richard J. Proctor
- Mike E. Brazie
- David Johe
- John W. Hawley
- Donald J. Malone
- Norm Tilford
- Bill Cutchliffe
- William P. Wagner

**Honors and Awards Committee**
- Edward Rue, Chairman
- James A. Wheeler
- Grover E. Murray
- John T. Galey
- Robert R. Berg
- William H. Park

**Member Services Committee**
- Randall T. Chew, III, Chairman
- Maurice E. Fornay
- A. J. Gaudin, Jr.
- J. Michael Faurote

**Membership Committee**
- Luke Fournier, Chairman
- Cornelius K. Ham
- Edward S. Ryan
- Erwin F. Pesek, Sr.
- John P. Walsh
- Darryll T. Pederson
- Linn Hoover
- Rex B. Humphrey

**Nominating Committee**
- M. O. Turner, Chairman
- John A. Taylor
- Doris M. Curtis
Member Employment Survey 1983

In 1983 Executive Director Vic Tannehill made a statistical analysis of the AIPG Membership. The results are informative:

4,182 AIPG members as of March 1983

<table>
<thead>
<tr>
<th>Type</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporate</td>
<td>44%</td>
</tr>
<tr>
<td>Consulting</td>
<td>41%</td>
</tr>
<tr>
<td>Government</td>
<td>10%</td>
</tr>
</tbody>
</table>

with five percent retired

Members in Major Oil Companies

1. ARCO
2. Exxon
3. Mobil
4. Gulf
5. Citéés Ser.
6. Chevron
7. Marathon
8. Tenneco
9. Phillips
10. Shell

Members by State

<table>
<thead>
<tr>
<th>State</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Texas</td>
<td>24%</td>
</tr>
<tr>
<td>Colorado</td>
<td>14%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>7%</td>
</tr>
<tr>
<td>California</td>
<td>6%</td>
</tr>
<tr>
<td>Nebraska</td>
<td>4%</td>
</tr>
<tr>
<td>Louisiana</td>
<td>4%</td>
</tr>
<tr>
<td>Other U.S.</td>
<td>39%</td>
</tr>
<tr>
<td>Other Countries</td>
<td>2%</td>
</tr>
</tbody>
</table>

Consulting Firms with most Members

<table>
<thead>
<tr>
<th>Firm</th>
<th>Members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dames &amp; Moore</td>
<td>22</td>
</tr>
<tr>
<td>Geraghty &amp; Miller</td>
<td>16</td>
</tr>
<tr>
<td>WCC</td>
<td>12</td>
</tr>
<tr>
<td>Dunn</td>
<td>10</td>
</tr>
<tr>
<td>D’Apollonia</td>
<td>7</td>
</tr>
<tr>
<td>Leggette Brashears</td>
<td>7</td>
</tr>
<tr>
<td>Lehmann</td>
<td>6</td>
</tr>
<tr>
<td>Fox</td>
<td>5</td>
</tr>
</tbody>
</table>

149 Colleges & Universities have faculty members of AIPG

<table>
<thead>
<tr>
<th>College</th>
<th>Faculty Members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colorado School of Mines</td>
<td>7</td>
</tr>
<tr>
<td>University of Missouri, Rolla</td>
<td>6</td>
</tr>
<tr>
<td>Kent State University</td>
<td>5</td>
</tr>
<tr>
<td>Oklahoma State University</td>
<td>4</td>
</tr>
<tr>
<td>Texas A&amp;M</td>
<td>4</td>
</tr>
</tbody>
</table>

The membership by age showed that we were (are?) an old timers group:

The average age of AIPG members is 53.8 years old.

51 percent of members are between the ages of 46 and 60.

80 percent are between the ages of 36 and 65.

Of the geologic specialties, the most (35 percent) were Petroleum and Oil and Gas Exploration, followed by Engineering Geology, Hydrogeology, and Exploration Geology (Mining). See 1999 comparisons.
Fourth Annual AIPG Governmental Affairs Conference
May 1-2, 1983 The Ramada Renaissance Hotel Washington, D.C.

Sunday, May 1, 1983
Arrival of Participants at The Ramada Renaissance—Conference Headquarters.
Reception and Briefing at The Ramada Renaissance. Cash bar and informal gathering. Institute President Larry D. Woodfork will extend a welcome. Executive Director Vic Tannehill will introduce AIPG’s 1983 Governmental Affairs Committee Chairman Dr. Gordon Everett who will outline Conference events. The Institute’s Legislative Counsel James U. Hamersley, and its Washington Representative Dr. Russell G. Wayland will also make brief comments.

Monday, May 2, 1983
Governmental Affairs Conference Session at The Ramada outlining the “how to” of successful governmental relations for AIPG members. A panel made up of Tannehill, Everett, Hamersley and Wayland will present prepared remarks. Members attending will have the opportunity to comment, ask questions, and share legislative experiences.
Group visits on “The Hill” with Congressional Committees and staffs, Representatives, Senators, and/or key Federal Agency people.
Cocktail Party/Reception for Conference Participants, local AIPG Members and invited guests from Government.

Memorial Richard Henry Jahns 1915-1983

Richard H. Jahns, CPG 289

Our profession lost a true giant among geologists with the untimely passing of Richard H. Jahns, CPG 289, on the last day of 1983. Dick died of sudden heart failure at his home in Menlo Park, California.

Dick was born on March 10, 1915, in Los Angeles. He spent his first eleven years in Los Angeles and the next six years in Seattle, Washington. At the age of 17 he was accepted as a freshman at the California Institute of Technology. His academic achievements include a Bachelor’s degree in geology at Caltech in 1935, a Master’s degree in geology at Northwestern University in 1937, and a Ph.D. in geology at Caltech in 1943.

In 1937 Dick joined the U.S. Geological Survey as a junior geologist. Dick continued working at least part-time for the Survey throughout the rest of his life, becoming Senior Geologist in 1949 and Consultant to the USGS in 1967. His work with the Survey included quadrangle mapping in New England, New Mexico and California; glacial terrain problems; pegmatites; strategic minerals; and engineering geology. On assignment from NASA, Dick took Apollo astronauts Alan Shepard and Edgar Mitchell into the field to teach them rock identification and terrain analysis.

Dick loved gemstones and pegmatites and took many of his students and colleagues on field trips to the Pala gem mines in San Diego County. He knew most of the mine owners personally. One such owner was his good friend Ed Swoboda who also is a fine jeweler and has created many unique display pieces for Dick and Frances. Being a thoughtful person, Dick more than once asked Ed to make up special pieces so that he could give them to his office staff at Stanford.

During his tenure at Stanford, Dick usually managed to get away to New Mexico for a month during the summer. These trips were spent checking the field areas of some of his graduate student advisers and conducting field mapping in areas of special interest to him. Dick’s early work with the Survey had taken him to the Petaca District to study pegmatites and to south-central New Mexico to study metalliferous ore deposits. His Ph.D. dissertation is a comprehensive study of the beryllium and tungsten deposits of the Iron Mountain Mining District of Sierra and Socorro counties. Dick subsequently became an Associate Geologist for the New Mexico Bureau of Mines and Mineral Resources, a position he retained for the rest of his life. He was largely responsible for the Bureau hiring its first engineering geologist in 1970. Dick’s visits to the Bureau’s offices in Socorro were invariably marked by a sudden outbreak of waterbagging, fireworks detonations, and other forms of practical jokes.

The Four Careers of Richard H. Jahns

During a memorial service for Dick in Menlo Park, Dean Allen Cox, Dick’s successor at the Stanford School of Earth Sciences, observed that Dick had four identifiable facets to his career. These areas were 1) teaching, 2) research, 3) university administration, and 4) consulting and public service.

Teaching
Dick’s love of students was perhaps the overriding pleasure in his professional life. Dick began his 38-year teaching career at Caltech in 1946 as an Assistant Professor. He rose to full Professor in just three years; a very impressive performance and probably still a record at Caltech. In 1960, after 14 years at Caltech, he left to become Chairman of the Earth Sciences Division and Professor of Geology at the Pennsylvania State University. Two years later he was elect-
ed Dean of the College of Mineral Industries at Penn State. In 1965 Dick returned to California to accept the position of Dean of the School of Earth Sciences at Stanford University. He stepped down as Dean in 1979, but remained on the faculty as the Welton J. and Maud L'Anphere Crook Professor of Geology and Applied Earth Sciences until his death.

Research

Richard Jahns was one of the world's foremost mineralogists and an expert on pegmatites. He authored at least 46 publications on these subjects. One classic paper on pegmatites was written by Dick in 1955 for the Fiftieth Anniversary Volume of Economic Geology. This 105-page treatise shows he did his homework—he included 698 references!


In 1974 the Encyclopedia Britannica asked Dick to write the discussion on Igneous Rocks, which he did in a clear manner for all to read.

Dick's research also included delving into the effects of earthquakes. For example, his 1974 report to the National Academy of Engineering was titled "Possible uses of natural ground as an in-place shake table."

Consulting and Public Service

By the middle 1950's the name Richard Jahns had become widely known at local and national levels. As a result, he began to be selected to serve on committees and boards. With his full commitment to teaching and research, Dick nevertheless rarely refused an opportunity to serve the public. He felt that geology could contribute to the solutions of many problems, and that politicians, laymen, and experts in other disciplines must be made aware of this.

Listed below are the public committees, boards and advisory panels that Dick served on or chaired.

Local Service:
- Mayor's AIPG Committee on Geologic Environment, City of Los Angeles;
- Los Angeles City Engineering Geologist Qualifications Board;
- Seismic Advisory Board, Redwood City
- Southern California Rapid Transit District's Board of Geotechnical Consultants for Los Angeles Metro Rail Project.
- State of California:
  - Governor's Science Advisory Board;
  - Geologic Hazards Advisory Committee;
  - State Mining and Geology Board;
- California Legislature Joint Committee on Seismic Safety;
- California Seismic Safety Commission.

Federal:
- White House Office of Science and Technology, Task Force on Earthquake Hazard Reduction;
- NASA Apollo Mission advisor to astronauts and lunar landing sites;
- U.S. Geological Survey, Consultant since 1967;
- U.S. Bureau of Land Management, Desert Plan Advisory Committee;
- Atomic Energy Commission, Advisor;
- U.S. Bureau of Reclamation, Auburn Dam Site Advisor;
- National Science Foundation, Earth Sciences Advisory Panel;
- Environmental Sciences Advisory Board.

Dick's professional and academic contributions to geology resulted in his receiving the following honors: Honorary Member, Association of Engineering Geologists, 1983; Teacher of the Year, Stanford University, 1983; Ian Campbell Medalist of the American Geological Institute, 1981; Public Service Award, American Association of Petroleum Geologists; Sigma Xi National Lecturer, 1968; Achievement Award, American Federation of Mineralogical Societies; Distinguished Alumnus Award, Caltech, 1970; Welton J. and Maud L'Anphere Crook Professor, Stanford University; and president of the Geological Society of America, 1970-71.

He was a member of the Board of Directors of three California corporations, two of which are involved mainly in seismic geology: Lindvall, Richter and Associates of Los Angeles, Earth Sciences Associates of Palo Alto, and TERA Corporation of Berkeley. Dick also acted as advisor or counselor to several other geotechnical firms, and frequently was asked to review their findings prior to the release of their reports.

An insight into Dick's clear manner of thinking and expressing himself may be obtained by quoting part of an impromptu statement he made as moderator of a panel convened for the 1969 AEG sponsored Symposium on Engineering Geology in the Urban Environment. Dick's panel topic was "The role of geology in urban planning and how best to insure its use." Three non-geologist panel members had just commented on the apparent lack of agreement between geologists when assigning risk. Jahns' impromptu reply:

"If I could put in my two-cents worth here, it seems to me it is very important to distinguish between two related but basically different kinds of questions. First is the matter of appraising risk per se, which is difficult at best and which can precipitate legitimate disagreements because matters of judgment are involved. The other question is one that is rarely asked directly—that of how much risk we are willing to assume in a given project. This one is incredibly difficult, because the proper answer involves not just geology, engineering, and other technical areas, but also financial and political factors and the appraisal of social losses and gains. Even when the issue has been faced up to, complete an objective analyses have rarely followed—a condition that underlies many of the controversial problems of the past decade or two."

Dick authored or co-authored more than 180 published papers. At least three of Dick's publications are regarded as classics in their fields. These publications are as follows:

- The Geology of Southern California, 1954, California Division of Mines, Bulletin 170, two volumes. (Dick was editor and contributor to seven articles. It is still the most comprehensive single source of information on the geology of this region.)

The Late Pleistocene in the Connecticut Valley in Northern Massachusetts, 1967, In Peter Robinson (Editor), Field trips in the Connecticut Valley, Massachusetts, new England Intercollegiate Geology Conference, Annual Meeting, Amherst, Massachusetts, pp. 166-193. (A classic on the importance of Quaternary geology.)

Two of Dick’s articles for the Caltech alumni magazine Engineering and Science have whimsical titles but meaty content. These articles are “The purchase of a gemstone—or what to do until the appraiser arrives,” 1955; and “Residential ills in the Heartbreak Hills of southern California,” 1959. This latter work was the theme for Dick’s involvement with the City of Los Angeles, sponsored by AIPG, that led to the formulation of the City’s Engineering Geologist Qualifications Board. The city grading ordinance he helped write was the forerunner of the California State Geologists Registration Act of 1968. Many states have later used California’s Act as a model.

Dick’s many friends will miss him, and so will our profession.


First Public Service Award

Until 1982, the Institute had two prestigious awards, the Ben H. Parker Memorial Medal (since 1969) and the Martin Van Couvering Award (since 1979). The Public Service Award was established by the Executive Committee in 1982, in recognition of one of its primary purposes: service to the public. In 1992, it was renamed the John T. Galey, Sr., Memorial Public Service Award, in posthumous honor of our fourth President, whose long professional career was a continuum of service to both the geological and the general public. This recognition is important because so many Members have distinguished themselves and the Institute by giving expert testimony to governmental units, by serving on governmental commissions and committees, and by providing geological expertise where it was needed by the public at large.

The first award went to Art Spaulding (1975 President) in 1983, and fittingly, the citationist was his long-time friend John T. Galey, whom the award name would honor ten years later.

1983 Annual Meeting, Jackson Hole, Wyoming

Gene George was the General Chairman of the memorable Twentieth Annual Meeting, September 7-10, 1983, at the beautiful Snow King Resort in Jackson Hole, Wyoming.

Festivities started Wednesday night with a “Poolside Icebreaker.” Thursday noon a “Dagwood Sandwich” buffet, and Thursday evening a “Chuckwagon Cookout”—a real western steak barbecue with cowboy music at the Triangle X Guest Ranch (in the rain!), and a Friday noon “Chicken Cordon Bleu” AIPG Annual Business Luncheon Meeting. There was no formal Banquet. Special activities included guided Snake River raft float trips from Dead Man’s Bar to Moose, Wyoming. Comment: “It was thrilling but not really white water.”

Two Short Courses were offered, both by geologist Joseph A. Fischer, president of Geoscience Services, Millington, New Jersey. The first was “The Geologist as Expert Witness,” and the second was “Minimizing Professional Risk and Liability.”

The Parker Medal was awarded to John D. Haun and the Martin Van Couvering Award went to William A. Newton. John’s citation by his colleague James A. Barlow, Jr., CPG 199 is included in John’s presidency year 1976. Bill Newton’s citation follows:

Citation for
William A. Newton, CPG 8, 1983 Recipient of the Martin Van Couvering Memorial Award,
as Written and Delivered by Jay Glenn Marks

Twenty years ago a few dozen geologists who believed that theirs was a noble but maligned profession gathered together and founded the American Institute of Professional Geologists. Their principal objective was to strengthen geology as a profession, thereby improving both its usefulness and its public image. Their act required conviction, ability and steadfastness
of purpose. Included in this group were Ben H. Parker, in whose memory an award has just been given, and Martin Van Couvering, in whose memory the present award is herewith being granted. It is being granted to another member of the illustrious group that founded our Institute, a man who demonstrates the conviction, ability and steadfastness of purpose that enables us to exist and prosper. He was a member of the first executive committee, bears member number eight, and still continues to serve AIPG whenever called upon. With pride the Institute this year names as recipient of the Martin Van Couvering award, which is given for outstanding contributions to AIPG, William A. Newton.

We may reasonably ask ourselves, what kind of man is it and what has he done for the Institute that he deserves such recognition from us. Let me tell you a little about Bill Newton.

He took his B.S. degree at the University of Illinois in 1935, and his M.S. degree in 1937 while working for the Illinois Geological Survey. I first met him in 1939 when he was an instructor in geology at Stanford University. Meantime he had married his schoolmate sweetheart Brenda, the lovely lady who is at his side tonight. Incidentally, they are the parents of three eminently successful children. Bill later worked for Carter Oil Company, was a successful oil-finder, resigned to become a successful consultant, was in 1960 offered the presidency of the Rocky Mountain Natural Gas Company, which he headed until retirement in 1975. Retirement, though, is a relative matter, as we shall see. Last year, for example, he conducted an independent geological survey of an area in Kentucky, recommended a drilling site and was rewarded with a nice gas producer. Meantime, at home, he carries a 19-stroke handicap on the golf course and last year won a hole-in-one trophy during Colorado senior tournament competition.

Bill has not lagged in the field of community service. He was for two terms the mayor of Columbine Valley, the town in which he lives. He has guided the ground-water and floodplain fortunes of that town. Some of you Coloradans will remember the prominent role that Bill played in the Ruedi Dam controversy, when he single-handedly and publicly battled the bureaucracy over the geologically inappropriate location of a dam across the Frying Pan River. Years ago he served as Second Vice-President of the Rocky Mountain Association of Geologists, more recently as President of the Denver Petroleum Club and, last year, as President of the Rocky Mountain Petroleum Pioneers.

But the Martin Van Couvering award is not being given for these things, but for service to AIPG, and here also Bill's record is outstanding, for without the likes of him this organization simply would not exist.

On that first executive committee, Bill worked closely with Ben Parker and Martin Van Couvering. He was one of the fund-raisers that obtained large private contributions to tide us through the first year and prepared the recommendation for a class of junior membership. In later years, he has served as chairman of the Nominating Committee, chairman of the Committee on Employees' Retirement Fund, and twice as a member of the Committee on Goals and Strategy and Plans for the Future. He was Chairman and AIPG representative on the American Geological Institute Committee on Environmental Geology, an offshoot of a proposal by John Galey that AIPG establish an Environmental Geology Center—a proposal that Bill and Ben Parker worked on and promoted together. It was the decision of the AGI Committee, not of Bill Newton, that AIPG not be supported in establishing the Center. In 1979 he was a member and the decisive voice on the Colorado Section's Public Affairs Committee that ordered the printing and distribution of Al Saterdal's production, "The U.S. Oil and Gas Industry," which was later adopted as an AIPG Position Paper, and of which every AIPG member and every member of the U.S. Congress received a copy. He was also a member of the joint AAPG-AIPG committee that settled the dispute over professional membership in those two organizations.

In my own opinion, the great value of having a fellow like Bill Newton around was confirmed in another situation in that same year, 1979. You will recall that we had to accept the resignation of our then one-and-only, highly regarded executive director, Art Brunton, who suggested that a three-man Headquarters Committee, consisting of Bill Newton, Andy Alpha and myself, would be all that was required to oversee the Headquarters office until we could find a new executive director, since the brilliant, talented and industrious young executive secretary, Deborah Dare, had all operations well in hand. Art was correct, because Debbie (now Mrs. Bobbie J. Timmons) was doing a miraculous job in running the outfit. But some decisions had to be made that were not in her purview. Here Bill took the lead, and my files are full of notes and letters showing that Bill took the initiative and, so to speak, wrote the decisions in those cases. We lost Bill from this committee in 1980 because he had been elected Vice-President of the Institute.

So in 1980 Bill served ably as Vice-President on the Executive Committee while back home at Headquarters he was chairman of the Finance Committee. There was a bunch of money coming in from dues payments, since our membership was then around four thousand and climbing. With his knowledge of finances to guide him, Bill directed that our funds be put in a money market account, and you know what money market accounts did in those days! In short, his wise advice made a bundle for our treasury.

Now I would not presume to suggest that making a lot of money for the Institute is grounds for awarding this very special commendation; but neither does it detract from the value of the services that Bill has rendered. When you add all of these things together you see that we have a very worthy recipient of the award for outstanding contributions to AIPG, and I take great pleasure now in presenting the Martin Van Couvering Memorial Award to William A. Newton.
One thing that the president of any organization must learn is that neither he nor the organization can be all things to all people. He, in concert with his fellow officers, must set some reasonable goals and not be distracted from pursuing them. This, with the able help of the Executive Committee, I have tried to do.

It would be appropriate this morning, in examining the state of the Institute, to review the goals for 1984.

One of the prime goals is to rebuild the Institute's financial reserves to a more acceptable level. The low cash reserve has been a limiting factor in the expansion of Institute programs and a source of worry and concern. The 1983 Executive Committee took a bold and significant step to help correct this situation by voting for a dues increase. It was necessary, they did it, and with it, we are accomplishing our objective. According to the latest financial statement, the financial forecast appears to be on target. We should attain our goal of an excess of income over expense of $50,000. This amount has been earmarked and appropriated for cash reserve. Coupled with the $18,500 reserve on hand at the beginning of the year, we should be able to end the year with approximately $68,500 in cash reserve, or Members' equity, if you will. This is still not quite where we would like it to be. Organization executives, CPA's, and credit rating firms have a rule-of-thumb that non-profit organizations, such as AIPG, should have a minimum of three months' operating dollars in a liquid cash reserve. Our expenses run, on the average, $30,000 per month. Applying this three-months rule, the Institute should have $90,000 in cash reserve to be in a secure and comfortable financial position.

A basic financial problem with AIPG is that 97 percent of our income is derived from Members' dues. The obvious answer to this problem is to generate a source of non-dues income. Unfortunately, a reliable source of non-dues income for AIPG has not been discovered in the past and it continues to elude us.

1984 has been a good year to concentrate on finances. It being an election year, things are relatively quiet on the Potomac and in the various state houses. This is not to imply that we are asleep at the switch. Russell Wayland, our Washington Representative, stays on top of the issues and keeps the Institute advised on affairs in which geologists have an inherent interest, so that AIPG can take appropriate and timely action. Also, Paul Strunk of Texas, who is Chairman of the Institute's State Affairs and Registration Committee, is staying abreast of events in his area of responsibility.

A second goal is to take in 300 new Members and 25 Associates. We are reasonably close to being on target. Through September, we had accepted 214 new Members and 32 Associates. We have already exceeded the goal for new Associates. Making a projection based on the September 30 figure, we should close out the year with 284 new Members, 16 shy of the goal. Our greatest area of growth continues to be in the field of Ground Water.

A second part of the membership goal, increasing to 8,000 Members in the near future, is lagging. We seem to be having difficulty in developing an effective strategy to reach this goal. But each of you can help. Here is your chance to be a participant. I would like to challenge each of you to bring in...
at least one new Member by this time next year. When you return home, carry this challenge to your Section. Each of us knows one top-flight geologist who should be a member of AIPG. If each Member will be responsible for one new Member in the next twelve months, we obviously will double our membership without a grand strategy. Don’t assume that your fellow professional and co-worker is a member, ask him!

Fifty percent of AIPG’s membership is in four Sections: Texas 24%, Colorado 13.3 percent, Oklahoma 6.6 percent, and California 6.1 percent.

A third goal is to publish and distribute issue and/or position papers on Hazardous Waste and Radioactive Waste. Production is underway on both publications. These will be important contributions to the public’s knowledge on these vital subjects. A second printing of Ground Water - Issues and Answers is planned.

Another goal is to assist all Sections in developing strong organizations that can and will carry out activities of value to AIPG Members in their Section within the framework of the Constitution and Bylaws. We are well aware that the heart and strength of the Institute is in the Sections. Both the Executive Committee and the Executive Director are doing all they can to help and support our 35 Sections. Eighty percent of the Sections showed growth in 1983 and new strong leadership is coming to the fore in many Sections. However, to be candid with you, a few Sections appear to be out of step from time to time. This is especially apparent in the membership screening process. Every now and again, a Section is distressed because the Executive Committee did not follow and agree with the recommendation of its Screening Board. However, I hasten to add that 99 times out of a 100, there is complete agreement with the Section Screening Boards. Although the Sections are given a great deal of autonomy, the Institute’s Constitution and Bylaws mandate that certain membership application procedures be strictly adhered to by every Section. While not specific on every step of the application process, they are very specific on some matters and on these, there can be no variance. While the reviewing officers and the Executive Committee rely heavily on and value the comments and recommendation of the Screening Board, there are rare occasions when the reviewing officers recommend a verdict which is different from the Screening Board. The reviewing officers do a marvelous job and I commend them. We must all realize and accept the fact, and I am sure all of us do, that the Bylaws place the final responsibility and authority for accepting or rejecting applicants in the hands of the Executive Committee.

The fifth goal is to eliminate any unnecessary delay in the membership screening process. We are showing progress. Headquarters, Section Screening Boards, and the reviewing officers have all contributed to this progress. It is now taking, on the average, just under nine months to process an application from start to finish. This is down from eleven months in the recent past. I would like to get this down to six months but our Executive Director tells me this is unrealistic. He says eight months is about the best we can hope for. But please understand that the screening process remains a very thorough operation. While sometimes the wheels may grind slowly, they do grind exceedingly fine.

If I may, I would like to take a minute and share some personal thoughts and observations with you.

Effective professional societies have a bias for action. They are not paralyzed by the decision making process. They continually listen to and learn from the people they serve. They stick reasonably close to what they know how to do best.

With regard to AIPG, I have observed that our diversity, which should be our greatest strength, sometimes is our greatest weakness. Our coefficient of cohesiveness is not as great as it should be. We should strive to correct this. We need dedicated advocates and positive thinkers. We must continue to grow in membership strength and build a stronger organization.

Building takes faith. Each of us has to believe. We’ve got to feel that together, we can make it happen. Then, we can truly say Sono other organization is as uniquely qualified to serve the professional interests and needs of all geologists as the American Institute of Professional Geologists.

Dean sent this letter to Herbert G. Koogle, president of the National Society of Professional Engineers (NSPE):

It has come to my attention that the National Society of Professional Engineers has endorsed resolutions proposed by
the Illinois and Kentucky engineer societies which would call on the Federal Office of Surface Mining to remove geologists as Lead Professionals in mine reclamation. On behalf of the Institute of Professional Geologists I take exception to these resolutions.

A Lead Professional has the sign-off responsibility for certifying the validity of technical information. In mine reclamation work, the overwhelming majority of this information is geological or geotechnical in nature. For a professional engineering society to recommend that geologists not be allowed to have the sign-off responsibility on geological data is difficult to understand. The Institute would be interested to know your reasoning on this matter.

[Editor: No reply was received. See 1988 for a flare-up of this situation in Kentucky.]

As Dean left office, he sent this letter (excerpted) to the Institute:

As I leave office, a continuing problem weighs on my mind, namely, we appear to be no closer to a unified professional organization for all professional geologists than we were a decade ago. In fact, the profession is witnessing a proliferation in the number of societies avowing to address the professional well being of some special interest group. It is my considered opinion that this is not, in the long term, a healthy situation. In addition to membership in the appropriate scientific/technical society, all geologists, no matter what their scientific specialty or mode of employment, should be able to unite under one professional banner. In my mind, there is no question but that the American Institute of Professional Geologists is the appropriate agent for this purpose.

The founders of AIPG meant for the Institute to be a voluntary effort on the part of geological professionals to police themselves for competent and ethical conduct. This is the cornerstone of AIPG. All other purposes are ancillary to this basic premise. We should never forget this. We should stand tall, never waver from the original ideals, and continue to strive to be the professional organization with which all geologists can identify.

The past year was very gratifying to me personally. It was an honor to have served as your President and to have been entrusted with the stewardship of the Institute. To serve as President of any organization is a privilege that few have had the opportunity to serve the Institute to the best of my ability.

Dean Grafton
1984 President

1984 “Qualifying” Societies for Membership Purposes

To apply for AIPG membership, individuals must be accepted members (Regular/Full or Junior) of a “qualifying” other geologic society. To apply for Associate affiliate, individuals must be accepted members (Regular/Full or Junior) of such a “qualifying” other geologic society.

Presently those “qualifying” other geologic societies (either a Member Society of the American Geological Institute or other qualified society approved by the Executive Committee) are:

- American Association of Petroleum Geologists (AAPG)
- American Geophysical Union (AGU)
- Association of American State Geologists (AASG)
- Association of Earth Science Editors (AESE)
- Association of Engineering Geologists (AEG)
- Division of Professional Affairs-AAPG (DPA-AAPG)
- Geochemical Society (GS)
- Geological Society of America (GSA)
- Geoscience Information Society (GIS)
- Groundwater Technology Division - National Water Well Association (GTD-NWWA)
- Mineralogical Society of America (MSA)
- National Association of Geology Teachers (NAGT)
- Paleontological Society (PS)
- Seismological Society of America (SSA)
- Society of Economic Geologists (SEG)
- Society of Economic Paleontologist & Mineralogists (SEPM)
- Society of Exploration Geophysicists (SEG)
- Society of Independent Professional Earth Scientists (SIPES)
- Society of Mining Engineers of AIME (SME-AIME)
- Society of Petroleum Engineers of AIME (SPE-AIME)
- Society of Vertebrate Paleontology (SVP)

The Institute has since abandoned this “science society” requirement for AIPG membership.

Congressional Testimony by Allen F. Agnew and Ernest K. Lehmann

These two eminent geologists were the 16th and 17th CPGs to give congressional testimony in Washington, D.C. The Institute can take pride in attempting to educate congressmen on issues that affect geologists and the geology profession. Dr. Agnew testified on “The National Policy on Ground Water Protection,” and Dr. Lehmann testified on “National Mineral and Materials Policy.” All congressional testimonies by CPGs are given in Appendix 9.

1984 Annual Meeting, Walt Disney World Village, Florida

General Chairman Bobby J. Timmons did a heck of a job in producing the 21st Annual Meeting! In addition to getting reasonable rates at the elegant Americana Dutch Resort Hotel, Bobby arranged for the hotel to cater to AIPG members and guests at poolside for the Icebreaker and for the Banquet—a Hawaiian Luau Buffet. At the buffet, we were presented leis by island girls, and dined on suckling pig, teriyaki steak, sweet and sour pork, and exotic fruits. The Program:

Wednesday, October 17
Advisory Board Meeting
Executive Committee Meeting
Phosphate Flyover FIELD TRIP
Ice-breaker Cocktail Party - Poolside at Americana Dutch Resort

Thursday, October 18
AIPG Foundation Breakfast
Inter-Society Advisory Group Meeting

Morning General Session
"POLITICS AND THE PROFESSION"
Governor Bob Graham of Florida
U.S. Senator Paula Hawkins
John Ward, Director of OSM
William C. Mott, Chm., Committee on Strategic Materials Mineral Resources
AIPG Luncheon

Afternoon General Session
Ross Schaff, State Geologist of Alaska
Homer Hooks, President, Florida Phosphate Council
E. F. “Andy” Andrews, Allegheny International
Robert Terrell, Staff of Senate Energy and Natural Resources Committee
AIPG Banquet and Award Presentation
Luau Buffet - Poolside

Friday, October 19
Past Presidents Breakfast
AIPG Annual Business Meeting
FIELD TRIP to Kennedy Space Center

First Honorary Member Award

1978 President Grover E. Murray was the first of only 25 members to be so honored thus far (see Appendix 3). His citation, by M.O. Turner at the 1984 Annual Meeting, is given for Grover’s presidency year, 1978.

Other awards at the 1984 Annual Meeting were the Ben Parker Medal to Robert L. Bates, the Martin Van Couvering Award to Andrew G. Alpha, the Public Service Award to Allen F. Agnew, and four Presidential Certificates of Merit.

Robert L. Bates
Andrew G. Alpha
Allen F. Agnew
Grover E. Murray

Taken at the 1984 AIPG Annual Meeting Banquet October 18th: (upper left) Grover E. Murray receives Honorary Membership; (upper right) Robert L. Bates presented Ben Parker Award; (lower left) Allen F. Agnew is given Public Service Award; and, (lower right) Andrew G. Alpha receives Martin Van Couvering Award.
1985 President Ernest K. Lehmann

Ernest K. Lehmann, CPG 583

All of our Presidents have proven to be exemplary professionals, but some seem more so. Ernest Lehmann, CPG 583, is one whose dedication to the Institute seems to shine. As an international mining geologist, he has spread the essence of professionalism to the far corners of the world. As you will read from the following tributes, he earned the Institute’s two highest honors, the Parker Medal and Honorary Membership.

He was born in Heidelberg, Germany, went to high school in New York, graduated Williams College cum laude, did graduate work at Brown University and Harvard Business School, served in the U.S. Army and founded his own consulting company; he fought for the AIPG Foundation, and has been its President since 1987; he encouraged the publication of several AIPG booklets, and was Chairman and main author of the insightful AIPG Long Range Planning Committee report of 1991, titled “The Institute in Evolution” (see Appendix 14).

A further insight into Ernest Lehmann’s career can be gleaned from excerpts from his citationist Ted S. Foss and Susan M. Landon:

Citation for
Ernest K. Lehmann,
1987 Recipient of the
Ben H. Parker Memorial Medal

The criteria for the award of the Ben H. Parker Memorial Medal could have easily been written specifically with this year’s recipient in mind. Ernie Lehmann has made significant contributions to our profession in each of the areas of education and training of geologists, service to the Institute, leadership in laws and regulations affecting geology, and activity in local and regional affairs of geologists.

Ernie was born in 1929 in Heidelberg, Germany. He attended elementary and secondary schools in New Rochelle, New York. He graduated in 1951 from Williams College, cum laude and with highest honors in geology, and was a graduate student and teaching assistant at Brown University in 1951-52. He has also completed the Owners and Presidents Management Program at the Harvard Business School.

Ernie served on active duty in the U.S. Army from 1953 to 1955 and was an officer in the U.S. Reserve from 1955 to 1958.

His professional career began in 1950 with the Signal Mining Company in Bannock, Montana. From 1951 to 1958 he was employed by Kennecott Copper Company and its subsidiary, Bear Creek Mining Company. He was instrumental in the discovery of the New Lead Belt in Missouri and in base and precious metals exploration throughout the United States.

In 1958 he began his consulting career, initially on his own, then as a partner in Lindgren and Lehmann, and finally, in 1967 he formed Ernest K. Lehmann & Associates, Inc., of which he is President and CEO. Over the last twenty years, this firm has become one of the most respected groups of geological consultants in the industry, conducting exploration and evaluation programs for mineral deposits in the U.S., Canada, Latin America, Africa, Europe, and Asia.

He became a charter member of the American Institute of Professional Geologists in 1964 and has served as Minnesota-Wisconsin Section President, and national AIPG President. He is also a member of the Society of Economic Geologists, Society of Mining Engineers, Mining and Metallurgical Society of America, Northwest Mining Association, Society for Geology Applied to Mineral Deposits, New York Mining Club, Twin Cities Geologists, and other scientific and professional organizations. He is a registered geologist in the states of California, Georgia, Delaware, and Alaska. He has served on an advisory committee to the U.S. Congressional Office of Technology Assessment on Strategic Minerals. He has testified on professional and mineral-related issues before the U.S. Congress and the Minnesota legislature. He is also a candidate member of the American Society of Appraisers.

In summary, Ernie’s life and career have been extremely rich in those activities that provide “outstanding service to his profession.” It is indeed an honor for the American Institute of Professional Geologists to have among its ranks a man of Ernie’s caliber to whom the Institute’s most distinguished award can be presented.

Ted H. Foss, CPG 6393

Citation for
Ernest K. Lehmann,
1997 Recipient of the Award of
Honorary Membership

What does an organization do to say thank you to someone who refuses to rest on past laurels? In this case, the American Institute of Professional Geologists presents Honorary Membership to Ernest K. Lehmann to acknowledge “an exemplary record of distinguished service to the profession and to the Institute.” This award is our way of saying thank you for continuing service to AIPG and the profession.

Ernie currently serves as the Chairman of the AIPG Foundation which was resurrected as a result of his dedication.
Ernie has worked to raise funds, identify new creative methods of gift-giving, and keep the grasping hands of past presidents (like me) out of the pot until a critical mass was achieved. Ernie, a charter member of the Institute, has served as President of the Minnesota-Wisconsin Section (1866), National Vice President (1981), National President-Elect (1984), and National President (1985). In 1987, Ernie Lehmann was awarded the Ben H. Parker Memorial Medal. He has served on many committees and worked as a volunteer on a variety of projects. Ernie has also provided support to government affairs activities of the Institute including testimony on revisions to the 1872 Mining Law before the Rahall Committee. In 1991, Ernie was awarded a Presidential Certificate of Merit for his continued service. Several civic organizations in the Minneapolis area have benefited from Ernie’s interests and beliefs.

The details of this illustrious career have been documented in previous award booklets. We thank Ernie for all the elbow-grease provided to the Institute over nearly thirty-five years; we thank Ernie for fighting for the Foundation; and, personally, I thank Ernie for his support of a younger professional even if she was a petroleum geologist. This award of Honorary Membership recognizes the continuing commitment that Ernie Lehmann devotes to the Institute and the profession.

Susan M. Landon, CPG 4591

President’s Message

“Institute a Professional Organization in the Public Eye”

By Ernest K. Lehmann

As a professional organization, one of AIPG’s primary goals is to increase our credibility and visibility both as a profession and as an Institute. We on the Executive Committee believe that this will strengthen the profession and benefit the public.

One way we expect to do this on the national level is through the activities of Bill Murray’s Governmental Affairs Committee, helped by our Washington representative, Russ Wayland, and our legislative counsel, Jim Hamersley.

The committee is already looking at aspects of the Superfund law, the administration’s tax package and the budget. The committee is looking at those aspects that impinge on our profession or where there is an appropriate role for geology or geologists. For example, will the tax package encourage sound resource management in accordance with the geologic realities of natural resources? Does the budget provide for adequate levels of geological research and education? Is an agency’s geological staffing at levels appropriate to the agency’s mission?

After such reviews, testimony on some of these and other issues will be prepared for oral and/or written presentation.

Independently of the national organization, several AIPG State Sections have recently testified at BLM hearings on regulations governing management of federal oil and gas leases. We hope that all State Sections will play an active role, making their voices heard on geologic matters that concern the public and the profession, especially on the state level.

However, we should keep in mind that many aspects of these public issues can best be addressed by others. For example, the economic effects of the Superfund law on the lead mining industry or of the oil and gas royalty regulation on independent producers can perhaps best be left to appropriate industry or trade association representing those groups, though many of us may be members of both. In other cases, testimony of an AIPG member as an individual, as an independent operator or in some other role may be more appropriate than testimony on behalf of AIPG.

Because we represent the broadest possible spectrum of the profession, we should keep a few basic principles in mind in determining our position on both state and national issues. We can do so by asking ourselves at least the following questions:

How is the public affected by the issue?
How is the geologic profession—as a profession affected?
Is there a truly geologic aspect?
Can we take a positive, constructive approach to the problem addressed?

If we carefully examine the issues in these terms and focus on the geological and professional questions involved, we can benefit the public, our profession and our membership.

Institute Officials Meet With Interior Secretary Hodel

On April 16th, 1985, AIPG officials met with Interior Department Secretary Donald Hodel at the DOI offices in Washington, D.C.

Representing the Institute at the meeting were Ernest K. Lehmann, president; Travis H. Hughes, President-Elect; and William G. Murray, Chairman of AIPG’s Governmental Affairs Committee. In addition to Secretary Hodel, two of the Department’s Assistant Secretaries were in attendance: Stephen Griles, Assistant Secretary for Lands and Minerals,
2. The role of geology in energy and minerals policy.

1. The role of professional geologists.

The following is taken from the text of a letter delivered to Hodel:

The American Institute of Professional Geologists welcomes having this opportunity to meet with you and to discuss with you some of our concerns related to the role of geology and of professional geologists in relation to the Department of the Interior.

The activities, policies and programs of your Department of the Interior are of prime concern to most professional geologists. The Department is probably the largest single employer of geological scientists in this country. It is the primary research agency in the geological sciences. As steward of a large percentage of the nation's land and as the administrator of the energy and mineral wealth contained in the nation's land, both onshore and offshore, your Department's policies and activities have a vital effect on the development of these resources. As the agency primarily responsible for research on water resources and as manager of the agencies that are engaged in reclamation projects, your Department policies and activities impact water resources and are in turn impacted by problems related to waste disposal of all types.

For these reasons, the Institute would like to convey to you the following thoughts:

1. The role of professional geologists.

Though the establishment of policy is the purview of each administration, nevertheless, policy respecting land, minerals, energy and water resources must be based on knowledge of the geologic environment. We believe that wherever possible, high level policy-making positions should be filled by professionals in the disciplines appropriate to the particular area of decision making. For this reason, we have supported two current candidates for the post of Assistant Secretary for Energy and Minerals—both of whom are members of the Institute: Dr. Charles Mankin of Oklahoma and Dr. Gordon Everett of Maryland—either would be well qualified for this post. Further, we would like to offer our assistance in locating other candidates for policy-making positions as the need may arise.

2. The role of geology in energy and minerals policy.

Geology and geologists are integral to nearly all aspects of energy and mineral policy. In amplification of this statement, we would like to highlight just a few geologically related concepts important to the development of energy and minerals policy.

a. The need for abundant energy and mineral reserves:

Abundant and available energy and minerals supplies are vital to the national welfare. The U.S. economy was not built and cannot grow in an atmosphere of scarcity of these vital raw materials. Further, the lack of strategic and critical materials in times of international crises can have a severe effect on the national security and economic well being. In order to be available when needed, “resources” need to be converted to “reserves.” The recognition of the distinction between reserves and resources is critical but is often overlooked by non-geologist decision-makers. Only reserves are available in the near term. Further, to assure availability, a significant portion of major energy and mineral reserves needs to be of domestic origin.

b. Some fundamental geologic principles:

The nature of geology is that it is an evolving and cumulative science. As applied to energy and mineral deposits, this means that areas that have been searched in the past frequently yield new mineral discoveries because of improved exploration and extraction technology and more importantly, because of evolving geologic concepts. In addition, changing technology and concepts also identify new “frontier” areas which have not hitherto been explored. A few examples suffice: the discoveries of oil and gas in the Rocky Mountain overthrust, the “new” lead-belt in Missouri, the platinum deposits of the Stillwater complex. All of these represent discoveries in geologically well known areas where radically new concepts have led to the development of important new reserves.

c. Land Policy

There is a truism that mineral and energy deposits are where you find them. They cannot be willed to occur on a specific piece of land to suit the whims of land use planners. In addition, minerals and energy exploration are essentially statistical “numbers” games: the more acres of favorable terrain that are explored, the more likely it is that discoveries will occur. In addition, exploration is three dimensional—new evolving technology and theory may allow deeper exploration than hitherto possible. For this reason, though some limited areas of the public lands may require establishment of single use management to preserve unique resources, most of the nation’s land should be governed by a multiple use policy that permits continuing exploration and development of mineral and energy resources in an environmentally sound manner. The maximum area possible should be open to exploration at any time. Limitations on areas available for exploration stifles new exploration concepts and reduces rather than enhances exploration.

d. Fiscal and economic policies.

Fiscal and economic policies have important impacts on making energy and mineral exploration and development economically attractive. Though the Interior Department is not responsible for fiscal and economic policy, it is the Department most concerned with natural resource problems. Therefore, we urge that the Department be a strong advocate of policies that will encourage the development of a sound energy and minerals base for the United States and wise use of our national minerals and energy resources. Tax and other policies which do not recognize the realities of these industries and their importance to the economy should be opposed and discouraged. Your Department in cooperation with the geologic profession can and should educate other government entities as to these realities.
3. **Research.**

Research is the foundation for advancement of scientific knowledge and its application to human welfare. The Institute commends the U.S. Geological Survey and the U.S. Bureau of Mines for their commitment to high standards of research. These organizations are the nation’s foremost research organizations on energy, minerals and water resources. We believe that the federal budget should continue to provide for a high level of such research. We further believe that a closer communication between the Department and its agencies and the geological profession on budget and research priorities would be useful to the Department and the nation. We would like to offer the Institute’s assistance in establishing enhanced mechanisms for such communications.

4. **Environmental Policies.**

Environmental policies regarding clean air, clean water, the disposal of wastes and safety in the work place cannot be adequately set without a recognition of the realities of the physical environment in which activities occur and a pragmatic approach as to the tradeoffs of costs and benefits. We share the general public’s concern for the preservation of a clean and safe environment. We believe that professional geologists, both in and outside of government, need to actively concern themselves with and participate in environmental assessments and decisions. We would like to offer our cooperation to you in making these assessments and in educating the public on environmental matters.

We appreciate having had the opportunity to meet with you and share our views with you. We look forward to being able to work with the Department on these and other issues of mutual concern.

Very truly yours,

Ernest K. Lehmann, CPG 583
President

---

**Four New AIPG Publications**

Of note during 1985 was the publication of four AIPG booklets: Two Issues and Answers series on “Ground Water” and “Radioactive Waste” by many authors (see Appendix 5), and two Monograph series, on “Guide to Federal and Appointive Positions” by Daniel N. Miller, Jr., and “Program of Cooperative Evaluation of Geology Departments” by Donald W. Levandowski. President Lehmann asked Paul H. Moser of Alabama to chair an ad hoc committee to prepare a “Geologic Hazards” booklet. After years of committee member changes, the highly popular book was published in 1993 just prior to Paul’s untimely death.

In 1985 the Institute had 4,565 members, most of which were distributed in ten states:

- Texas: 1,091
- Colorado: 586
- Oklahoma: 309
- California: 300
- Nebraska: 231
- Pennsylvania: 197
- Louisiana: 154
- Ohio: 147
- Florida: 132
- Illinois-Indiana: 121
update his 1981 paper (and 1985 speech). He did so in a TPG article, which is reproduced here in Appendix 9, for the year 1981.

The Parker Medal was awarded to **M. O. Turner** (1982 President); Honorary Membership awarded to **L. L. Sloss** (past-President of AGI and GSA); Martin Van Couvering Award to **Russell R. Dutcher** (Editor 1979-82, President-Elect candidate 1995), and the John T. Galey Public Service Award to **William L. Fisher** (past-President AAPG, AGI and future AIPG President). Five Presidential Certificates of Merit were given.

**PROGRAM**

**Wednesday, September 18, 1985**

- National Committees - As Posted
- 1985 Advisory Board - Mayo Room
- 1986 Advisory Board - Mayo Room
- Executive Committee Lunch - Bishop Room
- Executive Committee - Bishop Room
- Professional Seminars - Hall Room
- Intro: **Meredith E. Ostrom** Information Extraction from Digital Maps - **Gerald K. Moore**, EROS, USGS
- Ice-Breaker Cocktail Party - St. Paul Hotel - Ballroom North
- Thursday, September 19, 1985
- Speakers Breakfast - Mesabi Room

**1985 Annual Meeting**

**GENERAL SESSION I**

**Ballroom South**

**Welcome:** **Robert E. Pendergast**, General Chairman
**Future Trends in Professional Geology**

Intro: **Kelton D. Barr**
Keynote: **Daniel N. Miller, Jr.** - AIPG; Boise, ID
**Peter J. Hudleston** - Univ. of Minnesota
**Penelope M. Hanshaw** - Geological Society of America

**William L. Fisher** - American Association of Petroleum Geologists
**Elizabeth E. A. Johnson** - Association for Women Geoscientists

**AIPG Luncheon** - Ballroom North

**GENERAL SESSION II**

**Ballroom South**

**Future Trends in Professional Geology**

Intro: **Larry L. Johnson**
**Jay H. Lehr** - National Water Well Association
**Theodore R. Maynard** - Association of Engineering Geologists

**Haydn H. Murray** - Society of Mining Engineers, AIME
**Thomas W. Campbell** - Public Relations Society of America

**Social Hour** - Landmark Center
**AIPG Banquet & Award Presentation** - Landmark Center

Master of Ceremonies: **Terry Swor**
**Speaker:** **Anthony W. England**, Geophysicist, NASA Astronaut

**Friday, September 20, 1985**

**Past Presidents Breakfast** - Mayo Room
**AIPG Annual Business Meeting** - Ballroom South

**Field Trips**

**Number One:** **Twin Cities Subspace** - Leaders: **Donald Yardley** and **Charles Nelson**; 12:30 p.m. - 4:30 p.m.; visit to Civil and mineral Eng. Bldg., U. of Minnesota, Minneapolis Campus with discussion on other subsurface developments; bus transportation

**Number Two:** **Twin Cities Ice-Age Landscape** - Leader: **Howard Moores**; 12:30 p.m. - 4:30 p.m.; tour of glacial geomorphology of the Twin Cities and evolution of the Mississippi River; bus transportation

**Number Three:** **Southeastern Minnesota** - Leader: **Connie Sansome**; 12:00 p.m. - 5:30 p.m.; Lower Paleozoic outcrops and karst landscapes of SE Minnesota; stratigraphic control of glacial geomorphology; bus transportation; box lunch provided.

**Saturday, September 21, 1985**

**Stillwater - Tour and Field Trip** - Bus tour of St. Croix Valley, an apple orchard, lunch at the famous Lowell Inn and geology of Taylor's Falls area - Leader: **Bruce Olson**.
Outstanding Service to the University of Alabama. He is one of 25 Founders of the AIPG Foundation (1981), and co-author of AIPG’s 1991 publication “Education for Professional Practice.”}

Travis recalled his Presidency year:

“Attempting to foresee the future, I appointed a committee to evaluate the possibility of instituting a requirement for an examination for applicants to AIPG. The committee rejected the idea. At the time, I believed that AIPG could become the premier group representing the profession; and that if we instituted an exam, then that exam would become the national standard by which other examinations were judged. Thus eliminating the need for future development of an organization such as ASBOG.

“Because of the downturn in employment of geologists during that period, [Editor: An AAPG survey showed 25 percent of their members unemployed in 1986] the Executive Committee diverted funds and published the booklet “Guide to a Successful Job Search.” The booklet was popular and helpful to many geologists. The year before, when I was President-Elect, Serge Gonzales chaired a Committee to develop and evaluate, on a voluntary basis, the geology departments at universities throughout the U.S. The Committee ultimately had 75 members and evaluated geology programs at over 300 universities. Programs were evaluated as to whether their requirements met those necessary for membership in AIPG. Results were published under the title “Program of Cooperative Evaluation of Geology Departments” (Monograph No. 3, 1985, see Appendix 5). We adopted the AIPG Policy on Advocacy.

“During 1986 AIPG became the first geologic organization to have on-line services for its members. We continued the Washington Fly-In with a theme of ‘Environmental Geology.’ This was the first Fly-In to be videotaped.”

President’s Message

“AIPG Size Reflects Services Value”

By Travis H. Hughes

The services provided by AIPG, and the value of AIPG to the profession and the public-at-large can be measured, in part, by the size of its membership. AIPG constantly seeks new members because we know that many qualified geologists exist who can benefit from membership in AIPG and from whom AIPG can benefit by association.

At least 50,000 Americans have met the educational requirements for membership in AIPG. Many thousands of these are professional geologists and have all necessary qualifications for membership. They serve their profession with a sense of pride and dedication that exemplifies the qualities expected of AIPG Members. Each of us knows several such geologists.

Membership and certification by AIPG are means by which we illustrate competence and pride in our profession. If you share my sense of pride in our profession, and in the role of AIPG as a service to the profession, then it is an easy matter to contact a qualified geologist and invite him or her to the next meeting of your state Section. Use the Section meetings as opportunities to associate with non-members who are qualified geologists.

A common deterrent to many applicants is the cost to apply for membership ($20 application fee plus $75 dues).
The Institute now holds the dues in escrow during the six- to nine-month processing period. The Executive Committee has voted to require that only the $20 application fee be included with future applications. After acceptance, an individual would be admitted to membership upon receipt of dues for the first year. We hope this process—which may require a Bylaws amendment—will ease the financial burden of joining AIPG, by deferring payment of dues until a time coincident with admission.

Associate Affiliates of AIPG are individuals who have met basic requirements for membership but lack sufficient professional experience to become a member. Affiliation with AIPG is an indication that a young geologist is dedicated to our standards of ethics and professional practice. Have you considered inviting a junior colleague to a Section meeting, and to affiliate with AIPG?

As a Section project, why not consider sponsoring (dues for one year) an outstanding senior or graduate student in geology at one of your state universities. Such a program will provide a few Associate Affiliates to AIPG; but of greater importance, it will help solidify relationships with the academic community and will allow you to express AIPG’s standards of ethics and professionalism to an audience of students and faculty.

Total membership in AIPG is a function of our interest as Members, the activities of our Sections, and our willingness to provide a share of benefits to other professionals.

**Angelo Tagliacozzo Scholarship**

![Angelo Tagliacozzo, CPG 2630](image)

The Angelo Tagliacozzo Memorial Geological Scholarship has been established by NE/AIPG. It recognizes the dedicated leadership and service which Angelo, CPG 2630, provided to AIPG and the geological profession, until his untimely passing on October 11, 1986. The scholarship will further Angelo’s goal of acquainting young geologists with AIPG and its importance to the geological profession.

NE/AIPG will grant at least four scholarships to undergraduate geology students in the spring of 1987 and annually thereafter. The scholarships will help with the cost of summer field courses, textbooks, and other aspects of geological education. Scholarships will be awarded, both on academic achievement and on financial need, to students enrolled in recognized geology programs at colleges or universities in New England, New Jersey, or New York.

Future President **Russ Slayback** recalls Angelo served the Northeast Section on the Executive Committee from 1973 to 1982, as Vice President (1977-78), President (1979-80) and as Screening Board Chairman from 1983 until his death. He was also a National Advisory Board Delegate (1981-82) and was elected as an Advisory Board Representative to the National Executive Committee for 1982.

Angelo received his doctorate in geology from the University of Rome, Italy, in 1962. He worked as a geologist and geophysicist with the TAHAL Water Planning for Israel from 1962 to 1964 and as a hydrogeologist, foreign advisor and head of the geology section from 1964-1966. In 1968 Angelo joined Lockwood, Kessler and Bartlett as a geologist. In 1967 he joined the United Nations and worked three years in Costa Rica as a hydrogeologist and project manager. In 1969 he joined Edward & Kelcey and was responsible for geological and geotechnical investigations and in 1973 he joined Dames & Moore. There he worked as a ground-water geologist and project manager. In 1975 he joined Stone & Webster Engineering Corp. as a senior geologist where he was responsible for geological activities and ground-water studies. Angelo joined Gibbs & Hill in 1978 as a supervising hydrogeologist and was promoted to Chief of the Environmental Department in 1985.

Through all of his activities, Angelo made a legion of friends, in AIPG and in far-flung places where his job and interests took him. His passing stung many of us who worked with him particularly sharply because it was an all-too-sudden reminder of our own mortality. We will miss Angelo and remember him.

**1986 Annual Meeting, Keystone, Colorado**

**Lawrence O. Anna** was Chairman of the 23rd Annual Meeting in Keystone (Dillon) Colorado, September 17-20, 1986. Future President **Susan Landon** gave the Welcome Address, and past-President **John Rold** led the all-day field trip to “Mines and mining operations, historical sites, engineering
geology areas and classic geologic outcrops.” Lunch was at historic Leadville, Colorado. A Consultants’ Workshop was organized by Robert Fisher. The timely Keynote Speech on “Government and Natural Resources Development” was given by Donald P. Hodel, Secretary of the Interior.

PROGRAM

Thursday


“Education of Tomorrow’s Geologist”, Dr. George S. Ansel, President, Colorado School of Mines.

“Journalism and Geology”, Pete Chronis, Business/Energy Reporter, The Denver Post

“The Mining Industry and Natural Resources Development”, Gregory McKelvey, Manager, Cominco American, Inc.

“The Petroleum Industry and Natural Resources Development”, Lawrence Funkhouser.

Forum 1: Status of the Geologic Profession

A panel discussion on the status of Geology and Geologists, including projections for employment, salaries, new trends and problems and solutions.

6:00 p.m., **Western BarBQ**: Ron Ruhoff, Guest Speaker, “A Humorous Look at Historical and Colorful Colorado”

Recipients of AIPG National Awardees for 1986. From left to right (back row): Ed Dapples, Honorary Membership; Bud Rue, Van Couvering Medal; Bob Weimer, Ben Parker Memorial Medal; Frank Kottlowski, Public Service Award; Ross Shipman, Honorary Membership. From left to right (front row—recipients of Presidential Certificates of Merit): Jim Vincent, Serge Gonzales, Clayton Johnson, and Bill Street. Not pictured: Allan Krause.

Outgoing members of the 1986 AIPG Executive Committee pictured at the Institute’s Annual Meeting in Keystone, Colorado. Editor (1985-1986) Gary B. Glass; Advisory Board Representatives Norman “Ole” K. Olson and Phyllis M. Garman; Treasurer Charles E. Wier; and Advisory Board Representative Robert A. Northcutt.

Friday

Forum II: Public Lands and Natural Resource Development Panel, Moderator: Jim Redmond, News Anchor, KMGH-7

Participants:
Roberta L. Anderson, Public Lands Coordinator, AMOCO
Daryl Sknuffkee, Director, Wilderness Society
Robert Moore, U.S. Bureau of Land Management
Geoff Snow, Exploration Manager, Noranda Exploration
James Torrence, Regional Forester, U.S. Forest Service

Business Meeting Luncheon: Annual AIPG Business Meeting

The awards this year included Honorary Membership to Ross L. Shipman and Ed C. Dapples, long-time workers for AIPG. Robert J. Weimer earned the Parker Medal, and wrote a fine thank-you to TPG, which follows. The John T. Galey Service Award went to Frank E. Kotlowski, New Mexico State Geologist.

November 1986
LETTER TO THE EDITOR:

I express my most sincere appreciation to the Executive Committee for awarding the Ben H. Parker Memorial Medal to me. Ben Parker was a role model for many of us and it is a double honor for me to receive AIPG's highest award and to have it carry the name of a good friend and colleague.

Ruth and I first met Ben and Betty Parker in March, 1950, at Oraibi, Arizona, in the heart of the Hopi Indian Reservation. I was running a plane table crew for Union Oil Company of California, mapping structures in the Black Mesa basin. Dan Merriam was instrument man on the crew. Union had a second crew working in the area under Ben H. Parker, Jr. Ben and Betty came to Oraibi to visit Ben Jr. and we met at dinner at the Government Guest House where they were staying. Two months later Ben left the Presidency of the Colorado School of Mines to return to industry. John Vanderwilt, consulting geologist on the Board, became President and Ben replaced John on the Board of Trustees.

Our paths crossed again in the time interval 1954 to 1957, when I was a consulting geologist in the Denver area. Ben regularly attended meetings of the RMAG and supported scientific and professional activities in the Denver area. I started teaching at the Colorado School of Mines in September of 1957, and when I was a department head from 1965 to 1970, Ben was Chairman of the Board of Trustees. Ben passed away in 1969, following a Board of Trustees meeting on the Mines campus. The 1972 AAPG-SEPM Annual Convention in Denver was dedicated to the memory of Ben H. Parker. As General Chairman of the meeting, I wrote the Dedication and this provided an opportunity for me to again review his remarkable career. Ben was President of AAPG in 1961 and wrote about professionalism in his Presidential Address.

I participated in the organizational meeting of AIPG, arranged by Ben, on the School of Mines campus in 1963. The meeting was held in the Library Auditorium. Through the efforts of Ben and Orlo Childs, who was President of Mines from June, 1963 to May, 1970, AIPG maintained an office on the School of Mines campus to reduce overall expenses during the formative years of the Institute. As you know, Ben was Chairman of the first Advisory Committee and the second President of AIPG.

I have strongly supported the objectives and ideals of AIPG since that organizational meeting in the spring of 1963. It has been a very satisfying experience to see the organization grow into one with national influence, representative of the professional activities of all geoscientists. And now to receive this highest honor is a most gratifying and humbling experience.

Best wishes for continued success in all the important activities of AIPG.

Robert J. Weimer, CPG 98

1987
President Charles J. Mankin

“Charlie Mankin is a zealot in the cause of geology.” Thus starts the most recent tribute (1999) to our 23rd President, on the occasion of his award for Distinguished Service to GSA. The citation by Robert L. Fuchs, CPG 1989, continued: “His deep interest and involvement have ranged widely across the science—from field work to research to teaching to science administration to government service. It is in this last arena that Charlie has particularly excelled. He has been a persistent advocate for all of us at both the state and federal levels. In his role as director of the Oklahoma Geological Survey for more than 30 years, Charlie is an eloquent and forceful spokesman for earth science and natural resources. His familiarity with the inner workings and nuances of governments may be unequaled among GSA’s members. Time and again he has demonstrated a superb political ability to get things done for geology, for geologists, and for the citizenry.”

Charlie is one of only two CPGs to receive the top three AIPG awards. In 1988 he earned the Martin Van Couvering Award, in 1996 he was awarded the Honorary Member, and in 1999 he was awarded the Parker Medal. Insight into Charlie can be gleaned from his AIPG award citationists, Robert A.
Charles J. Mankin, CPG 1415
1988 Recipient of the Martin Van Couvering Memorial Award

In 1959 Charlie began his professional career as an Assistant Professor of Geology at the University of Oklahoma. In 1963 he was appointed as the Director of the School of Geology and Geophysics and held that position until 1977. In 1967 he concurrently became Director of the Oklahoma Geological Survey and continues in that capacity today. In 1978 he became Director of the Energy resources Institute at the university and served in that capacity until 1987. Charlie, with 21 years as Director of the Oklahoma Geological Survey, is the longest-serving director and state geologist in the 80-year history of the survey.

Charlie is an avid supporter of AIPG and has been a significant recruiter of new members. He has served on Oklahoma Section committees and chaired the Registration and Legislative Committee in 1975. He has encouraged members of the Oklahoma Survey staff to actively serve in positions in national AIPG and in AIPG’s Oklahoma Section. During 1976-78 he was the AGI Representative to the AIPG Executive Committee. In 1979 he served on the Employment Survey Committee and as chairman of the Search and Screen Committee for Executive Director. Charlie was chairman of the Public Relations Committee during 1982-83 and was elected vice president of the institute in 1984. In 1986 Charlie served as president-elect of the institute and in 1987 became its 23rd president.

Charlie’s membership in AIPG reflects well on the institute through his representation on several important national committees, councils and panels. He has served as a member of the Commission on Fiscal Accountability of the Nation’s Energy Resources and is presently chairman of the Advisory Committee on Royalty Management for the Department of the Interior. He has served on more than a dozen boards and committees of the National Academy of Sciences/National Research Council. He is currently the chair of the Board of Mineral and Energy Resources and the chair of the Panel on Earth Sciences and Applications of the Commission of Physical Sciences, Mathematics and Resources of the NAS/NRC. He also is a member of the Board of Directors of the Environmental Institute for Waste Management Studies located at the University of Alabama.

Charlie has also contributed to the status of AIPG through his service at a national level to other professional and technical organizations of geology. He is a member of more than a dozen scientific and technical organizations and has served many in a variety of capacities, including president of the Association of American State Geologists, the American Geological Institute, and as member of the Council and the Executive Committee of the Geological Society of America. He has also served as president of the Mid-continent Section of the Society of Economic Paleontologists and Mineralogists.

All of the above activities attest to Charlie’s seemingly boundless energy. His mastery of the personal computer serves him well during the immense amount of time he spends in travel connected with his many activities. Charlie’s portable computer accompanies him everywhere, allowing him the ability to communicate with his office and to respond to his many responsibilities while he is in transit to and from meetings across the country. When American Airlines tallies Charlie’s advantage mileage, its computer goes into overload.

Charlie has been the recipient of several honors and awards, including the Rocky Mountain Federation of Mineralogical Societies Distinguished Achievement Award in 1972, the Daughters of the American Revolution National Medal of Honor in 1983, the U.S. Department of the Interior Conservation Service Award in 1983 and the American Geological Institute Ian Campbell Medal in 1987.

I am pleased to present this citation for a dedicated member and an outstanding worker for the principles and purposes of the American Institute of Professional Geologists.

Robert A. Northcutt, CPG 2704

Charles J. Mankin, CPG 1415
1996 Recipient of Honorary Membership

Charlie Mankin is a native Texan, born in Dallas but grew up in the character-building land of West Texas. He received his three degrees in geology from UT Austin, and with a postdoctoral stint at Cal Tech, he launched his career at the University of Oklahoma in 1959. After nearly four decades at Oklahoma, he is still going strong. At OU, he rose rapidly through the academic ranks, becoming Acting Director of the School of Geology and Geophysics in 1963 and Director in 1964. Three years later, Dr. Mankin assumed the additional post of State Geologist and Director of the Oklahoma Geological Survey. At the ripe age of 35, Charlie was directing both a major academic department and a major state survey, and he continued to do so for 11 years. Someone saw in Charlie at an early date what we have all seen since. He relinquished the School directorship in 1978 only to become the Executive Director of the Energy Resources Institute at OU, which he carried jointly with the Survey until 1987. Since then, he is down to one paying job but as busy as ever.

In addition to heavy loads at Norman, Charlie has made tracks across the nation that are deep and seemingly everywhere. In his career to date, he has served on no less than 100 commissions, boards, and committees at national and state levels and has chaired dozens of these.

Charlie has not been one to shirk the tough, demanding assignments. Think of some. He was President of this Institute when an Executive Director was replaced. He chaired an NAS Committee on gas production in the Gulf of Mexico during the energy crisis when much of Congress was screaming that gas was being withheld in the Gulf. He chaired the Royalty Management Advisory Committee for Interior, a hot potato if ever there was one. He chaired another NAS Committee evaluating Interior’s resource assessment methodology at a particularly tempestuous time. He even
took on the daunting task of chairing a committee charged with incorporating science and technology into BLM decision-making. These assignments, as many others, were carried out in true Mankin style—efficiently, effectively, and credibly.

Charlie has been especially active in the National Academies and the National Research Council, chairing numerous committees, serving as a member of the Commission on Physical Sciences, Mathematics, and Resources, and, in particular, serving as a dynamic and highly effective Chairman of the Board on Mineral and Energy Resources.

Dr. Mankin has long been a prominent leader in many of our professional societies, both national and local. He is, of course, past president of this Institute, from which he has received the Van Couvering Award, and is now a trustee of the AIPG Foundation. He is past president and Campbell Medalist for the American Geological Institute as well as past president and current dean of the Association of American State Geologists. He is a former councilor and member of the Executive Committee of the Geological Society of America and current chairman of the GSA Foundation. He has been long active in affairs of the American Association of Petroleum Geologists, receiving its Public Service Award. Among several local and sectional groups, Charlie is past president of the Oklahoma Academy of Sciences.

Beyond the University, the Academy, and the professional societies, Mankin is well known in the policy world, prominent and regarded in the halls of Congress and the Oklahoma Legislature. Charlie regularly testifies before Congress, where his views and opinions are sought. Such standing is the principal reason we today have a National Geographical Mapping Act. Not all the work on that is finished, but it will be, with Mankin at the helm.

It has been my honor and gain to have shared a number of agendas (and even some libations) with Charlie Mankin through the years. He is a great friend and a valued counselor, enriching those about him. He is a true credit to this Institute and a most fitting Honorary member.

William L. Fisher, CPG 2398

AIPG/GSA Penrose Conference

During Charlie Mankin’s year as president, AIPG sponsored a GSA Penrose Conference, entitled “The 21st Century: An Introspection.” The conference was organized by four CPGs, David Stephenson, Allen Agnew, Daniel Miller, and Charles Mankin. It was held in July 1987 at Steamboat Springs, Colorado. The proceedings were reported by Heidi A. Horten and are given in Appendix 9.

Also in 1987, Wendy Davidson was rehired full-time (worked part-time from 1982-1985) at Headquarters and later became AIPG’s dedicated Publications/Website Manager.

1987 Annual Meeting, Lexington, KY

Our 24th Annual Meeting Chairman Larry Rhodes did a bang-up job in organizing interesting Technical Sessions and Field Trips. Being in blue grass country, two of the three Field Trips involved horses: One trip to the Kentucky Horse Park and Hadley-Whitney Museum, and another trip to Kneeland Race Course for lunch at the Clubhouse and an afternoon at the races. The third Field Trip was semi-technical—a geologic and scenic trip to Natural Bridge State Resort Park with lunch at the Lodge.
The technical Sessions were:

Technical Session
Presiding, Donald C. Haney

The Growing Numbers of Geologists in Environmental Geology—Where Are They Coming From and Are They Qualified? by John W. Williams, Professor of Geology and Chairman of the Department of Geology, San Jose State University, San Jose, California; Vice President of the Association of Engineering Geologists.


Technical Session II
Presiding, James F. Howard

Principles of Ground Water Monitoring in Karst Terrains by James Quinlan, National Park Service, Mammoth Cave, Kentucky, and Ralph O. Ewers, Geology Department, Eastern Kentucky University.

Assessment of “Drastic” as Applied to Kentucky Hydrogeological Settings by Lyle V. A. Sendlein, Professor of Geology and Director, Industrial Mining & Minerals Research, University of Kentucky, Lexington, Kentucky.


Technical Session III
James F. Howard, Presiding


Engineering Geology as a Profession by Christopher Mathewson, Professor of Geology and Director, Center for Engineering Geoscience, Texas A & M, College Station, Texas.


Technical Session IV
Donald C. Haney, Presiding

Brine Disposal Problems in Eastern Kentucky by W. A. Watson, Jr., Production Manager, Columbia Natural Resources, Huntington, West Virginia.


Four awards were given: The Parker Medal to Past-president Ernest K. Lehmann, Honorary Membership to Doris M. Curtis, Martin Van Couvering Award to Bobby J. Timmons, and the John T. Galey Award to Cliff Nolte.

Doris Curtis was candidate for AIPG President in 1986. She lost, but our profession also lost by her untimely death a few years later. It is fitting that we reproduce her citation for the Institute's fourth Honorary Membership by her close friends and co-workers John D. Haun, CPG 136, and Dorothy J. Echols, CPG 4191.

Citation for Doris Malkin Curtis, CPG 4117
1987 Recipient of the award of Honorary Membership
By John D. Haun and Dorothy J. Echols

Doris Curtis has provided an “exemplary record of distinguished service to the profession and to the American Institute of Professional Geologists.” This criterion for Honorary Membership has been fulfilled through almost fifty years of service to industry and academia. She began her professional career with degrees in geology from Brooklyn College (B.A., 1933) and Columbia University (M.A., 1934). Women in the geological profession were then as scarce as dinosaur eggs, but
through her example and encouragement, the barriers to employment of women in the geosciences have been reduced.

Doris began her career as a geologist for several small oil companies, but soon she joined Shell Oil Company as a paleontologist and stratigrapher and remained with Shell for seven years (1942-1949). During this tour she pursued her doctorate in geology at Columbia University, received the Ph.D. in 1949, and for the next ten years served as a professor and research geologist at the University of Houston, at Scripps Institute of Oceanography, and at the University of Oklahoma. Subsequently, she rejoined Shell, where she remained for twenty years as a staff geologist. Since her retirement from Shell (1979), she has been a consultant in the partnership of Curtis and Echols and (since 1981) has served as an adjunct professor at Rice University.

In addition to her other work, Doris has twice participated as a sedimentologist in the Deep Sea Drilling Program aboard the Glomar Challenger, once in the North Philippine Sea (1977-1978) and once in the North Atlantic (1981).

Through her research and publications, Doris has advanced our knowledge of sedimentation and stratigraphy (particularly of deltas), of micropaleontology and of the origin and entrapment of petroleum. A hallmark of her professional career has been her ability to synthesize a variety of data into a comprehensive exploration program of the Gulf Coast region.

Doris has been a tireless worker in a number of geological societies. She is a fifty-year member of the American Association of Petroleum Geologists (AAPG) and the Society of Economic Paleontologists and Mineralogists (SEPM), having served as an AAPG Distinguished Lecturer (1983) and as chairman of the AAPG-SEPM liaison committee (1986-1987). She served SEPM as secretary-treasurer (1964-1965) and as president (1978-1979). Today, her contributions continue unabated; Doris presently serves as director and vice president of the SEPM Foundation, as a member of the advisory committee for AAPG’s Treatise of Petroleum Geology and a member of the AAPG House of Delegates. Doris was president of the American Geological Institute (1980-1981) and chairman of the U.S. National Committee on Geology (National Research Council, 1981-1982). She served five years as secretary of the ad hoc Committee on Sedimentology, International Union of Geological Sciences (IUGS) and as a member of the IUGS Scientific Committee of the International Geological Correlation Program. Doris was a member of the Scientific Committee on Global and International Geology of the National Research Council’s Board on Earth Science, was a recent contributor to the Geological Society of America’s Decade of North American Geology volume on economic geology of the United States.

In recognition of her professional and scientific contributions, Doris has received numerous awards. These include honorary memberships in AAPG, SEPM, the Gulf Coast Section of SEPM and the Houston Geological Society. She was named “Woman of the Year” by the Houston Federation of Professional Women and received the President’s Medal of Distinguished Alumna from Brooklyn College of the College of the City of New York.

Doris has served AIPG as a member of the Executive Committee (1981), as chair of the ad hoc Committee on Professional Development (1985-1987), and was a candidate for AIPG president in 1986. She has given numerous lectures in an effort to improve public understanding of the petroleum industry, and as a member of the Environmental Quality Committee of the League of Women Voters, she has championed industry’s role in conservation. She has been an advisor to many young geologists on professional problems such as choosing a graduate school, locating employment or changing careers.

Because of her many years of dedicated service to the geological profession, her contributions to fundamental knowledge, and her championing of the role of industry in modern society, it is indeed appropriate that the American Institute of Professional Geologists has selected Doris Curtis as Honorary Member.
1988 President Sam R. Evans

Sam R. Evans, CPG 3349

Similar to President Bud Rue nine years earlier, Sam Evans took office with no Executive Director at Headquarters. Vic Tannehill had left the office workings to two-year veteran Secretary Carol A. Beckett, whose title was immediately changed to Administrative Manager, to better reflect her increased duties (see later).

Sam felt that the search for a new Executive Director was equally as urgent as that of trying to stabilize our membership numbers. To this end it was decided to provide greater visibility of the Executive Committee members and their activities. In addition to having Executive Committee members assist local members manning the AIPG booth at several national meetings of other geological societies, it was decided that the Executive Committee meetings would be combined with social gatherings for local members in various cities. The first “social” was held in Houston prior to the Executive Committee meeting where attendance was between 80 and 100 people. Many were non-members and came to find out more about AIPG. Other socials were held in Washington, D.C. and twice in Denver, also with large attendance. One of the Denver Executive Committee meetings was devoted to the screening and selection of the new Executive Director.

At the Annual Meeting in Tulsa, Sam and members of the Executive Committee met with representatives of AAPG, AEG and SIPES on matters affecting closer relations between the groups; such relations still exist today.

The turmoil of 1988 was described by Sam’s co-citationists for his Martin Van Couviering Award in 1990 and also for Honorary Membership in 1992. Following are excerpts from the tributes by Treasurer John T. Galey, Jr., CPG 2622, and Editor Edward B. Nuhfer, CPG 2808.

Sam Evans was our Institute’s Silver Anniversary president, and his presidency was one of the most successful in the history of AIPG. Sam’s success resulted both from the knowledge he gained through substantial investment of himself in AIPG over many years and his outstanding qualities as a leader.

After graduating from Wichita State University in 1951, Sam’s 40-year career as a professional geologist has taken him from an exploration geologist with Sunray Oil Company, Senior Vice-president, Energy for the Gulf Interstate Company and as an independent geologist and operator. [Interestingly, Sam holds two MBAs, from Oklahoma City University in 1967 and University of Houston in 1968.]

When he joined AIPG and the Texas Section in the mid-1970’s, no one knew how fortunate the Institute would be to have Sam as a member. For 17 years he devoted considerable time and effort to make AIPG an outstanding professional organization for all geologists. As President of the Texas Section, he directed the redrafting of its Constitution and By-Laws. In 1986, he began a three-year commitment to AIPG’s National Executive Committee, serving as Vice-president in 1986, President-Elect in 1987 and President in 1988.

As Sam took the reins as President, AIPG found itself without an Executive Director and a Headquarters staff whom had been excluded from management and major decision-making roles. Sam’s initial challenge was to develop a confident and efficient Headquarters staff and to revitalize and rebuild an organization that had drifted from its original precept into a viable and vigorous professional organization. This challenge transformed the job as President from that of a professional society officer to one as a full-time chief executive officer. The Executive Committee, through Sam’s leadership, reviewed and revised many facets of AIPG—from the Articles of Incorporation and Constitution and By-Laws, to screening procedures, production of publications and finances. This was not an easy task, but Sam’s warm personality and uncanny ability to elicit the very best from all those he touched, made the chore more palatable. While the Executive Committee worked through its tasks, Sam set about promoting and establishing better communications with AEG, SIPES and AAPG-DPA to promote a united front where professional aspects of geology were concerned. By giving so much of himself to the profession and AIPG, he has gone a long, long way in re-establishing the original vision of AIPG in making one professional organization for all geologists and has forged the contacts with other geological groups to unite when dealing with specific professional issues.

Sam and his wife, Billie, whom he met at Wichita State University, have three daughters and five grandchildren. When Sam refers to his wife, children or grandchildren, the reference is usually followed by a sincere, “Lucky me!” It is our great honor to provide this citation and we are particularly grateful for the time we have spent together in AIPG that allow us to call Sam and Billie our friends. Our two years spent on the Executive Committee with Sam give us clear reference is usually followed by a sincere, “Lucky me!” It is our great honor to provide this citation and we are particularly grateful for the time we have spent together in AIPG that allow us to call Sam and Billie our friends. Our two years spent on the Executive Committee with Sam give us clear

President’s Address to Members
By Sam R. Evans

Welcome to the Silver Anniversary year of AIPG. In 1963 a group of dedicated geologists concerned about the recognition of geology as a profession met to organize the American Institute of Professional Geologists. The Institute which from
the foundation group is a professional organization with over 4,500 members with specializations in most geological disciplines. The members proudly reveal they are Certified Professional Geologists by their actions and deeds. Certification means that the members have allowed peer review of their educational credentials, their professional experience and their ethical conduct. They have been certified as competent practitioners worthy of public trust in the practice of geology.

Certification, however, is simply one of the ways in which AIPG performs its function in structuring geology as a profession. It is not sufficient for members simply to be certified. It is essential that these certified geologists remain active members of AIPG.

One method of being active lies in participation in the annual meeting of the Institute. The celebration of the 25th Anniversary will culminate with the National Meeting September 28 through October 1, 1988, in Tulsa, Oklahoma. In addition to an outstanding program that the Oklahoma Section is putting together, we plan to give special recognition to the Charter Members, review our past, and plan seriously for the future of AIPG. Make your plans now to attend.

Another method of becoming active is by serving on Institute committees. As President, I make committee appointments. The process is very involved and time-consuming, but final results are very gratifying. The response by the membership this year was very positive for committee assignments. The Institute and profession are thankful to all who serve.

A third way of becoming active is through expression and communication with the institute and with the public. The Executive Committee, particularly the editor, have been making considerable efforts to turn The Professional Geologist back to the members as their vehicle and forum for communication. I encourage all members to contribute to the regular columns established in TPG and to be active in communication.

The 1988 Executive Committee held its first meeting, January 15, 1988, in Houston. Besides handling routine business, the committee was confronted with additional work for the Institute. As you will note in this issue of TPG, Vic Tannehill has resigned as Executive Director, effective January 31, 1988. The Executive Committee appointed John Galey and Larry Cerrillo, both of the Denver area, and Gary Glass, from Laramie, Wyoming, as a Headquarters Committee to oversee the daily operation of the Institute’s headquarters in Arvada, Colorado. The Executive Committee also appointed Carol Beckett as Administrative Manager. Carol has been very involved with the day-to-day operations of the headquarters for years and we are confident in her abilities to run headquarters. Assisting Carol is Wendy Davidson, secretary. Both Carol and Wendy are there to serve the members. They now most certainly have a full load of work, so I ask you to remember this when contacting them. I am available to serve the membership as are all of the Executive Committee.

The Executive Committee is presently evaluating the present and future needs of the Institute. From this evaluation we will determine the qualifications required of the person to be considered for the Executive Director position. We are not going to act in haste so bear with us.

The Friday night before the Saturday Executive Committee meeting in Houston, a reception was held for members and guests to meet the members of the Executive Committee. The response was even greater than I anticipated with more than 80 members and guests present. Among those guests I personally met three non-members who came because they were interested in joining AIPG. This excellent turnout tells me that the interest in AIPG is truly there.

A future final challenge to the membership is to find new qualified members so we may expand our influence and recognition. In order to attract new members, we must make AIPG dynamic and attractive. I welcome the opportunity to work with all of you in 1988, our Silver Anniversary year.

Search for Executive Director—Administrative Manager
Carol A. Beckett

Vice president Gary Glass led the Executive Director Search Committee for Vic Tannehill’s replacement. In addition to an ad in Geotimes, more than 40 candidates were identified and sent invitations to consider the position. Of this number, two were selected to come to Headquarters for interviews at a special Executive Committee meeting in November 1988. William V. Knight was clearly the winner, and would take office in May 1989, to allow him time to move from Tulsa to Arvada.

Carol A. Beckett came to the fore at AIPG Headquarters when we needed her most. She was helped by then-Secretary Wendy Davidson, a one-year employee, and a part-time employee (May 1982–May 1985), who took phone calls, answered correspondence and got TPG out every month. Also, Editor Ed Nuhfer had recently moved to Denver from Wisconsin and was frequently at Headquarters to help out, as were local CPG residents John Galey, Jr., William Weist, Larry Cerrillo and Fred “Ted” Mullin.

Carol started work as office staff in 1986, became Administrative Manager in 1988, and stayed on for four more years. She left in 1993 with her new husband, Ted Mullin,
who had just become our new Washington Representative. (This is the second time an AIPG office romance led to marriage—see 1979, Deborah Dare and Bobby Timmons).

Carol holds a B.A. in speech and communications from Capital University, Columbus, Ohio, and has also done extensive graduate work at the University of Nebraska at Omaha. Her career has included senior secretarial and office management positions for a number of companies, including Isbill Associates (airport engineering), the Xerox Stores District Office, and Wood-ward-Clyde Consultants. She has also served as Managing Editor for a variety of health-related publications.

**Washington Representative**

Elisabeth G. Newton, CPG 4785

Honorary Member and personal friend Elisabeth Guerry Newton, CPG 4785, has always been involved in the Washington, D.C. scene, since leaving her native South Carolina. In 1988 she took over as AIPG Washington Representative from her colleague Russ Wayland, and served in this position until 1992. Guerry also helped organize several AIPG Governmental Affairs Washington Fly-Ins. She was awarded the Public Service Award in 1989 and Honorary Membership in 1993. Her citationist in 1989 was Ernest K. Lehmann, and in 1993 Stanley S. Johnson paid Guerry tribute. Excerpts from their citations follow:

Guerry Newton has provided information to government through her early involvement in mineral resource appraisals of the Soviet Union and through her research on and interpretation of geotechnical projects and geologic hazards.

She has made information on engineering geology and mineral resources available to the public through numerous lectures and publications and through her unique ability to organize seminars; among her many activities, witness her active participation in the AAPG visiting petroleum geologists program, her lectures on the management of the public mineral estate, and her organization of AIPG's 1988 Washington Forum on Strategic minerals.

She has participated in educating young people and the public through "extracurricular" involvement in special education and through articles and lectures on careers in the geosciences, particularly in relation to women and minorities, as well as on technical subjects.

Guerry has made significant contributions to developing public policy in relation to leasing and development of the federal mineral rights, Indian lands, and mixed public and private lands. Of special note is her work in connection with leasing of minerals on the Outer Continental Shelf.

Her personal research in environmental protection on subjects regarding permafrost and geologic hazards did not go unnoticed. She received a Department of the Interior's award that commended her for achievements on the Alaska pipeline.

Policy formulation alone is not enough. Guerry has been deeply involved with the management of the nation's natural resources. For example, she was a key participant in the merger of the USGS Conservation Division with the minerals functions of the BLM to create the new Minerals Management Service.

But her activities have not only been confined to government service and AIPG, activities and memberships in other societies have taken her time. Activities with the Association of Engineering Geologists included membership on the Editorial Review Board and as a Liaison-observer for Internal Permafrost Activities. With the American Geological Institute she serves as Chairman - Human Resources Committee, and was Chairman of their Women Geoscientists Committee (1982-1983). Participation with activities at the American Association of Petroleum Geologists included Councilor for the Energy Minerals Division (1987-1989), visiting Petroleum Geologists Program, Public Information Committee, and Distinguished Lecture Committee. She also has membership in the International Association of Engineering Geologists, American Institute of Mining Engineers, Geological Society of American (Fellow), and American League of Lobbyists.

There are few people who have more fully met the goal of public service coupled with professional competence than Elisabeth Guerry Newton. There are none that I know who do so with such southern - South Carolina - charm.

**Committee on the Future of AIPG**

President Evans created a three-person ad hoc group to study this subject and report to the membership. Gary Glass was chairman and the other two members were 1986-87 Secretary Stanley S. Johnson and 1988 Advisory Board Member Gerald V. Mendenhall. They presented an oral report at the 1988 Annual Business Meeting in Tulsa. The three fielded questions during the lively discussion that followed. The committee addressed the hard questions of state registration, reciprocity, and the role of AIPG as the national lead organization. They also discussed a national examination for geologists and continuing education. Their written report is not available, but many of these topics are discussed in the 1991 Long-Range Planning Report "The Institute in Evolution"; see Appendix 9.
Guerry Newton, our AIPG Washington Representative, organized one of the most successful AIPG Governmental Affairs Conferences ever held. Speakers from the April 18 conference included Dr. William Bagby of the United States Geological Survey (USGS), Keith Knoblock of the American Mining Congress (AMC), T S Ary (yes, the name is T S — initials and no periods), the newly appointed head of the U.S. Bureau of Mines (USBM), Ernest K. Lehmann of Ernest K. Lehmann and Associates, and Representative James Oberstar (D) of Minnesota. All presentations were outstanding. Very brief summaries of the talks are provided below. The conference is on videotape and copies are available from AIPG headquarters.

Dr. Bagby began the program by noting the role of the USGS is the area of strategic minerals. After providing an overview of those minerals which are of particular importance to domestic industry and national defense, Bagby explained how the Office of Mineral Resources of the USGS has been compiling a data base that includes the setting and characteristics of known deposits. From that data base, models are constructed that should prove useful in delineating tracts favorable for mineral exploration. Several models based upon producing ore bodies from several foreign countries were shown by Dr. Bagby, and these models were followed with illustrations of areas within the continental U.S. that provide geological terrain similar to the terrain of the models. Deposits associated with rifting in Africa may have analogues in the Triassic rift basins of the eastern U.S. and in the old Mid-continent rift areas within northern Wisconsin. Bagby noted that ophiolites were discovered for the first time in northern Wisconsin by USGS workers.

Keith Knoblock of the American Mining Congress began with words of praise for Russ Wayland, AIPG’s recently-retired Washington representative for producing the “Federal Legislative and Regulatory Issues Reviewed” column in TPG and he encouraged all AIPG members to get personally involved with the issue of critical minerals through their representatives. He then proceeded to describe the current domestic mining industry as emerging from one of its worst recessions as a leaner but tougher and more competitive industry. The change has resulted from restructuring and investments in technology to increase efficiency.

Knoblock’s address then got specifically to the relationship of critical minerals to political decisions. Imports of critical minerals from the Soviet Union have increased, largely because of the results of the Anti-Apartheid Act in 1986. Reliance on unreliable foreign sources has been exacerbated by a number of factors, including the lack of a stable domestic minerals policy and withdrawal of hundreds of millions of acres of public land from minerals exploration and development. One latter example included withdrawal of lands in southern California which hold the most promising source of rare earth elements in the nation. Knoblock noted that an excessive number of agencies are involved with management and regulation of minerals and the resulting complexity has led to poor communication between agencies and has practically eliminated meaningful communication to high levels of government. A wildly fluctuating set of goals for management of the national defense stockpile has also been detrimental to good management of the nation’s critical minerals. The stockpile has been utilized for purposes other than national defense to control market prices and to help balance the budget. Positions for management of the stockpile have been unfilled for extended periods of time and those who finally were appointed resigned in frustration. Knoblock then made a series of recommendations for changes in policy in managing public lands, in regulating mining, in managing trade, in stabilizing minerals through the International Monetary Fund, in modifying tax reform, in stabilizing some basic industries that draw upon mineral resources and in developing seabed minerals.

TS Ary, newly appointed Director of the United States Bureau of Mines (USBM) then addressed the role of the bureau in the domestic minerals industry. Ary had been in office as the director only a few weeks but described the directions which he believes will permit the bureau to contribute to a healthy mineral industry. The USBM intends to take a more active role in cooperative efforts with the USGS, particularly in the models program described by Bagby. The Bureau of Mines can follow up on the geological studies with economic assessments and research in extraction methods. The USBM will also be working more closely with the Environmental Protection Agency at the grassroots level through an environmental technical group, a concept that has already been well received. The bureau already presently has exciting and productive research programs in advanced materials, in substitute materials and in mine reclamation. Greater efforts will be made by the bureau to reach out to lay people and to be vocal in addressing issues...
of importance to the minerals industry, particularly in the area of withdrawal of public lands.

Ernie Lehmann of Lehmann Associates noted the relationship of AIPG to the minerals industry and stated that no organization is more qualified than AIPG to address the issue of strategic minerals. He then proceeded to give formal definition of the terms “strategic” and “critical” in regard to minerals. The United States is becoming increasingly dependent on foreign markets despite a wide variety of minerals within its borders. The diversity of supply is decreasing and Cu and Zn may be on their way to becoming critical minerals. Lehmann then discussed why certain minerals eventually appear on the critical list and some steps that can be taken to decrease the potentially disruptive effects of a shortage in one or more critical minerals. A complete transcription of Ernest Lehmann’s address appeared in the June 1988 issue of TPG.

The Kentucky Engineers Controversy
From the viewpoint of the
Kentucky Society of Professional Engineers

TPG Editor’s note: This is excerpted verbatim from a flyer titled 1988 Legislative Position now being distributed by the Kentucky Society of Professional Engineers and Consulting Engineers Council of Kentucky. It was furnished by Dr. John Philley, President of the AIPG Kentucky Section. Those of you who are geology professors might be interested in the assertion, “Geologists do not take as many courses in natural or physical sciences and mathematics as engineers and thus do not have the broad technical background...” If your students are having problems being able to get a job in geology, you can credit some of their difficulty to flyers like this which promote letting those grossly unqualified in geology usurp its practice. Check your college catalogues. How many courses do engineers have to take in geology to qualify them to do “waste disposal”, “groundwater use”, “surface water quality”, and of all things, “subsurface investigations”? How many courses in soil science, ecology, geochemistry, botany, forestry, agronomy and environmental law do engineers take to qualify them to manage “mined land reclamation”? Are engineers taking any courses in biology, ecology, chemistry, soil science, etc. The registration of geologists does nothing to protect the public’s interest and has several negative impacts, such as:

1. The public safety, health, and welfare will not be enhanced by statutory licensing of geologists. Giving geologists some of the responsibilities for protecting the public safety, health and welfare could actually decrease the protection that the public currently receives under KRS 322. Geologists do not take as many courses in natural or physical sciences and mathematics as engineers, and thus do not have the broad technical background essential to making adequate technical judgments relating to matters involving the public safety, health, and welfare.

2. KSPE/CEC of KY recognizes that a process of identifying geologists who have reached milestones of technical competence in their field is desirable. This process is currently administered by the American Institute of Professional Geologists which certifies geologists as meeting certain criteria of education and experience. KSPE/CEC of KY sees no need to duplicate or replace this process by statutory licensing.

3. From a practical standpoint, the conflict between geologists and engineers cannot be avoided if geologists become licensed to practice independently from engineers. Passage of the bill will generate conflicts of practice and unlawful encroachment into the practice of engineering by geologists. Thus, registration of geologists will create an enforcement problem for the Kentucky Board of Registration for Professional Engineers and Land Surveyors.

4. Should a geologist registration bill be enacted, the geologist could, independently of the professional engineer, perform services now defined as engineering. These practices could occur in the areas of mining, mine permitting, toxic and hazardous waste disposal, groundwater use and protection, mined land reclamation, sanitary landfills, surface water quality evaluations, and subsurface investigations.

In summary, the proposed geologist registration bill is an attempt to dilute the public protection currently defined in Kentucky under KRS 322. Geologists currently work under the direction of a registered professional engineer when providing geological data supporting engineering investigation, evaluation, and design or the planning of the use of lands and waters. The current approach provides a high level of protection of the public, and it is believed that this protection would not be enhanced but rather would be jeopardized with the registration of geologists. Therefore, KSPE/CEC of KY is opposed to the registration of geologists.

AIPG Responds to Kentucky Engineers

[AIPG letterhead]
KSPE/CEC of Kentucky
Kentucky Engineering Center
Route #3, Democrat Road
Frankfort, Kentucky 40601

Gentlemen:

Based upon the misinformation about geologists that was printed in your brochure, “1988 Legislative Position” distributed by the Kentucky Section of KSPE/CEC, and for the unauthorized use of the
name of the American Institute of Professional Geologists (AIPG) in
the presentation of your position indicating AIPG’s support of such
position. We demand a written retraction to the false statements con-
tained therein. We expect to have notice within 30 days that a
retraction will be printed and submitted to every recipient of the
brochure. We also expect the KSPE/CEC to uphold their own Code of
Ethics in the State of Kentucky by taking appropriate action against
the specific authors and distributors of the brochure.

We specifically state our objections to your brochure.

KSPE/CEC STATEMENT: “KSPE/CEC of KY has reviewed registra-
tion of geologists for several years. Engineering utilizes and en-
compases geology and recognizes the need for technical information
obtained by geologists working for or with engineers.”

AIPG POSITION: Most engineering degrees require no minimum
education in geology; neither the EIT nor the PE examinations test
the basic areas of geology that are needed for the professional prac-
tice of geology. Many registered engineers have no geological training
that would qualify them to pass judgment on the geological work
done by a professional geologist. AIPG’s position is that the only pro-
fessional qualified by means of education to practice geology is an
individual who has graduated from an accredited university with a
minimum of 36 semester hours of geology. In all geological investiga-
tions, it is the geologist who should have the independence and pri-
mary responsibility for rendering a geological opinion based on geo-
logical data.

KSPE/CEC STATEMENT: “The registration of geologists does noth-
ing to protect the public’s interest and has several negative impacts,
such as: (1) public safety, health and welfare will not be enhanced by
statutory licensing of geologists. Giving geologists some of the
responsibilities for protecting public safety, health and welfare could
actually decrease the protection that the public currently receives
under KPS 322. Geologists do not take as many courses in natural or
physical sciences and mathematics as engineers, and thus do not
have the broad technical background essential to making adequate
technical judgments relating to matters involving protection of the
public safety, health and welfare.”

AIPG POSITION: The public safety, health and welfare are best
served by those with the educational training to perform within a
specialty area. Investigations within these disciplinary areas are best
performed by qualified geologists. Geologists are not paraprospec-
tionists and engineers. Professional geologists all hold degrees from
accorded universities and most professional practitioners hold MS or Ph.D. degrees. Geologists’ education and training in science
exceeds in breadth and depth that of most practicing engineers. The
science education of engineers usually ends after the introductory
level course in chemistry and physics and many engineers take no
courses in biology or geology. KSPE/CEC has ignored the validity of
education in geology as a requisite to practice geology or to supervise
the geological phases of investigations in the areas of mining, hydro-
logy, waste disposal, reclamation, and subsurface investigation.
Because of that, we believe that the KSPE/CEC stated position is
detrimental to the public interest.

KSPE/CEC STATEMENT: “(2) KSPE/CEC of KY recognizes that a
process of identifying geologists who have reached milestones of tech-
nical competence in their field is desirable. This process is presently
administered by the American Institute of Professional Geologists
which certifies geologists as meeting certain minimum criteria of
education and experience. KSPE/CEC of KY sees no need to duplicate
or replace this process by statutory licensing.”

AIPG POSITION: We believe that certification by peers is preferable to
statutory registration. However, should another profession attempt
to abuse the ethics of professional practice and conduct by using reg-
istration to usurp the practice of geology for the unqualified, then
geologists have no recourse other than that of formal recognition
through their own statutory registration. We do not oppose registra-
tion if this is the only alternative to keeping unqualified persons from
practicing geology. The Kentucky Code of Professional Ethics states:
“6. The engineer or land surveyor shall perform his services only in
areas of his competence.” By AIPG standards, an engineer or land sur-
veyor who would attempt to be the primary investigator in the geologi-
cal phases of investigation in the areas of mining, hydrology, waste
disposal, reclamation and subsurface investigations would be violat-
ing the provisions of the code. The use of the name AIPG in the
brochure is misleading by indicating that AIPG supports the KSPE/CEC position. We unequivocally do not support the
KSPE/CEC position. We believe the authors of the brochure have
violated the Kentucky Code of Professional Practice and Conduct with
regard to Section 2. “The engineer or land surveyor shall issue public
statements only in an objective and truthful manner.” The statements
about geologists in the brochure are neither objective nor truthful.

KSPE/CEC STATEMENT: “(3) From a practical standpoint, the con-
front between geologists and engineers cannot be avoided if geologists
become licensed to practice independently from engineers. Passage of
the bill will generate conflicts of practice and unlawful encroachment
into the practice of engineering by geologists. Thus, registration of
geologists will create an enforcement problem for the Kentucky Board
of Registration for Professional Engineers and Land Surveyors.”

AIPG POSITION: KSPE/CEC is creating the conflict (1) by issuing
statements that violate the Code of Professional Practice and Conduct; (2) by refusing the recognize the validity of geology as a sci-
ence and as an established profession; and (3) by refusing to recognize
that the practice of geology requires formal training in geology that is
not required for either a degree in engineering or a license to practice
engineering. If a Board of Registration for Geologists is created in
Kentucky, it will likely cause problems only for those who attempt to
practice geology without the necessary qualifications. Causing prob-
lems for such unscrupulous individuals parallels the reasoning of the
present Code of Professional Practice and Conduct in Kentucky.

KSPE/CEC STATEMENT: “(4) Should a geologist registration bill be
enacted, the geologist could, independently of the professional engi-
neer, perform services now defined as engineering. These practices
could occur in the areas of mining, mine permitting, toxie and haz-
ardous waste disposal, groundwater use and protection, mined land
reclamation, sanitary landfills, surface water quality evaluations, and
subsurface investigations.”

AIPG POSITION: We are not aware of any accepted definition that
defines the entire gamut of “mining, mine permitting, toxic and haz-
ardous waste disposal, ground water use and protection, mined land
reclamation, sanitary landfills, surface water quality evaluation and
subsurface investigations” as engineering. In fact, the basic back-
ground needed to satisfactorily perform essential services in these
areas rests in education and training available primarily in geology
departments—in courses engineers seldom take. Any such definition
of the above areas as “engineering” could be for the public good only with
the qualifications that those who practice in each specialty would (1)
acquire the necessary courses in geology that are needed to perform
the investigatory phases of each, or (2) require the services of a certifi-
ced (or fully qualified registered) geologist to make technical judg-
ments and prepare reports on the geological investigatory phases.

KSPE/CEC STATEMENT: “In summary, the proposed geologist regis-
tration bill is an attempt to dilute the public protection currently
defined in Kentucky under KRS 322. Geologists currently work under
the direction of a registered professional engineer when providing geo-
logical data supporting engineering investigation, evaluation, and
design or the planning of the use of lands and waters. The current
approach provides a high level of protection of the public, and it is
believed that this protection would not be enhanced but rather would
be jeopardized with the registration of geologists.”

AIPG POSITION: We believe that the above statement borders on libel. We know of no geologists who are attempting to subvert protec-
tion of the public provided under KRS 322.290. KSPE/CEC ignores

—160—
the introductory level of science education obtained by most engineers, yet KSPCE/CCEC proclaims that engineers are competent to supervise highly competent geologists who are much better qualified to perform geological investigations and reach meaningful geological conclusions than are most engineers.

AIPG takes this matter very seriously and expects the written retraction as requested. The citizens of Kentucky can be better served by having the best expertise available in looking out for public health, safety and welfare. A true professional will not present himself or herself as qualified in any field in which he or she is not fully competent.

Sincerely,

Sam R. Evans
President, AIPG

1988 Annual Meeting, Tulsa

This year marked the 25th anniversary of the founding of AIPG, our Silver Anniversary. Meeting Chairman James E. O’Brien held to the theme of “Silver into Gold.” The meeting was held at the Kensington Sheraton Hotel. The Keynote Speaker was astronaut-geologist Harrison H. Schmitt, who presented his fourth talk to AIPG (see Index and Who’s Who).

Four awards were presented. The Parker Medal to Michel T. Halbouty, Honorary Membership to Wallace B. Howe and Robert R. Berg, the Martin Van Couvering Award to Charles J. Mankin, and the Public Service Award to Russell G. Wayland. See the year 1987 for a biography of Charles Mankin, and 1982 for Russ Wayland’s biography. The Index and Who’s Who lists the accomplishments of Michel Halbouty and Wallace Howe.

Recipients of Presidential Certificates of Merit for 1988 from left to right: Leroy Gatlin, John Taylor and John Dayvault—the trio who organized the hydrology training course for petroleum geologists. Back row left to right: Steve Friberg, Larry Rhodes, Jim O’Brien, Gary Glass, John Galey, Jr., and Ed Nufter.

Bill Newton and Eileen and Ad Honkala, at the head table at the 1988 Awards Banquet.
Program
TECHNICAL SESSION I
Presiding: Joseph L. Thacker, Jr., CPG 4989
9:15 AIPG: Memory of the Beginning by John A. Taylor, CPG 237, Independent Geologist
9:50 Coal Mining in the Western Midcontinent Coal Field by Frederick N. Murray, CPG 4755, Consulting Geologist
10:30 Coffee Break

TECHNICAL SESSION II
Presiding: Donald P. Moore, CPG 4142
10:40 Geologic Setting and Non-Fuel Mineral Resources of Oklahoma by Kenneth S. Johnson, CPG 2266, Associate Director, Oklahoma Geological Survey
11:15 Georoots: The Legacy of the Scots by Nowell Donovan, Texas Christian University
Luncheon; Presiding: Sam R. Evans, CPG 349
12:00 A Geological Field Evaluation on the Moon by Harrison H. Schmitt, Geologist, Astronaut and former U.S. Senator

TECHNICAL SESSION III
Presiding: John V. Hogan, CPG 6438
1:30 Everything You Always Wanted to Know About Ground Water by Wayne Pettyjohn, CPG 2749, Sun Professor of Hydrogeology and Head of the School of Geology, Oklahoma State University
2:05 Research on Mechanical Integrity of Injection Wells by Jerry Thornhill, Robert S. Kerr Laboratory, Environmental Protection Agency
2:40 An Overview of Natural Gas in The United States by Danny Conklin, President, Philcon Development and President of IPA
3:15 Coffee Break

TECHNICAL SESSION IV
Presiding: Robert S. Merrill, CPG 4984
4:10 Professional Liability and Ethics by David M. Abbott, Jr., CPG 4570, Regional Geologist, Securities and Exchange Commission
4:45 Sidewinder: A New Development in Horizontal Drilling for Petroleum, Ground-Water, Mining and Environmental Monitoring by Noel F. Rasmussen, CPG 5035, Sidewater Tools, Inc.

Wednesday, September 28
Professional Workshop
Filing Hydrogeological Site Assessment for Hazardous Waste Sites by Patricia Billingsley-Clark, CPG 6654, Department of Environmental Quality Engineering, The Commonwealth of Massachusetts
Evolving Concepts and Problems in Reserve Definitions by David M. Abbott, Jr., CPG 4570, Regional Geologist, Securities and Exchange Commission
Disclosure-Disclaimer Statements by James E. O’Brien, CPG 4535, Consulting Geologist
Coffee Break
Computer Applications of Geologic Mapping; Topographic, Hydrogeologic, Mining and Petroleum by Penelope C. Nelson, CPG 6190, Consulting Geologist
Contracts and Letters of Agreement by William V. Knight, CPG 153, Consulting Geologist

Friday, September 30
TECHNICAL WRITING WORKSHOP
Technical Writing Workshop by Edward B. Nuhfer, CPG 2808 and Mary P. Dalles, University of Wisconsin (50-page workbook included)

Saturday, October 1
GEOLOGIC FIELD TRIP
Technical Geologic Field Trip to the Ouachita Mountain Structural Complex with stops along the way in the gas and coal producing Arkoma Basin. Includes Guide Book with six new papers and cross section approximating route traversed.
1989
President Richard J. Proctor

Richard J. Proctor, CPG 5091

President Proctor shared the Headquarters turmoil that plagued the term of Sam Evans until May 1989, when new Executive Director William Evans took charge of running the office. Luckily, Administrative Manager Carol Beckett stayed on to help smooth the transition, and TPG and other publications and correspondence continued, thanks to then-Secretary Wendy Davidson.

Richard instigated paid advertising in TPG and in the annual Membership Directory, as a source of Institute income. He originated the Outstanding Achievement Award, to be given to a prominent non-member of AIPG who furthers the cause of geology; the first awardee was Stephen Jay Gould, who gave an inspired speech at the 1989 Annual Meeting Banquet. When Richard was President-Elect in 1988, he brought in his friend and association attorney Alan B. Stover to help revise our Bylaws and Code of Ethics, to prevent AIPG from possible litigation (see later). Richard wrote Presidential Messages on the topics of Membership, Publications, State Registration, Regulations, Revised Bylaws, and one titled “Wilderness and the Public Good,” which was reprinted in Geotimes.

Richard was born in Los Angeles on August 2, 1931. He graduated California State University at Los Angeles in 1954; spent two years in the Army, then graduated UCLA with a master’s degree in geology in 1958. Most of his working life he was Chief Geologist for the Metropolitan Water District of Southern California, from 1958-80; (the District supplies water to 17 million people). In the 1970s Richard was invited to be Visiting Associate Professor of Geology at the California Institute of Technology (Caltech). He was also an invited lecturer at ten U.S. universities and the University of Cape Town. From 1980-95 he was President of Richard J. Proctor, Inc., consulting on construction projects such as tunnels, dams and building foundations, and also on geologic hazards such as landslides and earthquake hazards. He considers himself lucky to have worked with the eminent Caltech seismologist Dr. Charles F. Richter.

Before Richard joined AIPG he was asked to be co-author with CGFs Don Deere, James Dunn and Robert Fickies for one of the first AIPG publications, “Geologic Logging and Sampling of Rock Core for Engineering Purposes” (1977). And in 1988 AIPG Editor Ed Nuhfer asked Richard to help write a book geared for laymen, homebuyers and government officials. The result is the beautifully illustrated “Citizens’ Guide to Geologic Hazards” (1993), which has been translated into a Spanish language edition. And of course, Richard’s last book is this one.

Richard is also past-President of AEG and was Secretary-Treasurer of AGI for four years. AIPG has bestowed on him the honors of the Martin Van Couvering Award (1990), Honorary Membership (1992), and the Parker Medal (2003). The first citation by his friend and book co-author Ed Nuhfer, summarize Richard’s career in AIPG:

Richard J. Proctor is one of the nation’s best known engineering geologists. I first learned of him through his publications on tunnel boring machines and particularly from a memorable editorial in an American Society of Civil Engineers journal, “Let’s Teach Geology to the Civil Engineer Student” that appeared in January of 1981 and which I still reproduce for my civil engineers in my first week of classes in the engineering geology course.

Dick provides more than service to his profession; he displays to it a magnitude that all of us would do well to emulate. He has been immensely successful and I have no doubt that the time of anyone with comparable professional reputation carries a market premium. Yet, Dick has probably donated more of that valuable time to his profession than any individual in AIPG and perhaps in the nation. Dick has served AIPG as our Vice-President, President-elect, and 1989 President. He also served the Association of Engineering Geologists as their President and the American Geological Institute as their Secretary-Treasurer. In AIPG, Dick has developed and participated in almost countless projects. He has been a major force behind AIPG “Issues and Answers” publications and evidence of his energy and creativity seem to be everywhere within the Institute.

However, I think that beyond those of us who worked on the Executive Committee in 1988 and 1989, few actually know the extent of Dick’s lead role in one of the most important contributions made to AIPG since 1963. The essence of that contribution is found on pages 26 through 47 of the 1990 AIPG Directory. Those pages contain the Bylaws and Code of Ethics as well as a set of official policies and membership screening procedures. Those documents of governance did not appear in previous directories because they are new. Their production was not based simply on a whim for change; the changes were critical to the very survival of a professional institute for geologists.

Dick was President-elect in 1988, during the difficult period when the Institute operated without an Executive Director, and then served five months of his own presidential term in 1989 without benefit of a Director. The experiences of the Executive Committee in 1988 dictated that every aspect of AIPG required careful study. We were fortunate to have Dick on the Committee at that time because he was the only individual who was truly familiar with recent problems caused for other societies by their traditional constitutions and bylaws. Through Dick’s persuasion, the Executive
Committee selected Alan Stover, an expert on the relationship of law to professional societies, to review our own governing documents. When Stover’s report was completed, it was apparent that our existing documents of governance, which had served as our cornerstone since 1963, were ticking bombs with the potential to destroy the very Institute they were designed to create and preserve. In light of recent judgments, these documents left our Institute in a position so hazardous to litigation that it was something of a wonder that we were still in existence.

The rewriting of documents so basic as the constitution and bylaws of a society is tantamount in labor to laying the foundation of an entire new society. Dick was the lead individual in directing the revisions and the process took almost two years to complete. Without those changes, we might not be meeting here tonight.

Dick has continued his active publication efforts as an editor of the 700-page Engineering Geology Practice in Southern California with Bernard Pipkin, and as a co-author editor of The Citizen’s Guide to Geologic Hazards, a full-color book published by AIPG.

To say that Dick, through this busy career, “always found time to provide service to the profession” would be an understatement. He is a member of a dozen organizations and is listed in several Who’s Who publications as well as Parker’s Directory of Expert Witnesses. He has also found time to serve geology students as a lecturer in engineering geology at Caltech, UCLA, California State University, Texas A&M, Occidental College, University of Southern California and Stanford University. Students would be hard-pressed to find a more inspiring role model. It is always a good experience to work with Dick because his character as an accomplished professional always comes with the caring of an unusually warm and thoughtful human being. It’s impossible to work with Dick and not feel good about it. There’s little question about why he has such superb success as a consultant. It has been my personal pleasure to have worked with you, Dick, particularly on the various drafts of The Citizen’s Guide—which we have battled back and forth in recent years. I am very honored to be asked by you to provide this citation.

Edward B. Nuhfer, CPG 2808

President’s Messages

Two of Richard Proctor’s President’s Messages are included here. Another on “Wilderness and the Public Good” was reprinted in the July 1989 Geotimes, and is discussed in “At issue: Natural Resources vs. Environment” in 1970. Recall that the 1970s and 1980s were a time of increasing governmental regulations and land restrictions that affected the livelihood of geologists, hence my message on “Regulations, Regulations, Regulations.” The following President’s Message was selected to show another hot topic of 1989.

“State Registration of Geologists”

By Richard J. Proctor

This is a subject that could fill several presidents’ messages, and indeed has in the past. Our membership’s beliefs run the gamut of extremes from “never” to “now.” Both sides have valid reasons. However, there is a ray of resolve on the horizon.

On the con side are many exploration petroleum and mining geologists who must travel across state lines to perform their work. Having to be registered and pay annual fees in several states is a pain. Also, many of us do not like the idea of still another governmental regulation with which we must abide. Furthermore, this group of geologists does not deal with public health, safety; and welfare.

On the other hand, state licensing or registration for geologists is happening rapidly even as you read this. Twenty states now have some form of registration for geologists and about six more have laws in preparation. This is an increase of ten states in the past seven years. Many of the newer state registration laws have been written and sponsored by AIPG members. Their motives and needs are clear: they must compete with registered engineers. Many geologists must be registered to perform work. We all know what certain engineers in Kentucky think of geologists; many truly believe that geologists are professionally subordinate to them and want to keep it that way. There, the geologist does the work and writes the report but the engineer signs it, simply because he has a state-recognized number after his name. The fact is that geologists have no legal status in most states, even though they may be certified through this Institute, and even though our certification requirements are more stringent than some states’ registration requirements.

What to do? One approach is to encourage more states to recognize that certification in AIPG is sufficient for legal status. Alaska and Indiana have such statutes. Perhaps a continuing education requirement for continued AIPG membership would add more credence. We are looking into this.

Another solution; I’m happy to inform you (unless you heard it first at our Annual Meeting in Tulsa) that past-President Sam Evans and I have met with the top officers of AAPG’s DPA, SIPES, and AEG to discuss the preparation of a model state registration law that would address these concerns. The discussions now seem to go toward exclusion of petroleum and mining geologists from any future state registration, plus exclusion of any geologist that does not deal with public health, safety, and welfare. (A proposed law in Texas is worded in this manner.)

However, there is a pitfall in excluding one group of geologists. As in California in the 1960s, the petroleum geologists initially were against the proposed state registration of all geologists until Hank Neel, CPG 528, and others convinced the petroleum geologists that they would, in effect, be second-class professionals by being the only group of geologists not legally recognized by the state.

Most petroleum geologists who became state registered still don’t deal with public health, safety and welfare. Nonetheless, legal state recognition is useful to those who (1) testify as experts in court, and (2) those who change their spe-
cialty to the growing field of ground-water geology related to hazardous waste.

Many unemployed petroleum geologists are seeking new employment in ground-water geology because the oil patch remains economically depressed while hydrogeology is booming. However, because ground-water geology deals with public health, these unemployed geologists are faced with seeking state registration if they wish to work in those states that require registration. It is infinitely easier to grandfather into state registration than to study for the required exam after so many years since college and so many years of working in a different specialty. Therefore, a suggestion: An initial cost to grandfather into a new state’s registration may be an investment for the future for those of us that may change our specialty for economic or other reasons. (In this regard, Leroy Gatlin, CPG 566, John Taylor, CPG 237, and John Dayvault, CPG 4815, were commended at our Annual Meeting in Tulsa for their work in retraining unemployed geologists. I echo their kudos!)

I welcome your comments. Be assured that your Executive Committee will act only in the best interests of the Institute’s members.

“Regulations, Regulations, Regulations”
By Richard J. Proctor

Most of us don’t like to be told what we can and can’t do. However, laws, regulations, and restrictions are necessary to protect the public majority. Thus most environmental regulations are for the common good. We shouldn’t tolerate toxic wastes in rusting barrels, nor pesticides in our water. And we must get hopping on solutions to acid rain and global warming. Nevertheless, some regulations in the name of environmental concerns are excessive; some have caused national and private economic hardship, while not satisfying their intended purposes.

A concern has been expressed that students are being taught altruistic and one-sided views as regards pro-environmentalism relative to prudent economic development. Many conjure up negative images of words like dams, bulldozers, oil drilling, corporations, and even petroleum geologists. Are students being taught what a large multidisciplined effort is involved when they routinely fill their gas tanks, or flip a light switch, or turn a water faucet? I don’t believe they want a lesser standard of living for their children, but will they inadvertently be working toward that standard by advocating non-essential regulations, or by advocating closure of land that contains important minerals?

An example of non-technical people writing technical regulations was given by Unk Unklesbay, CPG 1028, when he was Executive Director of AGI. He received a phone call from an attorney on the staff of a congressman who was writing a proposed regulation on oil shale. He wanted some appropriate geological words to insert so that he could write a good bill!

Former Secretary of Energy John Herrington last year said, “Congress is a group of born regulators. Good environmental policy and good oil policy can exist together.” As minerals become more expensive to extract, consider that the average person in the U.S. consumes 40,000 pounds of raw minerals each year. Even so, the U.S. has gone from a self-sufficient, exporting nation to a dependent, importing nation. Question: Is it time to reduce our high standard of living to which we’ve become so accustomed, or can we look forward to even higher living standards in the future?

There is also a matter of perspective. Every creature that lives damages the environment to some degree. Man is not the only culprit. A beaver ruins his environment by destroying many more trees than he needs, disrupting fish habitats, and flooding ant hills. We don’t question his lifestyle. However, it seems we view human activities differently. Some among us get irritated when lumbermen harvest timber or when an agency builds a dam, even though the reasons for such activities are that people need lumber and water. Of course curtailing population growth is a solution, but this is no the forum for that topic.

Many say to help curtail acid rain and the greenhouse effect we should stop building fossil fuel electric power plants. The three least desirable emissions from fossil fuel plants, especially coal-burning, are sulfur, particulates and CO₂ gas.

Sulfur emissions cause acid rain; the amount leaving the smokestacks should be better regulated. Particulate matter emissions can cause lung disease; its quantity has been so regulated that there are more particles in the air we breathe than particles leaving the smokestacks; the size of particles allowed to leave with the flue gas is about 10 microns, or the size of large bacteria. CO₂ emissions cause global warming, and this cannot be eliminated from burning fossil fuels.

The main clean-air energy alternative is nuclear. (Solar, wind, and tides simply can’t produce enough power with today’s technology.) Although there are more than 90 active nuclear power generating plants in the U.S. (compared to about 260 in European countries), the U.S. public has been media-conditioned to fear this source of energy. As a result of this fear being translated into regulations, the costs of constructing new plants has increased significantly. In fact, a nuclear plant emits three times less radiation than a fossil fuel plant.

Incidentally, a disaster was averted at Three-Mile Island because the safety system ultimately worked, in spite of abundant human errors. At Chernobyl the containment failure was blamed on inferior Soviet design and construction.

We’ve become a nation of advocates. Our governmental departments are staffed without too much thought about balance in points of view. Obviously most who work for the Department of Defense are pro-military. And most who work for the Environmental Protection Agency are pro-environment. But pro-environment should not mean anti-development. The opinions of land developers, timber-men, oil-men, and mine operators should be seriously considered by federal agencies when they prepare far-reaching decisions that affect our national well being. Sure these groups have biases and special interests, but so do proponents of no-growth.

My main point: a more real-life balance of opinions should be a goal of governmental agencies before they issue regulations and restrictions that become law.
Other Happenings in 1989

When President Proctor took office he had a list of 16 goals that were published in the February 1989 TPG. Most were accomplished. Some of that year’s more interesting events include the following:

A serious disciplinary case in which a CPG was asked to resign his membership. He refused and said he would contact his attorney. (Because such cases are held in strict confidentiality, I don’t know how many other presidents have dealt with this problem.) Luckily, we had retained attorney Alan B. Stover (see later) who guided us through this potential lawsuit, and who later wrote AIPG’s Disciplinary Procedures. On the appointed hearing day, the accused CPG and his attorney didn’t show. The CPG later returned his AIPG certificate to Headquarters. Whew!

A good way for AIPG to become more visible to the public, is to publish more booklets in lay language. Six ad hoc committees were assigned the task of producing six booklets: “Geologic Maps,” chairman Ken Weaver, working with the USGS. “Professional Ethics” chaired by Dave Abbott; (see Appendix five for the end result of some of this effort in the 1998 book). “Strategic Minerals,” chaired by Elisabeth Newton. “What the Homebuyer Needs to Know,” chaired by Hugh Robertson; a booklet with this theme was published in 1996 by Wilgus Creath. “Starting Your Own Consulting Practice,” chaired by Fred Fox. And “Geologic Hazards,” chaired by the late Paul Moser. In 1989 the Hazards booklet had drafts from most of the 15 CPG co-authors. With Paul’s permission, committee members Ed Nuhfer and Richard Proctor re-contacted all 15 contributors, and expanded the draft booklet into the 1993 book, “Citizens’ Guide to Geologic Hazards,” the Institute’s best seller.

When President Proctor was most active in AEG, he noted that as much as 40 percent of AEG’s income came from advertising. Why didn’t AIPG do this? (Actually, advertising as a source of Institute income was started in 1981, but apparently wasn’t too successful.) In 1988, Proctor convinced the Executive Committee to create the position of “Advertising Coordinator.” The Executive Committee agreed to interview Proctor’s Texas colleague Aubrey “Pete” Henley, CPG 3706, and past-President of AEG. Pete flew to Headquarters to meet with the Executive Committee, and agreed to help identify prospective advertisers for TPG and our Directory, and to establish prices for different size ads. Advertising is still a source of income for the Institute, but the task is now handled by Headquarters staff.

The 1989 Executive Committee pursued contacts toward reciprocity with similar geologic societies in Australia, Canada and England. We were most successful with our English colleagues (see 1990).

We created a new Applicant Screening Committee to review all applications. This significantly reduced the review process down to about four months, and provided uniformity of review criteria. CPGs Stan Johnson, Travis Hughes, Serge Gonzales and Bob Northcutt were most active in getting this underway.

We also reduced the “Specialty Fields of Practice” from the unwieldy 320 to 54.

We wanted new benefits for our members, including liability insurance (a reality in 1991); we wanted more short courses at the annual meetings and more publications; we wanted more involvement between Sections and National. The late Honorary Member Doris Curtis (see Index and Who’s Who) did a yeoman’s job in coordinating these activities as chairman of the Membership Services Committee.

Executive Director William V. Knight, 1989

Bill Knight is a truly dedicated professional and a superb AIPG spokesman. He has delivered more speeches about AIPG to more Sections and university students than anyone—(I estimate more than 300 talks). A glimpse into the life of this remarkable man can be gleaned from two citationists. The first from past-President Russell Slayback, for Bill's Martin Van Couvering Award in 1996, and the second tribute to Bill from his British friend and AIPG Honorary Member Richard A. Fox, on learning of Bill's retirement in 1999. And, in 2001, Bill was awarded Honorary Member, with Charles Mankin his Citationist.

Citation for
Martin Van Couvering Memorial Award
To William V. Knight
By Russell Slayback, CPG 2305

It is a singular honor to be the citationist for Bill Knight, a man I regard with deep admiration, respect and friendship, for the 1996 Martin Van Couvering Memorial Award. The Van Couvering Award is presented annually by AIPG in recognition of distinguished service to the Institute. I am here to testify that no one serves AIPG as thoroughly, as completely, as effectively, and as loyally as William V. Knight.

Bill is a Charter Member of the Institute, CPG 153; personally knew and admired Martin Van Couvering; and is especially proud that his Membership Certificate was signed by our first President, CPG 1. It is especially fitting that the man who now holds AIPG together and keeps the Institute on a continuing growth path is now honored in the name of Martin Van Couvering.
A native of West Virginia, Bill studied Civil Engineering at West Virginia University before moving on to earn his B.S. in Geology from The Ohio State University and then his M.S. from the University of Tulsa. He has also studied Business Administration at the Alexander Hamilton Institute, Law at LaSalle Extension University, and Environmental Science at Oklahoma State University.

His professional career began at ARCO as a geophysicist and geologist for four years and then he spent 17 years with Atlas Minerals Division, rising to the position of Exploration Manager. Bill became Executive Manager and Senior Consultant for the William Brothers Engineering Company in Tulsa in 1973, until he became a full-time consultant in 1976 as President of Knight Exploration Company, as well as Associated Resource Consultants. Always capable of keeping several balls in the air, Bill also served as an Adjunct in Geology at the University of Tulsa from 1971 to 1976, and as a Seminar Instructor for the Society of Exploration Geophysicists, the Petroleum Information Corporation and the Tulsa International Petroleum Institute in the 1981 and 1989 period.

Bill is active in numerous professional societies, notably AAPG, AEG, AGWSE and SEG. He is also licensed in 12 states, as well as being a “Chartered Geologist” in the United Kingdom and a “European Geologist.” Bill has also been a Rotarian for 15 years, and is currently President of the Arvada Sunrise Rotary Club. Rotary’s motto, “Service Above Self,” pervades Bill’s professional life.

Bill Knight became Executive Director of the AIPG in May 1989, when AIPG was badly in need of a jump-start to get back on its proper course. One need look no further than the improvement in our publications and the growth of our services to our Members to understand that Bill provided the much-needed hard work and dedication to turn AIPG around. He reorganized the staff and instilled in them the understanding that service to and communication with our members is Job One. He developed business-style budgeting processes that allowed adjustment for success and early warning of tight times. Many AIPG Officers, Executive Committee Members and volunteer Members of the Institute made tremendous contributions to AIPG’s present successful position, and all of us remember being encouraged, inspired, nudged and, yes, prodded when needed by our Executive Director.

But we would not be honoring Bill Knight today if he had simply met his job description. Bill has gone above and beyond the call of duty in so many ways that they are difficult to enumerate. Bill recognized that our state Sections are the foundation of AIPG’s strength and reinstituted regular visitations with the Sections. His efforts on behalf of the Sections in trouble have been truly outstanding; witness the growing strength of New Mexico, Louisiana and Pennsylvania Sections in the last few years. He saw that AIPG could not thrive in a vacuum and began to reach out to other societies and to market AIPG at national conventions. He was instrumental in getting AIPG heavily involved in the excellent AGI Government Affairs Program, which has enhanced our stature within the geologic community.

While on the road for these purposes, Bill gets more bang for our buck by arranging to make presentations about professionalism and AIPG before geology departments at colleges and universities across the country. You should have noticed that the “Executive Director’s Itinerary” is a regular part of TPG; it is an amazing chronicle of Bill’s unthinking travel on behalf of AIPG.

Bill Knight has also made AIPG a force to be reckoned with within the European geologic community. Through his efforts and diplomacy, AIPG members can become “Chartered Geologists” in the U.K. through a comity agreement with The Geological Society of London, “Professional Members” of the Irish Association for Economic Geology, and through either may become “European Geologists” of the European Federation of Geologists. Again, several AIPG Officers have contributed to this effort, but it has been Bill’s persistent hard work and diplomacy that brought these relationships to fruition.

In his native West Virginia, Bill met and won the hand of Martha Ashworth in 1951; Martha, one of AIPG’s quiet assets, and Bill will celebrate their 45th wedding anniversary this coming December. They are the proud parents of three successful sons, Wm. Harold Knight, M.D., James F. Knight, M.D., and Robert B. Knight, P.E., and are blessed with eight grandchildren.

Bill Knight has truly earned our gratitude for his magnificent service to AIPG, which I hope will continue for many more years, and he brings high honor to the roster of recipients of the Martin Van Couvering Memorial Award.

An EFG Tribute to William V. Knight

With the 30th April 1999 fast approaching when Bill Knight retires, I felt it was appropriate that there should be a “tribute” from someone in the “Old Countries” of Europe who has had the privilege to know Bill and the AIPG in those busy years from 1989, when Bill became Executive Director.

As some of the fellow AIPG members will know it was a chance meeting with Bill at the World Geological Congress in Washington in 1989 that John Shanklin and I, representing the Institution of Geologists (UK) and the European Federation of Geologists (EFG) (based in Paris), were able to share some of the problems with AIPG. It was from that meeting that the strengthening links were established between the Geological Society (merged in 1990 with the Institution of Geologists in the UK), EFG, and the AIPG, and much of the credit must go to Bill for giving such fantastic support to the international scene when he was so busy at home.

He set such a good example for us here in Europe, and we learnt much from all that AIPG was doing to raise the profile of professional geology.

It was a great privilege that Bill and a succession of superb AIPG Presidents were able to travel to Europe to attend so many Council meetings of EFG and President meetings over the last 10 years. We also appreciated the kind hospitality that we received from AIPG at the various AIPG Annual Meetings that we attended in the USA.

The common ground that we covered on such different subjects was so stimulating for the EFG, the Geological
Society, and other member Associations of the European Federation, and there is no doubt in my mind that the continued links were maintained very much through the tireless effort of Bill Knight. I know he will be missed on the American and World Stage of professional geology but he has made his mark in such a truly professional (and unique) way. However, he moves on to a much-deserved rest, which he and Martha have earned more than most.

I very much support your Vote of Thanks and sincere "well done" from every CPG. I have learnt much from Bill and hope that in the years ahead the "Foundation Stones" that he has laid for geologists throughout the world will continue to grow.

I would also wish Bill Siok, his successor, every good luck for the future and hope that we have the opportunity to meet with you on your next trip to Europe.

With kind regards,
Eur. Geol. Richard A. Fox, CPG

“Revise Your Code of Ethics, or Else”
— Attorney Alan B. Stover

It seems that in the 1980s the U.S. Department of Justice (DOJ) set its sights on professional organizations that appeared to restrict membership based on wording in their Bylaws and Code of Ethics. The DOJ brought lawsuits against AEG (Association of Engineering Geologists) and ACS (American Chemical Society). The DOJ interpreted innocentsounding wording in documents to imply restraint of trade to scientists who are not members of these professional societies.

When Richard Proctor was President-Elect of AIPG in 1988 he explained AEG's costly experience with DOJ to the Executive Committee. To avoid a similar lawsuit, they voted to hire Alan B. Stover, an attorney specializing in association law, and who defended AEG, to review and rewrite AIPG's Bylaws and Code of Ethics. Mr. Stover, with members of the 1988 and 1989 Executive Committees, made a complete overhaul of our original 1964 documents. Some changes were:

- Merged the Constitution into the Bylaws and into the Articles of Incorporation;
- Moved the Code of Ethics from the Constitution to become a separate document that can be adopted and amended separately; Liability and indemnification provisions were added to conform to Colorado law; Procedural items, such as the applicant screening process and disciplinary procedures, became separate documents, to be more easily amended.

This major rewrite of 1989 was overprinted on the original 1964 Code of Ethics and Bylaws, and was printed in TPG, and voted on by the membership. The Bylaws were again partly revised in 1997 and 1999.

Alan Stover also prepared our Disciplinary Procedures (see annual Directory), and wrote the paper “Basic Antitrust for Associations” (included in Appendix 9 for the year 1989). Thank you Alan!

Congressional Testimonies by Michel Halbouty and Don Fife

In 1989 these two geologists were the last of 18 dedicated and concerned CPGs to give congressional testimonies. Their statements are reproduced in Appendix 9.

1989 Annual Meeting, Arlington, VA

Our hard-working 1986-87 National Secretary and 1988 President-Elect candidate Stanley S. Johnson was General Chairman of the 26th Annual Meeting. The meeting was held at the Crystal City Hyatt Regency Hotel in Arlington, Virginia, just across the Potomac from Washington, D.C. The date was October 3-7, but the day before the Annual Meeting, the annual Governmental Affairs Conference was held, instead of in the Spring, to allow more members to attend. The Program on October 4th was:

Welcome
Richard J. Proctor,
President, AIPG

Introduction of Conference
Elisabeth G. Newton,
AIPG Washington Representative

Environmental Issues
James Dunn,
Dunn Geosciences
Albany, New York

Oil and Gas Issues
Marcus Milling,
University of Texas
Austin, Texas

Nuclear Energy Issues
John D. Stevenson,
Stevenson & Assoc.
Cleveland, Ohio

Mineral Issues
Hans W. Schreiber,
Behre Dolbear & Co.
New York, New York

Address
R. A. Johnson,
Vice President, Public and Government Affairs
Amoco Corporation
Chicago, Illinois

On Thursday morning, the Annual Meeting Technical Sessions consisted of panel discussions on the still timely subjects of “Global Warming: Whose Issue?”, “What is Asbestos?”, “Groundwater—What Needs Regulation?”, and “Regulated Waste or Hazardous Waste?”

The Thursday afternoon session featured three presentations on subjects related to the research of the oceans’ floor. Bonnie A. McGregor began the session with a presentation on “Image Maps of the Exclusive Economic Zone.” Dr. McGregor’s talk was an overview of the cooperative effort between the U.S. Geological Survey and the Institute of
Oceanographic Sciences of the United Kingdom using the GLORIA system. Millington Lockwood presented an overview of NOAAs Bathymetric Mapping Program. S. Jeffress Williams spoke on the “Marine Geologic Studies of Hard Mineral Resources in the EEZ.”

On Friday morning, the Technical Sessions had four papers on the subject of radon gas. The session began with a paper on “Mapping the Radon Potential of Rocks and Soils” by James K. Otton. Susan L. Rose presented a paper titled “Uncertainty vs. Science: The Radon Research Program at the U.S. Department of Energy.” R. Thomas Peake presented a paper on “Assessing the Radon Potential of the United States.” The session was concluded by William E. Belanger with a paper titled “Investigation of Factors Influencing Temporal Variations in Radon in a Residential Structure.” (The abstracts of these papers are in the May 1989 TPG).

Dr. Robert C. Milici, CPG 5135, State Geologist of Virginia, was the invited Keynote Speaker at the Annual Luncheon.

One workshop was offered, on “Environmental Site Assessment for Real Estate Transactions,” organized by a team of geologists from NUS Corporation.

A local “quasi Field Trip/Social” visited Falls Park and a local winery. Three outstanding Spouses Tours included the White House, Mt. Vernon, and behind the scenes at the Smithsonian.

The Institute’s four highest awards were: Ben H. Parker Memorial Medal to Peter T. Flawn, CPG 430; Martin Van Couering Memorial Award to Stanley S. Johnson, CPG 3472; Public Service Award to Elisabeth Guerry Newton, CPG 4785; and Honorary Membership to Edward E. “Bud” Rue, CPG 12. In addition, the first award to a non-AIPG member was given:

**First AIPG Outstanding Achievement Award**

It seems that there are prominent non-AIPG members “out there” who should be recognized for their outstanding contribution to geology. In 1989 Proctor initiated a new award to recognize such individuals. The first recipient was Stephen Jay Gould, who accepted, and gave a thought-provoking speech at the Annual Meeting Banquet. The award is not necessarily given annually (see years 1995 for Ron Redfern, 1997 for John McPhee, and 1999 for Julia Jackson).

Dr. Gould’s work is particularly notable because of his clear and entertaining style of writing, which has resulted in better understanding of Man’s position on Earth, and how we got to be where we are today. Book titles such as “Hens’ Teeth and Horses’ Hooves,” “The Panda’s Thumb,” “Ever Since Darwin,” and “Time’s Arrow, Time’s Cycle” have become popular college reading. Dr. Gould has received 11 honorary university degrees and 12 national awards. His sage words were on “Young People’s Perception of Geology Compared to Chemistry and Physics,” at our Annual Awards Banquet. Dr. Gould’s citationist was his colleague Ellis Yochelson.
Is it proper to start with “Our first woman President”? Why not? Susan Landon is an exceptional person, geologist, and manager, regardless of gender. Thanks to Susan, we cannot be called a good old boy’s club, if we ever were. Also, in 1998 Susan was only the second woman geologist to be President of the American Geological Institute. In 2001 she was awarded the Ben Parker Medal; her citationist was past-President of the Association of Engineering Geologists, Susan Steel Weir. Her career is described by her colleague, 1989-90 Treasurer, and co-author with Susan of the 1991 Long-Range Planning Report (see Appendix 9), Norman K. Olson, on Susan’s being awarded the Van Couvering Memorial Award:

Susan M. Landon, CPG 4591, this year’s recipient of the Martin Van Couvering Award, is a trail blazer and pioneer, serving as the first woman President of the Institute in its 28-year history. She is the 15th recipient of the award, and as such she joins a distinguished group of fellow AIPG members who share the common characteristic of having given generously of themselves to the Institute. Susan typifies both that unselfish service to AIPG and the criterion for this award that states, “By far, the most important contribution a geologist can make to the Institute is that of time.”

Susan Landon, born in Mattoon, Illinois, earned a B.A. in geology from Knox College in Galesburg, Illinois in 1972 and an M.A. in geology at the State University of New York-Binghamton in 1975. She then progressed with Amoco Production Company in Denver and Houston through twelve years of frontier exploration, three years of development, and finally two years as Manager of Exploration Training. In this last position she was responsible for approximately 100 technical courses taught worldwide each year, including course content and instructor selection. Since leaving Amoco in 1989 she has worked as an independent petroleum geology consultant, based in Denver.

Susan was Certified in September of 1979. Not content to “just be a member,” she became actively involved in both Section and National Institute activities, rising to the positions of national Vice President in 1985 and (hosting the Annual Meeting) Colorado Section President in 1986. Moving and job commitments filled the next couple years. Then with renewed energy she accepted (and won) the nomination and election for president-elect of the Institute in 1989.

As President in 1990 she sought new challenges and innovative ways to serve AIPG. Under her leadership, the Executive Committee implemented several “firsts,” including:

First to approve a standing (and now very active) committee on Education in Earth Science, and

First to approve an ad hoc committee on Insurance (the Group now working to develop both a health plan and an Errors & Omissions plan) for the members.

In addition to these accomplishments, Susan reactivated the standing committee on the Cooperative Evaluation of Geology Departments. She provided leadership as AIPG branched into the international arena, successfully arranging for representatives of British geological societies and the European Federation of Geologists to attend the 1990 Annual Meeting in Long Beach. Susan was also AIPG’s co-representative at the deliberations of the Council of Professional Geologic Organizations (CoPGO) to develop a national model registration bill for geologists.

Under Susan’s guidance, and with her direct involvement, an ad hoc committee was formed to provide direct input to the federal government regarding the proposed revisions to the 1872 Mining Act. And, with the advantage of living in the metro-Denver area, she provided personal contact and strong support for the Headquarters staff.

Leaving office and traveling the world have not ended Susan’s service to AIPG. Throughout this year she has continued to work on the Education Committee and the ad hoc committee monitoring the 1872 Mining Act; she chaired the Nominating Committee.

Susan Landon and 1989 Alaska Section President Linda Okland during October visit to Anchorage.

AIPG President Susan Landon visited the Alaska Section in October. AIPG Erik Opstead treated her to a bird’s eye view of Mount McKinley.
Committee; and she accepted an appointment to the Headquarters Committee.

Susan Landon’s time, effort and talents have been intensely dedicated to AIPG. Serving on the Executive Committee with her during 1989 and 1990, I developed an enormous respect for Susan’s many abilities, particularly her outstanding management of interpersonal relationships, poise under stress, and exceptionally strong self-motivation. Her service has consistently strengthened the Institute, and she has been an inspiration to all who have worked with her.

**President’s Message**

**Multiple Working Hypotheses**

**Public Involvement in Regulations Encouraged**

By Susan M. Landon

I received a copy of an article entitled “Is Volcano to Blame for Hole in the Ozone?” from Courtland Lee, a Member in Maryland. This article generated some thoughts on the current status of the concept of multiple working hypotheses in science and the popular press. The article has received significant interest from friends and I decided that it would be appropriate to share this topic and my concerns with the readership of TPG.

Research has shown that Mount Erebus, an active volcano in Antarctica is emitting significant volumes of chlorine and fluorine into the atmosphere. The first reference to this occurrence I encountered was in the April 1990 issue of *National Geographic*, in an article on Antarctica. A scientist from Hawaii, Ray Chuan, was reported to have studied the chemical content of particles emitted by Mount Erebus, documenting the occurrence of hydrogen chloride and attempting to determine if these chlorine compounds may have a role in the depletion of ozone. As a point of interest, the article reports that particles of elemental gold are also emitted from Mount Erebus. The article stated that the depletion of the ozone layer is, in part, the result of man-made chemicals, the chlorofluorocarbons that are generated in the industrial areas of the world. Those areas are predominately situated in the northern hemisphere. National Geographic did present the possibility of both a natural source and a man-made source resulting in the depletion of the ozone layer but, as I finished the article, I felt that the general reader would believe that man-made compounds are the real villains.

The newspaper clipping Courtland sent to me discussed more of the details of Mount Erebus and the potential effects of its eruptions. A geologist at the New Mexico Institute of Mining and Technology, Philip Kyle, has also been studying Mount Erebus and was quoted: “Yöwe have an important natural source of chlorine and fluorine, and we know these chemicals destroy ozone. We don’t know how much of the emissions make it into the atmosphere, but they certainly could be a potential contributor to the ozone hole.” Chuck Stearns, meteorologist at the University of Wisconsin, has studied Antarctica’s weather and believes that the volcano is the sole contributor to the hole in the ozone because the chlorofluorocarbons observed at the South Pole are in very small quantities compared with the volume emitted by the volcano. Other scientists dispute these claims. Mario Molina, an atmospheric chemist at MIT, was one of the original scientists to suggest the link between chlorofluorocarbons and ozone destruction. Molina observed that massive volcanic eruptions can puncture the ozone layer, as happened in the 1982 eruption of El Chichon in Mexico, but that the Antarctic winds would disperse the gases rising from Mount Erebus.

In my opinion, the author of the article, David Sheppard with the Gannett News Service, certainly did a good job of stating the controversy. Although, as I read about issues such as ozone depletion and the greenhouse effect in the popular literature, I sometimes wonder what happened to the theory of multiple working hypotheses. Have scientists taken the position of some oil finders I have known? “My prospect/play is the absolute best” despite what subsequent data may indicate. Or, have those people who are reporting the situation to the general public preferentially distilled the concept of multiple working hypotheses from the material presented? Sheppard seems to be an exception, at least in the case of this article, and it is refreshing to read a balanced presentation of an issue.

Congressional Quarterly, Inc. (CQ), the Washington, D.C. based communications organization, has announced a new professional development seminar to highlight the importance of public participation in the federal regulatory process. The one-day seminar entitled “The Federal Regulatory Process and You” consists of several modules on various aspects of the overall process for the development of effective regulations.

E.G. Newton & Associates, Inc. was retained by CQ to develop the course module that defined the tools and methodology necessary for effective participation in the regulatory process. Elisabeth Guerry Newton, CP4 4785, company president, said “we are pleased that CQ has organized this seminar to respond to a key aspect of the process of participatory government. We welcome the opportunity to contribute to the success of this new seminar. Public involvement in the processes of government can only lead to more effective government regulations.” Other modules were developed by experts from the School of Public Policy, American University, the U.S. Advisory Commission on Intergovernmental Relations, and representatives of the corporate sector.

**Highlights of 1990**

A very successful Governmental Affairs Conference had Manuel Lujan, Secretary of the Interior, as speaker.

The AIPG Foundation reached its first goal of $50,000.

The EC adopted a new AIPG Policy on Specialty Certification and Registration. President Landon wrote a paper “Registration for Geologists” that appeared in the January *Geotimes*, and is reprinted herein, Appendix 9.

Future Honorary Member Richard A. Fox of the European Federation of Geologists wrote an
ROLLING ALONG AGAIN

AIPG Contacts with European Geologists

Bill Knight left a favorable lasting impression on our European colleagues. It started in 1989 when Bill started work as our new Executive Director. President Richard Proctor asked Bill to accompany him to represent AIPG at the World Geological Congress in Washington, D.C. At the Congress we met two members of our “sister” organization, the European Federation of Geologists (EFG). With Richard A. Fox and John Shanklin, who both later became AIPG Honorary Members, we laid plans for Bill to visit them at the Institution of Geologists at Burlington House in London (where, incidentally, AIPG members will receive a royal welcome). August 1990 saw Bill in the USSR meeting with Soviet geologists. His report follows. In later years, Bill’s efforts produced the comity agreement between EFG and AIPG.

“From Russia with Love”

By William V. Knight

On August 21, 1990, the group of AIPG Members visiting the Soviet Union returned home, tired but enlightened. Coincidentally, on August 26, ABC carried the old 007 movie, From Russia With Love. How times and perceptions change!

The group met in Moscow, Tbilisi, Khavkov, and Leningrad with counterpart groups of geologists and geophysicists working in the environmental, hydrogeology, mining, and petroleum geology fields. They visited offices, laboratories, and museums. Little new information was learned of a technical nature, but much was learned of a business, economic, political, and social nature. Several members of our group identified promising opportunities and potentially valuable contacts.

The Soviet counterparts had been asked to give us an overview of the “state of their art,” to identify possible opportunities for joint ventures especially for smaller American firms and individuals, and to outline the procedures for organizing these joint ventures. (By way of explanation, it appears that the only way to do business in the Soviet Union presently is through some type of joint venture with a Soviet entity.)

As to the state of their art, it appears that they have little to sell us that we do not already have in some form. They have some ideas of entering joint ventures outside the Soviet Union whereby they supply the technical expertise and non-Soviets supply the markets and the financial backing. One impression received was that there is an oversupply of qualified geologists and geophysicists who are worried about their future employment. Thus, they are forming consultation groups of people who have worked together for a long time. They are trying to sell their services anywhere, but preferably in the United States. The people taking this approach seem to be primarily from the research laboratories, academic institutions, and groups that have worked on Soviet aid/development projects outside the Soviet Union. This approach was found only among some of the groups in Moscow and Leningrad. Other groups there and elsewhere seemed to have a less exalted view of the state of their art. They were more interested in importing technology and financing for joint ventures within the Soviet Union.

Opportunities for joint ventures within the Soviet Union run the gamut from eliminating the giardia in Leningrad water through developing medium sized petroleum reserves and mineral prospects to predicting earthquakes in the Trans-Caucasus. It was said that most of the major petroleum and mineral reserves have been developed, but that most of the medium and smaller reserves have been ignored. Further, the emphasis in petroleum has been on structural traps. (As we all know, this is not unique to the Soviet Union.) Geologists in all of the cities seemed to believe that there are major reserves remaining in stratigraphic and combination traps. Some of the areas described as being too complicated to explore brought to mind recent developments in the Ardmore and Arkoma basins.

The procedures for organizing joint ventures are anything but straightforward. The currently unstable political situation makes any negotiations and resulting agreements extremely uncertain. Our group heard many suggestions as to how things will evolve. Future property rights, as well as lines and levels of authority are the subjects of considerable speculation and uncertainty. Thus, a deal arranged in Tbilisi or Kiev may not be approved in Moscow. On the other hand, the Georgians or Ukrainians—may say that does not matter; they will do it anyway. Similarly, Moscow’s authority to arrange deals in the republics may be challenged. In any case, local representation is essential. Thus, the best short term course for those interested in doing business anywhere in the Soviet Union, particularly if it involves natural resources, seems to be to spend time developing local contacts and identifying specific prospects. At some point the question of repatriation of profits must be considered. Presently, that is difficult. Goods, but not cash, can be exported. Unfortunately, few export goods are available and transportation facilities are limited, especially for bulky items such as petroleum or ores.

The people in the three republics visited were warm, friendly, and hospitable. The black market is flourishing, crime is increasing, and criticism of the governments of the last 70 years is open and intense. Those 70 years were heard referred to as “the time of stagnation.” There is an obvious desire for

article in TPG on “The Professional Geologist in Europe,” reproduced in Appendix 9.
more contact with other peoples. There is a real generation gap. The black marketeers are generally young and aggressive. Many of the “over-30” generations are having difficulty adjusting to the rapid changes. The old soldiers, veterans of the “great patriotic war,” wearing their medals and ribbons on their coats, seem to be in shock. One cannot help but reflect on the thoughts they must be having. The 1960s and 1970s were a time of upheaval and change in our own country. But, it was as nothing compared to that which they are experiencing. Their disillusionment and distress were summed up by one who said “Three generations have been sacrificed to an experiment that did not work. We are a loving people but we cannot love this past. Please help us to build our future.”

1990 Annual Meeting, Long Beach, CA

Future AIPG President Stephen M. Testa was the General Chairman of this most successful Annual Meeting. From October 10-13 the technical sessions, luncheon and Awards Banquet were held at the Hyatt Regency Hotel. Two Field Trips included an all-day excursion to Catalina Island, led by James Slosson, CPG 1109, who had mapped part of the island in the 1970s; and a tour of White’s Island, one of the oil-producing islands in Long Beach Harbor. The oil drilling rigs are sheathed to resemble tall buildings. Stories abound of Long Beach visitors who remark, “Those condos must have wonderful views.”

Grover E. Murray, CPG 94, received AIPG’s highest award, Ben H. Parker Memorial Medal, from President Susan M. Landon at the 1990 Annual Meeting.

Richard J. Proctor, CPG 5091, received the AIPG Martin Van Couvering Memorial Award.

Linda E. Okland, CPG 7117, received the AIPG Public Service Award.

Mason L. Hill, CPG 20, received the AIPG’s Honorary Membership Award.

From left to right: Richard Bateman, Executive Secretary of the Geological Society; John Shanklin, President of The Institute of Geologists, United Kingdom; and Richard Fox, President of the European Federal of Geologists.

1990 Annual Meeting field trip photos.

Photo on left: AIPG member John Haun and wife Lois.

Photo on right: AIPG member Larry Austin holding daugher Stephanie.

Field trips included Island White—Thums Long Beach Drilling Island.
The Luncheon Speaker was Joe Birman, CPG 316, president of Geothermal Surveys, Inc. There was no formal speaker at the Awards Banquet. Three spouses tours were given: Tour One visited old Mission San Juan Capistrano, and the city of Laguna Beach with its many art galleries and scenic ocean views. Tour Two was a motor coach trip to Rodeo Drive, Beverly Hills, Universal Studios, and the “Stars Walk of Fame.” Tour Three was in and about Long Beach, with a visit to an old rancho, the Art Museum, and shopping on Second Street.

The Awards Banquet featured the Parker Medal to past-President Grover E. Murray, for his years of service to the Institute; Honorary Membership to Mason L. Hill, CPG 20, (See Index and Who’s Who, and his reprinted citation in the October 1990 TPG); two Van Couvering Awards, to past-Presidents Sam R. Evans and Richard J. Proctor, for their trying but rewarding years in office; the Public Service Award to Linda E. Okland, CPG 7117, for her outstanding work educating students about science.

1991
President Haydn H. Murray

Haydn, our second president with the surname Murray, was born in Kewanee, Illinois, in 1924. He graduated the University of Illinois with a B.S. in 1948, a M.S. in 1950, and a Ph.D. in 1951 in geology. For the next 16 years, Haydn worked his way up to Executive Vice President of Georgia Kaolin Company. He then became a professor of geology at the University of Indiana in 1951 and was Department Chairman from 1973 to 1984. His accomplishments include President of the Clay Minerals Society in 1965, the President of SME (Society of Mining Engineers) in 1988, and a member of the UNESCO Working Commission on Genesis of Age of Kaolins, from 1973 to 1983. He was awarded the AIME Hal Williams Harding Award in 1976. He is co-author of the 1991 AIPG publication “Education for Professional Practice” (see Appendix 5).

Long Range Planning Report:
“The Institute in Evolution”

Haydn saw a need to define AIPG’s future goals, so he ordered a Long-Range Planning Report, chaired by Ernest K. Lehmann, with assistance from Susan Landon, Charles Mankin, Norman Olson, and Richard Proctor. The report, titled “The Institute in Evolution,” was written within the year, and is given in Appendix 9. (It is worth reading for those interested in the future of AIPG.)

Highlights of 1991

President Haydn Murray and his Executive Committee accomplished:

- Appointed a committee to monitor and take necessary actions regarding the 1822 Mining Law revisions as proposed by Senator Bumpers and Representative Rahall. Steve Friberg chaired this committee. We prepared a position paper and attended the Senate and House hearings. No bill came out of either committee in 1991.

- Initiated a letter campaign from AIPG members supporting the Geologic Mapping Act which was passed but not funded until 1992.

- Established with Ed Belsky of Johnson and Higgins of Seattle, a professional liability insurance program for AIPG members. (See below).

- Expanded the National Screening Committee from three to six members in order to lighten the workload of the individuals on this important committee.

Bill Knight and Haydn attended the meeting of the European Federation of Geologists held in Stockholm, Sweden in May 1991. We established a strong liaison with them, which has subsequently benefited AIPG.
The education committee in conjunction with Bill Knight, Chip Groat (AGI), Bob Northeuitt, and Haydn formulated a proposed undergraduate geology curriculum which was adopted by AIPG as a guide for undergraduate geology departments.

Established an Annual Meeting Guide so that National AIPG can play a more important role in administering and supervising future annual meetings.

The results of a 1991 member survey showed:

**All Members by Specialty**

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum</td>
<td>30%</td>
</tr>
<tr>
<td>Engr/Environ</td>
<td>23%</td>
</tr>
<tr>
<td>Unknown</td>
<td>19%</td>
</tr>
<tr>
<td>General</td>
<td>10%</td>
</tr>
<tr>
<td>Mining</td>
<td>9%</td>
</tr>
<tr>
<td>Computer/Forensic, Math</td>
<td>6%</td>
</tr>
<tr>
<td>Geophysics</td>
<td>3%</td>
</tr>
<tr>
<td></td>
<td>100%</td>
</tr>
</tbody>
</table>

**Overall Employment**

<table>
<thead>
<tr>
<th>Employment Type</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporate</td>
<td>35%</td>
</tr>
<tr>
<td>Independent</td>
<td>22%</td>
</tr>
<tr>
<td>Unknown</td>
<td>21%</td>
</tr>
<tr>
<td>Retired</td>
<td>11%</td>
</tr>
<tr>
<td>State Govt.</td>
<td>4%</td>
</tr>
<tr>
<td>Academia</td>
<td>4%</td>
</tr>
<tr>
<td>Fed. Govt.</td>
<td>3%</td>
</tr>
<tr>
<td></td>
<td>100%</td>
</tr>
</tbody>
</table>

[The next member survey was 1999]

**President's Message**

*“Environmental Issues”*

By Haydn H. Murray

Environmental issues and concerns will be in the forefront in the decade of the '90s. Geologists and particularly AIPG must take a stronger advocacy and educational role in this important area of earth science. Who are better trained than geologists to understand and provide balanced solutions to complex environmental problems?

The Society for Mining, Metallurgy, and Exploration (SME) is focusing a large portion of their 1991 annual meeting on environmental issues and concerns including federal and state environmental and reclamation regulations, appropriate industry responses to this regulatory framework, and viable technological solutions to environmental reclamation and waste management issues facing the mining industry. The American Association of Petroleum Geologists (AAPG) is highlighting environmental concerns to its membership. The Geological Society of America (GSA) had sessions at their last annual meeting focusing on ground-water contamination and particularly on geological solutions. AIPG, in my opinion, must become much more active in assessing environmental issues and taking advocacy positions with balanced solutions that will protect the environment and yet provide for the extraction of minerals and fuels essential to the nation’s welfare.

As many of you know, my expertise is the field of industrial minerals and particularly, clay minerals. Half of my career has been in industry and half in academia. From my industry experience I am intimately aware that many environmental rules and regulations are absolutely necessary, but I also recognize that there are some rules and regulations that are non-essential. All regulations that protect the environment must be reasonable both from a quantitative and an economic standpoint. An example of an unreasonable regulation was the federal Clean Air Act that prescribed dust emissions that were lower than the ambient wind blown dust in the area which happened to be in Casper, Wyoming. Blanket standards cannot be applied without some understanding of local conditions. I believe that our AIPG Sections should become more active in educating the general public and their state and federal legislators concerning some of these environmental earth science issues.

An issue that will seriously affect our mineral and fuel industries in this decade is wetlands. A broad restrictive definition of wetlands will reduce some of our much needed industrial mineral reserves and resources by as much as 50 percent. This will affect our future supplies and raise our costs which in turn will lower our standard of living. All of us in AIPG need to become advocates and educate the public and our legislators about the serious implications of an arbitrary and restrictive definition of wetlands that will prohibit the extraction of some of our critically needed minerals and fuels.

During my term as President of AIPG, I plan to focus on several issues, including:

- Completion of an acceptable draft model professional registration law for geologists.
- Establishing an accredited continuing education program.
- Working closely with AGI to expand its role as an advocate for the earth sciences.
- Helping our Sections undertake programs to educate the public and their legislators about the importance of reasoned and balanced regulations that will protect the environment and will also permit the production and extraction of needed minerals and fuels.
- Continuing to foster liaisons with foreign professional geologists organizations, a program that was initiated this past year by Susan Landon and Bill Knight with the European Federation of Geologists and the Institution of Geologists of the United Kingdom.
- Establishing more control of annual meetings’ organization and administration by AIPG Headquarters.
- Implementing programs that will bring in more new Members which will strengthen AIPG and allow us to provide additional services for our Members.

**First Professional Liability Insurance (from September 1991 TPG)**

The life of a professional geologist can be one of excitement, travel and financial rewards, or, just as easily one of financial devastation. As a “professional” you are held to a higher standard of performance than many of your peers. If you are involved in a project that does not turn out as planned, look out. Clients, project owners, and investors will be looking to find out what went wrong and who’s responsi-
ble. If there was a financial loss, the course most often taken is to sue everyone involved and let the courts decide.

Lawsuits, even if based on frivolous claims, are expensive to defend and can have a devastating impact on a geologist’s professional life. Even if the geologist is found to have performed his duties in a professional manner, his reputation may be tarnished and his bank account severely diminished.

Solutions to the problems are available. Adhering to the AIPG Code of Ethics is an excellent method to avoid professional mistakes that can occur. But, what do you do if you are sued? How do you proceed and how are you going to pay for it? Professional liability insurance may be the only answer. We have been actively working with AIPG Executive Director William V. Knight, CPG 153, and the AIPG Insurance Committee, headed by Gail Waggner, CPG 7211, to develop a professional liability policy designed for geologists. It has taken almost a year for us to review the many different professional liability policies that are available in the insurance industry. None of the policies that we reviewed were designed to cover the unique exposures of a geologist. With that in mind, we set out to create our own policy contract. This policy will address the multi-disciplined professional duties of AIPG members. It was designed for geologists with valuable input from the AIPG Insurance Committee.

Johnson & Higgins of Seattle has been appointed to represent AIPG in the insurance marketplace. J&H can offer professional liability insurance through companies that understand the unique professional exposures of AIPG members, insurance designed to cover many of the exposures geologists encounter.

In reviewing the insurance requirements with the AIPG Insurance Committee, two areas were of greatest concern: the pricing structure of the insurance and the coverage provided by the policy. Many AIPG members work for companies that are relatively small, usually under 20 employees. In the past, smaller companies have no been able to afford even the minimum premium charged by most insurance companies. A typical minimum premium was $25,000 with deductibles as high as $50,000. Insurance was out of the question for most AIPG members. Solving this problem was a high priority.

We are now negotiating with underwriters to design a new policy which will have a unique pricing structure based upon a per-geologist charge. The new policy will provide broad coverage with relatively low deductibles as well as reasonable premiums.

1991 Annual Meeting, Gatlinburg, Tennessee

Vivid Fall colors greeted attendees at our 28th Annual Meeting adjacent to the Great Smoky Mountains in Tennessee on October 16-19, 1991. Lawrence C. Weber was the General Chairman of this most-pleasant meeting, which included 12 speakers, four field trips, two spouses’ tours, a hayride, and an Awards Banquet.

Technical Program

New Madrid Seismic Zone by J. Chiu, Memphis State University

Structure of the Southern Appalachians by J. Dorman, Memphis State University

Bioremediation in Environmental Cleanup by D. Graves, IT Corporation

Geology of the Southern Appalachians by R. Hatcher, UT/ORNL

Conflicts in the Nuclear Waste Policy Act 1982-91 by A. McCabe, University of Tennessee

Energy Generation and its Impact on Great Smoky Mountains National Park by J. Peine, GSMNP

Energy Alternatives of the Future by R. Perhac, EPRI

TVAs Re-Evaluation of Reservoir Operations Policy by L. Richardson, TVA

Overview of New Madrid Zone by R. Stearns, Vanderbilt University

Impact of Acid Rain Legislation And Wetlands Policy on The Coal Industry by B. Thacker, ERCE

The Environmental Business: Risks and Rewards by L. Wilson, Jr., OSCO

Clean Coal Technology by S. Wilson, Southern Company Services, Inc.

Field Trip 1: Geology of the Great Smoky Mountains
Field Trip 2: Cades Cove with picnic and hayride
Field Trip 3: Oak Ridge Reservation
Field Trip 4: Biltmore Estate of George Vanderbilt
Spouse Tour 1: Pidgeon Forge, Tennessee
Spouse Tour 2: Art Museum in Knoxville and Museum of Appalachia Near TVA's Norris Dam

1992
President Daniel N. Miller, Jr.

Daniel N. Miller, Jr., CPG 64

Dan Miller (1924-2001) was possibly our most versatile president. He was a combat pilot in the Pacific in World War II, a university professor, a consultant (in minerals, petroleum, and research), a State Geologist, and Assistant Secretary of the U.S. Department of the Interior. Dan obtained his B.A. in 1949 and M.S. in 1952 from the Missouri School of Mines in Rolla, then earned his Ph.D. in 1955 from the University of Texas. Dan was professor and chairman of the Geology Department at Southern Illinois University, Carbondale; worked for Stanolind Oil and Gas Company (now AMOCO) mainly in Texas, Montana and Wyoming; had a two-year consulting contract with Barlow & Haun, Inc. (owned by two of our stalwart CPGs); was State Geologist of Wyoming; and in 1981 was nominated by President Reagan to join the federal government. Dan’s unique biography is best told by his two citationists. Excerpts from Edward “Bud” Rue’s citation for Dan’s Parker Medal in 1993 is merged with Charles Mankin’s citation for Dan’s Van Covering Award in 1994:

Dr. Daniel N. Miller, Jr., CPG 64, has directed much of his life toward improvements in the quality of both geology and geologists. His long and continuous record of distinguished service to the profession, industry, academia and government would be difficult for any of us here to match.

Industrial Geologist

Dan was born in St. Louis, Missouri in 1924, and 18 years later enrolled at Missouri School of Mines and Metallurgy in Rolla where he joined an Army Air Corps ROTC unit. He began active duty with the Air Corps in February 1943, and served during World War II in the Mariana Islands, Pacific Theater, as a multi-rated combat pilot and radar observer on B-29 aircraft in air strikes against the mainland of Japan. He was on Tinian at age 20 in August 1945 when the first two atomic bombs were dropped at Hiroshima and Nagasaki and was honorably discharged in 1946 as a First lieutenant.

Dan returned to the Missouri School of Mines and Metallurgy and graduated in 1949 and 1951, with a B.S. and M.S. degree in Geology and accepted an oil and gas exploration position with Stanolind Oil and Gas Co. in Corpus Christi, Texas. A year later he took an educational leave of absence to accept a Stanolind Graduate Fellowship at the University of Texas in Austin. He completed all of the Ph.D. requirements in two years and nine months and graduated in June of 1955. He then returned immediately to employment with Stanolind and was assigned to the district exploration office in Billings, Montana. In 1957 he was promoted to senior exploration geologist and research coordinator in the Rocky Mountain Division office of Pan American Petroleum Corporation (previously Stanolind) in Casper, Wyoming. Between 1960 and 1963, Dan was senior exploration geologist in the Lion Oil Division of Monsanto Chemical Company and a research consultant with Barlow and Haun, Inc. in Casper. During the same three years period he found time to publish four separate papers and was co-editor with Donald P. McGookey of the Wyoming Geological Association guide book on the Western Overthrust Belt, 15 years before the major oil and gas discoveries in that area.

Professor of Geology

In 1963 he was appointed Professor and Chairman of the Department of Geology at Southern Illinois University in Carbondale. While at Southern, Dan made his many industry contacts aware of their graduate and undergraduate programs. The students were able to work on highly technical field equipment donated by industry. More graduate and undergraduate scholarships, summer jobs and permanent positions became available to students. The increased enrollment and recognition of the school’s geology department more than doubled during his administration, and new classroom, office, and laboratory facilities were acquired. The Illinois industry geologists recognized Dan Miller’s devotion to the profession of geology and elected him President of the Illinois Geological Society in 1966. He also served as managing editor in 1968 of the first guide book by IGS on the geology and petroleum production of the Illinois Basin.

State Geologist

Dan left SIU in 1969 to accept a new position as Wyoming’s first full-time State Geologist and Executive Director of the Wyoming Geological Survey in Laramie. Once again he distinguished himself more than at any other time previously as he directed the survey through the most dynamic decade in the agency’s history, brought on in part by the Arab Oil Embargo in 1973 and governmental perceptions of an impending energy crisis. Wyoming’s oil, gas, uranium, vast reserves of low sulfur coal, and oil shale assumed new importance. The Survey was deluged with inquiries from the mineral industry, legislators and taxing bodies, planners, environmentalists, conservationists, and professionals of all kinds from out of state. In an effort to keep pace with the activity, Dan increased the staff and, with their help, designed and monitored construction of a new 22,400 s.f. Geological Survey office and laboratory building. He also served as Adjunct Professor in Geology and guest lecturer to
ROLLING ALONG AGAIN

many other departments on the campus of the University of Wyoming from 1969 to 1981.

Recognition of Dan's accomplishments was emphasized when he received the Wyoming Mineral Industries “Man of the Year Award” in 1975. By now his national reputation was well recognized, and he was elected president of the Association of American State Geologists in 1979. The people of Wyoming were most fortunate to have had the likes of Dan Miller at the helm of natural resources development during those critical years.

Department of the Interior

Wyoming’s mineral production prospered, and Dan’s enthusiastic and effective administration of the Wyoming Geological Survey attracted the attention of officials in Washington, D.C. Early in 1981, he was asked to consider his possible nomination as the Department of the Interior’s Assistant Secretary for Energy and Minerals. President Ronald Reagan officially nominated him on May 22, 1981, and in less than a month the Senate confirmed him by a unanimous vote. As Assistant Secretary, his new responsibilities included implementation of all energy and mineral policies related to the research and regulatory programs of the U.S. Geological Survey, the U.S. Bureau of Mines, the Office of Surface Mining and the Minerals Management Service.

This new assignment was a tremendous task that involved responsibilities for 21,000 employees and a 1984 budget of over a billion dollars. As always, Dan approached the position with the same cautious enthusiasm and good judgment that he had applied to all other challenges throughout his professional career. In 1983, during his second year in office, he received the AAPG Public Service Award. The citation read “To Daniel N. Miller, Jr., industrial geologist, educator, and governmental administrator, for enthusiastic efforts to relate geology to the public’s benefit through his many levels of service.”

Research Consultant

In the spring of 1984, Dan and his wife, Esther, left Washington and established residence in Boise, Idaho. Dan became a consultant to industry and president of JWO Exploration, Inc. He worked primarily as a business and industry advisor as well as lecturer and writer on technical subjects related to energy and mineral resources of the western states. From 1984 to 1987, he served as adjunct professor and guest lecturer to the Geology and Geophysics Department at Boise State University, and as president of the Rocky Mountain Section of AAPG. Throughout his professional life, Dan published more than 50 papers, gave hundreds of talks, and always shared his talents and enthusiasm with everyone with whom he had contact.

In 1989, Dan was offered the position of Director of the Anaconda Geological Documents Collection and Curator of the International Archive of Economic Geology in the American Heritage Center at the University of Wyoming. In this capacity, he was responsible for the management and utilization of one of the most comprehensive collections of mineral and mining data ever assembled by a private company. The donation of the Anaconda collection to the University of Wyoming consisted of 1.8 million documents cross-indexed on a computer database. Dan’s background and experience proved to be an invaluable asset in promoting the public use of this superb collection of geological and mining data. In 1992, Dan retired from his position at the University of Wyoming.

Dan Miller is the type locality of a professional geologist and public servant.

“Future Trends in Professional Geology”

By Dan N. Miller, Jr.

Dan’s thought-provoking 1981 paper gave a positive and a negative prognosis for geologists. Then ten years later he wrote “1991 Update of 1981 Prognosis.” Both papers appeared in TPG, and both are reproduced in Appendix 9 for the year 1981. Dan’s scenarios predicted more government restrictions in our profession.

Happenings in 1992

Fred “Ted” Mullin replaced Elisabeth G. Newton (1988-92) as AIPG Washington Representative. The Annual Meeting attendance at Lake Tahoe (see below) may have set a record with 256 total attendance. The AIPG Public Service Award was formally changed to the John T. Galey, Sr. Public Service Award.

A quote from Dan Miller’s entry in Who’s Who in America: “Use everything you know, in everything you do, all the time.”

Washington Representative

Fred B. “Ted” Mullin

Fred B. Mullin, CPG 1716

Our fourth Washington Representative (1992-97) was born in Harrisonburg, Virginia, in 1935, and matriculated at the Virginia Polytechnical Institute in Blacksburg, leading to his B.S. in engineering geology in 1961. Ted then worked for three years with the Corps of Engineers in Washington, D.C., then settled in with the U.S. Forest Service in Colorado for most of his professional career. He married Carol Beckett, AIPG Administrative Manager, in 1993. (Recall that Ted was one of several local CPGs who helped at Headquarters in 1988 when we were searching for an Executive Director. Ted was a member of the 1990-91 Executive Committee and was awarded...
Presidential Certificates of Merit in 1989 and 1994. Ted kept our members abreast of planned legislation with monthly reports in TPG.

1992 Annual Meeting,
South Lake Tahoe, Nevada

General Chairman R. Steven Friberg picked the sumptuous Caesars Tahoe Hotel to hold our Annual Meeting, September 27-30, 1992. Did they assume attendees might like to gamble? The hotel is just a few hundred yards east of the California border into Nevada, so gambling is legal.

The Technical Program consisted of five Theme Sessions, each with three invited speakers.

“Modeling Geologic Phenomena”

Speakers:
A. Journal, Stanford University
T. Cerling, University of Utah
J. Massmann, University of Washington

“Role of the Geologist in Predicting Earthquakes”

Speakers:
J. Davis, California State Geologist
B. Swan, Geomatrix Consultants
P. Showalter, University of Colorado

“Role of the Geologist in Siting and Cleanup Waste”

Speakers:
J. Yonker, M&O/TRW Environmental
S. Frishman, Nevada Agency for Nuclear Projects
H. Smedes, H. W. Smedes Associates

“Geological Common Sense Regarding Environmental Hazards”

Speakers:
M. Ross, USGS
W. Lyons, University of Nevada
G. Cochran, Desert Research Institute

“Management of Federal Lands”

Speakers:
T. Wilton, Independence Mining Company
D. Brickey, Sierra Club
R. Haskins, U.S. Bureau of Land Management

The Banquet Speaker was TS Ary, Director of the U.S. Bureau of Mines, whose topic was “Geologic Reason — A Basis for Decisions Affecting Society.” On the previous evening, Nevada State Geologist and future AIPG President Jonathan G. Price lectured on “Overview of the Geology, Resources, Hazards, and History of Nevada.” Three field trips were offered:

Field Trip No. 1: The 1989 Loma Prieta, California Earthquake, led by seven geologists.

Field Trip No. 2: Nuclear, Hazardous and Municipal Solid Waste Disposal in Nevada, led by four geologists.

Field Trip No. 3: Historic Contamination and Scenarios for Cleanup of the Comstock Lode and Carson River.

AIPG 1992 National Awardees. In back is Kenneth N. Weaver recipient of the Martin Van Couvering Memorial Award. Front row: Lawrence C. Weber, Presidential Certificate of Merit; Daniel N. Miller, Jr., President Award; Robert R. Jordan, John T. Galey, Sr., Memorial Public Service Award; Sam R. Evans, Honorary Membership; and Richard J. Proctor, Honorary Membership.
The professional career of William L. Fisher is characterized by his continued search for excellence and outstanding contributions to his state, nation and profession. He is one of those rare individuals who with sheer dedication, personal energy, superior intellect, and drive compressed several individual lifetime careers into one.

“We associate Bill Fisher primarily with the State of Texas, the University of Texas at Austin, and the Texas Bureau of Economic Geology. These are outstanding places to pursue a career in geology and they have served as his base for a quarter-century. A base only because his activities and influence reach far beyond Austin; even Texas cannot contain his energies.

“Bill holds five major titles: State Geologist of Texas and Director of the Bureau of Economic Geology, Chairman of the Department of Geological Sciences, Morgan J. Davis Centennial Professor of Petroleum Geology, Director of the Geology Foundation, and Vice-Chairman of the Texas Low-level Radioactive Waste Disposal Authority.”

So begins the dual tributes to Bill Fisher from his citationists Robert R. Jordan and Marcus E. Milling. Bob prepared his citation for Bill's Public Service Award in 1985, and Marcus prepared his citation for Bill's Parker Medal in 1996. Excerpts from their combined citations continue:

Public service is but one aspect of Bill’s very full life, but it is important to him, and more so to us, and the one on which we must concentrate in these brief remarks.

It was by no means certain that Bill would travel from a poor farm outside Marion, Illinois, to positions of prominence. In addition to his innate abilities, important strength and encouragement were provided by his family, especially by Marilee. You see, Bill and Marilee have not only been married for more than 30 years, they have been lifelong friends. They married about the time when Bill graduated from Southern Illinois University in 1954. Almost immediately Marilee began to share Bill, first with the Army, then with the University of Kansas until he earned his Ph.D. in 1961, and since then with his professional commitments and with us. We are grateful—Bill, continue to bring her many flowers.

In 1975, Washington called and Bill was invited to serve his country as Deputy Assistant Secretary for Energy in the U.S. Department of the Interior. The following year through Presidential appointment Bill was promoted to Assistant Secretary for Energy and Minerals at the Interior. In this position Bill was largely responsible for the nation’s energy and resource policy formulation on public lands and was directly responsible for supervision of several federal agencies. Very few individuals in our profession have aspired to such high public office. During this time Bill made many friends in Washington and became intimately familiar with beltway politics, assets which would serve him well on his return to Texas.

On rejoining the Bureau in 1977 Bill laid the seeds for a new major research program focused on assessing the distribution and quantity of the state of Texas’ oil and gas resources. Through Bill’s personal research and intellectual leadership over the past 20 years, the Bureau provided a new dimension to improved understanding of the observed reserve growth in older reservoirs. The Bureau’s research laid the foundation for a new national oil and gas assessment review.

Industry sought his services as consultant, educator and director. The quality of his service is suggested by the many leadership positions he has held, including the presidencies of AAGG, AAGP and AGI. We are not the first to recognize his abilities. He was elected to the National Academy of Engineering and awarded the AAGP’s Sidney Powers Medal in 1994 and the AGI Ian Campbell Medal in 1991.

Bill Fisher’s resume includes more than 125 titles plus many abstracts and more than a dozen major lectures per year. He has presented important research results in basin analysis, resource evaluation, seismic stratigraphy and facies analysis among other fields. He is a practicing geologist with long and varied experience. His public service is distinguished by the authority and integrity derived from his scientific endeavors. One must not have only the will to serve, there must be substance to serve with.
The recipient of this award is complex. Those who have only a blurred vision of him in motion might gain impressions of a driven, demanding, intimidating and colorful man. However, intellect, sensitivity, thoughtfulness and self-sacrifice are his true attributes. He understands the difference between the superficial and the fundamental. After his family, he is devoted to geology and to its applications in the service of mankind. We have all been enriched by that commitment.

The Geosciences: Adapting To A World Of Change
By William L. Fisher

Change and our need to adapt are always with us. But there are times when elements of change converge, take on a symmetry of their own, and move at an alarming speed; our adaptation tends to lag. Most of the scientific community, and for sure the geosciences, are in the midst of such rapid, structural change. It may be disconcerting or even disastrous for some, but it is well to remember that change can be fertile ground for the resourceful—those who sense the direction and gear to it.

What are these changes about us?

For one, a broad change is occurring in the scientific enterprise as the federal R&D effort seeks to shift emphasis from historical government-for-government R&D in national defense to R&D in a commercially driven environment dedicated to economic enhancement and global competition. Of the public R&D expenditures of the past 50 years, 60 percent went directly to defense, and a good part of the rest was defense related. During much of the period, federal R&D grew well in excess of GDP. In the 50's and 60's, growth was exponential; it slowed in the 70's and 80's and has been flat in real terms since the late 1980's. The FY 1995 federal R&D budget, as a percentage of GDP, is the lowest of any year since 1958 and in outyears may well be lower. But beyond volumetric shrink and the shift in emphasis, the real challenge for the nation’s R&D constituency is the development of new rationales by which research can be defended. The current idiom is strategic or goal-oriented research as opposed to curiosity-driven research. The geosciences, with their historical mooring in earth resources, should be able to make the transition easily. But alas, this broader R&D shift is occurring when resource-oriented research in the corporate enterprise is being massively downsized. Further, some agendas currently in the Congress call for elimination or substantial reduction of most of the geoscience and resource research effort of the federal government, impacting agencies of Interior, Energy, and other departments as well. Those entities currently expend about 35 percent of the total, public, and private, geoscience R&D effort.

For another, the massive, and seemingly relentless, growth in federal entitlement programs, unfunded federal and court mandates to the states, and a growing federal deficit are both squeezing and reducing governmental support and conduct of public R&D. We see the current uncertainty of the federal R&D effort along with the corporate downsizing already under way. But drop to the state level to see another squeeze play working. In my state, and at least in this regard it may be typical, about 85 percent of the state appropriations process is effectively out of the hands of the Legislature. As a result from 1985 to 1995, funding for prisons, largely mandated by the courts, grew 159 percent in real dollars; health and human services, generally under unfunded federal mandates, grew 139 percent. By contrast, higher education appropriations increased a bare three percent. Many state universities in the country now receive the bulk of their operating budgets from some source other than general revenues. The ultimate consequence of this privatization of public higher educational institutions is not known, but it makes for a major historical change.

Yet another, the new reality of a world of low-price energy is leading to substantial corporate change with particularly acute impact in the geosciences and their historical homing in resource exploration and development. The corporate R&D enterprise, for a long time constituting about one-third of the total public and private geoscience R&D effort, has declined precipitously in the past decade and is now likely no more than 15 percent of the total enterprise. But the R&D reduction is only a part of massive corporate downsizing. Such downsizing is not unique to the extraction industries, but arguably it has been more severe. Historically, nearly three-fourths of U.S. geoscience graduates initially were employed in the energy and mineral industries. That proportion is now much lower as most of the impact on U.S. geoscience employment has been realized. The reduction in number of U.S. geoscientists working in the extractive industries is likely permanent because of the changed nature of much of the remaining oil and gas resource base. The substantial economy of scale, offered by giant field discovery and subsequent large-volume, low-cost production, is greatly diminished, certainly in the United States and indeed in much of the world, and with it the large-scale corporate R&D and geoscience employment. Economies have shifted from those of scale to those of efficiencies. In the past decade of low oil and gas prices, the industry has significantly substituted technology and know-how for price. Smaller exploration and development companies are pursuing the ample, but relatively small-increment resource base in the United States and doing so profitably with economies of efficiencies. Many of the remaining, potentially large economy-of-scale prospects, which major companies have historically sought, are abroad and mostly in the hands of state-owned companies. Increasingly, the majors are creating joint ventures with foreign governments for exploration and, especially, development. These changed structures in the United States and abroad will require geoscientists. But the number will likely be lower than historically, and abroad at least, foreign nationals naturally will become increasingly larger parts of the employment mix.

And finally, the change in demand for geoscience graduates as regards volume and practice orientation is posing challenges academic departments have not fully addressed. To be sure, the tightening of university budgets is beginning to be felt, and the impact of declining employment opportunities is coming home, albeit somewhat offset by departments guiding a goodly number of their graduates to environmental areas, by continuing not readily employable students to the already-surplus Ph.D. degree, and by steadily increasing the enrollment of foreign nationals. While faculties and their students, especially at the Ph.D. level, have long become more and more specialized, future trends for employment are pointing other
ways. Historically, the overwhelming majority of geoscience graduates joined, at least initially, major companies. The companies, with their own internal training, provided the applied aspects of practice while the universities provided the basics. That historical, symbiotic relationship is now greatly reduced and yet declining. Major companies are increasingly going to outsourcing; the smaller E&P companies can staff with readily available experienced geoscientists; and the environmental companies that now offer employment go directly to billable hours, not structured in-house practical training programs. Practitioners, the stuff of most viable professions, will have to be trained differently and with broader perspective and flexibility, if a new core employment for geoscientists is to be established and maintained.

How health this grand enterprise of geoscience remains will depend upon how well we recognize and manage change that is inevitable by the fact that much of it is already upon us. Many of the changes we must accommodate are opposite to historical trends we have experienced. Wide-angle turns are difficult but no less imperative. We must become more flexible and broader in perspective in contrast to two generations of ever-increasing specialization. We will be more global, and we will compete globally in practice and in research. We will, of necessity, continue to be more efficient and more productive. If we face reality and make the changes necessary, we can assure a future as exciting and rewarding as ever and certainly as challenging. But I am sure it will not be the same.

The New and Emerging Domestic Oil and Gas Industry
By William L. Fisher

Excerpted and condensed from an address, given as the National Research Council/Board on Earth Sciences Distinguished Lecture in Geoscience Policy, to a convocation of presidents and executive directors of U.S. earth sciences professional societies, November 14, 1994, National Academy of Sciences, Washington, D.C.

The view that the domestic petroleum industry is in a sharp decline, with its demise soon and certain, is widespread. Many recent events seem to bear out such judgment. Major oil companies are reducing geologic and technical staff substantially and are redirecting increasing portions of their remaining exploration and production budgets abroad. Drilling activity is at historically low levels. Real oil prices are at a 20-year low, and natural gas prices, in real terms, are near the lowest in a decade. Environmental regulation is increasing, and large areas for high discovery potential are off-limits to exploration. While greater use of natural gas seems to be a least de facto national policy, there is a growing acceptance of increasing levels of oil imports as not only necessary but even desirable. Investor confidence is relatively low, reducing opportunities for drilling many good prospects. Further, many experienced oil and gas geologists are unemployed or seriously underemployed. Recruitment of entry-level scientists by industry is low, with university graduates mostly being disinterested in such employment anyway. Morale among many of the currently employed is low, in part because future job reductions are anticipated. These trends are indeed bleak and they are real; a case for demise might seem obvious.

But, in fact, there are other trends, all with positive implications; trends indicating transition and change, even in corporate composition, but, I would argue, not a demise of the industry. Several companies, especially some of the mid-sized to large independents, chiefly or exclusively in domestic exploration and production, are posting persistent profits and substantially advancing stock values. Average reserve additions per well drilled are equal to the most robust periods of the past, and, in fact, are 65 percent greater than the historical average. Oil and gas additions, per annual operating rig, are double those of a decade ago. Despite oil and gas drilling levels being at only 40 percent of levels in the first half of the 1980’s, reserve additions, over the past six years, have held even for natural gas and are down only 10 percent for oil. With per-well additions up and drilling costs down, the average finding cost of oil and gas, in recent years, is only 40 percent of the cost during the boom years. Some advanced technologies, such as 3-D seismic imaging, could be justified only in special situations a few years ago; today these technologies are approaching routine use. Our demonstrated ability to substitute efficiency, technology, and know-how for price is being established. Sophisticated investors are returning, and their numbers are increasing. And, finally, the remaining resource base in the U.S. for both oil and gas is now widely judged to be large and accessible at moderate cost. In contrast to the view of near-depletion and very high cost in the 1970’s.

On casual examination, these two sets of trends seem contradictory. Actually, they are resolvable in reflecting a basic transition dictated by the changed character of the remaining resource base. The transition is from a resource base providing opportunities for economies of scale discovery to one without such economies and almost entirely dependent on economies of efficiencies, driven exclusively by technology, concepts, and know-how. This transition began two decades or more ago, but it was overshadowed by the aberrant price spike and so-called boom of the late 1970’s and early 1980’s.

The first phase of oil and gas exploration in the U.S., extending into the early 1960’s, was marked by discovery; of many giant fields that quite simply offered tremendous economies of scale. Entities successful in finding a string of giant fields became major corporations. Most of these major companies have historically based their competitive positions on maintaining access to large fields that provide economies of scale. For many, this corporate strategy persists, leading them to sell more marginal prospects and properties in the U.S. Faced further with rather wholesale denial of access to many of the more promising big field exploration areas in the U.S., the major corporations have increasingly turned their efforts abroad.

Another element of the oil and gas industry is the historic, small, independent operator, a rather unique U.S. species. The independent operator, geared for the more marginal prospects, historically had a symbiotic relationship with the majors (in terms of farmouts, extension, technology transfer, and the like) and has found, as a matter of enlightened public policy, favorable provisions in the U.S. Tax Code. The historic symbiotic tie with majors is now greatly reduced, indeed nonexistent, in many U.S. oil and gas provinces, and
most of the favorable provisions of the Tax Code have been eliminated or reduced. The ranks of the small independent have significantly declined along with the staff reductions among the majors.

The remaining resource base of both oil and gas is judged in many recent assessments as substantial. The National Petroleum Council (NPC), in December 1992, estimated the U.S. lower 48 gas resource base at 1295 Tcf, nearly 25 percent larger than a DOE estimate made in 1988, an estimate judged at the time to be bullish. The Gas Research Institute has just released an estimate of 1585 Tcf, another 25 percent higher than the NPC estimate. On the oil side, an assessment by a panel of resource analysts for DOE in October 1992, pegs a remaining resource base of 99 to 204 billion barrels at prices ranging from $20 to $27 and with assumptions of existing and advanced technologies. These estimates are comparable to the average of some eight other recent resource base estimates that ranged from 82 to 209 billion barrels, assuming comparable price and technology. The estimates for both oil and gas constitute a resource life up to 80 years at present levels of domestic production, with remaining resource potential in excess of historical discovery and additions.

Although the remaining portion of the resource base is substantial in the aggregate, it is different from the portion historically pursued. Over the past 20 years, the U.S. oil and gas industry has persistently discovered about 220 significant fields (1 MMboe) yearly, of which about 35 are major fields larger than 10 MMboe. In fact, Richard Nehring reports 33 domestic plays in which, in the late 1980’s, discoveries of 25 MMboe or more were made. Whereas this record shows fairly robust exploration potential still around, the opportunity for giant field discovery (100 MMboe) with its economics of scale is relatively slight, except in a few of the frontier areas now mostly off-limits.

Of the 150,000 oil and gas fields I estimate remaining for future discovery, only two percent will be larger than 10 MMboe, 11 percent will be between one and 10 MMboe, and the balance, 87 percent, will be between 50,000 and one MMboe. Further, between 50 and 60 percent of future on land, lower 48 oil reserve additions will come from reserve growth in existing fields, and in increments that will run on the order of 25,000 to 250,000 barrels per well. In gas, NPC estimates that less than one-third of future additions will come from new field discovery; the rest will come from reserve growth in existing fields, low-permeability formations, coalbeds and shale, and mostly in relatively small increments per completed well.

Thus, most future reserve additions will come in smaller, modest increments. But small and modest provide good opportunity for an industry geared to such a scale. And the gearing is going on. The number of significant new fields (1 MMboe) discovered per 100 wildcats drilled is now 100 percent greater than three decades ago, a better than three percent average annual improvement in exploration efficiency from a resource base deemed by many to be drilled up. The principal reason is ever more sophisticated geologic exploration models driven by ever more precise geophysical detection technology. Just witnessing the rapid pace of 3-D seismic in on land, relatively small field exploration today is alone enough for us to predict another 100-percent increase in discovery efficiency by 2020, quite aside from a whole range of other developing technologies. By contrast, however, we have only marginally improved our ability to add reserve growth additions through field drilling, despite the dominant role reserve growth plays in total reserve additions. But as we move from reserve growth strategies, dominated by simple infill drilling going say from 80 to 40 acres (i.e., dividing by two), to the routine utility of advanced geophysical detection and geological targeting in complex fields, we will see reserve growth efficiencies equal to or even outpacing exploration efficiencies.

The opportunity for substantial oil and gas activity in the U.S. is real. Exploration and intensive field development can be profitable, if strategies consistent with the character of the resource base are developed and pursued. Such profits are now being realized, and there are enough signs to say the reemergence of the U.S. domestic oil and gas industry is underway. Still, transitions are painful for many of the individuals involved, especially as this transition comes after the massive slide from the aberrant boom days of a decade ago.

Oil and gas will continue to be sought in the U.S., albeit with different strategies and corporate makeup, because the fundamentals are solid. Major companies, to the extent that they pursue the remaining resource base, will decentralize and establish more local centers of profit; some are beginning to do just that. Many small operators will find it necessary to collaborate jointly to acquire and utilize the needed technologies. Mid-sized to large independents may be the prototype for the future if they maintain low overhead along with the capacity to acquire and utilize technology extensively.

We are now finding ourselves as the new domestic oil and gas industry emerges. The industry may not be the same, but it definitely is not gone.


In 1993 we finally saw the publication of the popular, 15-author book *The Citizens’ Guide to Geologic Hazards*. This topic had been worked-over by several ad hoc committees since the early 1980s. Most credit for the book’s fruition goes to Ed Nuhfer, and credit for its financing goes to the AIPG Foundation, and the special contributions of Russell Slayback, James A. Gibbs and William Knight. We all thank you.

Also two other AIPG publications were noteworthy this year. The original popular 1974 booklets *The Professional Geologist as Expert Witness and Organization and Content of a Typical Geologic Report* by James R. Dunn and others (see Appendix 5), was reprinted in 1986 and again in 1993.

1993 Annual Meeting, Springfield, Massachusetts

“Mere words fail to express the beauty of the New England countryside in October.” So begins the accurate invitation to our 30th Annual Meeting held October 12-16, 1993, at the Sheraton Springfield Monarch Place Hotel. Future AIPG President Russell G. Slayback was General
Chairman. The theme was “Geologists in a Strained Economy.” There were 13 speakers at the Technical Sessions, four “Trips,” four “Side Trips,” and two Short Courses. The eight trips were actually a combination of traditional Field Trips and Spouses Tours. They included:

No. 1: Berkshire Mountains Fall Foliage Tour, with visits to the Norman Rockwell Museum and the outstanding Clark Institute Art Museum.

No. 2: Northfield Mountain Pumped Storage Facility, with an afternoon boat ride on the Connecticut River.

No. 3: Springfield Museum Walk at the Quadrangle.

No. 4: Mystic Seaport.

No. 5: Old Sturbridge Village.

No. 6: Basketball Hall of Fame.

No. 7: Amherst, Massachusetts.

No. 8: Indian Moto Cycle Museum.

The Short Courses were on “Health and Safety Training,” by Steven P. Maslansky, and “Dr. Ruth has the Answers,” by Ruth Neil Anna, the Institute’s Public Relations Coordinator from 1981 to 1985.

The Technical Program:

“The Evolving Market for Hydrogeologic and Environmental Services” by M. Burke, VP, Leggette, Brashears & Graham, Inc.

“Impending Changes in the 1872 Mining Law and Its Impact on Mining Geologists” by K. Benedetto, consulting CPG

“Introduction to Northeastern Technology” by R. LaFleur, Rensselaer Polytechnic Institute

“Problems in Urban Geology” by C. Baskerville, Central Connecticut State University


“Status of Oil and Gas Development in the Northeastern U.S.” by R. Beardsley, President, Columbia Natural Resources, Inc.

“Trends in Geologic Education” by W. Motts, University of Massachusetts, Amherst

“Thoughts about our 1990s Futures” by W. Cutcliffe, CEO, Dunn Corporation

“Strategies for Maintaining a Loyal Staff” by G. Wallrap, TRC Environmental

“Securing Capital for Your Consulting Firm,” by A. Howard, Director, Bank of Boston

“Strategic Business Planning” by M. Zweig, President, Mark Zweig & Assoc.

“Competitive Perspectives from a Small Consulting Practice” by T. Stone, Stone Environmental Sciences, Inc.

“Challenges for Environmental Companies in the 1990s” by David Miller, CEO, Geraghty & Miller, Inc.

“State Geological Surveys in a Strained Economy,” a panel of R. Fakundiny, C. Mankin, H. Kasabach, and L. Woodfork. [Abstracts of all speeches are in the May 1993 TPG.]

The Awards Banquet featured Daniel N. Miller, Jr. receiving the Parker Medal; two Honorary Membership Awards, to Elisabeth G. Newton and John Shanklin of Robert A. Northcutt, Robert H. Fakundiny, Edward B. Nuhfer, and Elisabeth G. Newton.
England—our first non-U.S. member recipient; the Van Couvering Award went to Robert A. Northcutt; the John T. Galey Public Service Award to Robert Pakundiny; Ed Nuhfer received his third Presidential Certificate of Merit, more than any other CPG.

1994
President Russell G. Slayback

Russell G. Slayback, CPG 2305

Our only President from New England rose from a young geologist employee to President and Director of Leggette, Brashears & Graham, Inc.—a 140-employee geotechnical firm with 12 offices. His astute intelligence and management skills were also recognized by local and national AIPG members. Lucky for us, Russ’ AIPG career started in 1974 as a member of the Executive Committee of the Northeast Section, then in 1980 he was an Advisory Board Member to the National Executive Committee. Russ was Annual Meeting Chairman in 1993, was awarded the Presidential Certificate of Merit in 1992 and the Van Couvering Award in 1995.

In 1998 Russ was truly honored to be the first recipient of the Russell G. Slayback Award of the AIPG Northeast Section. Curt Cramer, President of the Section, said, “The award will only be given when a person meets its high standards. Russ has done so much for so long.” And, Russ was President of AGI in 2000. (Personally, on top of all this recognition, I think it’s hard to imagine a more bucolic -sounding place to live than Russ’ village of Green Farms, Connecticut.) Russ’ citationist for his Van Couvering Award was Bobby Timmons. Here are his words:

In 1971 the Institute approved the application of an activist in the truest sense and his active contributions to AIPG subsequently are legion. The July 1992 edition of TPG profiled his AIPG activities beginning with an Executive Committee membership in the Northeast Section in 1974 and culminating with his Institute Presidency in 1994. His twenty-four years plus and continuing service would, no doubt, be a source of pride to Martin Van Couvering as it is to those of us who have had the pleasure of actively working with Russ. The nineteen different categories of service known to me are in themselves hardly reflective of that important “time” factor described. To list and describe his AIPG activities would diminish the record, by human discomfort alone, and be an embarrassment to him. Suffice to mention only four of those specifically: Executive Committee membership in multiple years, Northeast Section Newsletter Editor beginning in 1982 and continuing to this day, 30th National Annual Meeting General Chairman, and finally, Institute President! Some of us have had experience in one or more of these capacities but to have performed in all four is, again, to underscore the value of “time” to the Institute.

In sheer contributions of time alone the record is overwhelming. Add to this his myriad of beneficial ideas which have become Institute policy and you begin to get an idea of the sacrifices he has made and his consequent total value to AIPG. We cannot adequately thank the man!

Past citationists for this award have lauded the recipient’s professional achievements. This award, to me, presupposes extraordinary professional achievements as well. Therefore, and again, I would ask you to simply “check the record.” In 1960, as a fledgling geologist fresh from Rensselaer Polytechnic Institute, he joined the form of Leggette, Brashears and Graham, the first ground-water consulting firm. Today he is President; figure it out for yourselves. As an aside, regarding that company of approximately 140 people in twelve different offices, I would venture that a higher percentage are AIPG members than from any other geologic firm. Where do you think that membership encouragement came from?

His family of two daughters, Leigh and Lynn, and wife Judy complete the quality scenario for our recipient. In her reply to our request for personal information about Russ, the love and respect Judy put “between the lines” was heartfelt.

The accolades given here barely scratch the surface of Russ’ overall contributions. His work and sacrifices of time to many other professional organizations, civic groups and other worthy causes, particularly those aiding youngsters, go unlisted here, as does the quality of friendship I have known for years.

President’s Message
“Learning the Ropes”
By Russell G. Slayback

No matter how much one may have been involved in AIPG, the initial months of being its President are a learning experience. I guess that shouldn’t have surprised me.

Several different experiences have pounded home to me how many of our professional colleagues are having a tough time making ends meet. This has been manifested in several ways, some of which sound contradictory at first.

Membership in AIPG is up, applications are coming in at a continuing strong rate and membership renewals are presently at 97 percent, higher than usual. Surely, these are signs of prosperity. Wrong! If there is any trend, it is that people who have had secure jobs with energy, mining, and environmental consulting firms have been laid off, rifled or
replaced by younger and cheaper talent. Most of these people, out of self-preservation, are now “consultants,” either as individuals or teamed up with similarly displaced colleagues, and they see AIPG certification and networking opportunities as a plus for their economic prospects.

Calling previously-active AIPG members to ask them to serve on committees has been revealing. Most accept with pleasure and eagerness to serve, but a surprising number have reluctantly declined assignments they would have readily accepted in past years. The reason: they are focusing all their energies on making a living. Some report that they are busy but can’t let up, and others are clearly struggling.

A third indicator, largely from long-term members, are letters sent in response to receiving their annual dues bills. These are relatively few in number and clearly reflect painful choices about personal budget priorities, but several have expressed their long-term dissatisfaction with or disappointment in what AIPG has achieved or not achieved in its 30 years of existence; even suggesting the AIPG membership is not worth the annual dues. Even those few are disturbing because they imply that others who have paid their dues without complaint harbor similar views.

Clearly, our members see AIPG through the lens of the personal experiences, both private and organizational. Nevertheless, for those who are dissatisfied there is a “we” versus “they” dichotomy that is disturbing. “They” haven’t prevented the spread of state registration. “They” haven’t achieved significant lobbying impact. “They” haven’t gotten as much as seven percent of the membership to an Annual Meeting. “They” haven’t developed meaningful programs for continuing education. And so on.

At the risk of losing some of my younger readers, I will note that the famous American philosopher, Pogo Possum, said many years ago: “We have met the enemy, and he is us.” At almost 5,000 members, AIPG can only reach significant achievements if its individual members think it is important and put forth their individual efforts to make something happen. There is not “they” of any significant numbers, there is only a “we” of members who can make AIPG better.

So, what have you done for AIPG lately?

The Winds of Change—Are They Blowing or Do I Just Feel Good ‘Cause It’s Spring
By Russ Slayback

An editorial in the AIPG Northeast Section Newsletter, Spring 1989

Geologists are among the least appreciated professionals in the universe, or so it has seemed. Lawyers and engineers beat us up on a regular basis, and John Q. Public doesn’t even know what we do. As proper masochists, we also beat up on each other, with geologists in academia, the oil patch, mining, and the environmental games all vigorously opposing the issue of importance to their supposed professional colleagues. On a practical level, we are as bas as the Jews and Arabs, or the Irish and English—we don’t see eye to eye and we don’t talk about it; we’d rather fight than change. Who is the loser? - every person who has dedicated himself or herself to a career as a professional geologist.

But circumstances seem to be driving improvements in the status of geologists in our world. I now pick up my newspaper and read about geologists on a regular basis. Jim Mellett, CPG 7406, was featured in the NY Times for his use of ground penetrating radar to locate archaeological features in lower Manhattan. Haig Kasabach, CPG 1461 and Frank Markewicz, CPG 852, were featured in articles on career opportunities and ground-water supply protection. Charles Dimmick, CPG 3886, has been invited to participate in an educational seminar program in which he will discuss the geologic aspects of inland wetlands. David Miller, CPG 1757, is frequently quoted on ground-water contamination issues. Klaus Jacob and Charles Merqurier were prominently featured in the NBC week-long feature on seismic risk in the metropolitan New York area, with special emphasis on the lack of seismic protections in local building codes.

We find now that oil companies are hiring hydrogeologic consultants to clean up their subsurface spills and even to depressurize tar sand mines, a classic reservoir engineering case in the old days. Mining engineers are calling in geologists to evaluate water problems in open pit and underground workings. Lawyers now reach out to geologists rather than engineers for subsurface problems. We may not reach professional equality with engineers in my lifetime, but it seems that we are gaining.

I take particular pleasure from the slowly changing attitudes of engineers toward geologists. In the hydrogeologic and environmental fields, many consulting civil engineers are no longer doing geology and botching it - they are recognizing their limits and calling in geologists, either as subcontractors or as independent members of multi-disciplinary project teams. To borrow a horrible old line, some of my best friends are engineers. Larger environmental engineering firms have or are developing their own hydrogeology departments, and a few are even managed by geologists! (Only a few, but that’s another story.)

The momentum toward legal recognition of geology, by legislative definition or by certification, licensure, or registration, is perking along. At last count, 15 states have registration or certification programs and three more have legal definitions of geology in the state code. The National AIPG Committee on the Status of Registration forecasts that as many as 10 more states may enact some form of registration in the next five years. Our 8-state region has traditionally been a hotbed of registration activity, but with little result. Only Maine has a certification program. Attempts in New York and New Jersey fell by the wayside, and Connecticut even resisted a bill defining geology and professional geologist.

Lately, the climate seems to be improving. A registration bill in Massachusetts has been introduced and a public hearing held. Joe Sinnott, CPG 1997, State Geologist, reports that he and Boyd Allen spoke for government, and Jim Skehan, CPG 1505, and Henry Russell spoke for AIPG/AEG and industry among eight parties who spoke for the bill, with none against. Joe expects that some refinements to the bill may be proposed before the bill is advanced. As a sardonic sign of the times, on the morning the geologic registration bill
was heard, a bill to register fortune tellers was also on the hearing agenda. We’ve come a long way, baby?

**Brian Fowler**, CPG 3954, reports that AIPG members, organized as the New Hampshire Association of Professional Geologists, have succeeded in having a certification bill introduced to the State Senate by Senator Sheila Roberge, and heard on January 25. Again, some restructuring of the bill is expected before legislative action. **Dennis Sasseville**, CPG 6814, and **Dave Woodhouse**, CPG 3742, have also been active in this effort. Way to go, guys!

Even in court or hearing rooms that climate seems to be improving. Lawyers who try to discredit geologists because they are not state-registered professional are finding that judges or hearing examiners lose patience with this tactic. Gradually, the idea that geology should be practiced by people trained as geologists is taking hold. What a screwy idea!

**1994 Annual Meeting, Flagstaff, Arizona**

A total of 231 people attended our 31st Annual Meeting in scenic Flagstaff, Arizona. The venue was the elegant Little America Hotel. General Chairman **Dale Nations** had energetic assistance from General Vice Chairman **David Kirchner**, Field Trip Chairman and Keynote Speaker, State Geologist **Larry Fellows**, Technical Program Chairman **Bill Wellendorf**, Transportation Chairman **Lisa Curci Worthington**, and others. There were seven invited speakers at the Technical Sessions, four Field Trips (combined technical and for guests), and two Short Courses.

**Technical Program**

“Geologic Mapping in Land Use and Exploration” by **S. Reynolds**, Arizona State University


“Legal Issues and Mining” by **D. Kimball III**, Kimball & Curry, P.C.


“Environmental Quality Issues” by **E. Fox**, Director, Arizona Department of Environmental Quality

“Professional Lobbying and the Geologic Community” by **Lynn Graf**

Short Course No. 1: “Appraisal of Industrial Minerals” by **Robert H. Paschall**, CPG

Short Course No. 2: “ASBOG Workshop on Geologic Registration” by **Charles Sherman**

The Field Trips were to such interesting places as the “Grand Canyon” (led by **Stanley Bues**), “Verde Valley, Petrified Forest and Meteor Crater” (led by **Wayne Ranney**), “Navajo and Hopi Reservations” (led by **Casey Dennis**), “Oak Creek Canyon, Sedona and Jerome” (led by **Wayne Ranney**).
The Awards Banquet honored Frank W. Harrison, Jr., recipient of the Parker Medal, Richard A. Fox, recipient of Honorary Membership (the second non-U.S. member for this award; Richard was also President of the European Federation of Geologists), Daniel N. Miller, Jr., recipient of the Van Couvering Award, Morris W. Leighton, recipient of the John T. Galey Public Service Award.

1995 President Richard C. Fountain

Richard C. Fountain, CPG 1750

The Institute's 31st president is a true Southerner, having spent his entire professional life in Florida, Texas and Georgia. Richard was born in Tampa, Florida, in 1937, graduated the University of Florida with a BS in Geology in 1959, and obtained his MS in Geology at Emory University in Atlanta in 1962. Most of his career has been with the International Minerals & Chemical Corporation in Florida (phosphates), and with Richard C. Fountain & Associates in Georgia.

During his presidency, his Executive Committee adopted the AIPG Policy on Annual Meetings and the Screening Policy for Applicants. The popular The Citizens' Guide to Geologic Hazards was translated into a Spanish language edition.

President’s Message
“A New Year”
By Richard C. Fountain

We are at the beginning of a new year in which we should consider both the short- and long-term goals of the Institute. The goals that we set should be based on professional and ethical standards for which the Institute stands and should be goals that can be met.

We have seen a lot of progress in AIPG over the past several years, particularly in 1994 with a growing continuity among its leadership. At the beginning of my term as AIPG’s thirty-first president, I not only would like to strengthen some of the objectives and goals of my predecessor, but add a few.

AIPG Membership

AIPG reached the threshold of 5,000 members before the end of 1994. This is an accomplishment in itself. This membership strength has been eluding us for many years. However, by being able to keep active members and by having an accelerated rate of growth of the certification of new applicants, we were able to reach that goal. I would like to move that goal out a little further by asking each member to try to bring in a candidate to seek certification in 1995. If this could be done, our membership could increase by ten percent or more. An addition of 500 members is a goal that I am asking each of you to help AIPG achieve in 1995.

Continue To Strengthen the Governmental Affairs Program

Bob Merrill, a past Secretary of AIPG and president-elect for 1996, chaired the National and International Affairs Committee last year and performed a commendable job. He has agreed to chair the committee again in 1995 and hopes that his committee members will continue working with him to develop various position papers on issues that arise from time to time affecting geologists. We feel that this committee’s activity last year was influential on various issues dealing with the mineral and energy industries that were brought before the U.S. Congress. Position papers developed by this committee on an as needed basis are reviewed and modified as necessary by the Executive Committee prior to being published or being presented before legislative bodies. In 1994 the committee charge was expanded to include international Affairs as a result of the growth in opportunities as well as in the necessity for geologists to be involved in the International marketplace. AIPG will continue to support the AGI Governmental Affairs Program in 1995.

AIPG Publications

As we all recognize, The Professional Geologist has continued to improve over the years, as has the quality of our other publications. Charles Wm. Dimmick has performed an admirable job in the past two years as our editor, and we are confident that the incoming editor for 1995 and 1996, Lyle G. Bruce, will do the same. New ideas regarding AIPG publications and continuing improvement in their quality is our goal in 1995. The submission of quality articles by our members is a prerequisite to the success of our publication as is the advertising which has allowed The Professional Geologist to mature.

National and Section Communications

Steve Testa, Vice-President in 1994, set a goal for that office to help strengthen communications between national and the respective sections. This was done by developing communications with section officers, keeping them informed of various functions of AIPG on the national level, and, in turn, informing the national officers and Executive Committee members of the sections’ activities. Steve has given the incoming Executive Committee some very sound suggestions and advice for the duties of the office of Vice-President, which this year will be filled by Tom Fails. Tom’s efforts in maintaining more timely communications between national and sec-
tion members will strengthen AIPG as a whole. As a goal for 1995, each section, through its president, should strive to update Tom on its activities on a quarterly basis.

**Applicant Processing**

The processing of applications for certification has been streamlined over the past two years with the guidance of Bob Fakundiny, committee chairperson for 1993 and 1994. Under his guidance and the efforts of those serving with him on this committee, applicant processing time has been very reasonable. The applicant processing procedures have been streamlined for 1995, and this year’s chair of the National Screening Committee, Steve Testa, and the committee members will continue to enhance the process.

**State Registration**

AIPG’s position on state registration or licensing of geologists has been misunderstood over the past years by some of our membership. AIPG has been, and will continue to be, supportive of local efforts to achieve registration or licensing status. It will continue to aid this process when necessary and when requested by local sections.

**Continuing Education**

The mechanism for the implementation of a meaningful Continuing Education program has been developed. It will be the goal of AIPG to consummate an agreement with the selected contractor and to have the first phase of the program implemented in 1995.

**Intersociety Relations**

The need for a more formal way to communicate with other societies dealing with the professional aspects of the geological sciences has been recognized by AIPG. In 1995 a committee, to be chaired by Russ Slayback, will be formed to work closely with other professional organizations such as AAPG, AEG, AGI, GSA, and others. This committee will attempt to keep us informed on matters being considered by these other professional organizations. Professional certification or registration, specialty certification, and other matters are areas in which AIPG and other professional organizations may interact. Our goal in 1995 is to develop a better mutual understanding and working relationship along these lines with other societies.

**Student Affiliation**

One of our goals in 1995 should be the establishment of several student chapters of AIPG at various universities across the country. Since a procedure for the establishment of the student chapters was developed, none have been established. Any faculty member or student interested in pursuing the establishment of a student chapter of AIPG is encouraged to contact me or headquarters as soon as is practical. The establishment of several student chapters of AIPG across the country is a primary goal that I have set for 1995 in hopes that their development will lead not only to additional applicants for certification in the future but will instill in the students early in their professional career the awareness of professionalism and ethics which in later years will bring them peer recognition as geologists practicing their chosen profession.

With these goals in mind, I welcome any new ideas or programs that AIPG can realistically pursue. Your comments will be brought to the attention of the Executive Committee and some action taken. Let each one of us do our part for AIPG in 1995 by soliciting new applicants for certification and by actively participating in your organization.

**1995 Annual Meeting, Denver**

With the theme “Prosperity and Professional Geology,” General Chairman Ron W. Pritchett and his team presented a fine meeting at the Denver Hyatt Regency, October 1-5, 1995. There were six technical sessions, nine field trips organized by Gary Mitchell, and three short courses.

**Technical Program**


“Mining Geology” by T. Robyn, G. Hahn, S. Sanderson, J. Pontius, J. Hardaway, A. Baltridge and D. Tintaro.


(Abstracts of these talks can be found in the May 1995 TPG.)

Field Trip No. 1: Yule Marble Quarry
Field Trip No. 2: Cross Mine
Field Trip No. 3: Dinosaur Ridge/Redrocks Park/I-70 Roadcut/Swelling Soils
Field Trip No. 4: Vail/Glenwood Springs/Leadville
Field Trip No. 5: Colorado Springs, CO
Field Trip No. 6: Golden, CO
Field Trip No. 7: Denver Botanical Gardens and Cherry Creek Shopping Center
Field Trip No. 8: Celestial Seasonings Tea Factory/National Bureau of Standards/Pearl Street Mall, Boulder, CO
Field Trip No. 9: Central City, CO
Short Course No. 3: “Continuing Education.”

Instead of an evening Awards Banquet, the awards were presented at an Awards Luncheon. The evening dinner was held at the Denver Natural History Museum, and included a behind-the-scenes tour and an IMAX movie. The Parker Medal went to Don L. Blackstone, the Van Couvering
Award to Russell G. Slayback, Honorary Membership was awarded to Ralph J. Bernhagen, the John T. Galey Public Service Award to Edward B. Nuhfer, and the second Outstanding Achievement Award was presented to Ron Redfern. Ron is not a geologist, but furthers the lay understanding of geology with his popular books, including “Corridors of Time,” “The Making of a Continent,” and “The Origin of the Western World.”

1995 Annual Meeting Field Trip Groups

Don L. Blackstone
Russell G. Slayback
Ralph J. Bernhagen
Edward B. Nuhfer
Ron Redfern

Bobby Timmons and Gary Mitchell. Gary marched into the Awards Banquet to the sounds of bagpipes.

1996
President Robert K. Merrill

Robert K. Merrill, CPG 4984

Bob Merrill is yet another Institute president who exudes enthusiasm for AIPG. He set high goals for his term in office, and accomplished them. A record seven new AIPG Policies and Procedures were drafted and approved in 1996 (see annual Directory). Bob's biography and accomplishments are summarized by his colleague and 1997 President Jonathan G. Price in his citation to Bob on being awarded the Martin Van Couvering Award in 1997:

The Martin Van Couvering Award is presented to an individual who has made outstanding contributions to our Institute. It is my great pleasure to cite Robert K. Merrill for this award. His contributions to the Institute have been remarkable.

Bob could receive this award for his many years of service to AIPG Sections in Colorado and Oklahoma, for his work on annual meetings, for his two-year chairmanship of our National and International Affairs Committee, or for his tireless efforts on the Executive Committee as Secretary in 1992 and 1993, as President-Elect in 1995, and as President in 1996. But to me, his crowning achievement has been his behind-the-scenes work to bring about the change that is necessary to make AIPG an even better organization for the science and profession of geology. As President, Bob helped keep up the momentum for bylaws revisions. When it looked as if the major change that was necessary to move the Institute forward might get mired in protracted wordsmmithing and debate, he and last year's Martin Van Couvering Awardee, Bill Knight, proposed a ballot measure that ultimately won the membership's approval by a four-to-one landslide. Bob's commitment to the Institute did not stop there. After his presidency he made sure that we revised the bylaws in a reasonable manner by pulling together comments from the membership, Sections, and Executive Committee and producing the essence of the draft that was recently adopted.

What is remarkable is that Bob has accomplished all this while currently gaining upstream opportunities for UNOCAL in Kazakhstan and Central Asia. His love for geology has roots in his B.A. degree from Colby College in 1967 and his Master's degree in 1970 and Ph.D. in 1974 from Arizona State University. He is well known for his publications on the geology of the White Mountains, Arizona; the origin and migration of petroleum in the overthrust belt of Wyoming and Utah; deep, overpressured gas in the Green River Basin; and risk and reserve analysis. Bob's work with UNOCAL, Occidental Petroleum, and Cities Service Company gave him the opportunity to volunteer his time not only to AIPG but also to the American Association of Petroleum Geologists. In addition, he's an active member of the Geological Society (of London), as a Fellow and Chartered Geologist, and of the Geological Society of America. In all respects, Bob is the essence of a professional geologist.

Bob has made other contributions to AIPG through his leadership. His vision helped catapult AIPG Headquarters onto the Internet, and he kept fellow members of the Executive Committee enthralled with the latest Web sites that serve the profession, the oil and gas industry, and international business in general. He brought the business skills he developed while working in industry to the tables of the Executive Committee and Advisory Board, but nobody quite knows where he acquired the sense of humor that gave his meetings the levity needed to make the long hours of volunteer service thoroughly enjoyable.

President's Message
“Vision for AIPG’s Future”
By Robert K. Merrill

What is the vision for AIPG's future? This is a question that I have been asking myself since the Long-Range Planning Committee published "The Institute in Evolution" in 1991. That committee concluded that the mission of AIPG as stated in Bylaws Article 1.2 is realistic for the future operations of the Institute. Many of the recommendations made by that committee have been implemented, but perhaps not as effectively as they could be. A clear Vision for the Institute provides the inspiration and clarity of purpose for continued commitment and actions by members of AIPG into the future.

In the December issue of the "The Professional Geologist" I wrote that the purpose of the Institute has not changed since its founding in 1963. I went on to note that the environment in which we work as professional geologists has changed significantly in the ensuing 32 years. The Executive Committee has been considering what, if any, changes need to be made in the Institute to accommodate the changes of the last 32 years to successfully advance the geological sciences and the profession of geology into the next century. Our membership has come to recognize that there may be a need for the Institute to evolve as well.

In a recent letter Scott Wolter, CPG, President of the Minnesota Section and Terry Swor, CPG, wrote: “AIPG is at a critical juncture as a professional organization in Minnesota. For us to exploit our current momentum will require that AIPG develop a comprehensive strategy to keep the organization vital and growing. AIPG needs to evolve with the times, or risk extinction.”

In its 32-year history AIPG has successfully focused on its purpose. I agree that AIPG is at a critical juncture. The
challenge for us is to recognize the best path for the Institute to follow. The first step in implementing change is to establish a Vision. Vision both focuses and inspires. The vision provides a framework to think strategically so that our actions are focused on the future, not on what happened yesterday or today. Strategy then provides the framework within which plans will be executed and goals achieved. The vision of 30 years ago was that AIPG provided a vehicle to communicate professional qualifications and ethics to the general public and governmental entities.

The most significant change over the last 32 years has been that nineteen states have “practice” acts providing for licensure of geologists, four have “title” acts providing for certification, not licensure, and three have “definition” acts. Those states that provide for licensure represent 37 percent of AIPG’s active members. If Texas passes a registration bill in 1997, over one-half of AIPG’s membership will be practicing in states where the practice of geology is regulated by statute. States are clearly usurping the role of establishing minimum qualifications for professional geologists. Mr. Welte’s and Mr. Swor’s comment about this reality is: “Either AIPG acts and fully embraces responsibilities and leadership for representing state registered geologists, or other organizations will surface and provide this leadership.” My impression is that they are not alone among AIPG’s Membership which is why the Bylaws revision is being considered.

On the other hand, what has not changed since AIPG was founded is the need to advance the geological sciences and the profession of geology. AIPG programs that support this need include the “Issues and Answers” series, “The Citizen’s Guide to Geologic Hazards”, and local, state and national political advocacy programs. These programs provide information for use by the general public and governmental entities that provide background and scientific explanations on geology-related issues. These programs are clearly part of advancing the geosciences and the profession of geology and represent areas where AIPG can be effective and increase its influence. These programs also represent the most significant way that AIPG can raise the income to be more effective.

How do we establish the Vision for AIPG? What must we become to advance our principles most effectively? That Vision will be a statement and a focus for future action. We do not want a strategy for the future built on instinctive reactions to yesterday’s success or today’s issues. We want to focus on today’s challenges and build an organization for the future. I would like to solicit input from our membership beyond the members of the Advisory Board. If you have comments, please send them to me or Email me at o5069rkn@discoveryl.unocal.com. You will be heard. Let’s talk about what we want to become.

President’s Message
“World Geologists”
By Robert K. Merrill

While I was returning from Almaty, Kazakhstan I was able to attend the biannual meeting of the European Federation of Geologists (EFG) in Haarlem, Netherlands, June 16. The members of the EFG represent the geological societies of each country in the European Union and meet twice each year to review the issues facing geologists in the European Union and to find ways to address those issues. Like AIPG the EFG is interested in certifying the professional credentials of geologists. What struck me about the discussions is that the issues facing our colleagues in Europe are the same as we face in the United States. The discussions centered around education, political advocacy and professional affairs. The experience strengthens my belief that AIPG’s efforts to develop and strengthen relationships with geologists outside the United States are extremely important. We can learn from each other the best way to promote the profession. Through mutual understanding we can widen the opportunities for all geologists. There is a need to educate the public about how the services of a geologist can help them in their daily lives. Lay people do not understand the concept that everything they use that does not grow has to come from the Earth. Further, services of a geologist can help protect people and their investments from the ravages of what have come to be called natural disasters like the recent eruption of Rapahoe Volcano in New Zealand or floods. What is the best way to improve the public’s understanding of how geology affects them every day? We discussed the need for beginning this education at the earliest levels and developing geological education programs in primary and secondary schools and outreach programs for the general public. How often have we heard these discussions in the United States? Can we learn from each other and perhaps develop common programs such as translating educational materials into each other’s languages? Geology does not stop at the Atlantic or Pacific!

Political advocacy is a common issue. The lament was heard that legislators or regulators make decisions that are potentially catastrophic when the earth’s processes are ignored. For example, flood potential, swelling soils, radon and landslide potential are usually ignored in land use planning. The Italians even suggested that each town should have a Municipal Geologist. I fear that we are a long way from such understanding by decision-makers. As constituents we have some influence through our votes, but geological information is too often ignored. Through our shared experiences we can develop ways to communicate to our decision makers the importance of considering earth’s processes when making land use and resource management decisions.

A significant issue for the EFG regarding professional affairs is the potential competition between federal or state geological surveys and consultants or consulting firms. AIPG addressed the same issue recently when consulting services were confused with cooperative research programs of the U. S. Geological Survey. Tax-supported institutions should not be allowed to undercut consultants’ fees in the private sector. On the other hand the leverage available from cooperative programs is beneficial to both the public and private sectors. It is a fine distinction between the two programs, especially when institutions like the British Geological Survey are being privatized. As governments follow the trend of outsourcing, we can probably expect more privatizations. Such privatizations are in progress in the United States Europe and the Former Soviet Union as governments no longer have the funds to manage and develop their resources themselves.

ROLLING ALONG AGAIN 1996 President Robert K. Merrill
What does such mutual understanding bring us? My travels around the world highlight opportunities for geologists throughout the world. I have recently seen the extent of the damage that years of neglect from inadequate investment has caused in the former Soviet Union. This damage is not only environmental but also affects ultimate resource recovery. Proper management of the abundant resources will finance the economies of these countries. Cleanup of the damage will follow as emphasis is given to the health of the population. Interchange between geologists in the United States, Europe and the rest of the world will bring common understanding, work opportunities and better resource management. The world's economy is so interconnected today that we cannot afford to continue to isolate ourselves as we have isolated the general public from our understanding of the Earth and how the Earth and its resources affect all of us each day.

President’s Message

“At the Interface of the Geological and Biological Sciences”

By Robert K. Merrill

As the 104th Congress convened in January 1995, the U. S. Geological Survey (USGS), U. S. Bureau of Mines (USBM) and National, Biological Service (NBS) all faced elimination under budget cuts accompanying the House Republican “Contract with America”. The U. S. Geological Survey was not eliminated thanks to a groundswell of support from the geological community. (AIPG actively pursued this support last year along with other societies.) However, the USBM is in the final stages of closure: February second was the last day of work for 1200 of the Bureau’s 1800 employees. Except for a skeleton crew of 60, the rest were transferred to the USGS, Bureau of Land Management, and Department of Energy. The functions of the NBS are being merged into the USGS and both of these agencies have experienced reductions in force.

This consolidation is mandated by the House/Senate conference report on the appropriations bill. After pressure to eliminate the NBS, the conference agreed to retain many of the functions of the NBS but place them under the USGS as a separate line item for “natural resources research”. In the report language the conference states that they “intend the merge of these research activities into the USGS to be permanent.” In addition, House Interior Appropriations subcommittee chairman Ralph Regula (R-Ohio) sent a letter to Secretary of Interior Babbitt reinforcing Congress’ intention to oversee the USGS/NBS merger in a “hands on fashion” and urging significant organizational restructuring, cultural change, and “urg[ing] the complete integration of the science functions of the Department.” The consolidation is to be completed with a report back to Congress by October 1, 1996. Following President Clinton’s veto of the appropriations bill in December, and no subsequent compromise, the Department of Interior has continued at reduced levels through a series of continuing resolutions. The most recent continuing resolution, signed into law January 26 (Public Law 104-99), states that activities related to transferring the NBS functions are to be funded at the conference report level, ensuring the consolidation will continue even though the appropriations bill itself has not been signed. (David Applegate, 1996, written communication.)

In late February I represented AIPG at an AGI sponsored workshop to facilitate the consolidation of the USGS and the NBS. The title is a paraphrase of a remark by Dr. Ron Pulliam, Director of the National Biological Service. In some respects it is the theme of this workshop that brought together representatives of the geological and biological communities in an effort to explore the synergies of the two organizations and the best way to consolidate them. As a geologist considering this consolidation, I was concerned that the 113-year history of excellent work by the U. S. Geological Survey would be diluted. I agreed to participate in this conference to do AIPG’s part to assure that the mission of the USGS as the primary provider of earth science information on natural hazards, the environment, and mineral and energy resources would continue. I came away from the workshop comfortable that the consolidation would not dilute USGS’s mission, but would actually strengthen the ability of the USGS to provide information to its clients within government and the general public.

The Department of Interior considers this workshop an important part of its planning process to implement the mandate of Congress. Secretary Babbitt began the workshop reviewing the Department of Interior’s perspective on the consolidation, highlighting the synergy of the two agencies in water, mapping, and geospatial data. He emphasized the role of a scientific organization to provide information for rational decision making and his rationale for creating the NBS, from the biology functions of seven different agencies. He was followed by Ron Pulliam, Director of the NBS, and Gordon Eaton, Director of the USGS, giving their perspectives on their agencies. The individual division chiefs then reviewed the work of their divisions.

1996 Annual Meeting, Columbus, Ohio

The Great Western (Westin) Hotel was the venue for this very successful Annual Meeting. The theme was “The Future of Geology: politics, Economics and Technology.” General Chairman Curtis J. Coe was assisted by co-chairman Tom Jenkins, and Program Chairman Tim Sainey. Two field trips were organized by Tom Berg, Ohio State Geologist, and three spouses’ tours were organized by Jenny Rytel. Three Short Courses were organized by Kathryn Epp.

The Technical Sessions had no less than 25 speakers. The topics and speakers are listed in the December 1996 TPG.

Field Trip No. One showcased the geology of Ohio. Field Trip...
No. Two visited several industrial mineral locations as well as Hocking Hills State Park. Three spouses’ tours included the historic German Village district; historic Roscoe Village and horse-drawn boat ride on the Ohio and Erie Canal; and the Franklin Park Conservatory, a 28-acre botanical garden.

The Awards Banquet honored William L. Fisher with the Parker Medal, Robert R. Jordan and Charles J. Mankin Honorary Membership, William V. Knight the Van Couvering Award, and John W. Rold the John T. Galey Public Service Award.
Jon's professional career began shortly after receiving his Ph.D. He taught economic and physical geology as an adjunct assistant professor at Bucknell University in Lewisburg, Pennsylvania from August 1977, to June 1978, between positions as geologist for the United States Steel Corporation in Salt Lake City, Utah (June 1977—August 1977), and later in Corpus Christi, Texas (June 1978 to January 1981). Most of his work during this period involved uranium exploration, production geology, and geochemistry.

Jon left the private sector in January of 1981 when he joined the University of Texas at Austin Bureau of Economic Geology where he later served as Director of the Texas Mining and Mineral Resources Research Institute from November 1984 to August 1988, and lecturer at the Department of Geological Sciences from January 1988 to May 1988. In September 1988, Jon was selected as State Geologist and Director of the Nevada Bureau of Mines and Geology, a position in which he has served for over eleven years, and since 1998 also serves as Director of the Center for Strategic Materials Research and Policy at the University of Nevada. During his term as State Geologist, Jon was on loan to the National Research Council for two years (February 1993 to February 1995) where he served as Staff Director, Board on Earth Sciences and Resources, under the auspices of the National Academy of Sciences in Washington, D.C. In this position, Jon's primary role was to advise the federal government on science issues, including basic research, use of science and technology in society, and policy. As Staff Director, Jon's primary role was to address issues relating to the solid earth sciences, and to natural resources such as petroleum and minerals, assisting the Board in preparing reports (eighteen reports during this two-year period), developing programs with those federal agencies concerned with earth science and resource issues, and supervising staff officers and support staff.

To simply sum up Jon's accomplishments, the numbers give a sense of the level of commitment Jon has given to the profession and the public at large. Jon has authored or co-authored over 220 technical articles, reports, and abstracts in the areas of general and regional geology, mineral and energy resources, environmental and engineering geology, and public policy. Since 1993, Jon has participated on 22 committees and panels, each resulting in reports provided directly to the National Research Council on diverse subjects ranging from science education, past global change, seismicity, earth resources, oil recovery in marginal fields, drilling and excavation techniques, and solid earth sciences and society. Jon has given his time freely—"if you ask he will come"—to a variety of technical, political, and public groups. Jon has presented over 153 special or invited lectures, while occasionally teaching graduate and short courses at the University of Nevada, Rice University, and the University of Texas.

Jon is a recognized expert in several fields of study and his opinion is greatly valued. This is demonstrated by the 19 official testimonies Jon has provided since 1987 to various committees within the United States Senate and House of Representatives, State of Nevada and Texas Senate and House of Representatives. The topics are enlightening: science education, including basic research, use of science issues, including basic research, use of science and technology in society, and policy. As Staff Director, Jon's primary role was to advise the federal government on science issues, including basic research, use of science and technology in society, and policy. As Staff Director, Jon's primary role was to address issues relating to the solid earth sciences, and to natural resources such as petroleum and minerals, assisting the Board in preparing reports (eighteen reports during this two-year period), developing programs with those federal agencies concerned with earth science and resource issues, and supervising staff officers and support staff.

ROLLING ALONG AGAIN

1997

President Jonathan G. Price

Jonathan G. Price, CPG 7914

Nevada State Geologist Jonathan Price received the Galey Award in 1999, and his citationist, Stephen M. Testa, gave an eloquent biography of Jon's career and service to AIPG:

JOHN T. GALEY, SR., MEMORIAL
PUBLIC SERVICE AWARD

Stephen M. Testa, CPG 6464, Citationist

Established in 1982, the John T. Galey, Sr., Memorial Public Service Award is awarded annually by the American Institute of Professional Geologists to an individual for his or her contribution and commitment to public service at a level well beyond their normal professional responsibilities. This year's recipient is Dr. Jonathan G. Price, CPG 7814, State Geologist and Director of the Nevada Bureau of Mines and Geology at the University of Nevada.

Jon was born on February 1, 1950, in Danville, Pennsylvania. He earned his B.A. degree in Geology and German at Lehigh University in 1972, and earned a Fellowship at the University of Heidelberg, West Germany (September 1972 to July 1973). It was not all work—Jon met his wife to be, Beth, through her brother, a classmate at Lehigh, and they were married in 1972. Jon went on to earn his M.A. in 1975 and in 1977, two years later, his Ph.D., in Geology at the University of California at Berkeley. During the summer months of 1974 and 1975 Jon worked as a geologist for the Anaconda Company in Weed Heights, Nevada, where he performed geologic mapping of the Yerington copper mine and logging of core as part of his Ph.D. dissertation titled "Geological history of alteration and mineralization at the Yerington porphyry copper deposit."

Jon’s professional career began shortly after receiving his Ph.D. He taught economic and physical geology as an adjunct assistant professor at Bucknell University in Lewisburg, Pennsylvania from August 1977, to June 1978, between positions as geologist for the United States Steel Corporation in Salt Lake City, Utah (June 1977—August 1977), and later in Corpus Christi, Texas (June 1978 to January 1981). Most of his work during this period involved uranium exploration, production geology, and geochemistry.

Jon left the private sector in January of 1981 when he joined the University of Texas at Austin Bureau of Economic Geology where he later served as Director of the Texas Mining and Mineral Resources Research Institute from November 1984 to August 1988, and lecturer at the Department of Geological Sciences from January 1988 to May 1988. In September 1988, Jon was selected as State Geologist and Director of the Nevada Bureau of Mines and Geology, a position in which he has served for over eleven years, and since 1998 also serves as Director of the Center for Strategic Materials Research and Policy at the University of Nevada. During his term as State Geologist, Jon was on loan to the National Research Council for two years (February 1993 to February 1995) where he served as Staff Director, Board on Earth Sciences and Resources, under the auspices of the National Academy of Sciences in Washington, D.C. In this position, Jon’s primary role was to advise the federal government on science issues, including basic research, use of science and technology in society, and policy. As Staff Director, Jon’s primary role was to address issues relating to the solid earth sciences, and to natural resources such as petroleum and minerals, assisting the Board in preparing reports (eighteen reports during this two-year period), developing programs with those federal agencies concerned with earth science and resource issues, and supervising staff officers and support staff.

To simply sum up Jon’s accomplishments, the numbers give a sense of the level of commitment Jon has given to the profession and the public at large. Jon has authored or co-authored over 220 technical articles, reports, and abstracts in the areas of general and regional geology, mineral and energy resources, environmental and engineering geology, and public policy. Since 1993, Jon has participated on 22 committees and panels, each resulting in reports provided directly to the National Research Council on diverse subjects ranging from science education, past global change, seismicity, earth resources, oil recovery in marginal fields, drilling and excavation techniques, and solid earth sciences and society. Jon has given his time freely—"if you ask he will come"—to a variety of technical, political, and public groups. Jon has presented over 153 special or invited lectures, while occasionally teaching graduate and short courses at the University of Nevada, Rice University, and the University of Texas.

Jon is a recognized expert in several fields of study and his opinion is greatly valued. This is demonstrated by the 19 official testimonies Jon has provided since 1987 to various committees within the United States Senate and House of Representatives, State of Nevada and Texas Senate and House of Representatives. The topics are enlightening: science education, including basic research, use of science issues, including basic research, use of science and technology in society, and policy. As Staff Director, Jon’s primary role was to advise the federal government on science issues, including basic research, use of science and technology in society, and policy. As Staff Director, Jon’s primary role was to address issues relating to the solid earth sciences, and to natural resources such as petroleum and minerals, assisting the Board in preparing reports (eighteen reports during this two-year period), developing programs with those federal agencies concerned with earth science and resource issues, and supervising staff officers and support staff.

To simply sum up Jon’s accomplishments, the numbers give a sense of the level of commitment Jon has given to the profession and the public at large. Jon has authored or co-authored over 220 technical articles, reports, and abstracts in the areas of general and regional geology, mineral and energy resources, environmental and engineering geology, and public policy. Since 1993, Jon has participated on 22 committees and panels, each resulting in reports provided directly to the National Research Council on diverse subjects ranging from science education, past global change, seismicity, earth resources, oil recovery in marginal fields, drilling and excavation techniques, and solid earth sciences and society. Jon has given his time freely—“if you ask he will come”—to a variety of technical, political, and public groups. Jon has presented over 153 special or invited lectures, while occasionally teaching graduate and short courses at the University of Nevada, Rice University, and the University of Texas.

Jon is a recognized expert in several fields of study and his opinion is greatly valued. This is demonstrated by the 19 official testimonies Jon has provided since 1987 to various committees within the United States Senate and House of Representatives, State of Nevada and Texas Senate and House of Representatives. The topics are enlightening: science education, including basic research, use of science issues, including basic research, use of science and technology in society, and policy. As Staff Director, Jon’s primary role was to advise the federal government on science issues, including basic research, use of science and technology in society, and policy. As Staff Director, Jon’s primary role was to address issues relating to the solid earth sciences, and to natural resources such as petroleum and minerals, assisting the Board in preparing reports (eighteen reports during this two-year period), developing programs with those federal agencies concerned with earth science and resource issues, and supervising staff officers and support staff.
employment opportunities, government affairs, earth resources, mining on federal lands, geologic mapping, hazard mitigation, and seismic safety. In addition to all this, since 1983 Jon has volunteered for community-related service with the American Red Cross where he has served on the Board of Directors, the Disaster Services, Health Services, and Safety Services Committees, and as an instructor in first aid and CPR. For some of these efforts, Jon was recipient of The Explorer Award from the American Geological Institute, and elected Fellow of the Geological Society of America and the Society of Economic Geologists, among others.

I first met Jon when the Nevada Section hosted the AIPG annual meeting at Lake Tahoe in 1992, and had the opportunity to work with him in 1997 when he served as this Institute’s President and I was President-Elect. Our families have since traveled over the Sierras on several occasions, and had the opportunity to share some time together. It is very difficult to succeed at Jon’s level without the support of one’s family. Jon is very much supported by his wife Beth, a chemist and teacher, and their two wonderful kids, Alex and Argenta.

Jon’s technical expertise is in the areas of geology and geochemistry of ore deposits, igneous petrology, aqueous geochemistry, environmental geochemistry, and solution mining. What do these have to do with public service? Absolutely everything! Of the 17 previous recipients of this honor, Jon is the ninth who has served as State Geologist, and currently is President-Elect of the Association of American State Geologists. Jon is everything I envision a State Geologist and public servant to be. It is not one activity or event that makes Jon worthy of this award, but rather his continued efforts throughout his career in serving the needs of the geological profession and the public at large. It is for his untiring energy, dedication, and commitment to the profession and society, that Jon is being honored with the 1999 AIPG John T. Galey, Sr., Memorial Public Service Award.

AIPG At The Forefront
By Jonathan G. Price, CGP 7814

The American Institute of Professional Geologists is at the forefront for the profession of geology. We should continue to assure that geology is applied to societal issues ranging from water, energy, and mineral resources to natural hazards and environmental protection. This goal translates to professional activism at local, state, national, and international political levels and to better education of the public decision-makers, and ourselves on geological issues.

The Members of AIPG are an impressive lot. Approximately ten percent of the people in nearly any group tend to be motivated to get involved on behalf of the whole group. With the total number of geologists in the U.S. being in the range of 50,000 to 100,000, it is not surprising that AIPG membership is limited to those few thousand who truly want to be involved.

The National Geologic Mapping Act of 1992 is an example of AIPG being at the forefront for the profession. When the Association of American State Geologists began to solicit political support for the passage of this bill, it was not surprising that many of the geologists who wrote to their Senators and Representatives were members of AIPG. In part through the persistence of AIPG members, the National Cooperative Geologic Mapping Program is receiving high priority at a time when many government programs are shrinking or being eliminated.

To keep AIPG at the forefront, we should continue to identify and recruit those geologists who have demonstrated the abilities and enthusiasm to represent the profession as a whole.

Our national organization should encourage AIPG sections and local groups of AIPG members to exchange information on both successes and failures. Great successes are being made in all areas in which AIPG should be involved—acting on political issues directly and peripherally related to geology; educating the public, including elected and appointed decision makers at local, state, and national levels; providing opportunities for continuing education of AIPG Members and others in the profession; communicating our professional needs to local colleges and universities; recruiting new Members; and informing one another about the issues affecting the profession. We accomplish much with exchanges of Section newsletters and with our monthly magazine, The Professional Geologist, but we should continue to look for new ways to distribute information.

Our Executive Director has done much to make AIPG certification accepted in foreign countries. As the profession continues to be more international in scope, expanding these efforts will be increasingly important.

In 1991 the AIPG Long Range Planning Committee recommended that our annual meeting be in Washington, D.C. at least every fourth year. To increase our involvement in national affairs, we need to follow through on this recommendation, and we need to be aggressive on several other fronts.

My recent two years in Washington, D.C. on loan from the Nevada Bureau of Mines and Geology to the National Research Council’s Board on Earth Sciences and Resources, exposed me to many realities about our Federal government. For example, it is astonishing how much power our non-elected officials have. Congressional staff, political appointees, and budget examiners and mid-level managers who are career bureaucrats all have tremendous influence over what programs are
pursued and what funding they receive. What is encouraging is that most of these individuals listen to and respond to advice from outside the government. Given all the applications of geology to societal issues, geology impinges on the activities of a huge number of federal agencies. AIPG should be actively promoting these applications and should be urging the Federal government to do what needs to be done in an efficient manner.

We have many opportunities to improve AIPG activities through better linkage with the American Geological Institute (AGI), the umbrella organization for numerous scientific and professional geoscience organizations. The AGI Government Affairs program has been extremely successful on national issues of importance to geologists, and AIPG Members have had a strong voice in guiding the program. Located in the Washington, D.C. area, AGI has assisted AIPG and its Members in dealing with Congress and Federal agencies.

Furthermore, AGI is serving as an electronic (Internet) clearinghouse for information on the national political science and AIPG should be able to either piggyback on or link with this AGI service. Use of the Internet has expanded exponentially over the past few years, rapidly replacing such standard practices as phone messages, faxes, mail orders for maps and publications, meetings requiring time and travel, and costly in-person searches for information of all kinds, including contents of libraries. Soon nearly every professional geologist will be linked to the Internet as an essential part of everyday business.

The future of geology is bright. With our enthusiastic membership, AIPG must continue to represent the profession at the forefront of societal issues, assuring that geologists are active in finding and efficiently exploiting energy, mineral, and water resources; protecting the environment; and mitigating geological hazards.

Washington Representative
John J. Dragonetti

John J. Dragonetti, CPG 2779

A native New Yorker, John has been active in AIPG since joining in 1975 with Certificate No. 2779. After four years in the U.S. Air Force during the Korean conflict, John graduated Columbia University with a B.S. in Geology in 1957. Most of his career has been in public service, with the New York State Department of Environmental Conservation, where he rose to Chief of the Bureau of Minerals, with the USGS, and finally Senior Advisor to Government Affairs at the American Geological Institute. His TPG column “Governmental Affairs” (1997-1999) reflected his interest in informing geologists how Washington politics work, and alert geologists as to what bills are being considered that have an effect on our profession.


1997 Annual Meeting, Houston, Texas

This successful meeting holds the record for most speakers—65. There were three concurrent technical sessions, all organized by the two Program Chairmen Norman S. Neidell and Michael D. Campbell. In addition, there were nine Short Courses. The General Chairman was John L. DeVault

Marcus Milling
Adolph U. Honkala
Ernest K. Lehmann
Robert K. Merrill
James E. Slosson
John McPhee

1997 Annual Meeting, Houston, Texas

This successful meeting holds the record for most speakers—65. There were three concurrent technical sessions, all organized by the two Program Chairmen Norman S. Neidell and Michael D. Campbell. In addition, there were nine Short Courses. The General Chairman was John L. DeVault

Marcus Milling
Adolph U. Honkala
Ernest K. Lehmann
Robert K. Merrill
James E. Slosson
John McPhee
and his Vice Chairman was Maj. Gen. Hugh W. Hardy (Retired). They organized a festive “Mexican Fiesta” Icebreaker and an Annual Banquet in the Houston Museum of Natural Science, titled “Dinner with the Dinosaurs,” with a giant T. Rex looming over the diners.

Two field trips offered inspection of “Superfund Sites in the Houston Area,” and “East Texas Items of Geological Interest.” There were five spouses’ tours, to places as diverse as NASA’s Houston Space Center and a musical theater presentation.

At the Awards dinner, the Parker Medal went to Marcus Milling, two Honorary Memberships were presented to Adolph U. Honkala and Ernest K. Lehmann, the Van Couvering Award to Robert K. Merrill, the John T. Galey Public Service Award to James E. Slosson, and the third Outstanding Achievement Award was presented to author John McPhee.

1998 President Stephen M. Testa

All AIPG Presidents are “doers,” but, in fact, some do more than others. Stephen Testa is in this category with three extra gold stars. Consider Stephen’s accomplishments for the Institute: General Chairman of the 1990 Annual Meeting; compiled and edited five new AIPG booklets in the Reprint Series (See Appendix 5); testified before the USGS on government’s encroaching competition with private consulting (see below); wrote 13 Presidential Messages in 12 TPGs (two in March 1998; several are reproduced here); prepared a new AIPG Policy, with the Executive Committee, on the “Exercise of Professional Judgment”; increased the number of committees to 22, to have more members participate in AIPG affairs; requested that an “AIPG Section Officers’ Manual” be prepared, and a new book “A History of AIPG” (this book) be prepared.

In Steve’s private career he has authored six books, mainly dealing with contaminated soil remediation. His success is influenced by his lovely wife Lydia, who also typed his books, and this one also. He owns his own business, working out of his ranch home in Mokelumne (Mo-KELum-ne) Hill in the Sierra foothills. Steve was also an adjunct professor at the University of Southern California.

Early-on AIPG recognized Steve’s potential by awarding him two Presidential Certificates of Merit in 1987 and 1994, and most recently the Van Couvering Award in 1999. In the words of his citationist, 2000 President Dennis Pennington:

Service to the Institute—always and absolutely! Stephen M. Testa has devoted an exceptional amount of time and a great deal of energy to AIPG. He has been extremely effective in his leadership to the Institute from 1986 to his outstanding tenure as President in 1998. He continues his commitment to AIPG now as co-Chair of the Membership Development Committee and member of the Inter-Society Liaison Committee, as well as the Nominating Committee. He continues to be involved with publications related to AIPG, serving as editor of a collection of papers for several books as part of the AIPG reprint series. He has also authored a co-sponsored book for AGI titled Petroleum in the Environment. Steve has been tireless as well in his support of
AIPG through coordinating with other geological associations such as AAPG (Editor-in-Chief DEG Journal), American Geological Institute, ASBOG, and other groups, and through maintaining professional relationships with our European counterparts. He represented AIPG at three European Federation of Geologists meetings (London, 1994; Athens, 1995; and Rome, 1996) and contributed to the EFG Dossier on Environmental Geology.

In his early days, he brought strong leadership to the California Section, serving as Section President in 1987 and 1988 and Editor in 1988 and 1989, for which service he received the Presidential Certificate of Merit, and he continues to contribute to the well-being of California. As Chairman of the Screening Committee, he streamlined the overall process by summarizing the salient points/issues for the Executive Committee. As Vice President when Russ Slayback was President, he enhanced communications among the Sections, again receiving the Presidential Certificate of Merit. He served as Advisory Board Representative when Bill Fisher was President (1993), and as President-Elect with Jon Price, he represented AIPG and the private sector at the USGS workshop on their Cooperative Geologic Mapping Program. As 1998 President, he testified before the National Research Council Commission on Geosciences, Environment, and Resources, discussing future roles, challenges, and opportunities for the U.S. Geological Survey. He recognized the immediate need to raise dues and increased the number of committees and volunteers. He also initiated the book being prepared by Richard Proctor on The History of AIPG. In addition, Steve has been involved with the Continuing Education Committee, Annual Meetings Committee, and Ad Hoc Committee for Professional Development, and serving as Chairman of the 1990 annual meeting in Long Beach, California. One of Steve's more important contributions is the concern, advice, and help he has given me as well as numerous others in and out of AIPG. Steve has never worried about being in the limelight. He just does work, much of it behind the scenes where no one really can see the effort he puts toward his love of AIPG. It is difficult to convey what he has accomplished for AIPG. There have been many, many achievements.

Steve has authored or co-authored over 95 papers and abstracts and several books, including many professional articles and service publications for AIPG, AGI, and AAPG, among others. From his days at the California State University at Northridge (BS, MS degrees), through his teaching at both California State University at Fullerton and at the University of Southern California, to his invited lectures and presentations to well-known geological institutions, Steve has always been a good communicator. He worked hard to communicate to the AIPG membership, which is one of the reasons he is being honored now. He used TPG, for example, as a convenient approach to building a consensus on many controversial and difficult subjects, all the while informing the membership on understanding the key issues of the day and long-term effects. He succeeded in encouraging numerous volunteers to come forward and help AIPG as well!

President's Messages

President Testa wrote an amazing Baker's Dozen of messages on a variety of topics. A sampling of two are reproduced here. His February 1998 TPG message is the fourth by a CPG on the subject “Why AIPG?” (See Appendix 9 for the years 1969, 1979 and 1987). So if there is a doubt in your mind concerning the benefits of membership in AIPG, read these papers.

“Why AIPG?”
By Stephen M. Testa

Why AIPG? For that matter, why be involved in any professional organization? These questions are surprisingly asked quite often. To take this a step further, with the proliferation of registration bills throughout the country, another frequently asked question is why certification? These questions are often posed and although the response to them has never been an issue with me throughout my professional career, it apparently rests heavily on the minds of many individuals.

Many of the reasons for “Why AIPG” are obvious. AIPG is the only organization that dedicates itself solely to the individual geologist and the profession of geology. An organization such as AIPG provides the regulatory community, the public and our colleagues a mechanism to recognize you as a qualified practitioner in your chosen profession. AIPG serves, along with other attributes of one’s background and experience, as a means to evaluate professional accomplishment and for employment consideration. AIPG also allows you to stay abreast of regulatory and professional developments that affect us all, and the profession and business of geology at the state, federal and international levels.

Less obvious is AIPG’s increasing role in bringing to students a professional awareness not provided elsewhere. There is little, if any, argument over the fact that geology departments overall dedicate minimal, if any, emphasis or time to the professional and business aspects of geology. It has always been difficult for me to understand how individuals can undergo the educational process and training for years, and after all that work is behind them, are then put on the streets in search for employment in their respective field of
expertise with so little professional preparation - let alone the likelihood of having to find employment in a specialty not of their primary choice which is all too often the case. Such activities as student and career days, and brown-bag sessions at various geology departments across the country, go far in bringing to students the professional awareness needed in an ever-changing business environment.

Only AIPG looks after you regardless of your technical specialty, and continually tries to improve the public's perception of what you do and how your role as a geologist beneficially impacts the public. There are some technical-oriented geological organizations that do maintain some elements of professional practice, but their efforts are typically restricted to their respective technical specialty. One would think that this is an easy task and simple concept to comprehend since geology does in fact impact many facets of our lives, but one cannot simply preach to the choir. AIPG continually works to assure that the right message is being received by the public and regulatory community, and that the message is being presented in a concise and consistent manner.

AIPG serves as a resource for information that relates to the professional practice of geology. It is common during difficult financial times for individuals to be forced to restrict their professional membership to only those organizations that they perceive as being more beneficial to their career. I have been and continue to be a member of numerous geological organizations, and although not necessarily active in all that I belong to, every organization has proven itself to be of value, and has contributed at some point to my professional development and success over the years. Although there are numerous sources where one can get information of educational and technical value, in regards to the professional practice of geology, these choices become very limited.

In regards to why certification, there are many individuals that have relinquished their membership in AIPG or have questioned the value of their membership for the sole reason that the State in which they reside and earn a living maintains a registration program. They are thus of the opinion that no further assistance from other organizations or groups is necessary simply because they are allowed to work at their profession as long as they remain registered within the State. In addressing this point, it is important to distinguish between the various State registration programs that currently exist and AIPG certification. State registration programs for geologists, engineering geologists, geophysicists, hydrogeologists or environmental assessors are established with the noble charge of protecting the public health, safety and welfare. However, all State programs face the risk of demise, and some have come very close to it over the past few years, reflecting financial constraints or the perceived notion that the public does not need protection. AIPG on the other hand, and professional certification which it provides, is established to protect the interests of the geologist and the geological profession, and serves as the ombudsman of the profession.

Although one would think that the reasons presented are sufficient, there are, of course, other reasons one should consider in considering “Why AIPG?”. Being a professional is more than simply earning a living for the services one provides. Being a professional is also a lifestyle. Assuming that we are all involved in this profession because we enjoy it, one would also assume that we care about how our profession is perceived by the public and regulatory community, and would want to do everything within our power to improve such perceptions. As with most organizations, what you receive from it is only as good as what you put into it. I can only hope that when this question of “Why AIPG” crosses your mind, that you give serious thought as to why you became a geologist in the first place, when has your professional work NOT had some impact on the world we all live and work in, and then what can you do to further promote the role and profession of geologists. It is my expressed opinion that AIPG membership provides a very good place to start!

“Some Thoughts on Professional Development”

By Stephen M. Testa

We commonly view professional development as attaining continuing education credits, attending technical workshops and professional meetings, etc. I remember clearly when I first embarked on my professional career immediately after completing my graduate studies. I was excited by the fact that I was actually being paid to geologize. Who cared where the money came from, I was doing geology and getting paid for it. At this time, I was involved primarily in studies related to the suitability and feasibility of constructing nuclear power plants in various parts of the country and overseas. The multi-faceted nature of these studies involved many technical challenges, introduced me to issues revolving around public policy and political awareness, which I found exciting and rewarding. It was with this participation in the workplace that I was also introduced by co-workers and colleagues to certain professional groups that met on a periodic basis.

In scanning the participants of these meetings, which have now become so familiar, there were always, as there are now, certain individuals that stood out from the pack. They were well regarded and respected for their personal attributes, their understanding and comprehension of the specifics of some technical issue, as well as for their resourcefulness in addressing a specific problem. It seemed that they knew everybody and everybody knew them. Such reverence was not simply restricted to their technical expertise, but seemed to overflow into other areas as well, including legislative activities, business savvy, etc. Of course, wanting to eventually be successful in my chosen field, I needed a plan—a strategy. It has been said by some that one needs a plan, and even a bad plan is better than no plan at all. As part of my plan, I considered what the major components were that comprised my concept of a professional. Also, being part of the consulting side of the business of geology, I had to consider what it took to become a successful consultant. The way I chose to address these questions was to take a closer look at these respected individuals, and to compose a list of traits and characteristics common to all, with the ultimate objective being to develop these professional traits to the best of my abilities, thus insuring my best chances for success. Hey, it was a plan.
I noted ten significant characteristics (or commandments with a little rewording and some assistance from a hard-rock geologist who can type) common to all the individuals that I had on my list.

First: They all earned a living either part-or full-time in applied geology of one form or another. Even the professor who taught more esoteric subjects such as igneous and metamorphic petrology used his knowledge to work out stratigraphic problems that in turn were used to address seismic issues associated with a particular site.

Second: Although they all had a broad understanding of geology and could discuss at length varied aspects of our science, they were considered experts in one or several specific areas of geology.

Third: They were interested and concerned about how our profession was perceived by the public and those in government. They were active in legislative and regulatory events of the day, and valued the perception of geologists and the geological profession by the public and regulatory community.

Fourth: They served occasionally as instructors conducting workshops and teaching classes at local universities and colleges, and for certain professional groups, whenever asked to do so.

Fifth: They published often, and were often observed participating in symposiums and technical sessions put on by many of the geological and even non-geological groups and societies. Even when the work they performed was a contradiction to what they previously had published.

Sixth: They participated in the activities and growth of several geological groups and organizations (certainly many of the more visible ones such as GSA, AAPG, AEG, AIPG, etc.), often serving on committees and as officers. They never mentioned the cost or time of being associated with the organizations they belonged to. If it was geology related, they were involved. And if they thought they could learn or add something to the program, they were involved.

Seventh: They appeared to be relatively astute in the business aspects of our profession, and in various aspects of business development, marketing and client relations, and understood fully that geology is a business.

Eighth: Many were so highly regarded for their expertise and personal skills that they were commonly asked to serve as expert witnesses or provide technical assistance to the legal profession.

Ninth: They appeared to get along amicably with other professionals such as engineers, and recognized the importance and benefit of being a team player in solving difficult technical problems. They did not hesitate to express the limitations of their knowledge and were reluctant to practice beyond their expertise.

Tenth: Although not all of these individuals performed well in all these categories, without question they all were involved.

Indirectly and unknowingly through their actions and through their involvement they provided many young geologists the guidance needed to pursue their own professional goals. Professional development takes a variety of forms; however, one cannot overstate the importance of setting an example by one’s actions. There are not many organizations with the depth and breadth of AIPG. I have many people to directly thank during my pursuit of a successful career in geology, but, much credit must also go to all of those individuals that unknowingly serve as mentors to us all, notably in the early years of professional development. Many of my role models were AIPG members which I did not know at the time, but I sure do now.

Testimony Before the USGS
Unfair Competition

American Institute of Professional Geologists’ Comments Regarding the National Research Council Study on the Future Roles, Challenges, and Opportunities for the United States Geological Survey.

As President of the American Institute of Professional Geologists (AIPG), and a consulting environmental and engineering geologist for the past twenty years, I am pleased to have the opportunity to address this committee on certain issues relating to the future roles, challenges and opportunities for the United States Geological Survey (USGS). My comments provided herein reflect AIPG’s participation in the 1997 workshop on the USGS National Cooperative Geologic Mapping Program (NCGMP), participation in the Interior’s external Task Force for the Review of the Federal-State Cooperative Water Program, review of draft versions of various USGS strategic plans, and comments and concerns brought to our attention by various members of AIPG during my tenure President. Presented below are comments regarding the future roles, challenges and opportunities for the USGS pertaining to the four points this committee has before it.

Major Societal Needs that the USGS Should Address: AIPG has in the past enthusiastically supported the Congressionally mandated original mission of the USGS (established in 1879), to classify the public lands and examine the geological structure, mineral resources, and products of the national domain, as exemplified in AIPG’s position on the Mission and Name of the USGS (Attachment A). This mission has since evolved into one that is much broader and self-defined as noted in the Strategic Plan for the USGS, dated May, 1996, where it states:

“The U.S. Geological Survey provides the Nation with reliable, impartial information to describe and understand the earth. This information is used to: minimize loss of life and property from natural disasters; manage water, biological, energy, and mineral resources; enhance and protect the quality of life; and contribute to wise economic and physical development.”
AIPG continues to support the original mission, and supports this expanded mission only to the extent that it applies to activities that are clearly in the national interest.

In 1997, I personally had the opportunity to attend and participate in the USGS workshop pertaining to the NCGMP. The majority of the projects that come under this program address (1) the needs of urban corridors, which are areas that are undergoing growth at a pace faster than information can be made available to the public for urban planning purposes, and (2) the burgeoning public use of the nation’s natural parks. AIPG has in the past, and continues, to support these types of programs and other broad-based programs, that we perceive as appropriate and within the national interest.

Programs such as the NCGMP produce products that have broad application by numerous multi-faceted users, and are prime examples of an appropriate government function for the overall good of the public. Overall, the USGS mapping program produces products that the private sector is typically not in a position to develop nor pay for. For example, detailed maps at 1:24,000 and smaller scale are usually beyond the scope and capabilities of the private sector; whereas, the private sector is capable of developing and paying for detailed mapping of specific sites such as 1:12,000 and larger scales. The latter case reflects mapping needed for determining exact locations of geologic hazards in new subdivisions, private wellhead protection, water resource development, or mineral exploration and reclamation, among others. Other broad-based, public-good activities include producing the topographic base maps and derivative products, reporting on mineral production statistics, monitoring geologic hazards, mapping the extent of ecosystems, and stream gauging.

Significant Emerging Scientific and Technical Issues that Appear Especially Important in Terms of their Relevance to the Mission of the USGS: Options for Addressing Multidisciplinary Issues: In review of the USGS’s draft report “Strategic Directions for the Water Resources Division, 1998-2000”, the issues pertaining to wetlands was omitted. AIPG has developed a draft policy statement regarding wetlands, which involves the scientific definition, identification, inventory, and maintenance and development of these resources, especially as a natural mitigation and remediation strategy (Attachment B). The Biologic Resource Division (BRD) would be the logical choice for WRD to develop an inter-divisional program within the USGS to address complicated, multi-faceted and diverse wetland issues.

Opportunities for Improving Partnerships and Other Cooperative Arrangements with Other Federal Agencies, State Agencies, Universities, and the Private Sector: Appropriate International Functions of the USGS: Certain AIPG members and individuals outside of AIPG have voiced concern regarding alleged competition between the USGS and the private sector (Attachment C). It is the overall consensus of AIPG that the USGS should not transgress outside the national interest by competing with the private sector in areas for which a national concern is not present. Such concerns have been brought to the attention of the USGS, notably, the Water Resources Division (WRD). Such concern is consistent with our understanding of Senate Report 105-227 which states that the USGS is expected:

“To undertake a careful review of its own practices, in full consultation with all involved parties, and implement such actions that are called for as a result…”

AIPG has appreciated the opportunity to have direct exchange of dialog with the WRD over the past few years regarding this issue, particularly as to certain activities of the Water Resources Division in Arizona, Colorado and elsewhere. Such dialogue has been informative and has resulted in a mechanism for groups such as AIPG to voice its concern, and provide an opportunity for the USGS to review and modify its activities as they relate to the private sector, as deemed appropriate.

Balance of Activities such as Data Acquisition and Management, Regional Studies and Fundamental Research: To the extent that basic research is fundamental to applying science to the issues that the USGS should address, the USGS also has a role in basic research. Some are of the opinion that the National Science Foundation and the Department of Energy have more of a role in basic research in the earth sciences than does the USGS. The USGS should be conducting basic research that is in direct support of its applied mission. For example, to reduce loss of life and properties from future earthquakes, the importance of conducting basic research to understand why earthquakes occur when and where they do, is clearly understood. When conducting basic research, however, the USGS should rely heavily on the “best and brightest” minds, which means that the USGS should have and maintain external grant programs or cooperative agreements, and not rely principally on in-house expertise. Such an approach is mandated by Congress in the National Hazards Reduction Program, but is considered by some not practiced in many of the other USGS programs that conduct basic research.

In summary, AIPG will continue to support what we perceive as broad-based, public-good type activities that remain consistent with the USGS mandate and within the national interest. On behalf of AIPG, I appreciate the opportunity to set forth our comments to this committee.

Respectfully submitted,

Stephen M. Testa
AIPG President

[National Research Council Letterhead]
Committee on the Future Roles, Challenges, and Opportunities for the U. S. Geological Survey

December 30, 1998

Stephen M. Testa
Testa Environmental Corporation
19814 Jesus Maria Road
Mokelumne Hill, CA 95245

Dear Mr. Testa:

On behalf of Donald DePaolo and members of the National Research Council’s Committee on Future Roles, Challenges, and Opportunities for the U.S. Geological Survey, I want to thank you for your presentation on December 15th. The committee found your presentation and ensuing discussion to be informative, thought provoking, and of great benefit in their deliberations.

Our success is contingent upon the willingness of people, such as you, who make time in their busy schedules to speak at our meetings. If I
can be of assistance, in any way, please do not hesitate to contact me.

Sincerely,

Tamara L. Dickinson
Senior Program Officer

New AIPG Publications

Several new significant AIPG books were published in 1998. *Geologic Ethics and Professional Practices, 1987-1998*, 202 pages, edited by David M. Abbott, Jr. (see Index and Who’s Who). This book, designated AIPG Reprint Series No. 1, is a compendium of reprints and some new papers. It consists of five parts: After a Foreword by Ernest K. Lehmann, Part I discusses Ethics Codes; Part II, a collection of papers on Ethics Topics; Part III on Registration; Part IV on Professional Standards; and Part V on Professional Practice Issues. As reviewer John D. Haun says, “the book presents an encyclopedic, thought-provoking review of the world of ethical behavior. It should be read and pondered not only by professional practicing geologists, but by all governmental and academic geologists as well.”

A second important book of 1998 is “Petroleum” in the AIPG Issues and Answers Series (see Appendix 5), written by Madhurendu B. Kumar. A large amount of information is condensed into 36 pages.

AIPG Reprint Series Numbers two through six were compiled and edited by Stephen M. Testa in 1998-99. He scoured many journals and books to select interesting papers by CPGs. The book titles are “Environmental Geology,” “Engineering Geology,” “Petroleum Geology,” “Mining Geology,” and “Hydrogeology.”

1998 Annual Meeting,
Baton Rouge, Louisiana

“Professional Geology, Mineral Resources and Our Environment” was the theme of our 35th Annual Meeting in “Red Stick,” Louisiana. (Named by Pierre LeMoyne in 1699 for the red pole dividing the hunting grounds of two Indian tribes.) General Chairman Madhurendu B. Kumar and Vice-Chairman David E. Pope presided at the elegant Hilton Hotel, October 3-8, 1998. The five Technical Sessions, organized by Co-Chairmen Chacko J. John and David D. Reimers, included 23 invited speakers. There were two field trips, three Short Courses, and four Spouses’ Tours. The Keynote Speaker was past-president William L. Fisher who spoke on “Fossil Fuels and Global Warming: From Running Out to Fouling Up.”

Field Trip Number One: visited several Salt Domes and the home of Tabasco hot sauce. Field Trip Number Two visited Dow Chemical Company’s horizontal wells and AMOCO’s Port Hudson Oil Field.

Short Course Number One: on “Management Development” was offered the third year in a row by David E. Fletcher, a consultant and on the faculty at the Colorado School of Mines. Short Course Number Two “The Technique of Professional Geological Witnessing/ Louisiana Oil and Gas Matters” by W. H. Robbins, Randall C. Songy and CPG Frank W. Harrison, Jr. (see Index and Who’s Who).
Short Course Number Three “Practical Geostatistics for the Professional Geologist” by Dale Easley of the University of New Orleans.

Spouse Tour Number One: visited the huge Mall of Louisiana.

Number Two toured the Old and New State Capitols.

Number Three inspected rural Mud Painting and had a Cajun buffet on a Bayou Tour. Number Four visited two of the areas most impressive plantations, Magnolia Mound and Nottoway. (Overheard: “Shades of Scarlett O’Hara!”)

The 1998 Awards Banquet honored Peter R. Rose with the Parker Medal, three Honorary Memberships to William C. Gussow, John D. Haun and Robert A. Northcutt, the Martin Van Couvering Memorial Award to David M. Abbott, Jr., and the John T. Galey Public Service Award to Kathleen M. F. Benedetto.

1999
President Thomas G. Fails

Thomas G. Fails, CPG 3174

In 2001 Tom was awarded the Martin Van Couvering Memorial with William Knight Citationist.

Tom’s year as President saw 35 State sections and 113 foreign members. The ten states with the most members are TX, CO, OH, CA, PA, NY, MI, IL, NJ, OK. Most members work in the field of environmental geology, a job category not listed in 1965 (see later).

Student Recruiting,
What Are We Doing Wrong?
By Tom Fails

AIPG has had a program to recruit Student Affiliate members and to encourage formation of AIPG Student Chapters for a number of years. Executive Director Bill Knight includes visits and presentations to geology departments and students across the nation every year during his travels for Section visits, attendance at conventions and meetings, etc. But despite considerable effort, we have had only limited success in attracting students to our membership. AIPG’s first Student Chapter was founded during 1996 at Wright State University in Ohio. (This Student Chapter was well represented at the 1996 Annual Meeting in Columbus.) As of mid-February 1997, the Institute had 65 Student Affiliates enrolled, but expected to lose up to 29 due to non-payment of dues, so by the time you read this we may have only about 36 effective Student members. Further, only a total of 72 Student Affiliate numbers have been granted since the program began.

Why this lack of success? Two factors have been mentioned: attitudes ranging from a lack of interest to obvious hostility expressed by faculty members at the departments visited, and where interest was shown by students in possible affiliation, a lack of follow-up by the local Sections.

Past approaches have been made mainly through geology department faculties, faculties which in many cases do not include any CPGs. In general, students have not been approached directly beyond their attendance at a faculty-arranged department presentation. We now appear to have ample evidence that only limited success has been obtained using this approach. For those among us who believe more effective Student Affiliate recruiting would be of great benefit to both students and the Institute, particularly under the broadened membership program that is to be introduced soon, now may be the time to consider new and better ways to reach out to geology students and inform them of the benefits of AIPG affiliation. An initiative undertaken by Colorado Section last year is worth consideration even though the eventual outcome is still unknown.

At the 1995 Annual Meeting in Denver, John Utgaard, then President of Illinois-Indiana Section, told me about an all-day meeting for hydrogeology students that his Section had sponsored at Indianapolis the previous year. Being one who is always eager to poach a good idea, while giving full credit for it to the author, I took the concept to Colorado Section’s Executive Committee as something that we might wish to try as a means of helping geology students with their professional career concerns while letting them know about AIPG and geologic professionalism and perhaps recruiting
some Student Affiliate members. The Executive Committee responded with enthusiasm, tempered with the admonition that the instigator of the project should be the one responsible for carrying it out. And so, Colorado Section’s Student Day Committee was born. Bob Johnson, the incoming President for 1996, gave the Committee strong support from the beginning and the Committee gradually expanded to where 23 Colorado Section CPGs and CFCs were active participants. Roger Slatt, head of the Department of Geology and Geological Engineering at the Colorado School of Mines graciously agreed to act as host and provide the necessary facilities. Provision of lunches to student attendees and AIPG participants and half-day rentals of two field trip buses generated a budget of $1800, money that the Section did not have due to our Annual Meeting losses. Sponsorships of $50 to $200 were requested from companies employing geologists in Colorado through their CPG employees. This program attracted 18 sponsors, who contributed sufficient funds to provide a small surplus after all bills were paid. If by now you are starting to suspect that a lot of time, planning, participation and money are necessary to put on a one-day event for students, YOU ARE ABSOLUTELY RIGHT! But the payoff in satisfaction for an event really appreciated and praised by the students made all of this worthwhile. Will Colorado Section have another Student Day? Not in 1997—we simply cannot take on a project on this scale annually. But yes, in 1998 or 1999, we will definitely do it again.

The following description of Student Day is extracted from an article published in the November 1996 Colorado Section newsletter:

Colorado Section’s first Student Day, held in coordination with Wyoming Section, took place on a golden Saturday, September 28, on the CSM campus. All indications from those attending students, faculty, speakers, committee members are that this was a successful venture. Sixty-five were registered (62 students, three faculty), but a few were no-shows. Nevertheless, the fifty-plus attending made the event worthwhile. Attendees came from CU-Boulder, CU-Denver, CSM, CSU, UNC and Wyoming.

Two morning Field Trips—Central Front Range Tectonics, led by Bob Weiner (professor emeritus, CSM), and Swelling Soils: Problems and Solutions, led by Jeff Hynes (Colorado Geological Survey).

After an excellent box lunch, General Session talks by President Bob Johnson (Welcome and Appreciation), John Rold (Success Factors for Professional Geologists), Dave Abbott (Professional Ethics), Tom Fails (Geology is Not Enough) and Bill Knight (Professionalism in Geological Practice) were given. The group then split for participation in two simultaneous geologic specialty sessions. Bill Bellis and Tom Karnuta cochaired the Environmental. Hydrogeology and Engineering Geology session where John Ivey (Engineering Geology), Tom Karnuta (Engineering/Environmental Geology), Debbie Jepsen (Environmental Geology) and Larry Cerrillo (Hydrogeology) were the speakers. The parallel Natural Resources session was co-chaired by Graham Closs (Mining) and Tom Fails (Petroleum). Emphasis was placed on the differences between large companies versus independent companies and consultants in both industries. Greg Hahn spoke on employment aspects of large- and medium-sized mining companies and Trevor Ellis on mining geology consulting. For the petroleum industry, Laura Wray covered the majors/large independents and Steve Sonnenberg the consultants and independent geologists. While the author did not attend the EHE session, I can state that all four Natural Resource talks were of excellent quality and scope and appeared to give the students exactly the information they wanted. As an indication of interest, the question and discussion periods following the specialty sessions were scheduled to 5:00 p.m., but were announced to be open-ended afterward. The EHE session shut down at about 6:00 p.m., and the Natural Resources session continued until nearly 6:30! Lots of good, intelligent questions and frank, realistic answers.

Food for thought. When asked, considering the time, effort and cost involved in putting on Student Day, whether it was worthwhile, students and faculty appeared to be 100 percent affirmative. Surprisingly, when asked “supposing we did this again next year, or the second or third year, would you attend again?” they appeared to be overwhelmingly in the affirmative.

Among those CPGs involved on the 28th, the sentiment was that this was a success and had supplied what the students wanted and should be repeated—sometime. Perhaps planning should start for a Student Day in ’98 or ’99. CU-Boulder has already volunteered to host the next Student Day, whenever it is scheduled.

When asked how to improve Student Day, if repeated, the only suggestion was to have the sessions in the morning and the field trips in the afternoon with the speakers on the buses so that they could be asked questions.

As the meeting ended, a CSM sophomore approached Bob Johnson and me. He would like to help establish a Student Chapter of AIPG at Mines. Tricia Beaver, Bill Knight, Graham Closs, Murray Hitzman are you listening? We advised him to contact Bill Knight and to contact Tricia (97 Section President) as well. We were also approached by a CSU graduate student as to whether Colorado Section could supply a speaker or two for a symposium planned there in mid-November. We told her that in principle we were happy to supply speakers for student functions but mid-November was too short notice and suggested April as an alternative. She thought April would work, as they have two such symposia each year. We will stay in touch with her on this and try to better determine just what is wanted at CU. So, the reaction to Student Day that we hoped would occur is starting to occur. It is hoped that the Section Executive Committee, will act on these two approaches.

National is interested in the Student Day handout, perhaps extended with additional papers by the speakers, as a possible publication useful in promoting Student Days by other Sections, establishing Student chapters and recruiting Student Members. Dave Abbott, who compiled the handouts, proposes putting this publication on AIPG’s internet home page, which should have happened by press time.

To all of you—see what a little thought, effort and cash can accomplish? The goodwill resulting from Student Day may pay real future dividends in more members, greater activities by these members and better relationships with the geology departments and co-sponsor companies involved. And
regardless, many students have been helped in their career planning.

Student Day was only half the battle, however. Without effective follow-up, the opportunity to recruit Student Affiliates and form Student Chapters will be lost. One or two Colorado Section CPGs have volunteered to work with each of the five Colorado universities attending and to try to maintain the momentum coming out of Student Day. At two schools, CPGs on geology department staffs are involved. So what’s going on? Unfortunately, six months after Student Day, very little. Bob Johnson, past-President of Colorado Section is the ramrod but after sustained effort seems to be getting little but promises and excuses.

As noted earlier “where interest was shown by students in possible affiliation, a lack of follow-up by the local Sections” has led to a lack of success in the past in student recruitment. The initial euphoria of a successful Student Day is now gone, to be replaced by what?

We appear to have half of a solution. A successful Student Day event, but no continuing return. A good crop but no harvest. Why?

In our only effective case study to date—Wright State—a combination of a strong push by CPG Tom Berg, Ohio State Geologist, and strong student leadership by Student Affiliate Margie Kloska, who received a Presidential Certificate of Merit for her efforts, worked.

Joint efforts by an interested CPG and an effective, energetic student leader led to success at Wright State. There may be other possible approaches to recruiting Student Affiliates and forming Student Chapters. I’d like to hear about them. Perhaps Tom Berg could provide some insight in a future article, as programs like these are of major potential benefit to AIPG. For now, Wright State offers the most promising approach, either on its own or as a follow-up to a successful Student Day.

Executive Director William J. Siok

William J. Siok, CPG 4773

Effective May 1, 1999, William J. “Bill” Siok replaced William V. “Bill” Knight as the Institute’s Executive Director. Bill Siok had to transplant himself and his family from New Hampshire to Colorado. And, similarly, Bill and Martha Knight returned to their home in Tulsa, Oklahoma, having served the Institute admirably for ten years. President Tom Fails gave a brief biography of Bill Siok, which follows:

Bill Siok, a native of New England, graduated from Rensselaer Polytechnic Institute in 1969 with a BS in Geology. The cyclical petroleum industry was in a slump and jobs were scarce. On the advice of a professor, Siok spent two years teaching earth science at a junior high school. Wanting to “do geology,” however, Bill obtained an assistantship at South Dakota School of Mines and Technology and emerged with a MS in Hydrogeology in 1973. Siok then joined the Vermont Agency of Environmental Conservation as a hydrogeologist and environmental engineer. Six years spent reviewing proposals for wastewater and sludge disposal in cold, cold Vermont led to a career change to private industry in 1979. Siok established the New England office of Wehran Engineering in 1979 and as Vice President was responsible for development of the company’s business activities and management of its projects in the region until 1987. Involvement in various management positions with several firms followed until 1994, when Bill jointed ENSR Consulting as Senior Program Manager, providing technical consultation and representation of clients in negotiations with environmental regulatory agencies in New England.

Siok’s technical experience is in hydro, environmental, and engineering geology, the specialties of the majority of AIPG’s present membership. He lists his skill areas as technical investigations, negotiations, expert testimony, project operations, and financial and staff management. As such, Bill will bring 19 years of private sector and six years of public sector technical, management, and business development experience and skills, mainly in the small company environment, to AIPG. He has exhibited the resilience and determination to persevere and succeed in this environment in upper New England, an area not exactly brimming with economic opportunities. Good training and experience for an AIPG Executive Director!

In addition to AIPG, Siok is a member of the Association of Engineering Geologists and the American Institute of Hydrology, and is a Registered Geologist in Kentucky and a Certified Geologist in Indiana and Virginia. Since becoming a CPG in 1980, Bill has served on the Northeast Section Executive Committee and was an Advisory Board Representative on the 1995 National Executive Committee. He was a member of the ad hoc Committee for Bylaws and Policy Review, of which he was Chair in 1996. He is a member of the Task Force for Continuing Professional Development, was AIPG’s Vice President for 1998, and was re-elected at Baton Rouge as Advisory Board Representative to the 1999 Executive Committee, a seat which he relinquished in April 1999.

Member Employment Comparisons 1965-1999

An interesting comparison of types of employment of AIPG geologists in the 35-year span between our first member survey in 1965 and in 1999:
Note: AIPG specialty categories have changed over the years, so it is difficult to compare earlier job categories with newer ones. For example, Engineering Geology and Environmental Geology weren't listed as specialties in 1965. Later, AIPG listed 320 three-digit “Key to Specialty Fields of Practice.” This caused many otherwise Petroleum Geologists to list themselves under Natural Gas or Appraisals or Operations. In 1989 the 320 job categories were reduced to the present 54. Therefore, the above comparisons of job specialties is only an approximation, but nevertheless shows how Engineering/Environmental/Hydrogeology has become our number one field of practice.

### 1999 Geologists Salary Survey

The average income reported in a recent survey of the Compensation of Geologists was $62,500, according to Dr. Steven Langer, President of Abbott, Langer & Associates, Crete, Illinois. However, 10 percent of the reported incomes were under $40,500 and 10 percent over $117,900. The survey was sponsored by the American Institute of Professional Geologists.

Compensation varies considerably from one type of employer to another. Median incomes are slightly higher in non-consulting firms ($64,900) than in consulting firms ($61,000). The highest median incomes are in the petroleum industry ($107,100), geophysics consulting firms ($90,200), petroleum geology consulting firms ($60,000), and engineering geology consulting firms ($60,400).

Income data are reported by region, state, and metropolitan area; type of employer; size of organization; level of education; length of experience; geological specialty; level of professional responsibility; certification/registration/licensure status; and level of supervisory/managerial responsibility. Income data are also reported for each of the variables above vs. type of employer; size of organizations; region, state, and metropolitan area; length of experience; supervisory/managerial responsibility; and job level.

Survey participants with a bachelor’s degree in geology have a median income of $59,925, with a masters in geology $65,372, and with a Ph.D. in geology $71,000.

Geologists with five–nine years of experience have a median income of $46,521, as opposed to the 30-plus year veteran with a median income of $82,000.

Those geologists with no supervisory responsibility have a median income of $58,125. For those supervising 50 or more professional & sub-professional employees, it is $101,250.

The highest median incomes are found in the Houston, Los Angeles/Long Beach, New Orleans, Washington, DC, Rochester (NY), Philadelphia, New York City, San Francisco/Oakland, and Dallas/Fort Worth metropolitan areas (all between $68,500 and $99,100). The lowest are found in South Dakota, Iowa, and the Baltimore, Birmingham, Atlanta, Pittsburgh, and Dayton metropolitan areas (all between $39,900 and $52,437).

By geological specialty, the highest median incomes are found in petroleum and natural gas, geophysics and seismology, geochemistry, and exploration (all between $80,600 and $89,850). The lowest are found in general geology/earth sciences/regional geology, petrography/petrology/mineralogy, and environmental geology/soil science/land reclamation (all between $54,001 and $56,000).

### Government Affairs Program

David Applegate

The AGI editor and Government Affairs Director is J. David R. Applegate, who also contributes monthly updates to TPG. Often with his assistants at AGI, David summarizes the various bills and congressional actions that affect geologists and our profession. From 1982 to 1999, these duties were performed by several AIPG-designated Washington Representatives. In 2002 David was awarded Presidential Certificate of Merit.

David graduated Yale University with a B.S. cum laude in Geology and Geophysics in 1989. He then obtained his Ph.D. in Geology and Geochemistry from the Massachusetts Institute of Technology in 1994. After graduation he became a Congressional Science Fellow for the American Geophysical Union, 1994-95, while at the same time was Professional Staff Member of the Senate Committee on Energy and Natural Resources. Since 1995, David has been the AGI
Director of Government Affairs. His 1999 tribute to Congressman George E. Brown, a strong science advocate, was published in Geotimes.

1999 AIPG Washington Fly-In
by James D. Shotwell, CPG 8290, Chair
AIPG National Affairs Committee, and
Thomas G. Fails, CPG 3174, 1999 AIPG President

The annual AIPG Washington, DC Fly-In was held April 25 through 27 in the Nation’s capitol. As in the past, AIPG members from across the country donated their time and travel at their own expense to provide an advocacy role for the profession of geology. Advocacy of the profession is one of the major purposes of the Institute, and the DC Fly-In is an excellent venue for such an effort.

The American Geological Institute (AGI), of which AIPG is a member organization, has again offered their hospitality and logistical support for the Fly-In participants. The AGI Government Affairs Program has been instrumental in providing AIPG with timely updates and analysis of congressional and federal agency initiatives. Centreville Travel of Wilmington, Delaware, again has donated their time and considerable expertise to locating relatively inexpensive, suitable accommodations in the DC area for the Fly-In participants.

We convened at AGI headquarters for an orientation and strategy session. Participants were briefed on the appointment schedule and the message to be delivered at each meeting with Senators, Congressmen, and the various leaders of federal agencies and private scientific organizations. A lead speaker for each appointment is identified during the strategy session.

During 1998, four new Committees or Subcommittees were created by the AIPG Executive Committee: the Subcommittee on Professional practice, the Subcommittee on Competition Between Government and the Private sector, the Subcommittee on National Energy Issues, and the Committee for Peer Review. These Committees/Subcommittees are all under the umbrella of the National Affairs Committee, and concerned themselves with the following issues which were the basis of the 1999 DC Fly-in:

The Subcommittee on Competition Between Government and the Private Sector has been very active in calling attention to instances of competition between federal governmental agencies and private sector professional geologists. The Subcommittee has communicated directly with the USGS-WRD and the USGS-Geologic Division about perceived conflicts in Arizona, has participated in the National Research Council’s Committee on Future Roles, Challenges and opportunities for the US Geological Survey, and has served on the Department of Interior’s Advisory Committee for Water Information's Task Force for the Review of the Federal-State Cooperative Water Program. AIPG involvement in each of these programs has provided a platform from which we have been able to elevate the dialog among these organizations to a level at which constructive criticism is exchanged and policies for avoiding conflict in the future are being formulated. Because of AIPG’s involvement with the leadership of the USGS, we were asked to comment on the USGS Water Resources Division Strategic Direction for the Water Resources Division, 1998-2008. The comments were gathered from various AIPG reviewers and presented by 1998 President Stephen M. Testa.

The Subcommittee on National Energy Issues has been charged with tracking the Department of Energy’s (DOE) implementation of the Kyoto Agreement, access to federal lands for energy minerals exploration, and the progress of the
National Geologic Data Repository. The issues of Global Climate Change and the Kyoto Agreement are areas the Subcommittee has identified as key issues that may impact professional geologists in the near- to medium-term future. In addition, the Subcommittee is concerned with the implementation of the DOE’s Comprehensive National Energy Strategy, especially as it may impact professional geologists. AIPG is working on a Global Climate Change Policy, and the Fly-In participants visited the leadership of the DOE to communicate our views.

The Subcommittee for Professional Practice is establishing a dialog with the American Society for Civil Engineering (ASCE) and with the National Society for Professional Engineers (NSPE) so that areas of professional practice can be identified and discussed. In addition, issues such as the attempted exclusion of professional geologists from underground storage tank projects in Oklahoma and the recent Proposition 229 in California were discussed during visits with ASCE and NSPE during the 1999 DC Fly-In.

We scheduled a meeting with the National Science Foundation (NSF) to discuss the provision of AIPG reviewers for NSF grant proposals in geoscience research. The Peer Review Committee is in the process of organization. A Chair has been appointed, and a call for volunteers was published in the February issue of The Professional Geologist.

Related issues important in the 1999 DC Fly-In were:

The creation of an official AIPG Wetlands Policy and the management of wetlands by the US Army Corps of Engineers and the US Geological Survey, specifically the USGS WRD and the Biological Resources Division. AIPG stresses the importance of the input of qualified geoscientists in the management of wetlands resources and in the creation of new wetlands for pollution remediation purposes. The current draft of an AIPG Policy on Wetlands has received considerable comment. At their January 23, 1999 meeting, the Executive Committee instructed the Task Force for a Wetlands policy to take these comments into account in further deliberations on drafting the Policy.

Various geoscience budgets within the federal government have become increasingly important over the last several years. The 1999 DC Fly-In visited with the Office of Management and Budget to present our views on budgetary erosion of key programs and agencies within the Department of the Interior and at the NSF.

We met with representatives of the Federal Emergency Management Agency (PEMA) to determine whether AIPG could play a role in prediction and avoidance of certain geologic hazards, many of which were identified in the AIPG publication “The Citizen’s Guide to Geologic Hazards,” before they become true emergencies.

As in the past, a brochure which states the various AIPG purposes and policies that are pertinent to the advocacy of the profession of geology were delivered during each appointment.

While the Annual DC Fly-Ins are an excellent arena for advocating the profession of geology to national legislators and regulators, other means of providing advocacy include visiting State and local governmental officials, delivering speeches to service organizations such as the Rotary and Kiwanis Clubs, and becoming involved in setting a sound earth science curriculum in local or state elementary and secondary schools. Sponsoring merit badge training sessions for the Boy Scouts and Girl Scouts is also a very enjoyable means of providing advocacy. Every AIPG member is encouraged to become more active in advocating the geosciences to the public.

**1999 Annual Meeting, Girdwood, Alaska**

**Richard H. Ragle** chaired this highly successful meeting, with major assistance from Assistant Chairman **Robert N. Braunstein** and Alaska Section president **Marilyn Plitnik**. The venue was the Westin Alyeska Prince Resort in Girdwood, about 30 miles from Anchorage.

There were nine Technical Sessions, concerning Engineering Geology, Ethics, Information, Oil and Gas...
Exploration, Environmental Geology, Education, Mining, Cold Regions, and Geopolitics. Three Short Courses included Hazardous Waste, Geohazards, and Mining. Eleven Field trips included such places as Portage and Eagle River Glacial Features, Mt. Denali, and Anchorage and Turnagain Landslides. Five Spouses’ Tours included Anchorage City Tour and Portage Valley & Big Game.

The Awards Banquet honored William A. Newton (see Index and Who’s Who). Bill was a member of the first Executive Committee in 1963-65, and Chairman of the first Annual Meeting in 1964. His citationist Russell Slayback stated, “CPG 8. Do I really need to say more about why Bill Newton is being awarded Honorary Membership?”

The Institute’s fourth Outstanding Achievement Award went to Julia A. Jackson, former Editor at the American Geological Institute. Julia organized the first annual Earth Science Week in 1998, and was president of The Association of Earth Science Editors. Stephen M. Testa was awarded the Martin Van Couvering Memorial Award for his outstanding service to the Institute and as president in 1998. Jonathan G. Price, 1997 President, was awarded the John T. Gale Memorial Service Award.

President Dennis Pennington

Dennis Pennington, CPG 4401

Dennis was born in Brooklyn, NY, in 1949. He earned his Bachelor’s degree in geology from SUNY Potsdam, NY, in 1971, and his master’s in geochemistry from Penn State University in 1973. After working for several geologic firms, he is now head of National Environmental Technical Corporation in Telford, Pennsylvania. Dennis was national Vice President in 1997, and in that year he wrote an article for TPG which is reproduced below. As President-Elect in 1999, he attended, along with President Tom Fails and Vice President Robert Font (at their own expense), the European Federation of Geologists meeting in Budapest, Hungary, in June 1999. Dennis will lead the AIPG contingent at the July 2000 EFG meeting in Alicante, Spain. Unfortunately, illness prevented Dennis from staying active the latter part of his term of office, but Tom Fails and 2000 President-Elect Robert Fakundiny helped out at Headquarters.

President’s Message

“Societies and Policy Makers”

Much can be said about the role of the geoscience community in supporting our public institutions and policy-making. Too often, the technical community ignores the public or, at least, hides when controversial issues arise. The geologic professions also have not truly recognized the importance of communicating facts and information to lawmakers so that intelligent decisions can be made by our policy makers. We even avoid speaking to the general media that have a major influence on the public, and, hence, lawmakers. How many times have you asked yourself, where did they obtain such incorrect data? In some cases, misrepresentation of data or the censure…
of news is intentional, but more often it reflects a lack of knowledge of a technical area by a journalist. Additionally, sometimes our technical people don’t explain data and consequences of interpreting data, or have their own political agenda to promote.

As the global market changes and the need for experts in resources and the environment as well as geologic hazards increases, we must, as a profession, be there. In many cases, our professional societies in the United States, Europe, and North America must communicate our knowledge so that others will not make the same mistakes or waste valuable public monies on policies that can destroy industries or cause more problems than the original concern.

An example of a key public issue that has many effects on how our industries and society may function is global warming caused by man. There is a political faction that feels 20-25 percent of the countries of the world are causing global warming while close to 75 percent of the world is excluded from any concerns of global effects. That, in itself, is interesting for the simple reason that while many new industrialized countries or non-European countries are excluded from having to control greenhouse gases, the United States, Canada, and some European countries are told by the international community to limit greenhouse gases. Some of these countries that are excluded by controls can, in fact, produce more greenhouse gases than many of the European countries combined. This automatically implies political rather than scientific reasons for controlling greenhouse gases. There are many sources of information which indicate that global warming by man may or may not be happening, yet some countries are intent on restricting some societies while excluding other societies from controls. Rarely is there any discussion on natural global warming cycles or analysis of the geological record. Issues discussed don’t seem to include the reconciliation of data from atmospheric temperature measurements (which indicate cooling temperatures) and land temperature measurements (which indicate warming temperatures). Because of the influence of politics, it is difficult to trust the opinions of some on this issue. Professionals seem to make an opinion and then try to justify it. Simple physical laws often are ignored. For example, the amount of sea ice versus land ice at both poles has not been adequately discussed. In addition, the effect of solar cycles and historical chemical cycles on global warming of the earth have not been objectively discussed to identify natural or man-made issues that may affect global warming. Where are our mainstream scientific societies on this issue? Some of our institutions have made general statements about the issue while staying on top of the so-called fence. A few associations have stated their view, but are ignored by the national media. There are other institutions that almost appear to support global warming by man simply to obtain funding. However, most are silent. The reasons for the silence could be a lack of consensus or an avoidance of controversy. If the reasons for silence are the avoidance of controversy, our scientific associations may be failing the public. Even a statement related to a lack of an adequate information base to present an opinion would be welcome. Somehow our public must be made to understand that the issue is complex and is not just a simple concern over restricting carbon dioxide emissions. After all, natural sources of carbon dioxide far exceed man-made sources of carbon dioxide. Also, the influence of water vapor in the atmosphere (as a control on heat transfer) has not been widely considered in relation to the influence of carbon dioxide.

Other issues such as groundwater use and building in geologic hazard areas, although evaluated locally when a crisis occurs, are not brought to the attention of national and regional political bodies concerns are short lived. The extent of these issues often is not brought to the attention of policymakers on a consistent basis, thus allowing lawmakers to make
decisions without realizing that a large database exists. In my opinion, the role of scientific associations, in part, is to help lawmakers and others become aware that geological data exist that could help formulate more practical policies. Earth Science Week is an example of a successful program.

In summary, geosciences can have a major impact on public policies, but we must be more aggressive in providing the necessary tools to help our elected representatives make the right decisions. Networking and combining resources of associations are key to our survival as we enter this new millennium.

2000 Annual Meeting, Milwaukee

Annual Meeting General Chairman Jack W. Travis ran a smooth meeting, the first of the millennium, assisted by Co-Chair David Voight, Program Chair Bernd Rehm and Field Trips Chair Jamie Robertson. The venue was the elegant and historic Pfisher Hotel. The theme was “Learning from the past—directions for the future.” Of course, in keeping with Milwaukee’s heritage, a major brewery tour (Miller), and a microbrewery tour were included.

The Institute awardees were Russ Slayback, Parker Medal; Robert Levich, Van Couvering Award; Jim Williams, Galey Service Award; Travis Hughes, Honorary Membership; and Myrna Killey, Presidential Certificate of Merit.

2001 President Robert H. Fakundiny

Robert H. Fakundiny has been active in AIPG, serving as Secretary in 1996, Galey Awardee in 1993, Presidential Certificate of Merit in 1994 and co-author of two AIPG publications in 1991 and 1998. Bob is the first past-President to be a member of the Executive Committee, a new position to aide continuity. Bob is the New York State Geologist. He was born in Manitowoc, Wisconsin, in 1940, obtained his B.A. in geology from the University of California at Riverside, and his masters and Ph.D. from the University of Texas at Austin.

President’s Message

I have had the following letter sent to those City, State, and Federal agencies involved with the cleanup and restoration of the devastated sites in Manhattan, the Pentagon, and in Pennsylvania. The members of AIPG have special and possibly unique expertise and experience that may be valuable to them. I ask that you consider those ways that you may contribute and be ready to respond, if requested. This is an opportunity to demonstrate the importance and value of a certified professional geologist program. Thank you for your continued support of AIPG and its programs.

This letter offers the services of the American Institute of Professional Geologists (AIPG) to you and your staff who are addressing the health, engineering, and environmental issues related to geology at the sites of the terrorist attacks on the World Trade Center, the Pentagon, and in Pennsylvania and the sites and facilities used in their cleanup and restoration. This offer is in a small way our expression of sympathy to those who have suffered losses and also support for the chal-
challenges you and your staff are facing. Our collective special expertise and experience may be useful for the successful return of these areas to operation.

The AIPG is a non-profit organization of approximately 5000 professional geologists who come from independent consulting, governmental agencies, the academic community, and a variety of private industries. Our primary purposes are to strengthen the geological sciences as a profession, to promote ethical conduct within our profession, to protect the public and the geological sciences from unprofessional practice, and to educate the public about the need for sound geological practices. We have established a set of severe qualifications for granting our title of “Certified Professional Geologist” and can assure the public that those geologists who hold the title have undergone rigorous peer review and have been deemed competent practitioners who are worthy of public trust.

AIPG has among its ranks qualified professional geologists in a number of specialties that may be needed by your staff in confronting the difficulties of bringing these devastated sites and our Nation back to normal functioning. Included among these specialties are: geological composition and properties of construction materials, computer applications to geological problems, engineering geology, natural-energy and fossil-fuel resources, environmental geology and geology related to health, environmental impact assessment, forensic geology, geophysics, geotechnical applications, hazardous waste disposal, hydrogeology and groundwater protection, investment analysis of geological projects, land reclamation, marine geology, petrography of hazardous waste materials (such as asbestos), soil science, seismology, and water resources.

AIPG realizes the shortage of resources available to you in restoring lower Manhattan and the Pentagon and would like to offer pro bono aid wherever possible, recommending members who have one or more of the above-listed specialties. AIPG can be a clearinghouse for directing you to the services of competent, professional geologists among our membership.

For more information you can contact me at (518) 486-2002, e-mail: rfakund@mail.nysed.gov or our Executive Director, William Siok at (303) 412-6205, e-mail: wsiok@aipg.org.

You have our sincerest concern for the quick and careful accomplishment of the many tasks facing you and your staff, and hope that we as an organization may be able to aid you in achieving the goal of restoring our city and Nation.

**2001 Annual Meeting, St Louis**

This meeting marked the first of two joint annual meetings with the Association of Engineering Geologists. It was a huge success, being a meld of AEG’s technical sessions and AIPG’s sessions on professionalism and ethics (and a few technical presentations). Also, the combined field trips were well attended by more than just one society alone could provide. We thank General Chairman John Howard, CPG 8740, for running a great meeting, and for choosing the extraordinary Hyatt Hotel, which occupies the former St. Louis Train Station. John was ably assisted by AEG’s Greg Hempen for the Technical Program, John Bogner, CPG 8341, for Professional Development sessions, and Duane Kruegar, RM-0009, for the Field Trips. A special acrobobic thrill was a single-seat-elevator ride to the top of...
2002 President Lawrence A. Cerrillo

Larry is an independent consultant on ground water and environmental projects for national and international clients. His company is Ingenuity Enterprises International, Inc. of Evergreen, Colorado. The international part of the title is apropos in that Larry has worked in such diverse places as Argentina, Mongolia, Pakistan, Philippines and Sri Lanka. His clients and employers have been equally diverse: Louis Berger & Associates, Geraghty & Miller, Hunter Environmental Services, Parsons Brinkerhoff Quade & Douglas, Land O’ Lakes, USGS, and World Water Corporation.

Larry was born and raised in Syracuse, New York. He joined the Army right out of high school, was discharged in Alaska, and stayed there to enroll in the University of Alaska in 1957. He became interested in geology as a result of a field trip to a glacier. He felt that if one could get paid for being in the great outdoors, then this was the job for him. After two years at UAK, and several jobs, he transferred to the University of Syracuse, where he earned his BS in Geology in 1964. He then attended grad school at the University of Buffalo, then transferred to Colorado State University, where he received an assistantship, and obtained his MS in 1967. Because the USGS funded his master’s work, Larry went to work for them in Denver and in Long Island, New York. After four years with the Survey, he joined Geraghty & Miller, then a few other consulting firms, finally forming his own company in 1996.

I recently had occasion to be in Bismarck, North Dakota and the opportunity to meet with four members of that section; Dennis James, Roger Schmid, Milton Lindvig, and Dr. David Bickel. Although small relative to other sections, these gentleman have some of the same concerns heard everywhere, namely registration/licensing, membership, member scatter, benefits, and costs. I would like to express my personal opinions on these topics. If you have differing opinions, you can direct your remarks directly to me. As the disclaimer often goes, “… the views expressed by the author are not an official position of this organization.”

Registration/licensing

This trend started in California many moons ago for the very good reason that there were and still are many areas where geologic conditions impact the health, safety, and welfare (HSW) of its citizens. One might argue that it is the citizens that are impacting the geology. At any rate, there are rational reasons to attempt to insure that “things” geologic be evaluated by those with the appropriate education and experience. This of course is true in most any discipline. The question is whether registering or licensing such individuals insures that the HSW of the people is protected. I could describe many things that it does do, but I do not feel that protecting the HSW of the people is one of them.

Many argue that it is to put geologists on par with engineers in the courtroom. I am not sure, even though I have argued that point, that this is needed. Most geologists I know have at least one, and in many cases two advanced degrees that would put them on par—in the sense that they are qualified to practice in their chosen field.

Registration/licensing is needed to establish credentials in the eyes of the public. I might agree that often perception is stronger than reality, and this may be a valid point, but I think it is up to us as professionals to bridge that gap. I believe this is one area where strengthening the AIPG credentials, such as with our continuing professional development program, that this can be accomplished. I am not advocating more stringent requirements for membership or certification, but merely strengthening our roles once recognized.

When wearing my mediator hat, I like to believe I can see both sides of this issue, but I wonder whether the proof is in the pudding? Think long and hard about why you want registration/licensing, and do not forget the costs to yourselves and others.

Membership

Every section, and national, is concerned about membership; it is the leading topic of discussion at every executive committee meeting. I suspect one of the reasons we do not attract a large number of members is our lack of excitement about AIPG and what we are doing. As members we are most effective at the local and state level, but we do play an important role at the national level via our DC fly-in and related lobbying efforts. Yes, I know that economics is a factor, but I believe it comes down to our personal enthusiasm or lack thereof that is the main factor. Have you ever seen a success-

ful salesman that was not excited about his product or service? Not all our benefits are tangible, eg technical publications, but all are important to you as a professional geologist.

Member Scatter

Almost without exception, the members in most sections are scattered state wide, and in some instances in more than one state. This indeed makes regular meeting attendance difficult. Some of the ways to bridge that gap is to have meetings at varying locations throughout the year. Carpooling to such meetings can be fun and educational. Another way to close the gap is to have a regular newsletter. This does not have to be lengthy, but a couple of pages that provides information on what is happening in various parts of the section. You also may include job openings, legislative items, an article on some project, or any number of things to keep communication open. Here in Colorado we are fortunate to have a newsletter and Doug Peters who keeps us informed of events on a regular basis by e-mail. I suspect there may be others of like mind in your section.

Benefits and Costs

Our executive director and the executive committee continually strive to find ways to provide more benefits at less cost to our members. Many benefits seem to go unnoticed, especially to those we hear from most. If you have ideas or suggestions from other organizations you may belong to that you think would benefit our members, let us know. We may or may not be able to implement a particular program or idea, but we sure will give it consideration. Come to the annual meeting or any executive committee meeting and let us know what we may do better. Of course there is always the tele-
phone, e-mail, or snail mail. We are here to serve, but if we do not know what is most important to you we cannot address it.

We may not be the largest geologic organization, but we are the only one that advocates for all geologists regardless of discipline, gender, or race. Your continued success and enjoyment as a professional geologist is important; many are those that work to sustain that status. Make it a great day!

2002 Annual Meeting, Reno

The second of two joint Annual Meetings with the Association of Engineering Geologists was another huge success. AIPG Co-Chairs Gary Luce and Kel Buchanan are to be commended, as is Vice-Chair and head of Finances Jon Price. The Field Trips were organized by Jake Hudson, the Short Courses by Shawn Gooch, and the Technical Sessions by Garry Norris and Gary Luce. A poignant excursion was to the Donner Museum in nearby Truckee, where we learned that the fateful party missed escaping the worst snow storm in the history of the Sierras by one day.

This year's Institute awardees were Larry Woodfork, Parker Medal; M.B. Kumar, Van Couvering Award; Tom Berg, Galey Service Award; and, for the first time, three Honorary Memberships Awards, to Michael Halbouty, John Rold and Roy Shlemon.

2003 President Richard M. Powers

In our 40th year, our president is also President/CEO of his own company, BCI Engineers & Scientists, Inc. in Lakeland Florida. Richard's firm deals with disposal of waste materials from mining and processing of phosphate, limestone, sand and copper. However, his early jobs were in petroleum and uranium. After graduation from Boston University in 1974, Richard traveled to Wyoming to become senior field supervisor-geologist for Century Geophysical Corporation in Casper. From 1975 to 1977 his work took him to North and South Dakota, Montana, Colorado and Utah. He then spent three years with Mullen Engineering, a uranium mining consulting firm. He then switched to supervision of open-pit uranium mining for the Tennessee Valley Authority (TVA), as senior project geologist in Wyoming. Richard then traveled to Florida in 1977 where he went to work for BCI, become a partner in 1984, and purchased controlling interest in 1997.

President's Message

During the last week of September 2002, AIPG and AEG held their second joint conference in Reno, Nevada. For those who could not attend you missed an excellent technical and business meeting. Our annual conference is the one time per year when we can spend a relaxed time with our peers and friends discussing institute business, technical issues and life. Next year, AIPG will celebrate its 40th anniversary. The 40th annual meeting will be held on the west slope of the Rocky Mountains in Glenwood Springs, Colorado and I encourage everyone to attend. It’s a great time to be in the
Rocky’s and the planned field trips will be fantastic. I hope to see you there!

Much progress was made last year under the leadership of Larry Cerrillo and during the 2002 Annual Meeting. This year I plan to work diligently to complete several tasks and implement others that are important to the long-term vitality of the Institute. I only ask for one thing—your help. The strength of the Institute resides within our membership and by working together we can make measurable and substantive progress in the next 12 months.

AIPG Business Plan

During the Executive Committee meeting in Reno, Executive Director Bill Siok presented a business plan for AIPG. The plan discusses several topics in detail and concluded the following:

- AIPG is financially sound.
- During recent years AIPG has experienced a continuous decline in total members and requires an immediate effort to reverse the trend.
- The key to AIPG’s long-term effectiveness is the twin goal of increasing membership and the generation of continuous sources of non-dues revenue.

The plan also identifies several key objectives:

- Identify sources and develop a sustainable, non-dues based, revenue initially of $80,000/yr to sustain another geologist staff member.
- Increase membership by 1000 by the end of 2003.
- Increase membership to 6000 by 2005.
- Increase membership to 10,000 by 2008.
- Add to member services:
  - Professional Liability Insurance
  - Employment service
  - On-Line CPD courses.

Our total membership has declined from 5,102 (4,589 CPG’s) in 1996 to 4,536 (4,006 CPG’s) for 2001 and the trend continued through 2002. Why is this happening? There are a couple of reasons; our membership is aging and many CPG’s are retiring. Currently, 20 percent of our CPG’s are between 66 and 96 years old. Secondly, many geologists do not see the value of being a CPG due to state registration. We must reverse the membership trend from decline to growth and the following describes the strategy that I need your help to implement.

Membership Growth

Individual

Forty years ago, AIPG’s original mission was to attest to the competency of professional geologists through certification and act as an advocate for the profession. In the wake of state registration, I feel we must focus our attention towards advocacy of our profession and member services, while encouraging AIPG certification. By most estimates there are approximately 120,000 practicing geologists in the United States and if the Institute is to be “the voice of geologists”, we must facilitate membership growth and entice all geologists to be AIPG members. So how do we do this?

I’m sure you have all heard the following:

- “I have to fill out that application and then wait six or more months to become a CPG?”
- “Why should I join? I’m already a registered geologist.”

Here are your answers:

- “No, you don’t have to become a CPG. We want you to join the Institute as a member and help us promote the profession and the ethical practice of geology. All you need to do is fill out a card, attest that you’re a degreed geologist and will abide by AIPG’s Bylaws and Code of Ethics. I will be your member sponsor and even mail the card for you. In the future if you want to add the CPG credential to your resume you can apply later.”
- “Are you concerned about your profession? If so you should join with the other several thousand geologists that believe strongly in the profession of geology and its ethical practice. AIPG’s introductory membership is just $40 for the first year. What do you have to lose? Please give it a try.”

With the membership vote in October to require only one member sponsor and the introduction of the single postcard size application, our biggest barrier to signing up new members disappeared. In addition, the $40 first year membership fee should make cost a non-issue.

Corporate

AIPG has implemented a Corporate Membership Program that is aimed at two central issues:

- Developing a better relationship with Corporation’s practicing geology and stressing competence, integrity and ethical practice
- Providing a career path and business reason for geologists to be AIPG members.

The program requires that a Corporate Member must have a CPG in a position of senior responsibility that is responsible for the Corporation’s compliance with AIPG Corporate Membership Requirements. Additionally, the Corporation’s practice of geology and geoscience must be conducted under the supervision and review of CPG’s at all locations. A Corporate
Member will pay dues based upon its dollar volume of geological business and will include the membership dues of the Corporations designated CPG and between two and six regular memberships in AIPG.

In 2003 we hope to enroll 50 or more Corporate Members into AIPG. The application process is simple and we believe the program will provide benefits to AIPG, corporations, and individual members. If your company is a candidate for membership please let either Bill Siok or me know and we'll follow up.

I am asking for your help this year to build our membership by 1000 or more.

Today—take a membership application card, sign it as a member sponsor, bring it to your co-worker, ask them to join and have them fill out the card while your there. If they are a little uncertain—tell them you will pay their first year membership fee of $40. You will feel great, as you have made a contribution to the Institute and your profession, and your friend will always remember you as someone who cared about their career.

Remember that if half of us bring in one new member each—our membership will increase by over 2000!

President-Elect for 2004 Presidency,
Robert G. Corbett

Bob was born in Chicago in 1935, but finished high school in the small Michigan town of Coloma, where his family moved to open a resort. He attended Harvard, then the University of Michigan, where he earned his Ph.D. in 1964; his dissertation was on the Ambrosia Lake Uranium District, New Mexico. After graduation and marriage, Bob took his first teaching position at West Virginia University. His second position was at the University of Akron where he spent twenty years. His third and final academic position was at Illinois State University, where he was Chair of the Department of Geography-Geology. He retired in 2001. During his teaching career, Bob found time to consult on environmental geology and hydrogeology. He lists 25 clients in government and Fortune 500 companies. In addition to AIPG, he is an active member in Sigma Xi and the National Association of Geology Teachers, and is an Associate Editor of the Journal of Geoscience Education.

2003 Annual Meeting, Glenwood Springs, Colorado

“Geology in the Next Decade” was the theme of AIPG’s 40th Annual Meeting in Glenwood Springs, Colorado on October 4-9, 2003. The meeting co-chairs were Past-Presidents Susan Landon and Tom Fails. Well over 100 professional registrants attended the convention. Laura Wray planned and organized a series of field trips to examine a variety of geologic locales of central Colorado. The geology was enhanced by some of the best late fall weather we have ever experienced and brilliant golden aspen trees. The technical and professional programs were very well attended and provided attendees with a broad spectrum of topics. The social activities were great fun. We partied with Washboard Annie at the spectacular High Country Adventure Lodge after traveling up the flank of Glenwood Canyon in Conestoga wagons by the light of the full moon. We celebrated with our awardees at the historic Hotel Colorado and dined on typical Rocky Mountain fare ...trout, buffalo, and elk. The Piceance Basin Field Symposium, cohosted with the Rocky Mountain Association of Geologists, sold out with 47 participating in the
field portion and another 30 attending the talks and posters on Sunday. The meeting was technically satisfying, socially fulfilling, and down right fun!

This year’s Institute awardees were Charles “Chip” Groat, Outstanding Achievement Award; Richard J. Proctor, Parker Medal; Kelvin J. Buchanan, Van Couvering Award; Vicki J. Cowart, Galey Service Award; and Honorary Membership to Charles Wm. Dimmick. Presidential Certificates of Merit to: John W. Hawley, Virginia T. McLemore, Babtunde A. Oyelow, John H. Talley, and Lawrence C. Weber.

Awardee photos from left to right: Robert Fakundiny, Charles Groat, Rick Powers; Ernest Lehmann, Kel Buchanan, Rick Powers; Jon Price, Vicki Cowart, Rick Powers, and (photo below) Russ Slayback, Charles Dimmick, and Rick Powers.

AIPG 2004 Executive Committee. Back row: Terry Rippstein, John Howard; Middle Row: Ron Wallace, Kate Kleiter, Bob Corbett, Rick Powers, Robert Font; Front Row: David Abbott and Ray Talkington.

<table>
<thead>
<tr>
<th>Year</th>
<th>Name</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>1963</td>
<td>Martin Van Couvering+</td>
<td>California</td>
</tr>
<tr>
<td>1964</td>
<td>Martin Van Couvering+</td>
<td>California</td>
</tr>
<tr>
<td>1965</td>
<td>Martin Van Couvering+</td>
<td>California</td>
</tr>
<tr>
<td>1966</td>
<td>Ben H. Parker+</td>
<td>Colorado</td>
</tr>
<tr>
<td>1967</td>
<td>Allen C. Tester+</td>
<td>Iowa</td>
</tr>
<tr>
<td>1968</td>
<td>John T. Galey+</td>
<td>Pennsylvania</td>
</tr>
<tr>
<td>1969</td>
<td>R. Dana Russell+</td>
<td>Illinois</td>
</tr>
<tr>
<td>1970</td>
<td>Henry H. Neel+</td>
<td>California</td>
</tr>
<tr>
<td>1971</td>
<td>Robert R. Berg</td>
<td>Texas</td>
</tr>
<tr>
<td>1972</td>
<td>Neilsen Rudd</td>
<td>California</td>
</tr>
<tr>
<td>1973</td>
<td>Adolf U. Honkala</td>
<td>Virginia</td>
</tr>
<tr>
<td>1974</td>
<td>Frank B. Conselman+</td>
<td>Texas</td>
</tr>
<tr>
<td>1975</td>
<td>Arthur O. Spaulding</td>
<td>California</td>
</tr>
<tr>
<td>1976</td>
<td>John D. Haun</td>
<td>Colorado</td>
</tr>
<tr>
<td>1977</td>
<td>John A. Taylor</td>
<td>Oklahoma</td>
</tr>
<tr>
<td>1978</td>
<td>Grover E. Murray+</td>
<td>Texas</td>
</tr>
<tr>
<td>1979</td>
<td>Edward E. Rue</td>
<td>Illinois</td>
</tr>
<tr>
<td>1980</td>
<td>James R. Dunn</td>
<td>New York</td>
</tr>
<tr>
<td>1981</td>
<td>John W. Rold</td>
<td>Colorado</td>
</tr>
<tr>
<td>1982</td>
<td>M. O. Turner</td>
<td>Texas</td>
</tr>
<tr>
<td>1983</td>
<td>Larry D. Woodfork</td>
<td>West Virginia</td>
</tr>
<tr>
<td>1984</td>
<td>Dean Grafton</td>
<td>Texas</td>
</tr>
<tr>
<td>1985</td>
<td>Ernest K. Lehmann</td>
<td>Minnesota</td>
</tr>
<tr>
<td>1986</td>
<td>Travis H. Hughes</td>
<td>Alabama</td>
</tr>
<tr>
<td>1987</td>
<td>Charles J. Mankin</td>
<td>Oklahoma</td>
</tr>
<tr>
<td>1988</td>
<td>Sam R. Evans</td>
<td>Texas</td>
</tr>
<tr>
<td>1989</td>
<td>Richard J. Proctor</td>
<td>California</td>
</tr>
<tr>
<td>1990</td>
<td>Susan M. Landon</td>
<td>Illinois</td>
</tr>
<tr>
<td>1991</td>
<td>Hayden H. Murray</td>
<td>Ohio</td>
</tr>
<tr>
<td>1992</td>
<td>Daniel N. Miller, Jr.+</td>
<td>Wyoming</td>
</tr>
<tr>
<td>1993</td>
<td>William L. Fisher</td>
<td>Texas</td>
</tr>
<tr>
<td>1994</td>
<td>Russell G. Slayback</td>
<td>Connecticut</td>
</tr>
<tr>
<td>1995</td>
<td>Richard C. Fountain</td>
<td>Florida</td>
</tr>
<tr>
<td>1996</td>
<td>Robert K. Merrill</td>
<td>Texas</td>
</tr>
<tr>
<td>1997</td>
<td>Jonathan G. Price</td>
<td>Nevada</td>
</tr>
<tr>
<td>1998</td>
<td>Stephen M. Testa</td>
<td>California</td>
</tr>
<tr>
<td>1999</td>
<td>Thomas G. Fails</td>
<td>Colorado</td>
</tr>
<tr>
<td>2000</td>
<td>Dennis Pennington</td>
<td>Pennsylvania</td>
</tr>
<tr>
<td>2002</td>
<td>Lawrence A. Cerrillo</td>
<td>Colorado</td>
</tr>
<tr>
<td>2003</td>
<td>Richard M. Powers</td>
<td>Florida</td>
</tr>
<tr>
<td>2004</td>
<td>Robert G. Corbett</td>
<td>Illinois</td>
</tr>
<tr>
<td>2005</td>
<td>Robert G. Font</td>
<td>Texas</td>
</tr>
</tbody>
</table>

+ = Deceased

Of these 41 presidents, at one time in their career, or full time, their employment included:

- 21 in Petroleum
- 15 as Professors
- 10 in Government (one - Federal, seven - State Geologists, two - City)
- 10 in Engineering/Environmental
- 8 in Mining

Interestingly, four presidents were unsuccessful in their first election bid for President-Elect.
### APPENDIX 2—AIPG EXECUTIVE COMMITTEES

<table>
<thead>
<tr>
<th>Year</th>
<th>President</th>
<th>Vice President</th>
<th>Secretary-Treasurer</th>
<th>Editor</th>
<th>Advisory Board Chrmn.</th>
<th>Advisory Board Reps.</th>
</tr>
</thead>
</table>
### APPENDIX 2—AIPG EXECUTIVE COMMITTEES

<table>
<thead>
<tr>
<th>Year</th>
<th>President</th>
<th>Vice President</th>
<th>Secretary-Treasurer</th>
<th>Editor</th>
<th>Advisory Board Chrmn.</th>
<th>Advisory Board Reps.</th>
<th>AGI Rep.</th>
<th>Nat'l Academy of Sci. Rep</th>
</tr>
</thead>
<tbody>
<tr>
<td>1975</td>
<td>President</td>
<td>Arthur O. Spaulding</td>
<td>Ingrassia</td>
<td>Ross L. Shipman</td>
<td>John D. Haun</td>
<td>Robert L. Bates</td>
<td>Donald E. Hallinger</td>
<td>Larry D. Thompson</td>
</tr>
<tr>
<td>1982</td>
<td>President</td>
<td>M. O. Turner</td>
<td>Ingrassia</td>
<td>Ross L. Shipman</td>
<td>William A. Adent</td>
<td>Joseph F. Fritz</td>
<td>John W. Eggers</td>
<td>Angelo Tagliacozzo</td>
</tr>
</tbody>
</table>
### APPENDIX 2—AIPG EXECUTIVE COMMITTEES

#### 1984
- **President:** Dean Grafton
- **President-Elect:** Ernest K. Lehmann
- **Vice President:** Charles J. Mankin
- **Secretary-Treasurer:** Richard J. Anderson
- **Editor:** Kenneth N. Weaver
- **Advisory Board Reps.:** William A. Adent, John B. Gustavson, Daniel D. Miller, Bobby J. Timmons, Edd R. Turner

**AGI Rep.:**

#### 1985
- **President:** Ernest K. Lehmann
- **President-Elect:** Travis H. Hughes
- **Vice President:** Susan M. Landon
- **Secretary-Treasurer:** Richard J. Anderson
- **Editor:** Gary B. Glass
- **Advisory Board Reps.:** John B. Gustavson, Robert A. Northcutt, Ross L. Shipman, Bobby J. Timmons

#### 1986
- **President:** Travis H. Hughes
- **President-Elect:** Charles J. Mankin
- **Vice President:** Sam R. Evans
- **Secretary:** Stanley S. Johnson
- **Treasurer:** Charles E. Wier
- **Editor:** Gary B. Glass
- **Advisory Board Reps.:** Phyllis M. Garman, Robert A. Northcutt, Norman K. Olson, Terrance E. Swor

#### 1987
- **President:** Charles J. Mankin
- **President-Elect:** Sam R. Evans
- **Vice President:** Richard J. Proctor
- **Secretary:** Stanley S. Johnson
- **Treasurer:** John T. Galey, Jr.
- **Editor:** Edward B. Nuhfer
- **Advisory Board Reps.:** Donald L. Hook, James I. Irwin, Elisabeth G. Newton, Bill A. Street

#### 1988
- **President:** Sam R. Evans
- **President-Elect:** Richard J. Proctor
- **Vice President:** Gary B. Glass
- **Secretary:** Serge Gonzales
- **Treasurer:** John T. Galey, Jr.
- **Editor:** Edward B. Nuhfer
- **Advisory Board Reps.:** Lawrence A. Cerrillo, Gerald V. Mendenhall, Fred N. Murray, Wallace W. Stewart

#### 1989
- **President:** Charles J. Mankin
- **President-Elect:** Sam R. Evans
- **Vice President:** Richard J. Proctor
- **Secretary:** Serge Gonzales
- **Treasurer:** John T. Galey, Jr.
- **Editor:** Edward B. Nuhfer
- **Advisory Board Reps.:** Lawrence M. Austin, Robert R. Jordan, Richard C. Fountain, George H. Gore, F. B. (Ted) Mullin

#### 1990
- **President:** Susan M. Landon
- **President-Elect:** Haydn H. Murray
- **Vice President:** Robert A. Northcutt
- **Secretary:** Richard J. Proctor
- **Treasurer:** Dale O. Reese
- **Editor:** Thomas Z. Jones

#### 1991
- **President:** Haydn H. Murray
- **President-Elect:** Daniel N. Miller, Jr.
- **Vice President:** R. Stephen Friberg
- **Secretary:** Larry R. Rhodes
- **Treasurer:** Dale O. Reese
- **Editor:** Thomas Z. Jones
- **Advisory Board Reps.:** F. W. “Rick” Obernolte, Jr., Mark L. Reinhardt, Frank S. Turek, Ronald P. Zurawski

#### 1992
- **President:** Daniel N. Miller, Jr.
- **President-Elect:** William L. Fisher
- **Vice President:** Richard C. Fountain
- **Secretary:** Robert K. Merrill
- **Treasurer:** Dale O. Reese
- **Editor:** Thomas Z. Jones
- **Advisory Board Reps.:** F. W. “Rick” Obernolte, Jr., Mark L. Reinhardt, Frank S. Turek, Ronald P. Zurawski

#### 1993
- **President:** William L. Fisher
- **President-Elect:** Russell G. Slayback
- **Vice President:** F. W. “Rick” Obernolte, Jr.
- **Secretary:** Robert K. Merrill
- **Treasurer:** Myrna M. Killey
- **Editor:** Charles Wm. Dimmick
- **Advisory Board Reps.:** Kathleen E. J. Benedict, Kathryn Epp, Stephen M. Testa, Lisa Curci Worthington
## APPENDIX 2—AIPG EXECUTIVE COMMITTEES

<table>
<thead>
<tr>
<th>Year</th>
<th>President</th>
<th>President-Elect</th>
<th>Vice President</th>
<th>Secretary</th>
<th>Treasurer</th>
<th>Editor</th>
<th>Advisory Board Reps.</th>
<th>Editor Elect</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>Richard M. Powers</td>
<td>Robert G. Corbett</td>
<td>Bruce K. Darling</td>
<td>F. Lynn Kantner</td>
<td>Mark B. Sweatman</td>
<td>Virginia T. McLemore</td>
<td>Lawrence A. Cerrillo, Robert A. Levich, Barbara H. Murphy, Dennis Pennington, Lawrence C. Weber</td>
<td></td>
</tr>
</tbody>
</table>
Ben H. Parker Memorial Medal

The Ben H. Parker Memorial Medal is the Institute's most distinguished award. It was established by the Executive Committee, in 1969, in posthumous honor of a truly great leader and one of the most articulate and effective advocates for the improvement of the profession of geology. The medal is awarded to individuals who have long records of distinguished and outstanding service to the profession. It is a tribute to Ben H. Parker, a person who gave much of his life to improve the quality of geology, geologists, and the services they provide. The following outstanding geologists have been awarded the Ben H. Parker Memorial Medal.

Martin Van Couvering 1969
Ian Campbell 1970
Allen C. Tester 1972
James Boyd 1973
Jerry B. Newby 1973
Linn Hoover 1974
R. Dana Russell 1976
Frank B. Conselman 1977
John T. Galey 1978
Howard E. Rothrock 1980
Robert R. Berg 1981
Adolf U. Honkala 1981
Henry H. Neel 1982
John D. Haun 1983
Robert L. Bates 1984
M. O. Turner 1985
Robert J. Weimer 1986
Ernest K. Lehmann 1987
Michel T. Halbouty 1988
Peter T. Flawn 1989
Grover E. Murray 1990
Wayne A. Pettryjohn 1991
Robert H. Dott, Jr. 1992
Daniel N. Miller, Jr. 1993
Frank W. Harrison, Jr. 1994
Donald L. Blackstone 1995
William L. Fisher 1996
Marcus E. Milling, Sr. 1997
Peter R. Rose 1998
Charles J. Mankin 1999
Russell G. Slayback 2000
Susan M. Landon 2001
Larry D. Woodfork 2002
Richard J. Proctor 2003

John T. Galey, Sr., Memorial Public Service Award

The Public Service Award was established by the Executive Committee, in 1982, in recognition of one of its primary purposes; service to the public. In 1992, it was renamed the John T. Galey, Sr., Memorial Public Service Award, in posthumous honor of our fourth President, whose long professional career was a continuum of service to both the geological and the general public. This recognition is important because so many members have distinguished themselves and the Institute by giving expert testimony to governmental units, by serving on governmental commissions and committees, and by providing geological expertise where it was needed by the public at large.

Arthur O. Spaulding 1983
Allen F. Agnew 1984
William L. Fisher 1985
Frank E. Kottlowski 1986
Cliff J. Nolte 1987
Russell G. Wayland 1988
Elisabeth G. Newton 1989
Linda E. Okland 1990
Meredith E. "Buzz" Ostrom 1991
Robert R. Jordan 1992
Robert H. Fakundiny 1993
Morris W. "Brud" Leighton 1994
Edward B. Nuhfer 1995
John W. Rold 1996
James E. Slosson 1997
Kathleen M. F. Benedetto 1998
Jonathan G. Price 1999
John T. Galey, Sr. Memorial Public Service Award - continued

James H. Williams 2000
John J. Dragonetti 2001
Thomas M. Berg 2002
Vicki J. Cowart 2003

Presidential Certificate of Merit

Each year, the President of the American Institute of Professional Geologists may award one or more certificates of merit to individuals who, through dedicated and meritorious service, have made an outstanding contribution to the Institute. The award, the Presidential Certificate of Merit, is announced and presented to the recipient at the Annual Meeting.

George H. Davis 1982
Russell R. Dutcher 1982
A. Gordon Everett 1982
Joseph F. Fritz 1982
John S. Fryberger 1982
John B. Gustavson 1982
Albert M. LaSala 1982
Gary E. Melickian 1982
Edward B. Nuhfer 1982
Arthur O. Spaulding 1982
Benton M. Wilmoth 1982
Richard M. Winar 1982
Allen F. Agnew 1983
Donald F. Cardinal 1983
Randell T. Chew III 1983
Gene R. George 1983
Travis H. Hughes 1983
Gary E. Melickian 1983
Elisabeth G. Newton 1983
William H. Park 1983
Ross L. Shipman 1983
Derek B. Tatlock 1983
Bobby J. Timmons 1983
Russell G. Wayland 1983
Kenneth N. Weaver 1984
Alan M. Jacobs 1984
Stanley S. Johnson 1984
Bruce H. Mason 1984
Richard P. Ortiz 1984
D. Theodore Clark 1985
Stanley C. Grant 1985
William G. Murray 1985
Robert Pendergast 1985
Serge Gonzales 1986
Clayton H. Johnson 1986
Allan J. Krause 1986
Bill A. Street 1986
James K. Vincent 1986
Phyllis M. Garman 1986
William J. Gilliland 1987
Raymond E. Irwin 1987
Stanley S. Johnson 1987
Elisabeth G. Newton 1987
John C. Philley 1987
Stephen M. Testa 1987
John H. Dayvault 1988
R. Steven Friberg 1988
John T. Galey, Jr. 1988
Leroy Gatlin 1988
Gary B. Glass 1988

Award of Honorary Membership

For the first time in its history, AIPG in 1984 conferred Honorary Membership on one of its most distinguished and illustrious members. This special honor, provided for in the Institute's Constitution and Bylaws, had long been available but had never before been granted. The most important criterion for this award is an exemplary record of distinguished service to the profession and to the Institute.

Grover E. Murray 1984
L. L. Sloss 1985
Ross L. Shipman 1986
Edward C. Dapples 1986
Doris M. Curtis 1987
Wallace B. Howe 1988
Robert R. Berg 1988
Edward E. Rue 1989
Mason L. Hill 1990
Konrad B. Krauskopf 1991
Sam R. Evans 1992
Richard J. Proctor 1992
Elisabeth G. Newton 1993
John Shanklin 1993
Richard A. Fox 1994
Ralph J. Bernhagen 1995
Robert R. Jordan 1996
Charles J. Mankin 1996
Adolf U. Honkala 1997
Ernest K. Lehmann 1997
Robert A. Northcutt 1998
William C. Gussow 1998
John D. Haun 1998
William A. Newton 1999
Larry D. Woodfork 1999
Travis H. Hughes 2000
William V. Knight 2001
Michel T. Halbouty 2002
John W. Rold 2002
Roy J. Shlemon 2002
Charles Wm. Dimmick 2003
## Past Recipients of the Outstanding Achievement Award

The Outstanding Achievement Award was established by the 1989 Executive Committee to honor a non-member of AIPG who is widely recognized as a major contributor to the profession of geology. The award is not necessarily given annually, but only when the Awards Committee recommends an outstanding candidate to the Executive Committee for their consideration.

- Stephen Jay Gould 1989
- Ron Redfern 1995
- John McPhee 1997
- Julie A. Jackson 1999
- Charles G. “Chip” Groat 2003

<table>
<thead>
<tr>
<th>Name</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stephen Jay Gould</td>
<td>1989</td>
</tr>
<tr>
<td>Ron Redfern</td>
<td>1995</td>
</tr>
<tr>
<td>John McPhee</td>
<td>1997</td>
</tr>
<tr>
<td>Julie A. Jackson</td>
<td>1999</td>
</tr>
<tr>
<td>Charles G. “Chip” Groat</td>
<td>2003</td>
</tr>
</tbody>
</table>

### Presidential Certificates of Merit - continued

<table>
<thead>
<tr>
<th>Name</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stephanie V. Hrabar</td>
<td>1988</td>
</tr>
<tr>
<td>Edward B. Nuhfer</td>
<td>1988</td>
</tr>
<tr>
<td>James E. O’Brien</td>
<td>1988</td>
</tr>
<tr>
<td>Larry R. O’Brien</td>
<td>1988</td>
</tr>
<tr>
<td>John A. Taylor</td>
<td>1988</td>
</tr>
<tr>
<td>Richard H. Young</td>
<td>1988</td>
</tr>
<tr>
<td>Serge Gonzaless</td>
<td>1989</td>
</tr>
<tr>
<td>Daniel W. Hall</td>
<td>1989</td>
</tr>
<tr>
<td>Fred B. “Ted” Mullin</td>
<td>1989</td>
</tr>
<tr>
<td>Robert A. Northcutt</td>
<td>1989</td>
</tr>
<tr>
<td>Robert R. Jordan</td>
<td>1990</td>
</tr>
<tr>
<td>Norman K. Olson</td>
<td>1990</td>
</tr>
<tr>
<td>William G. Weist, Jr.</td>
<td>1990</td>
</tr>
<tr>
<td>Frederick M. Beck</td>
<td>1991</td>
</tr>
<tr>
<td>R. Steven Friberg</td>
<td>1991</td>
</tr>
<tr>
<td>Ernest K. Lehmann</td>
<td>1991</td>
</tr>
<tr>
<td>Robert A. Northcutt</td>
<td>1991</td>
</tr>
<tr>
<td>Gail Waggoner</td>
<td>1991</td>
</tr>
<tr>
<td>Logan T. MacMillan</td>
<td>1992</td>
</tr>
<tr>
<td>Russell G. Slayback</td>
<td>1992</td>
</tr>
<tr>
<td>Lawrence C. Weber</td>
<td>1992</td>
</tr>
<tr>
<td>Don E. Williams</td>
<td>1992</td>
</tr>
<tr>
<td>Kathleen M. F. Benedetto</td>
<td>1993</td>
</tr>
<tr>
<td>Thomas Z. Jones</td>
<td>1993</td>
</tr>
<tr>
<td>Madhurendu B. Kumar</td>
<td>1993</td>
</tr>
<tr>
<td>Edward B. Nuhfer</td>
<td>1993</td>
</tr>
<tr>
<td>Peter R. Rose</td>
<td>1993</td>
</tr>
<tr>
<td>David C. Scott</td>
<td>1993</td>
</tr>
<tr>
<td>Larry C. Simpson</td>
<td>1993</td>
</tr>
<tr>
<td>Robert H. Fakundiny</td>
<td>1994</td>
</tr>
<tr>
<td>Mark A. Osten</td>
<td>1994</td>
</tr>
<tr>
<td>Charles Wm. Dimmick</td>
<td>1994</td>
</tr>
<tr>
<td>John L. Bognar</td>
<td>1994</td>
</tr>
<tr>
<td>Steven M. Testa</td>
<td>1994</td>
</tr>
<tr>
<td>Fred B. “Ted” Mullin</td>
<td>1994</td>
</tr>
<tr>
<td>Wendy J. Davidson</td>
<td>1994</td>
</tr>
<tr>
<td>Robert K. Merrill</td>
<td>1994</td>
</tr>
<tr>
<td>William V. Knight</td>
<td>1994</td>
</tr>
<tr>
<td>Robert L. DeGroot</td>
<td>1995</td>
</tr>
<tr>
<td>William G. Dixon, Jr.</td>
<td>1995</td>
</tr>
<tr>
<td>Thomas G. Fails</td>
<td>1995</td>
</tr>
<tr>
<td>Thornton L. Neathery</td>
<td>1995</td>
</tr>
<tr>
<td>Dennis T. Pennington</td>
<td>1995</td>
</tr>
<tr>
<td>Thomas M. Berg</td>
<td>1996</td>
</tr>
<tr>
<td>Wilgus B. Creath</td>
<td>1996</td>
</tr>
<tr>
<td>Thomas G. Fails</td>
<td>1996</td>
</tr>
<tr>
<td>Margaret Kloska</td>
<td>1996</td>
</tr>
<tr>
<td>David G. Rensink</td>
<td>1996</td>
</tr>
<tr>
<td>James H. Williams</td>
<td>1996</td>
</tr>
<tr>
<td>David M. Abbott, Jr.</td>
<td>1997</td>
</tr>
<tr>
<td>Robert N. Braunitz</td>
<td>1997</td>
</tr>
<tr>
<td>Curtis J. Coe</td>
<td>1997</td>
</tr>
<tr>
<td>Barbara H. Murphy</td>
<td>1997</td>
</tr>
<tr>
<td>James D. Shotwell</td>
<td>1997</td>
</tr>
<tr>
<td>Gary E. Van Gilder</td>
<td>1997</td>
</tr>
<tr>
<td>John J. Dragonetti</td>
<td>1998</td>
</tr>
<tr>
<td>Robert G. Font</td>
<td>1998</td>
</tr>
<tr>
<td>Dawn H. Garcia</td>
<td>1998</td>
</tr>
<tr>
<td>Gunnar Hultquist</td>
<td>1998</td>
</tr>
<tr>
<td>Madhurendu B. Kumar</td>
<td>1998</td>
</tr>
<tr>
<td>William J. Siok</td>
<td>1998</td>
</tr>
<tr>
<td>David M. Abbott, Jr.</td>
<td>1999</td>
</tr>
<tr>
<td>Eugene Aleshin</td>
<td>1999</td>
</tr>
<tr>
<td>Ronald E. Alexander</td>
<td>1999</td>
</tr>
<tr>
<td>Kelvin J. Buchanan</td>
<td>1999</td>
</tr>
<tr>
<td>L. Graham Closs</td>
<td>1999</td>
</tr>
<tr>
<td>Robert M. Colpitts, Jr.</td>
<td>1999</td>
</tr>
<tr>
<td>Dean Feller</td>
<td>1999</td>
</tr>
<tr>
<td>Travis H. Hughes</td>
<td>1999</td>
</tr>
<tr>
<td>William V. Knight</td>
<td>1999</td>
</tr>
<tr>
<td>Manuel Regueiro</td>
<td>1999</td>
</tr>
<tr>
<td>James D. Shotwell</td>
<td>1999</td>
</tr>
<tr>
<td>Myrna M. Killey</td>
<td>2000</td>
</tr>
<tr>
<td>Thomas M. Berg</td>
<td>2001</td>
</tr>
<tr>
<td>Thomas G. Fails</td>
<td>2001</td>
</tr>
<tr>
<td>Wendy J. Davidson</td>
<td>2001</td>
</tr>
<tr>
<td>James A. Jacobs</td>
<td>2001</td>
</tr>
<tr>
<td>Catherine A. O’Keefe</td>
<td>2001</td>
</tr>
<tr>
<td>Ronald B. St. John</td>
<td>2001</td>
</tr>
<tr>
<td>John H. Talley</td>
<td>2001</td>
</tr>
<tr>
<td>David M. Abbott, Jr.</td>
<td>2002</td>
</tr>
<tr>
<td>J. David Applegate</td>
<td>2002</td>
</tr>
<tr>
<td>Thomas G. Fails</td>
<td>2002</td>
</tr>
<tr>
<td>John T. Howard</td>
<td>2002</td>
</tr>
<tr>
<td>Robert A. Levich</td>
<td>2002</td>
</tr>
<tr>
<td>John H. Talley</td>
<td>2002</td>
</tr>
<tr>
<td>John W. Hawley</td>
<td>2003</td>
</tr>
<tr>
<td>Virginia T. McLemore</td>
<td>2003</td>
</tr>
<tr>
<td>Babatunde A. Oyelowo</td>
<td>2003</td>
</tr>
<tr>
<td>John H. Talley</td>
<td>2003</td>
</tr>
<tr>
<td>Lawrence C. Weber</td>
<td>2003</td>
</tr>
</tbody>
</table>
## ANNUAL MEETINGS

<table>
<thead>
<tr>
<th>Order</th>
<th>Location</th>
<th>Chairman</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Denver, Colorado</td>
<td>William A. Newton</td>
<td>November 13-14, 1964</td>
</tr>
<tr>
<td>2</td>
<td>Golden, Colorado</td>
<td>Jay G. Marks</td>
<td>October 8-9, 1965</td>
</tr>
<tr>
<td>3</td>
<td>Denver, Colorado</td>
<td>Earl G. Griffith</td>
<td>October 21-22, 1966</td>
</tr>
<tr>
<td>4</td>
<td>Houston, Texas</td>
<td>Monty G. Martin</td>
<td>October 6-7, 1967</td>
</tr>
<tr>
<td>5</td>
<td>San Francisco, California</td>
<td>Daniel J. Pickrell</td>
<td>October 11-12, 1968</td>
</tr>
<tr>
<td>6</td>
<td>St. Louis, Missouri</td>
<td>William C. Hayes, Jr.</td>
<td>October 10-11, 1969</td>
</tr>
<tr>
<td>7</td>
<td>Oklahoma City, Oklahoma</td>
<td>Jerry B. Newby</td>
<td>October 16-17, 1970</td>
</tr>
<tr>
<td>8</td>
<td>Denver, Colorado</td>
<td>Robert M. Lindvall</td>
<td>October 8-9, 1971</td>
</tr>
<tr>
<td>9</td>
<td>Pittsburgh, Pennsylvania</td>
<td>Bruce A. Prather</td>
<td>October 13-14, 1972</td>
</tr>
<tr>
<td>10</td>
<td>New Orleans, Louisiana</td>
<td>Louis E. Riez</td>
<td>October 12-13, 1973</td>
</tr>
<tr>
<td>11</td>
<td>Denver, Colorado</td>
<td>D. Keith Murray</td>
<td>November 1-2, 1974</td>
</tr>
<tr>
<td>12</td>
<td>Tucson, Arizona</td>
<td>Walter E. Heinrichs, Jr.</td>
<td>October 30-November 1, 1975</td>
</tr>
<tr>
<td>13</td>
<td>Denver, Colorado</td>
<td>John A. Taylor</td>
<td>November 6-7, 1976</td>
</tr>
<tr>
<td>14</td>
<td>San Antonio, Texas</td>
<td>A. Wayne Wood</td>
<td>December 1-3, 1977</td>
</tr>
<tr>
<td>15</td>
<td>Albuquerque, New Mexico</td>
<td>John W. Shomaker</td>
<td>December 1-2, 1978</td>
</tr>
<tr>
<td>16</td>
<td>Lafayette, Louisiana</td>
<td>A. J. Gaudin</td>
<td>September 20-22, 1979</td>
</tr>
<tr>
<td>17</td>
<td>Mobile, Alabama</td>
<td>Jack Bryan</td>
<td>September 24-27, 1980</td>
</tr>
<tr>
<td>18</td>
<td>Williamsburg, Virginia</td>
<td>John Kent Kane II</td>
<td>October 21-25, 1981</td>
</tr>
<tr>
<td>19</td>
<td>Pasadena, California</td>
<td>Bruce Barron</td>
<td>November 10-13, 1982</td>
</tr>
<tr>
<td>20</td>
<td>Jackson Hole, Wyoming</td>
<td>Gene George</td>
<td>September 7-10, 1983</td>
</tr>
<tr>
<td>21</td>
<td>Orlando, Florida</td>
<td>Bobby J. Timmons</td>
<td>October 17-19, 1984</td>
</tr>
<tr>
<td>22</td>
<td>St. Paul, Minnesota</td>
<td>Robert E. Pendergast</td>
<td>September 18-20, 1985</td>
</tr>
<tr>
<td>23</td>
<td>Keystone, Colorado</td>
<td>Larry Anna</td>
<td>September 17-20, 1986</td>
</tr>
<tr>
<td>24</td>
<td>Lexington, Kentucky</td>
<td>Larry Rhodes</td>
<td>October 13-17, 1987</td>
</tr>
<tr>
<td>26</td>
<td>Arlington, Virginia</td>
<td>Stanley S. Johnson</td>
<td>October 4-7, 1989</td>
</tr>
<tr>
<td>27</td>
<td>Long Beach, California</td>
<td>Stephen M. Testa</td>
<td>October 9-13, 1990</td>
</tr>
<tr>
<td>29</td>
<td>South Lake Tahoe, Nevada</td>
<td>R. Steven Friberg</td>
<td>September 27-30, 1992</td>
</tr>
<tr>
<td>30</td>
<td>Springfield, Massachusetts</td>
<td>Russell G. Slayback</td>
<td>October 12-16, 1993</td>
</tr>
<tr>
<td>32</td>
<td>Denver, Colorado</td>
<td>Ron W. Pritchett</td>
<td>October 1-5, 1995</td>
</tr>
<tr>
<td>33</td>
<td>Columbus, Ohio</td>
<td>Curtis J. Coe</td>
<td>October 9-13, 1996</td>
</tr>
<tr>
<td>34</td>
<td>Houston, Texas</td>
<td>John L. Devault</td>
<td>October 8-11, 1997</td>
</tr>
<tr>
<td>35</td>
<td>Baton Rouge, Louisiana</td>
<td>M. B. Kumar</td>
<td>October 3-8, 1998</td>
</tr>
<tr>
<td>36</td>
<td>Anchorage, Alaska</td>
<td>Richard H. Ragle</td>
<td>October 4-8, 1999</td>
</tr>
<tr>
<td>37</td>
<td>Milwaukee, Wisconsin</td>
<td>Jack W. Travis</td>
<td>October 10-14, 2000</td>
</tr>
<tr>
<td>38</td>
<td>St. Louis, Missouri</td>
<td>John T. Howard</td>
<td>October 3-7, 2001</td>
</tr>
<tr>
<td>39</td>
<td>Reno, Nevada</td>
<td>Kevin J. Buchanan</td>
<td>September 25-29, 2002</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gary Luce</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>Glenwood Springs, Colorado</td>
<td>Susan M. Landon</td>
<td>October 4-8, 2003</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Thomas G. Fails</td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX 5—AIPG PUBLICATIONS

AIPG PUBLICATIONS

Issues and Answers Series

Monograph Series

1986 Guide to a Successful Job Search

1986 Use of Geology in Reclamation of Surface Mined Land (Out-of-print).
1988 Metals... Minerals... Mining edited by Patricia Petty. (Out-of-print).
1990 Withdrawal of Alaska Lands from Multiple Uses (Out-of-print).

Professional Guides
1974 The Professional Geologist as Expert Witness (see Monograph No. 4; revised 1986 and 1994).
1974 Organization and Content of a Typical Geological Report (see Monograph No. 5; revised 1986 and 1993).
1974 Appraisal of High-Bulk, Low Unit Value Mineral Deposits (Out-of-print).
1975 Use of Geology in Reclamation of Surface Mined Land (Out-of-print).
1975 Value of Metallic Ore Deposits (Out-of-print).
1977 Earth Resources as Foundation for Environmental Planning (Free, out-of-print).
1977 College Curricula for Professional Practice of Earth Sciences (Out-of-print, prepared by panel of 25 CPGs, see also Monograph No. 3, and 1991 publication).
1979 Understanding Mineral Resources (Out-of-print).
1980 Withdrawal of Alaska Lands from Multiple Uses (Out-of-print).
1981 Metals... Minerals... Mining edited by Patricia Petty. (Out-of-print).
### APPENDIX 5—AIPG PUBLICATIONS

<table>
<thead>
<tr>
<th>Year</th>
<th>Title</th>
<th>Authors</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(With 21 contributors and reviewers; Spanish language edition). Slide set of 50 world geologic hazards sold separately)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### AIPG Reprint Series

1998


In preparation:

No. 2. **Environmental Geology** compiled and edited by Stephen M. Testa.

No. 3. **Engineering Geology** compiled and edited by Stephen M. Testa.

No. 4. **Petroleum Geology** compiled and edited by Stephen M. Testa.

No. 5. **Mining Geology** compiled and edited by Stephen M. Testa.

No. 6. **Hydrogeology** compiled and edited by Stephen M. Testa.

#### Continuing Publications

- **Honors and Awards** (Annual booklet since 1983).
- **AIPG, What it is, What it does** (Updated since 1984).
- **The Professional Geologist (TPG)** (Monthly magazine)
- **Membership Directory** (Annually).
AIPG Activities and Services to Members

The seal of AIPG carries the terms “competence”, “integrity”, and “ethics”. It is these words that guide AIPG’s major activities in certification, representation, information, and education. These, and other activities of AIPG, are supported through the dues and voluntary efforts of Members.

Certification

AIPG certifies the qualifications of professional geologists to the public. Through a process of peer review, the qualifications of applicant geologists are investigated, and their education, technical competence, performance, and ethical standards are evaluated. Applicants found to meet AIPG’s standards are granted the designation, “CPG” (Certified Professional Geologist), and become Members. For the protection of the public and the profession, Members found guilty of violating the AIPG’s Code of Ethics may be decertified and expelled from the Institute. The Institute assures the general public that its Certified Members have (1) a college degree with at least 36 hours of geology credit; (2) a minimum of five years professional work experience; and (3) a sustained record of ethical conduct.

The Institute makes known the significance of certification and its CPG designation. AIPG makes available to its Members, at cost, insignia items such as membership certificates, wall plaques, stamps, seals, and other items bearing the Institute’s logo.

Education

AIPG, at both the National and Section levels, provides a variety of continuing education programs and materials designed to enhance the scientific, technical, and professional knowledge of its Members.

Short Courses/Seminars/ Workshops

Short courses, seminars and workshops on timely and appropriate scientific, technical, and professional topics, accredited by AIPG are offered throughout the country. These provide unique educational opportunities for professional geologists to hear from knowledgeable experts on useful and interesting subjects. Participants gain valuable insights to problems and learn the latest on the job skills and techniques.

Section Meetings

Regular meetings held by the Institute’s Sections include scientific and technical presentations as well as presentations on professional subjects. By their attendance, Members increase their knowledge, not only of their science, but also on the status of geology as a profession. Attendees have opportunities to make valuable personal contacts with fellow geologists and to learn from them.

Annual Meetings of the Institute

AIPG’s annual meetings include outstanding educational presentations. Prominent speakers give attendees the latest information on developments in professional affairs; governmental legislation and regulation; the science of geology; professional techniques; scientific/technical information; and the future outlook for the profession.

Information

AIPG disseminates information to its Members and to the public in a number of ways.

The Professional Geologist (TPG) Bi-Monthly Magazine

The Institute publishes its magazine, The Professional Geologist (TPG), bi-monthly. TPG includes news of AIPG activities, as well as timely information on all aspects of the geologic profession. It is an important source of information on Institute programs and events; proposed federal and state legislation and regulations of concern to geologists; business news; public attitudes and trends; on the job techniques; current research; and recent publications of interest.

Annual Membership Directory

Each year AIPG publishes a comprehensive membership directory, which lists Members and Affiliates alphabetically, geographically, and by specialty. It gives names, mailing addresses, phone and fax numbers, e-mail addresses, employers, and geologic specialties.

Monograph Series Booklets

The Institute periodically publishes monographs on pertinent subjects related to the profession and the practice of geology.

Issues and Answers Booklets

The Institute prepares and distributes a number of “Issues and Answers” publications defining the issues and providing the recommendations of professional geologists on current legislative/regulatory matters of public concern. These factual, well documented, unbiased publications are of great value to government at all levels (particularly congressional staff), as well as to the general public.

Headquarters Staff

For facts, data, and answers to many questions, members call AIPG Headquarters. The staff answers hundreds of requests for information each year.

Headquarters FAX Line and e-mail

In order to facilitate communication with members, AIPG has FAX and e-mail capability at Headquarters. This may be found particularly useful for the transmittal of items for TPG, notices, and documents of immediate concern. The Headquarters FAX number is (303) 253-9220. The email address is aipg@aipg.org.

Representation

AIPG represents the interests of its Member geologists in relations with government, education, and the general public. The Institute promotes both its Members and the profession of geology, explains their value, and works to enhance their images.
**Government United States**

AIPG arranges for expert testimony by Member geologists before legislative and regulatory government bodies at the federal, state, and local levels and at hearings in Washington and around the country. In lieu of personal testimony on complex legislative or regulatory proposals, AIPG prepares and submits written testimony which is carefully considered and entered into the record of government bodies.

The Institute’s staff, Member representatives, and officers meet often with key elected and appointed officials for meaningful exchanges on governmental issues having geologic implications. Similar activities are undertaken at the state level, primarily by the appropriate Section.

**Government-International**

Through its developing links with corresponding professional societies in other countries, AIPG works to attain acceptance of its members for practice in those countries.

**Education**

To the benefit of the future of the profession, AIPG works closely with college and university earth science and geology department faculties, department heads, and deans on program and curriculum planning, proper career preparation of students, and necessary facilities and resources.

To encourage and assure quality in continuing education opportunities offered by vendors of short courses, seminars, and workshops, AIPG administers a Continuing Education Accreditation Program.

**General Public**

News releases are made to newspapers, magazines, and radio and television stations around the country about AIPG and its activities, as well as those of its Members. Institute publications are produced and distributed to the public to explain, in lay terms, complex current national issues with geologic implications.

Providing knowledgeable speakers to appear before meetings of various groups, societies, clubs, and professional organizations is another way AIPG works to represent its Members’ interests in keeping the public properly informed on geologic matters.

**Types of Membership and Requirements**

**Certified Professional Geologists**

Education: 36 semester or 54 quarter hours in geological sciences* with a baccalaureate or higher degree; certified copy of official transcripts must be sent by each college or university

Experience: Eight years beyond bachelor’s degree, or seven years beyond master’s degree, or five years beyond doctorate

Sponsors: Three required from professional geologists, two of whom must be CPGs (see Section 2.3.1.4 of the Bylaws for exceptions)

Certification/Registration: None required

Screening: Section and National

Application Fee: $50 (to upgrade from Registered Member or Member to CPG, the fee is $35)

Annual Dues: $120 plus Section dues; both prorated for remainder of year when accepted

**Registered Member**

Education: 30 semester or 45 quarter hours in geological sciences* with a baccalaureate or higher degree; certified copy of official transcripts are required for this application if they are not required by the state for registration/certification/licensure

Experience: No proof required

Sponsors: Two required from professional geologists, one of whom must be a CPG, Registered Member, or Member; sponsor letters in state registration application may serve as sponsor statements if approved by Executive Committee

Certification/Registration: Proof of current registration/licensure/certification must be submitted with application and with annual renewals and must include expiration date

Screening: National

Application Fee: $30

Annual Dues: $70 plus Section dues; both prorated for remainder of year when accepted

**Member**

Education: 30 semester or 45 quarter hours in geological sciences* with a baccalaureate or higher degree

Experience: No proof required

Sponsors: One professional geologists, of whom must be a CPG, Registered Member, or Member

Certification/Registration: None required

Screening: Section and National

Application Fee: $30

Annual Dues: $50 plus Section dues; both prorated for remainder of year when accepted

**Student**

Education: Currently enrolled in a geological science* degree program

Experience: None required

Sponsor: One letter from geological science faculty member

Certification/Registration: None required

Screening: Headquarters can approve

Application Fee: $5

Annual Dues: $15

**Associate**

Education: None required

Experience: None required

Sponsors: One CPG, Registered Member, or Member

Certification/Registration: None required
Screening: Headquarters can approve
Application Fee: $20
Annual Dues: $60 plus Section dues; both prorated for
remainder of year when accepted

As defined by the American Geological Institute, a geo-
logical science is any of the subdisciplinary specialties that
are part of the science of geology, e.g., geophysics, geochem-
istry, paleontology, petrology, etc.

Note to those who received their degrees from
non-U.S./Canadian universities: If you received a degree from
a university or college outside the U.S. or Canada, and the
school is unable to provide an acceptable transcript, you must
submit a copy of your diploma and a list of courses taken. The
Screening Committee may ask you to provide additional
information or an equivalency evaluation, at your expense.

Committee Charges

Any Member with interest in serving on any national
committee of AIPG may contact the AIPG President or the
Chairman of the appropriate committee. Committees may be
asked, as appropriate, to assist the officers and/of
Headquarters staff in matters related to their charge, includ-
ing providing materials and staffing for the AIPG exhibit
booth at conventions and expositions.

Standing Committees

Standing Committees, as provided for in the Bylaws, are
permanent ongoing committees that implement the objec-
tives of AIPG and assist greatly in conducting important
functions of the Institute. They are established by, and
responsible to, the Executive Committee. The Chairman of
Standing Committees are appointed annually by the
President from among the Members of AIPG.

Significant Committee activities are reported in TPG.
Chairmen frequently attend and report at Executive
Committee meetings. A member of the Executive Committee
is appointed by the President to serve as liaison with each
committee.

Annual Meetings

Charge: Collect information on the conduct of past
Annual Meetings of the Institute and assemble and maintain
it in a form that will be useful in planning and conducting
future Annual Meetings (i.e., a published manual), advise the
President, Executive Committee, and Executive Director in
planning and conducting the Annual Meetings of the
Institute; and provide advisory guidance to the host commit-
tees of upcoming Annual Meetings of the Institute.

Education

Charge: The duties of the Committee fall into three dis-
tinct categories.
1. Professional: Develop and maintain programs, subject to
Executive Committee oversight and approval, for (a) pro-
fessional development of Members and Affiliates through
continuing education, and (b) Section and National lead-
ership training and development.
2. Academic: Provide a service to colleges and universities
by bringing together academic professionals and those
practicing in the private and public sectors for their
mutual benefit as well as the benefit of the geology stu-
dents; and organize visiting committees to evaluate indi-
vidual college or university departments of geology, in full
cooperation with both the staff of each visited department
and the administrative officers of the institution. This
cooperative evaluation is to be conducted only when
requested by the department. A visiting committee con-
ists of no fewer than three and no more than six profes-
sional geologists representing, as nearly as possible, acad-
eme, industry, and government service. In the discharge
of its responsibilities, this Committee and the Visiting
Committees: (a) are guided by the AIPG requirements
and policies on curricula, and (b) give full recognition to
the necessary rights of a department to establish its iden-
tity through the specific objectives it has defined for its
programs. These safeguards of character are intended to
assure that (a) the standards of the profession and of the
Institute are maintained, while (b) recommendations that
would tend to foster undesirable regimentation are avoid-
ed.
3. Public: Identify opportunities to positively impact the
public understanding of geology and the profession of
gology to: (a) provide a more geologically literate public
in order to enable and encourage educated decisions on
matters affecting the environment, geologic hazards, etc.;
(b) provide a more knowledgeable public from which our
policymakers are chosen; and (c) inspire an interest in
the earth sciences in young people to assure an adequate
source of future geologists.

Ethics

Charge: Administer the AIPG Code of Ethics, as provided
in the Bylaws of the Institute and in the AIPG Disciplinary
Procedures; consider and report to the Executive Committee,
as appropriate, on matters relative to ethical or unethical con-
duct by professional geologists, Members or nonMembers; pre-
pare materials that can provide guidance for members on eth-
ical questions.

Honors and Awards

Charge: At least fifteen days prior to the first meeting of
the Executive Committee each year, recommend to the
Executive Committee the issuance of any of the following
awards: (a) The Ben H. Parker Memorial Medal, (b) The
Martin Van Couvering Award, (c) The John T. Galey, Sr.,
Memorial Public Service Award, (d) Honorary Membership,
and (e) such other awards as it considers appropriate or as the
Executive Committee directs. The Executive Committee may
accept, reject, modify, or amend these recommendations. Along
with its recommendations, the Committee shall submit prop-
er documentation to support its recommendations, as well as
the recommendations of others which were submitted to it. It
is Executive Committee policy that a maximum of one Parker
Medal and one Van Couvering Award per year be conferred.
All recommendations and nominations for honors and awards
shall become part of a permanent Committee file for reference
and consideration by future Committees. This permanent file
will be maintained by the Chairman and passed on to succes-
sor Chairmen.
APPENDIX 6—AIPG ACTIVITIES AND SERVICES TO MEMBERS

International Affairs

Charge: Promote AIPG Members freedom of access to practice in other countries; establish and maintain correspondent relationships with technical and professional geological organizations in other countries and promote cooperation and the free flow of geologists and geological information between countries.

Intersociety Committee

Charge: To (a) establish and maintain liaison and cooperation with other organizations having mutual interests, and (b) serve as a point of contact with all other organizations for any legal and legitimate purpose.

Membership Development

Charge: Encourage the professional development and involvement of all geologists by (a) recruiting them to become Members or Affiliates; (b) promoting the establishment of local Districts and Chapters and Student Chapters, and (c) overseeing the management of Student Chapters by the Sections.

Membership Services

Charge: Solicit and screen prospective services for the Members and the staff; advise the Executive Committee on the subject of membership services; and monitor all such programs while they are in place in order to: (a) assure that they produce the expected results and meet the needs of the Members and the staff; and (b) compare them to newly proposed programs to help the Institute provide the best possible services for the Members and staff. Services may be either internally or externally generated and administered.

National Affairs

Charge: Monitor both Federal and foreign legislative and regulatory matters having geologic implications, either on its own initiative or at the request of the President, and identify and prepare position and policy statements for Executive Committee consideration, on issues of professional concern to geologists; increase AIPG's impact and visibility on legislation and regulation affecting the profession at national and international levels; assist in presenting approved AIPG positions on issues before appropriate governmental representatives and bodies; in cooperation with the International Affairs Committee promote AIPG Members' freedom of access to practice in all countries; establish and maintain correspondent relationships with technical and professional geological organizations throughout the world; and promote the free flow of geological information within and between countries. The Committee organizes in such a way as to most effectively represent the full spectrum of AIPG membership interests, including Mining, Petroleum, Engineering Geology, Hydrogeology, Environmental Geology, Professional Affairs (including intersociety activities), Academia and Public Service. Subcommittees communicate with each other in kind, so that positions taken do not represent parochial points of view. The Committee maintains close liaison with the State and International Affairs and Intersociety Liaison Committee.

National Screening

Charge: Exercise the authority delegated to it by the Executive Committee in the AIPG Screening Policy For Applicants, which is currently in effect.

Nominating (Chaired by the immediate Past President)

Charge: At least fifteen days prior to the first meeting of the Executive Committee each year, recommend to the Executive Committee two or more prospective candidates for the offices of AIPG PresidentElect and Vice President. In each oddnumbered year, also recommend two or more prospective candidates for the offices of Secretary and Editor. In each evennumbered year, also recommend two or more prospective candidates for the office of Treasurer. The Committee shall determine that all candidates are fully qualified. It will provide to the Executive Committee appropriate background information on each candidate that it recommends. The Executive Committee will accept, reject, modify or amend these recommendations at its Winter meeting and return its instructions to the Nominating Committee within two weeks afterwards. The Nominating Committee will then recruit candidates from the list provided by the Executive Committee according to the instructions of the Executive Committee. If the Nominating Committee finds it necessary to supplement the list of prospective candidates, it will do so with the advice and consent of an Ad Hoc Subcommittee of three or more Members of the Executive Committee appointed for this purpose by the President and ratified by the Executive Committee at its Winter meeting. Prior to June first of the same year, present to the Executive Committee via the President and the Secretary, the names of at least two candidates for each office from the previously approved list, each of whom is qualified and willing to serve.

Professional Education

Charge: Develop and maintain programs, subject to Executive Committee oversight and approval, for (a) professional development of Members and Adjuncts through continuing education, and (b) Section and National leadership training and development. Main-tain liaison and cooperation with the Membership Services Committee.

Publications

Charge: Identify opportunities for the production of special publications appropriate to the purposes and goals of AIPG; investigate the feasibility of potential individual special publications; and provide advice and recommendations to the Editor and/or the Executive Committee. (Each recommendation to produce a special publication shall include a full description of the proposed publication, a production and marketing plan, a financial projection and analysis, and the names of the persons who will be responsible for its production.) Prepare and issue all press releases and advertising materials; and maintain control of the Institute mailing list and labels as instructed by the Executive Committee.

Sponsorship

Charge: To develop a corporate sponsorship program as a means of generating revenues for the Institute business as approved by he Executive Director and Executive Committee;
monitor and administer such program while in place to assure that (a) sponsors are solicited and maintained on a periodic basis, and (b) sponsors are duly recognized for their contributions.

State Affairs

Charge: Monitor statelevel actions that may impact the practice of geology, especially as they pertain to some form of licensing, registration, certification, or definition of geologists. Maintain close liaison with the officers and appropriate committees of each Section; monitor the work of the Association of State Boards of Geology, providing assistance and technical support as requested and as appropriate. Maintain close liaison and coordination with the National & International Affairs Committee.

Tellers

Charge: Tally ballots cast by Members voting on matters presented to them; certify the results to the President and to the Secretary; and perform under the direction of the President.

Ad Hoc Committees

Ad hoc committees are established by the President and/or the Executive Committee to perform specific tasks.

Continuing Professional Development

Charge: A Task Force to study and report the feasibility and desirability of introducing requirements: (1) for Continuing Education for renewal of CPG, (2) for Examinations for granting Certification, and (3) for requiring periodic recertification.

Search Committee for AIPG Executive Director

Charge: Analyze the needs and resources of AIPG and recommend future emphasis, particularly with regard to the Executive Director's position. In doing so, be sure to get the input of AIPG staff. Answer the following questions in your analysis: (a) should the Executive Director be a CPG or at least qualified to become a CPG? (b) to what extent should fundraising be a major responsibility of the Executive Director? It is obvious to the 1997 Executive Committee that increasing nondues revenue, through publications, advertising, and grants and contracts, must be a priority for the Executive Director. We ask that the Search Committee include this priority in the position description and advertisement (c) to what extent should the Executive Director speak for the Institute in public forums? A related question is to what extent should the Executive Director be the lead representative of AIPG in meeting with Sections and attending meetings with geoscience and engineering organizations? (d) Where should the AIPG Headquarters be located in the long run? Other suggestions came from the Past Presidents' breakfast (i) political savvy, particularly with Washington, D.C., and/or state experience would be useful; (ii) skills in fundraising with foundations, industry, and government agencies would help; (iii) someone who builds linkages with other geoscience and engineering organizations would be an asset; and (iv) someone with an international outlook would help keep us on the course to represent American geologists in the international arena. With an analysis in mind, draft a position description and advertisement. The position description and advertisement should outline the key expectations for the Executive Director. Solicit applications for the position through publication in TPG and elsewhere and through professional contacts. An ad approved by the Executive Committee should be distributed no later than the end of April 1998. Develop a short list of candidates for review by the Executive Committee. The Executive Committee will be able to review the status of the search during its virtual meeting in the summer, and interviews with the top candidates should be conducted during the annual meeting October 38, 1998 in Baton Rouge.

Registration/Certification Board for Geologists

Alabama (Practice) - (334) 269-9990
AL Board of Licensure for Prof. Geologists
E-mail: ALGEOBD@aol.com
http://www.algeo bd.state.al.us/

Alaska (Title) - (907) 465-2534
AK Division of Occupational Licensing
E-Mail: license@dced.state.ak.us
http://www.dced.state.ak.us/occ/

Arizona (Practice) - 602-364-4930
AZ Board of Technical Registration
http://www.btr.state.az.us/

Arkansas (Practice) - (501) 296-1877
AR State Board of Reg. for Prof. Geologists
E-mail: connie.raper@mail.state.ar.us
http://www.state.ar.us/age/BOR.htm

California (Practice/Specialties) - (916) 263-2113
CA Board for Geologists and Geophysicists
E-mail: geology@dca.ca.gov
http://www.dca.ca.gov/geology

Delaware (Practice) - (302) 739-4522
DE State Board of Registration of Geologists
E-mail: vgingrich@state.de.us
http://www.professionallicensing.state.de.us/

Florida (Practice) - (850) 487-7990
FL Board of Professional Geologists
E-mail: Leon.Biegalski@dbpr.state.fl.us
http://www.state.fl.us/dbpr/pro/geolo/geo_index.shtml

Georgia (Practice) - (478) 207-1400
GA State Board of Reg. for Prof. Geologists
E-mail: arpassmore@sos.state.ga.us
http://www.sos.state.ga.us/default800.asp

Idaho (Practice) - (208) 334-2268
ID Board of Registration for Prof. Geologists
E-mail: ibpg@ipbg.state.id.us
http://www2.state.id.us/ibpg/

Illinois (Practice) - (217) 785-0800
IL Dept. of Professional Regulation
http://www.dpr.state.il.us/WHO/gegy.asp
APPENDIX 6—AIPG ACTIVITIES AND SERVICES TO MEMBERS

Indiana (Title) - (812) 855-5067
IN Geological Survey Dept of Natural Res.
E-mail: amawilso@indiana.edu
http://adamite.igs.indiana.edu/indsurv/products/index.htm

Kansas (Practice) - (785) 296-3053
KS State Board of Technical Professions
E-mail: ksbt1p@ink.org
http://www.accesskansas.org/ksbt/

Kentucky (Practice) - (502) 564-3296 ext. 227
KY Board of Registration for Prof. Geologists
E-mail: Diana.Mangeot@mail.state.ky.us
http://www.state.ky.us/agencies/finance/borders/geology/index.htm

Maine (Practice) - (207) 624-8603
State Brd of Cert. for Geologists & Soil Sci.
E-mail: sandra.a.leach@state.me.us
http://www.state.me.us/pfr/ols/

Minnesota (Practice) - (651) 296-2388
Board of AELSAG & ID
E-mail: shari.telega@state.mn.us
http://www.aelsagid.state.mn.us/

Mississippi (Practice) - (601) 354—6370
MS State Board of Registered Prof. Geologists
E-mail: Rick_Ericksen@deq.state.ms.us
http://www.msbrpg.state.ms.us/

Missouri (Practice) - (573) 526-7625
MO Board of Geology Registration
E-mail: geo@mail.state.mo.us
http://www.ecodiv.state.mo.us/pr/geo/

Nebraska (Practice/Specialties) - (402) 471-8383
Nebraska State Board of Geologists
E-mail: geology@nol.org
http://www.geology.state.ne.us/board/nbg.htm

New Hampshire (Practice) - (603) 271-2219
NH Joint Board of Licensure and Certification
http://www.state.nh.us/jtboard/home.htm

New Jersey (Practice) - (609) 292-8761
(only groundwater consultant- UST work)
Bureau of Underground Storage Tanks
http://www.state.nj.us/dep/srp/

North Carolina (Practice) - (919) 850-9669
NC Board for Licensing of Geologists
E-mail: neblg@bellsouth.net
http://www.ncblg.org/

Oregon (Practice/Specialties) - (503) 566-2837
OR State Board of Geologist Examiners
E-mail: osege@open.org
http://www.osege.org/

Pennsylvania (Practice) - (717) 783-7049
PA State Board of Professional Engineers, Land Surveyors & Geologists
E-mail: engineer@pados.dos.state.pa.us
http://www.dos.state.pa.us/bpoa/engbd/mainpage.htm

South Carolina (Practice) - (803) 896-4497
SC State Board of Registration for Geologists
E-mail: haysed@mail.lrl.state.sc.us
http://www.lrl.state.sc.us/POL/Geologists/

Tennessee (Title) - (615) 741-3611
TN Dept. of Commerce & Ins. Div. of Reg. Board
E-mail: dmoulder@mail.state.tn.us
http://www.state.tn.us/commerce/boards/geology/index.htm

Texas (Practice) - (210) 375-9000
TX Board of Professional Geoscientists
E-mail: emiller@pape-dawson.com

Utah (Practice) (801) 466-6769
UT Council of Professional Geologists
E-mail: president@utahpg.org
http://www.dpl.utah.gov/licensing/geologist.html

Virginia (Title) - (804) 367-2406
VA Board of Geology Dept. of Professional and Occupational Regulation
E-mail: Geology@dpor.state.va.us
http://www.state.va.us/dpor/index.html

Washington (Practice) - (360) 664-1497
WA State of Washington Department of Licensing Geologist Licensing Program
http://www.wa.gov/dol/bpd/geofront.htm
The Washington State Legislature passed a bill that provides another opportunity for people to apply for a Washington State Geologist License or Geologist Specialist License without taking an exam.
Information is available at:

Wisconsin (Practice) - (608) 266-5511
WI Dept. of Regulation & Licensing
E-mail: web@drl.state.wi.us
http://www.drl.state.wi.us/Regulation/applicant_information/dod1058.html

Wyoming (Practice) - (307) 766-2490
WY Board of Prof. Geologists
E-mail: wbpg@wsgs.uwyo.edu
http://wbpgweb.uwyo.edu/

States with Statutory Definition
Colorado - (303) 866-2611
Vicki Cowart, State Geologist
E-mail: vicki.cowart@state.co.us
http://geosurvey.state.co.us/

Oklahoma - (405) 325-3031
Dr. Charles Mankin, State Geologist
cjmankin@ou.edu
www.ou.edu/special/ogs-pttc

States with Partial Regulation
Connecticut - (860) 424-3700
CT Licensed Environmental Prof. Program
http://dep.state.ct.us/pao/PERDFact/LEP.htm

Iowa (UST groundwater work) - (515) 281-8135
IA Underground Storage Tank Section
E-mail: jim.humeston@dnr.state.ia.us
http://www.state.ia.us/dnr/organiza/wmad/lqbureau/ust/
**Title Acts** - the state is the entity that qualifies the practitioners, usually through a board. It grants a title, e.g., “Certified,” and restricts its use. Only the title is restricted, not the practice.

**Practice Acts** - states have statutes similar to title acts, but which restrict practice to those qualified by the state.

**Association of State Boards of Geology (ASBOG)**
Phone: (803) 739-5676
E-mail: asbog@asbog.org
http://www.asbog.org

<table>
<thead>
<tr>
<th>Specialty Field</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>App/Eval</td>
<td>Appraisals/evaluations</td>
</tr>
<tr>
<td>Coal</td>
<td>Coal</td>
</tr>
<tr>
<td>ColdReg</td>
<td>Cold regions/permafrost</td>
</tr>
<tr>
<td>CompApp</td>
<td>Computer applications</td>
</tr>
<tr>
<td>CnstrMat</td>
<td>Construction materials</td>
</tr>
<tr>
<td>EconG</td>
<td>Economic geology</td>
</tr>
<tr>
<td>EngrgG</td>
<td>Engineering geology</td>
</tr>
<tr>
<td>EnvrirG</td>
<td>Environmental geology</td>
</tr>
<tr>
<td>EnvrirI</td>
<td>Envr. Impact Assessment</td>
</tr>
<tr>
<td>EnvrirS</td>
<td>Envr. Site Assessment</td>
</tr>
<tr>
<td>Explor</td>
<td>Exploration</td>
</tr>
<tr>
<td>FieldG</td>
<td>Field geology</td>
</tr>
<tr>
<td>ForensG</td>
<td>Forensic geology</td>
</tr>
<tr>
<td>GenIg</td>
<td>General geology/Earth Sci.</td>
</tr>
<tr>
<td>Geochem</td>
<td>Geochemistry</td>
</tr>
<tr>
<td>GeoMod</td>
<td>Geologic modeling</td>
</tr>
<tr>
<td>Geomor</td>
<td>Geomorphology</td>
</tr>
<tr>
<td>Geophys</td>
<td>Geophysics</td>
</tr>
<tr>
<td>Geostat</td>
<td>Geostatistics</td>
</tr>
<tr>
<td>Geotech</td>
<td>Geotechnical</td>
</tr>
<tr>
<td>Geother</td>
<td>Geothermal</td>
</tr>
<tr>
<td>HazWste</td>
<td>Hazardous waste</td>
</tr>
<tr>
<td>HydroG</td>
<td>Hydrogeology</td>
</tr>
<tr>
<td>IndstM</td>
<td>Industrial minerals</td>
</tr>
<tr>
<td>InvstAn</td>
<td>Investment analysis</td>
</tr>
<tr>
<td>LandRec</td>
<td>Land reclamation</td>
</tr>
<tr>
<td>Leasing</td>
<td>Leasing</td>
</tr>
<tr>
<td>Mgmt</td>
<td>Management</td>
</tr>
<tr>
<td>MarineG</td>
<td>Marine geology</td>
</tr>
<tr>
<td>MathG</td>
<td>Mathematical geology</td>
</tr>
<tr>
<td>Metallic</td>
<td>Metallic minerals</td>
</tr>
<tr>
<td>Micropal</td>
<td>Micropaleontology</td>
</tr>
<tr>
<td>Mineral</td>
<td>Mineralogy</td>
</tr>
<tr>
<td>MiningG</td>
<td>Mining geology</td>
</tr>
<tr>
<td>NatGas</td>
<td>Natural gas</td>
</tr>
<tr>
<td>Oprs/Dev</td>
<td>Operations/development</td>
</tr>
<tr>
<td>Paleont</td>
<td>Paleontology</td>
</tr>
<tr>
<td>Palynol</td>
<td>Palynology</td>
</tr>
<tr>
<td>Petrog</td>
<td>Petrography/petrology</td>
</tr>
<tr>
<td>Petrol</td>
<td>Petroleum</td>
</tr>
<tr>
<td>Phosph</td>
<td>Phosphates</td>
</tr>
<tr>
<td>Planet</td>
<td>Planetology</td>
</tr>
<tr>
<td>RegG</td>
<td>Regional geology</td>
</tr>
<tr>
<td>RemSens</td>
<td>Remote sensing</td>
</tr>
<tr>
<td>Sediment</td>
<td>Sedimentology</td>
</tr>
<tr>
<td>Seismol</td>
<td>Seismology</td>
</tr>
<tr>
<td>SoilSci</td>
<td>Soil science</td>
</tr>
<tr>
<td>Stratig</td>
<td>Stratigraphy</td>
</tr>
<tr>
<td>StructG</td>
<td>Structural geology</td>
</tr>
<tr>
<td>Tectonic</td>
<td>Tectonics</td>
</tr>
<tr>
<td>Uranium</td>
<td>Uranium</td>
</tr>
<tr>
<td>Volcanol</td>
<td>Volcanology</td>
</tr>
<tr>
<td>WsteDis</td>
<td>Waste disposal</td>
</tr>
<tr>
<td>WtrRes</td>
<td>Water resources</td>
</tr>
<tr>
<td>YEAR</td>
<td>NO. CERTIFIED</td>
</tr>
<tr>
<td>------</td>
<td>--------------</td>
</tr>
<tr>
<td>1963</td>
<td>0</td>
</tr>
<tr>
<td>1964</td>
<td>711</td>
</tr>
<tr>
<td>1965</td>
<td>449</td>
</tr>
<tr>
<td>1966</td>
<td>290</td>
</tr>
<tr>
<td>1967</td>
<td>246</td>
</tr>
<tr>
<td>1968</td>
<td>179</td>
</tr>
<tr>
<td>1969</td>
<td>183</td>
</tr>
<tr>
<td>1970</td>
<td>143</td>
</tr>
<tr>
<td>1971</td>
<td>135</td>
</tr>
<tr>
<td>1972</td>
<td>139</td>
</tr>
<tr>
<td>1973</td>
<td>113</td>
</tr>
<tr>
<td>1974</td>
<td>100</td>
</tr>
<tr>
<td>1975</td>
<td>108</td>
</tr>
<tr>
<td>1976</td>
<td>886</td>
</tr>
<tr>
<td>1977</td>
<td>491</td>
</tr>
<tr>
<td>1978</td>
<td>302</td>
</tr>
<tr>
<td>1979</td>
<td>158</td>
</tr>
<tr>
<td>1980</td>
<td>212</td>
</tr>
<tr>
<td>1981</td>
<td>273</td>
</tr>
<tr>
<td>1982</td>
<td>291</td>
</tr>
<tr>
<td>1983</td>
<td>288</td>
</tr>
<tr>
<td>1984</td>
<td>258</td>
</tr>
<tr>
<td>1985</td>
<td>238</td>
</tr>
<tr>
<td>1986</td>
<td>238</td>
</tr>
<tr>
<td>1987</td>
<td>193</td>
</tr>
<tr>
<td>1988</td>
<td>135</td>
</tr>
<tr>
<td>1989</td>
<td>217</td>
</tr>
<tr>
<td>1990</td>
<td>278</td>
</tr>
<tr>
<td>1991</td>
<td>294</td>
</tr>
<tr>
<td>1992</td>
<td>345</td>
</tr>
<tr>
<td>1993</td>
<td>399</td>
</tr>
<tr>
<td>1994</td>
<td>365</td>
</tr>
<tr>
<td>1995</td>
<td>266</td>
</tr>
<tr>
<td>1996</td>
<td>304</td>
</tr>
<tr>
<td>1997</td>
<td>204</td>
</tr>
<tr>
<td>1998</td>
<td>142</td>
</tr>
<tr>
<td>1999</td>
<td>98</td>
</tr>
<tr>
<td>2000</td>
<td>82</td>
</tr>
<tr>
<td>2001</td>
<td>88</td>
</tr>
<tr>
<td>2002</td>
<td>68</td>
</tr>
<tr>
<td>2003</td>
<td>73</td>
</tr>
</tbody>
</table>

*CPG numbers 5200 through 5995 (795 numbers) not assigned.
*In 2003 numbers were inadvertently skipped.
<table>
<thead>
<tr>
<th>Charter Members 1-743</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>City, State</th>
<th>Member Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOYD, James</td>
<td>New York, New York</td>
<td>CPG 225</td>
</tr>
<tr>
<td>BRADY, Frank H.</td>
<td>Casper, Wyoming</td>
<td>CPG 138</td>
</tr>
<tr>
<td>BRANHAM, Charles E.</td>
<td>Oklahoma City, Oklahoma</td>
<td>CPG 257</td>
</tr>
<tr>
<td>BRASHEARS, Maurice L.</td>
<td>Garden City, New York</td>
<td>CPG 183</td>
</tr>
<tr>
<td>BREED, William J.</td>
<td>Flagstaff, Arizona</td>
<td>CPG 427</td>
</tr>
<tr>
<td>BREHM, Clarence E.</td>
<td>Mt. Vernon, Illinois</td>
<td>CPG 508</td>
</tr>
<tr>
<td>BROADHURST, Samuel D.</td>
<td>Roanoke, Virginia</td>
<td>CPG 543</td>
</tr>
<tr>
<td>BROCKETT, Lester D.</td>
<td>Los Angeles, California</td>
<td>CPG 481</td>
</tr>
<tr>
<td>BROOKS, Billy Jack</td>
<td>Abilene, Texas</td>
<td>CPG 555</td>
</tr>
<tr>
<td>BROOKS, Bruce D.</td>
<td>Sacramento, California</td>
<td>CPG 482</td>
</tr>
<tr>
<td>BROWN, Sillas C.</td>
<td>Scottsdale, Arizona</td>
<td>CPG 36</td>
</tr>
<tr>
<td>BURCHER, John E.</td>
<td>Denver, Colorado</td>
<td>CPG 699</td>
</tr>
<tr>
<td>BUDDENHAGEN, Harold J.</td>
<td>Bakersfield, California</td>
<td>CPG 258</td>
</tr>
<tr>
<td>CALLAWAY, David C.</td>
<td>Liberal, Kansas</td>
<td>CPG 200</td>
</tr>
<tr>
<td>CALVERT, Warren L.</td>
<td>Denver, Colorado</td>
<td>CPG 210</td>
</tr>
<tr>
<td>CAMPBELL, Ian</td>
<td>Denver, Colorado</td>
<td>CPG 19</td>
</tr>
<tr>
<td>CARR, James W.</td>
<td>Littleton, Colorado</td>
<td>CPG 629</td>
</tr>
<tr>
<td>CARR, John E.</td>
<td>Bakersfield, California</td>
<td>CPG 483</td>
</tr>
<tr>
<td>CARR, Jack O.</td>
<td>Denver, Colorado</td>
<td>CPG 226</td>
</tr>
<tr>
<td>CARR, Morgan J.</td>
<td>Albuquerque, New Mexico</td>
<td>CPG 428</td>
</tr>
<tr>
<td>CARSON, Horace R.</td>
<td>Holmdel, New Jersey</td>
<td>CPG 403</td>
</tr>
<tr>
<td>CARTWRIGHT, James</td>
<td>Denver, Colorado</td>
<td>CPG 3</td>
</tr>
<tr>
<td>CASAVER, George A.</td>
<td>Berkeley Springs, Virginia</td>
<td>CPG 86</td>
</tr>
<tr>
<td>CARY, Allen S.</td>
<td>Seattle, Washington</td>
<td>CPG 260</td>
</tr>
<tr>
<td>CASTRO, Manuel J.</td>
<td>Ventura, California</td>
<td>CPG 603</td>
</tr>
<tr>
<td>CAYLOR, Garth W.</td>
<td>Tula, Oklahoma</td>
<td>CPG 454</td>
</tr>
<tr>
<td>CHALMERS, John H.</td>
<td>Abilene, Texas</td>
<td>CPG 319</td>
</tr>
<tr>
<td>CHANCELLOR, Robert E.</td>
<td>Denver, Colorado</td>
<td>CPG 80</td>
</tr>
<tr>
<td>CHANDLER, Charles E.</td>
<td>Denver, Colorado</td>
<td>CPG 32</td>
</tr>
<tr>
<td>CHAPMAN, John J.</td>
<td>Magnolia, Arkansas</td>
<td>CPG 461</td>
</tr>
<tr>
<td>CHAWNER, William D.</td>
<td>Denver, Colorado</td>
<td>CPG 87</td>
</tr>
<tr>
<td>CHILDLS, Orlo E.</td>
<td>Golden, Colorado</td>
<td>CPG 146</td>
</tr>
<tr>
<td>CHRISTIE, Norman J.</td>
<td>Calgary, Alberta, Canada</td>
<td>CPG 396</td>
</tr>
<tr>
<td>CHURCH, Clifford C.</td>
<td>Bakersfield, California</td>
<td>CPG 624</td>
</tr>
<tr>
<td>CLAIR, Joseph R.</td>
<td>Denver, Colorado</td>
<td>CPG 713</td>
</tr>
<tr>
<td>CLARK, James W.</td>
<td>Bakersfield, California</td>
<td>CPG 629</td>
</tr>
<tr>
<td>COLLE, Jack O.</td>
<td>Houston, Texas</td>
<td>CPG 220</td>
</tr>
<tr>
<td>COLTON, Roger B.</td>
<td>Denver, Colorado</td>
<td>CPG 741</td>
</tr>
<tr>
<td>COOLIN, Rodney G.</td>
<td>Bakersfield, California</td>
<td>CPG 216</td>
</tr>
<tr>
<td>CONLEY, Jack N.</td>
<td>Midland, Texas</td>
<td>CPG 304</td>
</tr>
<tr>
<td>CONNELLY, John J.</td>
<td>Ventura, California</td>
<td>CPG 194</td>
</tr>
<tr>
<td>CONSCRIK, Frank B.</td>
<td>Abilene, Texas</td>
<td>CPG 4</td>
</tr>
<tr>
<td>COOK, Earl F.</td>
<td>Houston, D.C.</td>
<td>CPG 113</td>
</tr>
<tr>
<td>COOK, N. S. Jr.</td>
<td>Denver, Colorado</td>
<td>CPG 320</td>
</tr>
<tr>
<td>COWDERY, Robert D.</td>
<td>Denver, Colorado</td>
<td>CPG 517</td>
</tr>
<tr>
<td>COX, Beak C.</td>
<td>Honolulu, Hawaii</td>
<td>CPG 182</td>
</tr>
<tr>
<td>COX, Willard E.</td>
<td>Butte, Montana</td>
<td>CPG 321</td>
</tr>
<tr>
<td>CRAG, Jack W.</td>
<td>Houston, Texas</td>
<td>CPG 701</td>
</tr>
<tr>
<td>CRANDALL, Kenneth H.</td>
<td>San Francisco, California</td>
<td>CPG 590</td>
</tr>
<tr>
<td>CRAWFORD, Arthur</td>
<td>Salt Lake City, Utah</td>
<td>CPG 386</td>
</tr>
<tr>
<td>CRESS, Robert H.</td>
<td>Roswell, New Mexico</td>
<td>CPG 572</td>
</tr>
<tr>
<td>CRITCHLOW, Robert N.</td>
<td>Bakersfield, California</td>
<td>CPG 281</td>
</tr>
<tr>
<td>CRONEIS, Carey</td>
<td>Houston, Texas</td>
<td>CPG 656</td>
</tr>
<tr>
<td>CROSS, Charles M.</td>
<td>Palo Alto, California</td>
<td>CPG 23</td>
</tr>
<tr>
<td>CROSS, Rodman K.</td>
<td>Long Beach, California</td>
<td>CPG 484</td>
</tr>
<tr>
<td>CROSSWHITE, Emerson G.</td>
<td>Bakersfield, California</td>
<td>CPG 262</td>
</tr>
<tr>
<td>CROTHERS, Thomas A.</td>
<td>Littleton, Colorado</td>
<td>CPG 518</td>
</tr>
<tr>
<td>CROWELL, John C.</td>
<td>Los Angeles, California</td>
<td>CPG 169</td>
</tr>
<tr>
<td>CUMMINGS, Kenneth F.</td>
<td>Denver, Colorado</td>
<td>CPG 519</td>
</tr>
<tr>
<td>CURBAN, John F.</td>
<td>Santa Barbara, California</td>
<td>CPG 195</td>
</tr>
<tr>
<td>CURBY, William H.</td>
<td>Casper, Wyoming</td>
<td>CPG 79</td>
</tr>
<tr>
<td>DANEHY, Edward A.</td>
<td>Sunnyvale, California</td>
<td>CPG 485</td>
</tr>
<tr>
<td>CARROW, George F.</td>
<td>Billings, Montana</td>
<td>CPG 397</td>
</tr>
<tr>
<td>DAVIS, George H.</td>
<td>Hyattsville, Maryland</td>
<td>CPG 707</td>
</tr>
<tr>
<td>DAVIS, Leon V.</td>
<td>Albuquerque, New Mexico</td>
<td>CPG 52</td>
</tr>
<tr>
<td>DAVIS, Morgan J.</td>
<td>Houston, Texas</td>
<td>CPG 428</td>
</tr>
<tr>
<td>DAVIS, Thornton</td>
<td>San Antonio, Texas</td>
<td>CPG 387</td>
</tr>
<tr>
<td>DAY, James R.</td>
<td>Denver, Colorado</td>
<td>CPG 127</td>
</tr>
</tbody>
</table>

APPENDIX 8—CHARTER MEMBERS 1-743

ADAMS, Elmo W. CPG 55
Burlingame, California

ADAMS, Linn F. CPG 305
San Francisco, California

ADAMS, William L. CPG 197
Oklahoma City, Oklahoma

ADENT, William A. CPG 306
Sacramento, California

ADLER, Joseph L., CPG 658
Houston, Texas

AGNEW, Allen F. CPG 240
Bloomington, Indiana

ALBISHEN, Eugene, CPG 307
Metuchen, New Jersey

ALLEN, Rhesa M. Jr., CPG 577
Ruston, Louisiana

ALLEN, Robert W. CPG 706
Knoxville, Tennessee

ALPHA, Andrew G., CPG 308
Torrance, California

ANDERSON, Robert W., CPG 588
Bakersfield, California

ARMSTRONG, Ureel S., CPG 600
Ventura, California

ASHLEY, Burton E., CPG 155
San Francisco, California

ATWATER, Gordon I., CPG 143
New Orleans, Louisiana

AURIN, Fritz L. CPG 354
Fort Worth, Texas

AYLER, Maynard F., CPG 252
Tripoli, Libya

AYLER, Richard B., CPG 578
Jefferson City, Missouri

BACKLUND, Alvin L. Jr., CPG 563
affayette, Louisiana

BERRY, Richard H., CPG 303
Alexandria, Virginia

BERRY, Richard M., CPG 616
Oklahoma City, Oklahoma

BEST, John B. Jr., CPG 426
Amarillo, Texas

BEVERIDGE, Thomas R., CPG 3
Rolla, Missouri

BIRCHUM, Jack R., CPG 586
Abilene, Texas

BIRDSEYE, Henry S., CPG 394
Albuquerque, New Mexico

BIRMAN, Joseph H., CPG 316
La Crescenta, California

BLACKSTONE, Donald L. Jr., CPG 317
Laramie, Wyoming

BLAHA, Robert W., CPG 441
Littleton, Colorado

BLOOM, Harold, CPG 334
Golden, Colorado

BLOOMER, Richard R., CPG 15
Abilene, Texas

BOARDMAN, Alexander C., CPG 442
Denver, Colorado

BROCKMAN, Frederick H. Jr., CPG 27
Houston, Texas

BOETTCHER, Jerome W., CPG 516
Wheatridge, Colorado

BOLING, Kenneth G., CPG 641
Rock hill, Missouri

BOLYARD, Dudley W., CPG 81
Littleton, Colorado

BONNEY, Baxter H., CPG 243
Abilene, Texas

BOOS, C. Maynard, CPG 710
Denver, Colorado

BOOS, Margaret F., CPG 711
Denver, Colorado

BOSHER, James R., CPG 695
Denver, Colorado

BOYD, Glen A., CPG 84
Isaaqah, Washington
APPENDIX 8—CHARTER MEMBERS 1-743

DAYTON, Morris E., CPG 507  
Tulsa, Oklahoma  
DEACON, Robert J., CPG 471  
Portland, Oregon  
DEAN, James W., CPG 685  
Littleton, Colorado  
DE BROSSE, Theodore A., CPG 82  
Columbus, Ohio  
DECUIS, L. Courtney, CPG 604  
San Francisco, California  
DE LA MONTAGNE, John, CPG 422  
Bozeman, Montana  
DEUTSCH, Martin J., CPG 665  
Englewood, Colorado  
DICKERSON, Benjamin F., III, CPG 681  
Salt Lake City, Utah  
DIDIER, Frank D., Jr, CPG 587  
Ventura, California  
DJKON, Howard R., CPG 181  
Bettendorf, Iowa  
DOBROVOLNY, Ernest C., CPG 443  
Denver, Colorado  
DOLLOFF, John H., CPG 180  
Deer, Colorado  
DONEGAN, Ben, CPG 648  
Abilene, Texas  
DOW, Verne E., CPG 732  
T靛pea, Arizona  
DOYLE, Francis P., CPG 111  
Corpus Christi, Texas  
DOWN, George R., CPG 388  
Denver, Colorado  
DRESSER, Hugh W., CPG 57  
Houston, Texas  
DUBITZKY, Roy H., CPG 455  
Roswell, New Mexico  
DUNLAP, Charles M., CPG 694  
Casper, Wyoming  
DUNWOODY, Joseph, CPG 389  
Bakersfield, California  
DYER, Charles F., CPG 111  
Louisville, Kentucky  
EARL, Fred N., CPG 6  
Butte, Montana  
EDGELL, Wendell R., CPG 621  
El Paso, Texas  
EDMONDSON, William F., CPG 390  
Bakersfield, California  
ELIAS, J. Morrow, CPG 421  
Los Angeles, California  
ELICKER, Richard E., CPG 564  
Oklahoma City, Oklahoma  
ELLISON, Samuel P., J., CPG 429  
Austi, Texas  
ELSTON, Wolfgang E., CPG 301  
Silver City, New Mexico  
ENLORS, Harold E., CPG 104  
Corvallas, Oregon  
ENNS, Chester O., J., CPG 88  
New York, New York  
ERICKSON, Arthur R., CPG 536  
Denver, Colorado  
ESCHNICK, Stanford, CPG 263  
Bakersfield, California  
ESPENSCHIED, Ernest K., CPG 282  
Bakersfield, California  
EVANS, David M., CPG 520  
Denver, Colorado  
EYAMANN, James L., CPG 605  
Carthage, California  
PACCI, William C., CPG 151  
Anchorage, Alaska  
FANTOZZI, Joseph H., CPG 525  
Santa Maria, California  
FAEMER, Dormon N., CPG 16  
Abilene, Texas  
FAUKNER, Glen L., CPG 635  
Arvada, Colorado  
FESTER, George H., CPG 391  
Glendale, California  
FELLOWS, Dean R., CPG 645  
Dallas, Texas  
FENTRESS, George H., CPG 521  
Lakewood, Colorado  
FEZETZ, Richard W., CPG 654  
Richardson, Texas  
FINCH, William C., CPG 680  
Englewood, Colorado  
FINE, Sponser F., CPG 69  
Los Angeles, California  
FINLEY, Emmett A., CPG 147  
Fairfax, Virginia  
FISHER, Charles K., CPG 227  
Denver, Colorado  
FISK, Henry G., CPG 398  
Darby, Montana  
FLAN, Peter T., CPG 430  
Austi, Texas  
FLETCHER, S. Richard, CPG 630  
Abilene, Texas  
FLOYD, Robert J., CPG 382  
Nashville, Tennessee  
FOLEY, Frank C., CPG 161  
Lawrence, Kansas  
FOOGE, Richard M., CPG 439  
Amherst, Massachusetts  
FOSTER, Frank W., CPG 383  
Boulder, Colorado  
FOSTER, Julian M., CPG 241  
Huntington, West Virginia  
FOUGERILL, Harold L., CPG 556  
Midland, Texas  
FOX, Portland P., CPG 544  
Cleveland, Tennessee  
FRAMES, Donald W., CPG 526  
Bakersfield, California  
FRANK, Glen W., CPG 406  
Kend, Ohio  
FRASCOGNA, Xavier M., Sr., CPG 565  
Jackson, Mississippi  
FRYE, John C., CPG 201  
Urban, Illinois  
FREKELL, Arne S., CPG 444  
Littleton, Colorado  
FUNDINGLUND, Ernest L., Jr, CPG 714  
Denver, Colorado  
GAINES, Gilbert, CPG 535  
Alhambra, California  
GAINES, Robert B., Jr, CPG 622  
Omaha, Nebraska  
GALBRATH, George S., CPG 632  
Abilene, Texas  
GALEY, John T., CPG 511  
Pittsburgh, Pennsylvania  
GANOPOLE, Gerald, CPG 103  
Anchorage, Alaska  
GARDETT, Peter H., CPG 527  
San Marino, California  
GARRETT, Howard L., CPG 721  
Billings, Montana  
GATLIN, Leroy, CPG 566  
Oklahoma City, Oklahoma  
GAZIK, William B., CPG 687  
Silver Spring, Maryland  
GESTER, Peter W., CPG 202  
Gilfide, California  
GILBERT, Ray E., CPG 58  
Denver, Colorado  
GIS, Wesley G., CPG 42  
Austin, Texas  
GJELSTEEN, Thor, CPG 78  
Denver, Colorado  
GLASS, Theodore G., CPG 133  
Mt. Vernon, Illinois  
GLOVER, Ellis D., CPG 682  
Denver, Colorado  
GOEBEL, Robert T., CPG 355  
Abilene, Texas  
GORDON, Edwin D., CPG 384  
Cheyenne, Wyoming  
GORTON, Kenneth A., CPG 703  
Golden, Colorado  
GOTCAUTAS, Vic, A., CPG 34  
Lafayette, Louisiana  
GOTH, Joseph H., Jr, CPG 431  
Casper, Wyoming  
GOULD, Donald B., CPG 385  
Denver, Colorado  
GOW, Kenneth L., CPG 733  
Houston, Texas  
GRAHAM, Charles E., CPG 376  
Granville, Ohio  
GRAHAM, Jack B., CPG 242  
New York, New York  
GRANT, Leland F., CPG 372  
Chattanooga, Tennessee  
GRAWE, Oliver R., CPG 544  
(Deceased)  
GRAY, Clifton H., Jr, CPG 378  
Riverside, California  
GRAY, Jerry J., CPG 467  
Albany, Oregon  
GRAY, Shapleigh G., CPG 702  
Wein, Texas  
GRIBI, Edward A., Jr, CPG 144  
King City, California  
GRIFFITH, Earl G., CPG 90  
Denver, Colorado  
GROFF, Sidney L., CPG 153  
Butte, Montana  
GRUSE, L. Trowbridge, CPG 379  
Golden, Colorado  
GULMON, Gordon W., CPG 33  
Natchez, Mississippi  
GUINERESEN, James N., CPG 380  
Los Angeles, California  
GUSSOW, William C., CPG 203  
Fullerton, California  
GUTSCHECK, Raymond C., CPG 283  
South Bend, Indiana  
HACKEL, Otto, CPG 228  
Bakersfield, California  
HACKER, Robert N., CPG 381  
Cataoga Park, California  
HAGEMAN, John A., CPG 264  
Brentwood, Tennessee  
HAGEMANN, Richard F., CPG 192  
Houston, Texas  
HAGNI, Richard D., CPG 549  
Rolla, Missouri  
HAIGLER, Leon B., CPG 43  
Roswell, New Mexico  
HALBOUTY, Michel T., CPG 10  
Houston, Texas  
HALL, Edward A., CPG 204  
Los Angeles, California  
HALL, Kempton B., CPG 217  
Ojai, California  
HALL, Robert B., CPG 284  
New York, New York  
HALL, William B., CPG 322  
Butte, Montana  
HAMPION, Paul E., CPG 722  
Portland, Oregon  
HANCOCK, Bob, CPG 44  
Oklahoma City, Oklahoma  
HANSELL, James M., CPG 285  
Littleton, Colorado  
HANSEN, Daisy C., CPG 218  
South Pasadena, California  
HANSEN, Miller, CPG 43  
Helena, Montana  
HANSON, Bernald M., CPG 187  
Midland, Texas  
HARDMAN, William D., CPG 179  
Nashville, Tennessee  
HARDER, James, C., CPG 581  
Lead, South Dakota  
HARDIN, Frank E., CPG 248  
Houston, Texas  
HARDIN, George C., Jr, CPG 77  
Oklahoma City, Oklahoma  
HARDING, Maynard W., CPG 637  
Los Angeles, California  
HARDING, Richard W., CPG 17  
State College, Pennsylvania  
HARING, Louis H., Jr, CPG 356  
San Antonio, Texas
APPENDIX 8—CHARTER MEMBERS 1-743

HARRIS, Steven H., CPG 582
Bismarck, North Dakota
HARRIS, Wilson G. Jr., CPG 286
Mt. Vernon, Illinois
HARRIS, Earl F., CPG 244
Auburn, Texas
HARRISON, P. Wyman, CPG 134
Norfolk, Virginia
HART, Peter C., CPG 211
Baltimore, Maryland
HARVEY, Castle J.C., CPG 631
Fort Worth, Texas
HASE, Donald H., CPG 438
Iowa City, Iowa
HAUN, John D., CPG 136
Evergreen, Colorado
HAVENOR, Kay C., CPG 673
Roosevelt, New Mexico
HAWKINS, Ralph D., CPG 591
Ventura, California
HAWLEY, Arthur S., CPG 486
Sacramento, California
HAYDEN, Russell J., CPG 91
Pocatello, Idaho
HAYES, John R., CPG 53
Denver, Colorado
HAYES, Paul L., CPG 606
Anaheim, California
HAYES, William, C.Jr., CPG 125
Rolla, Missouri
HAZZARD, John C., CPG 323
Los Angeles, California
HEBERTSON, Keith M., CPG 142
Los Angeles, California
HECK, E. T., CPG 413
Bradford, Pennsylvania
HEEDRICK, Hollis D., CPG 223
Princeton, New Jersey
HEINRICHS, Walter E. Jr., CPG 688
Tucson, Arizona
HEINTZ, Louis O., CPG 652
Los Angeles, California
HEINY, Leonard W., CPG 399
Casper, Wyoming
HELMIG, Phil D., CPG 404
Roosewell, New Mexico
HEMLUTH, Darrell N., CPG 265
Seattle, Washington
HENDRICK, Herbert E., Sr., CPG 545
Mount Vernon, Iowa
HENDRY, Charles W. Jr., CPG 160
Tallahassee, Florida
HERB, James J., CPG 557
Aubine, Texas
HEREY, William B. Jr., CPG 659
Dallas, Texas
HERRON, Robert F., CPG 324
Santa Barbara, California
HERSHIY, Alan R., CPG 325
Bakersfield, California
HERSHIY, H. Garland, CPG 287
Iowa City, Iowa
HERSHIY, Robert E., CPG 416
Nashville, Tennessee
HESSTAND, Thomas C., CPG 21
Denver, Colorado
HILL, Bruce P., CPG 266
Bakersfield, California
HILL, Mason L., CPG 20
Whittier, California
HILL, Melvin J., CPG 462
Whittier, California
HILL, Mason L., CPG 20
Reno, Nevada
HILL, Mason L., CPG 20
Sierra Madre, California
HILL, Mason L., CPG 20
Golden, Colorado
HILL, Mason L., CPG 20
Pittsburgh, Pennsylvania
HILL, Mason L., CPG 20
HINTZ, Lehi F., CPG 743
Provo, Utah
HIPKE, Dale A., CPG 558
Gainesville, Texas
HORSON, Henry D., CPG 478
Sierra Madre, California
HOCKMAN, Edwin L., CPG 437
Richmond, Virginia
HOFFACKER, Benjamin F., CPG 267
Midland, Texas
HOLLISTER, John C., CPG 286
Golden, Colorado
HOLT, Richard D., CPG 412
Roswell, New Mexico
HONKALA, Adolf U., CPG 7
Richmond, Virginia
HOOVER, Martin V., CPG 463
Worthington, Ohio
HOURO, Wallace B., CPG 163
Rolla, Missouri
HUFF, Donald F., CPG 445
Littleton, Colorado
HUGHES, Aden W., CPG 159
Los Angeles, California
HURLBY, E. William, CPG 689
Casper, Wyoming
HURLEY, Neal L., CPG 634
Long Beach, California
HUTCHINSON, Robert M., CPG 326
Golden, Colorado
IRVIN, Guy D., CPG 114
Amariillo, Texas
IVING, Irving G., CPG 115
Las Vegas, Nevada
JACOBSEN, Frank H. Jr., CPG 178
Pittsburgh, Pennsylvania
JACOBER, Gordon E., CPG 452
Englewood, Colorado
JACOBSEN, Eric C., CPG 487
Rolling Hills, California
JAHNS, Richard H., CPG 289
State College, Pennsylvania
JAMISON, Harrison C., CPG 327
Los Angeles, California
JENKE, Arthur Louis, CPG 191
Abilene, Texas
JOHNS, Willis M., CPG 328
Butte, Montana
JOHNSON, Philip W., CPG 644
Charleston, West Virginia
JOHNSON, Robert W., CPG 290
Knoxville, Tennessee
JOHNSON, Ross B., CPG 76
Lakewood, Colorado
JOHNSON, Vard H., CPG 329
Palo Alto, California
JONES, Vern C., CPG 291
Sacramento, California
JORDAN, Louise, CPG 617
Nirman, Oklahoma
KADAY, Frederick L. Jr., CPG 105
Chestert, New Jersey
KAPIENSKI, Robert W., CPG 423
Chicago, Illinois
KASKA, Harold V., CPG 188
Coral Gables, Florida
KAY, William H., CPG 26
Arvada, Colorado
KELLER, John M., CPG 330
Knoxville, Tennessee
KELLY, John M., CPG 456
Washington, D.C.
KELLY, Thomas E., CPG 625
Houston, Texas
KENNEDY, William E., CPG 332
Glendale, California
KESLER, Thomas L., CPG 331
Kings Mountain, North Carolina
KILKENNY, John E., CPG 59
Alhambra, California
KING, Vernon L., CPG 488
Los Angeles, California
KINGMAN, Owen, CPG 417
Ducktown, Tennessee
KINNEY, Edward E., CPG 712
Arlington, New York
KIRKPATRICK, Darrel L., CPG 554
Bakersfield, California
KISTLER, James O., CPG 335
Bakersfield, California
KISTLER, Philip R., CPG 592
Los Angeles, California
KLAER, Fred H. Jr., CPG 75
Columbus, Ohio
KLEINHOFT, Dean, CPG 583
La Habra, California
KNIEBEL, George M., CPG 411
Sarasota, New York
KNIGHT, Jack W., CPG 116
Denver, Colorado
KNIGHT, Robert D., CPG 30
Rolla, Missouri
KNIGHT, William V., CPG 153
Tulsa, Oklahoma
KNouse, W. Stanley, CPG 607
Beverly Hills, California
KNOX, Robert J., CPG 716
Denver, Colorado
KOENIG, John W., CPG 141
Rolla, Missouri
KOENIG, Karl J., CPG 683
College Station, Texas
KOTTROWSKI, Frank E., CPG 56
Sacramento, New Mexico
KRAUSKOPF, Konrad B., CPG 229
Stanford, California
KRINTZITZKY, E. L., CPG 92
Vicksburg, Mississippi
KRUGER, Max L., CPG 472
Laramie, Wyoming
KUEHNER, Harold A., CPG 537
Oklahoma City, Oklahoma
RUIN, Truman H., CPG 177
Golden, Colorado
LAHLE, Frederic H., CPG 357
Dallas, Texas
LAIRD, Wilson M., CPG 176
Grand Forks, North Dakota
LANCESTER, L. K., CPG 63
Dallas, Texas
LANDIS, Kenneth K., CPG 292
Ann Arbor, Michigan
LANE, Phillip J., CPG 573
Casper, Wyoming
LARSON, Wilbert S., CPG 18
Denver, Colorado
LAWELL, Troy J., CPG 418
State College, Mississippi
LAUER, Robert A., CPG 175
Knoxville, Tennessee
LAVEN, John P. Jr., CPG 608
Bakersfield, California
LEDINGHAM, Glen W., CPG 473
The Hague, Netherlands
LEE, Allen T., CPG 696
San Marco, California
LEDES, David J., CPG 674
Los Angeles, California
LEFOND, Stanley J., CPG 550
Euclid, Ohio
LEGGETTE, R. M., CPG 174
New York, New York
LEHMANN, Ernest K., CPG 583
Minneapolis, Minnesota
LEITZ, C. J., CPG 132
Raleigh, North Carolina
LE MAY, William J., CPG 574
Bakersfield, California
LIMBERT, Edward J., CPG 743
Tallahassee, Florida
LINN, John W., CPG 116
Mount Vernon, Iowa
LINDGREN, Donald W., CPG 468
Tulsa, Oklahoma
LINDIG, Robert J., CPG 474
Bakersfield, California
LIND, Spencer, CPG 205
Bakersfield, California
LIVADIS, Thomas, CPG 205
Bakersfield, California
LIVINGSTON, Robert F., CPG 326
Denver, Colorado
LIPPS, Henry, CPG 584
St. Paul, Minnesota
LITZ, Leslie L., CPG 205
Bakersfield, California
LOVE, Donald L., CPG 489
Bakersfield, California
LOZEREN, R. A., CPG 474
Tulsa, Oklahoma
LINDGREN, Donald W., CPG 468
Wayzata, Minnesota
LINDVALL, Robert C., CPG 337
Denver, Colorado
LONG, Robert E., CPG 338
Long Beach, California
LONG, William R., CPG 293
Shreveport, Louisana
LOUCKS, Gerald G., CPG 717
Brookfield, California
LOURE, Monzell R., CPG 490
Bakersfield, California
-241-
METTLER, Steward D., CPG 295
Lakewood, Colorado
MERWIN, Stuart S., CPG 346
MERRILL, William R., CPG 345
Norman, Oklahoma
MELTON, Frank A., CPG 14
MELLEN, Frederic F., CPG 149
MELBYE, Charles E., CPG 344
MEAGHER, David P., CPG 456
Oklahoma City, Oklahoma
MC MURTRY, Wilbur E., CPG 272
Winnetka, Illinois
MC GARR, H. J., CPG 185
Golden, Colorado
MC DONALD, Ralph L., CPG 140
Morgantown, West Virginia
MC COLLUM, Leonard F., CPG 660
Houston, Texas
MCORD, Wallace R., CPG 339
Morgantown, West Virginia
MC DONALD, Ralph L., CPG 140
Golden, Colorado
MC GARR, H. J., CPG 185
Redding, California
MC KEE, Ethel M., CPG 737
Winnetka, Illinois
MC MURTRY, Wilbur E., CPG 272
Oklahoma City, Oklahoma
MEAGHER, David P., CPG 456
Tulsa, Oklahoma
MELEYE, Charles E., CPG 344
Golden, Colorado
MELLEN, Frederic F., CPG 149
Jackson, Mississippi
MELTON, Frank A., CPG 14
Norman, Oklahoma
MERRILL, William R., CPG 345
Intramuros, Manila Philippines
MERWIN, Stuart S., CPG 346
Lakewood, Colorado
METTLER, Steward D., CPG 295
Cedar Rapids, Iowa
MEYER, Gerald, CPG 723
Vienna, Virginia
MEYERHOFF, Howard A., CPG 436
Philadelphia, Pennsylvania
MILES, Owen P., Jr., CPG 137
Casper, Wyoming
MILLER, Daniel N. Jr., CPG 64
Carbondale, Illinois
MILLER, Fred, CPG 74
Denver, Colorado
MILLER, Robert R., CPG 509
Omaha, Nebraska
MILLISON, Clark, CPG 715
Englewood, Colorado
MITCHELL, James G., CPG 273
Denver, Colorado
MOHR, Clifford L., CPG 27
Golden, Colorado
MONAHAN, Rex, CPG 424
Sturgis, Colorado
MONEYMAKER, Berleen C., CPG 705
Knoxville, Tennessee
MOODY, Graham B., CPG 168
Berkeley, California
MORGAN, Ray E., CPG 650
Rolla, Missouri
MORLEY, Earl R. Jr., CPG 93
Redondo Beach, California
MORRIS, James P., CPG 679
Dallas, Texas
MORRIS, Lawrence K., CPG 670
Los Angeles, California
MORTON, Paul K., CPG 491
Pico Rivera, California
MOURANT, Walter A. H., CPG 246
Albuquerque, New Mexico
MURSING, Siegfried, CPG 492
Pasadena, California
MUIRE, Forrest H. Jr., CPG 347
Abilene, Texas
MUNOZ, Robert R., CPG 720
Denver, Colorado
MUNTIAN, Arthur C., CPG 117
Virginia Beach, Virginia
MURPHY, Leonard A., CPG 655
Lakewood, Colorado
MURPHY, Robert E., CPG 575
Ruswell, New Mexico
MURPHY, T. D., CPG 60
Berkeley Springs, West Virginia
MURRAY, Donald K., CPG 446
Denver, Colorado
MURRAY, Grover E., CPG 94
Baton Rouge, Louisiana
NAIL, Jack D., CPG 483
Los Angeles, California
NATLAND, Manley L., CPG 166
Los Angeles, California
NERL, Henry H., CPG 528
Los Angeles, California
NEWBY, Jerry B., CPG 249
Oklahoma City, Oklahoma
NEWITT, Louis A., CPG 190
San Antonio, Texas
NEWTON, William A., CPG 8
Denver, Colorado
NICHOLS, J. L., CPG 727
Billings, Montana
NICHOLS, William E., CPG 686
Liberal, Kansas
NIENABER, James H., CPG 447
Evergreen, Colorado
NOLAN, Thomas B., CPG 475
Washington, D.C.
NORTHUTT, Warner C., CPG 22
Loveland, Colorado
OAKESHOTT, Gordon B., CPG 45
San Francisco, California
OBORNE, Harry W., CPG 123
Colorado Springs, Colorado
OFOYLE, Charles C., CPG 55
Denver, Colorado
O'BRIAN, Larry E., CPG 522
Denver, Colorado
O'BRIEN, Jerome J., CPG 611
Los Angeles, California
O'BURNE, Richard C., CPG 158
Denver, Colorado
OFF, Theodore, CPG 619
Ventura, California
OGLE, Burdette A., CPG 348
Denver, Colorado
OLEŚ, Keith F., CPG 333
Corvallis, Oregon
ORTALBA, Robert A., CPG 296
Bakersfield, California
OSBORNE, Allan B., CPG 576
Omaha, Nebraska
OSMOND, John C., CPG 538
Salt Lake City, Utah
OWEN, Edgar W., CPG 559
San Antonio, Texas
OXMAN, Dale D., CPG 450
Denver, Colorado
PAIGE, Russell A., CPG 626
Oxnard, California
PAINE, William R., CPG 728
Lafayette, Louisiana
PARK, William H., CPG 584
Bakersfield, California
PARKER, Ben H., CPG 5
Denver, Colorado
PARKER, Ben H. Jr., CPG 212
New York, New York
PARKER, Gerald G., CPG 691
Denver, Colorado
PARKER, John M., CPG 230
Denver, Colorado
PARKER, Richard L., CPG 433
Amarillo, Texas
PASCHALL, Robert H., CPG 118
Sacramento, California
PASSEL, Charles F., CPG 245
Fort Worth, Texas
PATCHICK, Paul F., CPG 400
White Bear Lake, Minnesota
PATTERSON, Thomas J., CPG 213
Lakeeland, Florida
PAYNE, Max B., CPG 612
Bakersfield, California
PEDRY, John J., CPG 434
Casper, Wyoming
PEFLEY, David R., CPG 704
Littleton, Colorado
PEIRSON, A. Lawrence III, CPG 401
Acton, Massachusetts
PERINI, Vincent C. Jr., CPG 101
(Deceased)
PERKINS, James M., CPG 31
Houston, Texas
PERK, J. Kent, CPG 503
Lakewood, Colorado
PESIEK, Erwin F. Sr., CPG 458
Oklahoma City, Oklahoma
PETERSON, James A., CPG 349
Farmingdale, New Mexico
PETERSON, Marvin L., CPG 119
Bethel Park, Pennsylvania
PETERSON, Reed L., CPG 152
Bethel Park, Pennsylvania
PHILBRICK, Shailer S., CPG 274
Pittsburgh, Pennsylvania
PICKETT, Eli S., CPG 494
Whittier, California
PICKRELL, Daniel J., CPG 651
San Francisco, California
PIERCE, Richard L., CPG 358
Bakersfield, California
PINCUS, Howard J., CPG 65
Worthington, Ohio
PITTMAN, Gardner M., CPG 529
Bakersfield, California
PITTMAN, Howard M., CPG 736
San Antonio, Texas
PORTER, Frederick C., CPG 530
Bakersfield, California

APPENDIX 8—CHARTER MEMBERS 1-743

–242–
RUSHING, Robert S., CPG 232
Flagstaff, Arizona

RUSH, Richard W., CPG 231

RUPNIK, John J., CPG 618

RUTHERFORD, Homer M., CPG 677

RUTTER, Ryan B., CPG 642

Rutledge, Texas

RUTLEDGE, William S., CPG 106

Ryan, Jack W., CPG 89

Ryan, John H., CPG 611

SABIN, Uomo M., CPG 207

Butte, Montana

SATERDAL, A., CPG 351

Sauter, Idaho

SCHLUETHER, Earle B., CPG 68

Denver, Colorado

SCHLICKER, Herbert G., CPG 389

Portland, Oregon

SCHEIDEN, Henry C., CPG 531

Boulder, Colorado

SCHURR, John D., CPG 114

Mountain View, California

SCOTT, Howard F., CPG 560

San Antonio, Texas

SCOTT, David M., CPG 286

San Antonio, Texas

SCOTT, Edward J., CPG 126

San Antonio, Texas

SCOTT, Tiffany L., CPG 98

San Antonio, Texas

SCOTT, William M., CPG 497

Long Beach, California

SCHULLER, Allen B., CPG 233

Spenard, Alaska

SEARLS, William A., CPG 540

Casper, Wyoming

SEDAY, Henry D., CPG 512

Bakersfield, California

SEFFRIT, William H., CPG 562

Los Angeles, California

SEIFERT, William A., CPG 13

Salt Lake City, Utah

SERENIOS, Franklin L., CPG 32

Bakersfield, California

SERPENTINO, Michael J., CPG 73

San Diego, California

SHEARER, Eugene M., CPG 453

Denver, Colorado

SHAW, John F., CPG 207

Bakersfield, California

SHAVKII, Arthur T., CPG 502

Austin, Texas

SHILLER, Robert B., CPG 167

Bedford, Massachusetts

SHIRN, Lawrence D., CPG 362

Ft. Worth, Texas

SHOUP, Russell W., CPG 533

Bakersfield, California

SHUCK, Gordon W., CPG 527

Los Angeles, California

SIEGEL, Thomas F., CPG 420

Bakersfield, California

SIEKER, Russell L., CPG 451

Bakersfield, California

SIEGEL, Jack W., CPG 739

Salt Lake City, Utah

SIEVE, Howard C., CPG 208

Denver, Colorado

SILCOX, John H., CPG 362

Bakersfield, California

SIMPSON, Benjamin T., CPG 129

Houston, Texas

SIMPSON, Howard E., CPG 639

Golden, Colorado

SINGLE, Erwin L., CPG 247

Denver, Colorado

SKLAR, Maurice, CPG 532

Los Angeles, California

SMAIT, Robert R., CPG 498

San Gabriel, California

SMITH, Fred L., CPG 692

Houston, Texas

SMITH, Raymond, CPG 219

Ventura, California

SPALDING, Arthur O., CPG 29

Los Angeles, California

SPACE, William H., CPG 562

San Antonio, Texas

SPATA, Frank J., CPG 693

Auburn, Texas

SREP, Alfred C., CPG 154

Rolla, Missouri

SQUIRES, Bill J., CPG 670

Arvada, Colorado

STANIFORD, Francis L., CPG 636

Evansville, Indiana

STARK, Howard E., CPG 499

Long Beach, California

STEAD, Frederick L., CPG 567

Magnolia, Arkansas

STEAMS, Richard G., CPG 298

Nashville, Tennessee

STEHLER, Carl Jr., CPG 363

Oxnard, California

STEPHENSON, Robert C., CPG 738

Columbus, Ohio

STEVENS, Elick G., CPG 505

Auburn, Texas

STICKEL, John F. Jr., CPG 671

Los Angeles, California

STROMBECK, Franklin H., CPG 729

Oklahoma City, Oklahoma

SULLIVAN, Harold H., CPG 196

North Hollywood, California

SUPP, Carl W. A., CPG 109

Baltimore, Maryland

SWANSON, Robert L., CPG 359

Auburn, Texas

SWEET, John W., CPG 126

Anchorage, Alaska

SWINGLE, George D., CPG 302

Knoxville, Tennessee

TABOR, Lawrence L., CPG 500

San Francisco, California

TAKKEN, Suzanne, CPG 568

Oklahoma City, Oklahoma

TAYLOR, John A., CPG 237

Oklahoma City, Oklahoma

TAYLOR, Warren L., CPG 364

Littleton, Colorado

TEITSWORTH, Robert A., CPG 299

Bakersfield, California

TESTER, Allen C., CPG 2

Iowa City, Iowa

THOMAS, Horace D., CPG 214

Laramie, Wyoming

THOMPSON, Raymond M., CPG 47

Englewood, Colorado

THREET, Richard L., CPG 365

San Diego, California

THURSTON, William, CPG 514

Washington, D.C.

TINDELL, William N., CPG 562

Auburn, Texas

TOMKINS, Jack Q., CPG 739

Salt Lake City, Utah

TOMPINS, Joseph D., CPG 661

Auburn, Texas

TOTTEN, Stan W., CPG 222

San Francisco, California

TRAVIS, Everett J., CPG 435

San Antonio, Texas

TRAVIS, Richard S., CPG 106

Los Angeles, California

TRAXLER, J. Douglas, CPG 366

Pacific Palisades, California

TROSTER, John G., CPG 597

Atherton, California

TRUKE, John F., CPG 107

Casper, Wyoming

TROWBRIDGE, Arthur H., CPG 224

Metairie, Louisiana

TRXEL, Ben W., CPG 220

Inglewood, California

TUCKER, Charles A. Jr., CPG 150

Mt. Vernon, Illinois

TURK, Len B., CPG 277

Oklahoma City, Oklahoma

APPENDIX 8—CHARTER MEMBERS 1-743
APPENDIX 8—CHARTER MEMBERS 1-743

Abilene, Texas
WASSON, Edward B., CPG 51
Denver, Colorado
WAYLAND, Russell G., CPG 597
Los Angeles, California
WAYNE, William J., CPG 250
Bloomington, Indiana
WEBB, George H. Jr., CPG 615
Bakersfield, California
WEBB, Kenneth W., CPG 633
Aurora, Colorado
WEBSTER, Cutler, CPG 139
Bakersfield, California

WAGNER, Norman S., CPG 70
Baker, Oregon
WAGNER, Robert W., CPG 369
Santa Fe Springs, California
WAGNER, Warren R., CPG 170
St. Louis, Missouri
WAHLSTROM, Ernest E., CPG 69
Boulder, Colorado
WALKER, Alfred C., CPG 408
Westerville, Ohio
WALKER, Frank H., CPG 40
Lexington, Kentucky
WALLACE, Winfield R., CPG 646
Wichita Falls, Texas
WALROND, Henry, CPG 502
Bakersfield, California
WANGSNESS, Orrin J., CPG 370
Bakersfield, California
WARGO, Joseph G., CPG 54
Prescott, Arizona
WARRIN, L. Coy, CPG 596

Abilene, Texas
WASSON, Edward B., CPG 51
Denver, Colorado
WAYLAND, Russell G., CPG 597
Los Angeles, California
WAYNE, William J., CPG 250
Bloomington, Indiana
WEBB, George H. Jr., CPG 615
Bakersfield, California
WEBB, Kenneth W., CPG 633
Aurora, Colorado
WEBSTER, Cutler, CPG 139
Bakersfield, California

WAGNER, Norman S., CPG 70
Baker, Oregon
WAGNER, Robert W., CPG 369
Santa Fe Springs, California
WAGNER, Warren R., CPG 170
St. Louis, Missouri
WAHLSTROM, Ernest E., CPG 69
Boulder, Colorado
WALKER, Alfred C., CPG 408
Westerville, Ohio
WALKER, Frank H., CPG 40
Lexington, Kentucky
WALLACE, Winfield R., CPG 646
Wichita Falls, Texas
WALROND, Henry, CPG 502
Bakersfield, California
WANGSNESS, Orrin J., CPG 370
Bakersfield, California
WARGO, Joseph G., CPG 54
Prescott, Arizona
WARRIN, L. Coy, CPG 596

Abilene, Texas
WASSON, Edward B., CPG 51
Denver, Colorado
WAYLAND, Russell G., CPG 597
Los Angeles, California
WAYNE, William J., CPG 250
Bloomington, Indiana
WEBB, George H. Jr., CPG 615
Bakersfield, California
WEBB, Kenneth W., CPG 633
Aurora, Colorado
WEBSTER, Cutler, CPG 139
Bakersfield, California

WAGNER, Norman S., CPG 70
Baker, Oregon
WAGNER, Robert W., CPG 369
Santa Fe Springs, California
WAGNER, Warren R., CPG 170
St. Louis, Missouri
WAHLSTROM, Ernest E., CPG 69
Boulder, Colorado
WALKER, Alfred C., CPG 408
Westerville, Ohio
WALKER, Frank H., CPG 40
Lexington, Kentucky
WALLACE, Winfield R., CPG 646
Wichita Falls, Texas
WALROND, Henry, CPG 502
Bakersfield, California
WANGSNESS, Orrin J., CPG 370
Bakersfield, California
WARGO, Joseph G., CPG 54
Prescott, Arizona
WARRIN, L. Coy, CPG 596

Abilene, Texas
WASSON, Edward B., CPG 51
Denver, Colorado
WAYLAND, Russell G., CPG 597
Los Angeles, California
WAYNE, William J., CPG 250
Bloomington, Indiana
WEBB, George H. Jr., CPG 615
Bakersfield, California
WEBB, Kenneth W., CPG 633
Aurora, Colorado
WEBSTER, Cutler, CPG 139
Bakersfield, California

WAGNER, Norman S., CPG 70
Baker, Oregon
WAGNER, Robert W., CPG 369
Santa Fe Springs, California
WAGNER, Warren R., CPG 170
St. Louis, Missouri
WAHLSTROM, Ernest E., CPG 69
Boulder, Colorado
WALKER, Alfred C., CPG 408
Westerville, Ohio
WALKER, Frank H., CPG 40
Lexington, Kentucky
WALLACE, Winfield R., CPG 646
Wichita Falls, Texas
WALROND, Henry, CPG 502
Bakersfield, California
WANGSNESS, Orrin J., CPG 370
Bakersfield, California
WARGO, Joseph G., CPG 54
Prescott, Arizona
WARRIN, L. Coy, CPG 596
Selected Speeches and Papers by CPGs

Note: 18 CPGs gave Congressional Testimony in the turbulent years 1975-1989. For the record, all testimonies are listed here. However, owing to their length, most are not printed here, but can be found in TPG for the year mentioned.

1961 Ben H. Parker - “Attributes of the Geologic Profession”
1963 Edward E. Rue - Minutes of Organizational Meeting and the Founding Convention (see text, The Formative Years)
1963 Edward E. Rue and Robert Hancock - Roster of 94 Attendees of the Founding Convention
1963 Martin Van Couvering - First four “AIPG Bulletins”
1964 William A. Newton and Mrs. Howard Rothrock - Minutes of first Annual Meeting
1965 Grover E. Murray, et al. - Minutes of AAGP/AIPG/SIPES Meeting on Registration
1965 Frank B. Conselman - “The Challenge of Professional Geology”
1965 Grover E. Murray - “The Responsibilities of a Geologist to his profession” (see text, 1978)
1968 Michel T. Halbouty - “The Impact of Natural Resources on Society”
1968 John T. Galey - “Blueprint for Action” (see text, 1968)
1968 James R. Dunn - “Motivation and the AIPG”
1969 R. Dana Russell - “Comments to the Association of Engineering Geologists” (herein) and “Why AIPG?” and “Let’s Talk” (see text, 1969)
1970 Henry H. Neel - “The Active and the Indolent,” “Finale” and “Natural Resources vs. Environment” (see text, 1970)
1970 William A. Newton - “Proposed Environmental Geology Center” (see text, 1968)
1970 Fred L. Fox - “Our Professional Image”
1971 Tom A. Simpson, et al. - Report of the Public Relations Committee
1972 Neilson Rudd - “Geology as a Profession” (see text, 1972)
1974 Allen F. Agnew - “Environmental Geology — A Wasted Asset”
1974 Frank B. Conselman - Presidential Address at Annual Meeting
1975 Ian Campbell - “Is the Game Worth the Candle? (Reflections on Registration of Geologists)”
1975 Arthur O. Spaulding - Congressional Testimonies: Outer Continental Shelf, and Management of Public Lands
1975 Kenneth H. Crandall - Congressional Testimony: Outer Continental Shelf
1975 Edith Mc Kee – Congressional Testimony: Coastal Zone Management
1975 Burdette A. Ogle - “Energy, Minerals, Development: The PROs vs. the CONs”
1976 John D. Haun - “Professionalism and the Geological Scientist” (see text, 1976)
1976 Walter E. Heinrichs, Jr. - Congressional Testimony: Federal Lands
1976 Fred L. Stead - Congressional Testimony: Federal Lands
1976 Howard Hansen - Congressional Testimony: Outer Continental Shelf
1976 John T. Galey - Congressional Testimony: Natural Gas Shortage
1977 John T. Galey - Congressional Testimony: Outer Continental Shelf
1977 James W. Skehan - Congressional Testimony: Hazards of Earthquakes
1977 John A. Taylor - Congressional Testimony: Outer Continental Shelf
1977 TS Ary - Congressional Testimonies: Alaska Lands, and Mining Law Reform
1977 Kelsey L. Boltz - Congressional Testimony: Mining Law Reform
1978 Eugene B. Waggoner - Congressional Testimony: Dam Safety
1978 Adolf U. Honkala - “The Individual Consultant” (see text, 1973)
1979 Edward E. Rue - “Why AIPG?” (see text, 1979)
1980 James R. Dunn - “Join the World” and “The State of AIPG” (see text, 1980)
1981 John W. Rold “AIPG Around the Country” and “Education and AIPG” (see text, 1981)
1983 Lee C. Gerhard - “Comments on Professionalism in the Academic World”
1983 Larry D. Woodfork - “My Objectives” (see text 1983)
1984 Dean Grafton - “The Institute Message” (see text, 1984)
1984 Richard M. Foose - “Reflections on Professional Geology”
1984 Allen F. Agnew - Congressional Testimony: National Policy on Ground Water Protection
1985 Ernest K. Lehmann - “Institute is a Professional Organization in the Public Eye” and letter to Secretary Hodel (see text, 1985)
1986 Travis H. Hughes - “AIPG Size Reflects Service Value” (see text, 1986)
1987 Bob Sprinkel - “Why AIPG?”
1988 Sam R. Evans - ”President’s Address to Members” and “AIPG Responds to Kentucky Engineers” (see text, 1988)
1989 Donald Fife - Congressional Testimonies: The 1872 Mining Law is a National Asset, and The Myth of the ‘Fragile’ Desert
1989 Fred L. Fox - Consultant’s Column: “Starting Your Own Consulting Practice”
1989 Richard J. Proctor - “State Registration of Geologists” and “Regulations, Regulations, Regulations” (see text, 1989)
1989 Gerald V. Mendenhall - “Certification of Ethics”
1989 Alan B. Stover - Basic Antitrust for Associations
1990 Susan M. Landon - “Multiple Working Hypotheses” (see text, 1990) and “Registration for Geologists”
1990 William V. Knight - “What the Students Tell Me”
1990 William V. Knight – “From Russia With Love” (see text, 1990)
1990 Richard A. Fox - “The Professional Geologist in Europe”
1991 Hadyn H. Murray - “Environmental Issues” (see text, 1991)
1992 James R. Dunn - “America the Beautiful”
1992 James H. Williams and Brian J. Swenty - “The Geologist and the Engineer”
1993 William L. Fisher - “The New and Emerging Domestic Oil and Gas Industry” (see text, 1993)
1994 Russ Slayback - “Learning the Ropes” and “The Winds of Change—Are They Blowing or Do I Just Feel Good ‘Cause it’s Spring?” (see text, 1994)
1994 William V. Knight - “Professional Society?—Scientific Society?—What’s the Difference?—Why Have Both?”
1995 Richard C. Fountain - “A New Year” (see text, 1995)
1995 Ronald A. Baugh - “Now That I’m a Registered Geologist, Do I Need to Keep my AIPG Membership? YES!”
1995 Jonathan G. Price - “AIPG at the Forefront” (see text, 1997)
1995 Robert K. Merrill - “Vision for AIPG’s Future,” “World Geologists” and “At the Interface of the Geological and Biological Sciences” (see text, 1996)
1997 William J. Siok - “AIPG of the Future”
1998 Stephen M. Testa - Why AIPG?,” and “Some Thoughts on Professional Development” (see text, 1998)
1998 Stephen M. Testa - Testimony before the USGS on unfair competition (see text, 1998)
1998 David M. Abbott, Jr. - “What are Professional Practices and how do they Relate to Professional Ethics?”
1998 Fred L. Fox - “Are Ethics Being or Doing?”
1998 Thomas G. Fails - “Student Recruiting—What Are We Doing Wrong?” (see text, 1999)
1999 Hugh Hay-Roe - “Ten Commandments for Presenters”
1999 Roy J. Shlemon - “The Hazard of Geologic Hazards to Geology”
2000 Dennis Pennington – “Societies and Policy Makers” (see text)
2001 Robert H. Fakundiny–President’s Message (see text)
2002 Lawrence Cerrillo–President’s Message (see text)
2003 Richard M. Powers–President’s Message (see text)

Attributes of the Geologic Profession*
By Ben H. Parker

I submit that the application of petroleum geology is a profession based on science. But with acknowledged difference of opinion let us look for decisive fact.

Webster says that science is any branch or department of systematized knowledge considered as a distinct field or object of study while profession is defined as “a calling in which one professes to have acquired some special knowledge used by way either of instructing, guiding or advising others or of serving them in some branch of learning or science.”

With these distinctions in focus I have no doubt personally that most petroleum geologists are working in a truly professional aspect of our science. That is, the predominant
majority of petroleum geologists are either instructing or advising others or are serving others through a knowledge of geologic science. To me this fact of service to others or the practical application of geologic science is so apparent as to be a truism. However, this acceptance of the professional development of our science is not universal. There are members of our association (AAPG) who believe that geology is a science perishable and who recognize small reason for its professional development. With these I do take exception, but because of their belief on the subject I think that some inquiry into our professional status is timely.

In addition to the aspect of service to others based on scientific knowledge the geologic profession is distinguished from non-professional occupations by certain characteristics. These are qualities which are common to a greater or lesser degree to all professions. It is through the development of these attributes that professional evolution occurs. These characteristics are more highly developed in some professions such as law, medicine and clergy than in others including geology.

Ernest Greenwood, a sociologist at the University of California, has made a critical review of the sociological literature on occupations. He found that all professions seem to possess five elements which distinguish them from non-professional occupations. These characteristics are: (1) a systematic body of theory, (2) authority, (3) community sanction, (4) ethical codes, and (5) a culture.

These five elements essential to professions which are considered at length by Greenwood are hereinafter defined briefly by abridgment from his summary of professional attributes.

**Systematic body of theory** is that fund of knowledge that has been organized into an internally consistent system. Because understanding of this theory is so important to professional skill, preparation for a profession must be an intellectual as well as a practical experience.

**Professional authority** is the right, mutually recognized by professional and client, for full and absolute authority in all professional matters to be assumed by the professional as contrasted with the comparative ignorance of the laymen. This attribute reaches its full development in the professions of law and medicine where the professional, once selected and engaged by the client, dictates unconditionally what is good or evil for the client. Such absolute authority carries with it, of course, great responsibility.

**Community sanction** of a profession is the official granting of authority beyond that conceded by the individual client. It results in a series of monopolistic powers and privileges formally or informally recognized by citizens generally or by a governmental unit.

**Ethical codes** are the self-imposed regulative systems of rules and regulations which encourage or compel honorable behavior on the part of the members of the profession.

**Professional culture** consists of a profession’s own standards of values, norms and symbols. It commonly develops a unique social structure resulting from formal and informal association of work groups, research groups and various professional associations and the behavior patterns accepted as appropriate in the professional society. In some areas of certain professions such as law and clergy the symbols of specialized culture extend so far as to include distinctive dress.

These then are the characteristic elements of professions generally.

To me, none of the five professional characteristics just defined appears foreign to petroleum geology. Two of them, body of theory and code of ethics, are indeed well developed and appear as the dominant attributes of our profession. The others, authority, sanction and specialized professional culture, have not been nurtured to the same degree as in some other professions. These others are not completely lacking in our professional individuality however.

By far the most important of our attributes is our body of scientific theory—our organized geologic knowledge. This is the one characteristic which gives us our identity and distinguishes us most clearly from other occupations and professions . . . I state with confidence that geologists can have great pride in comparing the state of geologic knowledge with that of other sciences.

Standing hand in hand with our towering assemblage of geologic knowledge are distinct professional obligations. These are threefold—first, to see that this knowledge is properly unfolded and applied for the benefit of our employers, clients and mankind generally; secondly, to see that it is readily available to properly qualified researchers and aspiring students; and last and most important, to make certain that there is free opportunity and proper climate for the continuing growth and development of geologic knowledge.

One area of serious deficiency in the utilization of our body of scientific theory does, however, in my opinion, exist. This is our failure to give maximum stimulus to our profession for full and continuing use of our ever expanding fund of geologic knowledge. I submit that to meet this need we should give encouragement to the organization of working, scientific institutes which would give opportunities to geologists to continue personal professional education on a formal basis outside of existing academic programs. Through this development the status of our profession would be continually elevated.

The second of the dominant attributes of our profession is our ethical codes. Greenwood observes that the ethical codes of professions generally are to give assurance against abuses that might develop as a result of the monopolies commonly enjoyed. Petroleum geologists can take pride in the fact that our code of professional ethics has evolved for another reason; not primarily to protect a professional monopoly but rather because of the inherent desire of the very great majority of geologists to deal fairly with employer, client and fellow geologists alike. Without engaging in "witch hunts" we must be alert and continually on guard to uphold and to strengthen this code of ethics—an attribute essential to our professional recognition. As individuals and as an association we must have the fortitude required to face squarely violations in ethical behavior and where necessary to enforce indicated sanctions to discourage such infringements.

In geology, professional authority has been more generally existent than is commonly perceived. In usual cases the geologist’s ultimate employer or client is not an earth scientist and must, therefore place full faith and responsibility in
the professional judgment and skill of the geologist employed. It is this investiture of faith and the acceptance of responsibility that gives another confirmation of the professional relationship. Professional authority is indeed nothing more than a full measure of confidence expressed by those for whom we work. The critical need for its better development is shown by the custom recently prevalent in some quarters of calling on ‘experts’ from outside the profession to establish the patterns of geologic programs and staff organizations.

Where professional authority is granted, a responsibility, a fidelity of trust attaches itself to the authority accepted. This brings a greater accountability than may at first be apparent. Among these obligations is a duty to find ways to assure a proper balance between the number of scientists being trained in geology and the number of trained recruits to the profession needed at any time.

A second responsibility allied to our professional authority is the need to work for the full utilization of geologic training and experience in every needed and proper field. In this regard our profession has been lamentably negligent at times. A case in point is that of the rather common practice of the determination of ore reserves in mineral deposits by mining engineers. The engineering analysis is so dependent upon geologic factors completely foreign to empirical engineering observations as to require the use of geologic knowledge in the determination of the problem. Nevertheless, to a considerable degree we geologists have repeatedly stood passively aside and permitted engineers without adequate geologic training and experience to undertake these important activities. Experience has shown that in many such cases the lack of geologic knowledge has added greatly to the ultimate cost of these projects. It is our professional duty to see that endeavors such as these, which are eminently geologic in nature, or which need the benefit of some geologic knowledge, be given proper direction and execution by professional geologists. So long as we fail to do this we continue to be negligent not only to our own profession but also in the execution of our duties to the public at large.

In some professions the individual professional authority granted by individuals has been projected forward and officially recognized. It then becomes a community sanction of professional powers. Examples of highly developed community sanction may be seen in the medical and legal professions. Here legal codes prohibit an individual from assuming a professional title unless it has been conferred by an accredited professional school. In my judgment some such authorizations for professional public practice is a necessity for the best interests of all concerned. I urge you to accept the professional responsibility of finding the most feasible solution to this problem. If we fail to do this others may assume our prerogative and place unreasonable restrictions on us.

The fifth professional characteristic is professional culture. In petroleum geology this attribute has evolved and been developed largely through this Association (AAPG), its affiliated sections and local societies and through scientific groups outside of the United States having similar aims. This development has been directed predominantly toward the scientific component with a minimal focus on the professional aspect. It has resulted in scientific and economic contributions of great benefit to society at large which have given a true value to our profession—a worth in which petroleum geologists may justifiably have great pride.

These are the attributes of the geologic profession as I see them. They are the characteristics of a venerable profession which we can face with honest self-respect. Such attributes are not self-nurtured, however. They require the concerted efforts of every member of our profession to assure their continued development. This can best be brought about by a strong aggressive professional organization which can represent all geologists in professional affairs. Our Association (AAPG) is a scientific and technical structure which was not organized to function as a professional group. Only by a combination of individual effort and the functioning of such a professional organization can we hope to maintain the professional leadership with which we are charged.

As J. G. Holland so aptly said, responsibility walks hand in hand with capacity and power. We have the capacity and latent power. We must elect to accept the obligation.

*From his Presidential Address to AAPG, 1961, as reprinted in the August 1987 TPG.

APPENDIX 9—SELECTED SPEECHES AND PAPERS BY CPGs

Record of Proceedings
Exhibit “A” to Minutes of the Founding Convention of the American Institute of Professional Geologists
Held at Golden, Colorado
November 14, 15, 1963
By Edward E. Rue & Robert Hancock

AIPG Register
(in order of sign-in)
Founding Convention

Name, Affiliation, and Business Address

W. W. Mallory
U. S. Geological Survey
Denver Federal Center
Denver, Colorado 80225

J. F. Murphy
U. S. Geological Survey
Denver Federal Center
Denver, Colorado

E. F. Cook
University of Idaho and
National Academy of Sciences  
2101 Constitution Ave. N.W.  
Washington, D.C. 20418

A. B. Campbell  
U. S. Geological Survey  
Denver Federal Center  
Denver, Colorado

Fred N. Earll  
Montana School of Mines  
Butte, Montana

D. A. Robertson  
Shell Oil Company  
250 Mt. Lebanon Blvd.  
Pittsburgh 34, Pennsylvania

K. D. Clark  
Montana Bureau of Mines  
Butte, Montana

Richard W. Lekme  
U. S. Geological Survey  
Denver Federal Center  
Denver, Colorado

R. B. Ross  
Mississippi Geological Society  
1241 Deposit Guaranty Blvd.  
Jackson, Mississippi

James C. Maclachlan  
Independent  
2141 S. Wolcott Ct.  
Denver, Colorado 80219

J. G. Marks  
Humble Oil and Refining Co.  
Box 120  
Denver, Colorado

Henry Collins  
U. S. Geological Survey  
Bldg. 25, Denver Federal Center  
Denver, Colorado

John H. Maxson  
Aerial Exploration Co.  
5335 Montview Blvd.  
Denver, Colorado

Charles L. Cherry  
Consultant  
6506 So. Elizabeth Way  
Littleton, Colorado

Donald I. Foster  
Consultant  
Rt. 1, Hidden Valley  
Evergreen, Colorado

Mr. & Mrs. W. E. Hofstra  
Ambassador Oil Company  
201 Tower Building  
Denver, Colorado

W. D. Chawner  
Humble Oil Company  
P. O. Box 120  
Denver, Colorado

Robert E. Hershey  
Tennessee Division of Geology  
862 Bresslyn Road  
Nashville, Tennessee

Harold D. Holloway  
Texas Water Commission  
P. O. Box 2311, Capitol Station  
Austin, Texas

Robert M. Lindvall  
U. S. Geological Survey  
Denver Federal Center  
Denver, Colorado

B. Pete Harder  
Photo-Geology Info  
207 B Denham Bldg.  
Denver, Colorado

Maynard F. Ayler  
Mining Consultant  
1315 Normandy Rd.  
Golden, Colorado

Robert M. Weidman  
Montana State University  
Geology Department  
Missoula, Montana

H. A. Sellin  
Mobile Oil Company  
Box 5444, Terminal Annex  
Denver, Colorado

Raymond C. Robeck  
Mining Geologist  
2140 Carr Street  
Denver, Colorado

J. Q. Tomkins  
Utah State Highway Dept.  
1425 E. 9th Street  
Salt Lake City 5, Utah

R. C. Berber  
Route 1  
Fayetteville, Arkansas

Frank J. Bell  
Southern Illinois University-Carbondale, Illinois

Robert J. Floyd  
Tennessee Division of Geology  
G-5 State Office Building  
Nashville, Tennessee

John D. Haun  
Colorado School of Mines  
Golden, Colorado

Robert H. Carpenter  
Colorado School of Mines  
Golden, Colorado

John R. Hayes  
Colorado School of Mines  
Golden, Colorado

L. W. Leroy  
Colorado School of Mines  
Golden, Colorado

Robey Clark  
Mobil Oil  
Box 5444, Terminal Annex  
Denver, Colorado

Frank W. Foster, Independent  
3315 Dover Drive  
Boulder, Colorado

William Kay  
Midland Exploration Co.  
211 C. A. Johnson Bldg.  
Denver, Colorado

Robert Weimer  
Colorado School of Mines  
Golden, Colorado

B. W. Beebe  
Box 334  
Boulder, Colorado

Margaret Fuller Boos  
Denver Consulting Geologist  
Denver, Colorado

C. Maynard Boos  
Denver Consulting Geologist  
Denver, Colorado

Ray E. Gilbert  
Bear Creek Mining Co.  
1498 S. Lipan  
Denver, Colorado

T. C. Hiestand  
Saratoga Prod. Co., Inc.  
2769 S. Monroe  
Denver, Colorado

W. A. Newton  
Rocky Mountain Natural Gas Co.  
1726 Champa Street  
Denver, Colorado

Grover E. Murray  
Box 16016, University Station  
Louisiana State University  
Baton Rouge, Louisiana

Bob Hancock  
Consultant  
818 Okla. Mortgage Bldg.  
Oklahoma City, Oklahoma

R. G. Rogers  
Colorado Interstate  
Box 951 Amarillo, Texas

Keith M. Hebertson, independent  
2892 Robb Circle  
Denver, Colorado

M. A. Long  
Intex Oil Company  
1329 First National Bank Bldg.  
Denver, Colorado 80202

Howard E. Rothrock, Consultant  
Box 902  
Coleman, Texas

Orlo E. Childs  
Colorado School of Mines  
Golden, Colorado

William W. Huy  
Dept. Of Geology  
University of Illinois  
234 Nat. History Bldg.  
Urbana, Illinois

D. W. Trexler  
Department of Geology  
Colorado School of Mines  
Golden, Colorado

Patti J. Fritts
APPENDIX 9—SELECTED SPEECHES AND PAPERS BY CPGs

Martin Van Couvering
Pasadena California — November 29, 1963
Bulletin No. 1

To All Members of the Executive Committee and the Steering Committee of AIPG.

Now that I am back at my home base, and have had time to scan the pile of documents relating to AIPG I am impressed with the awesome responsibility I have undertaken. I have been well-aware, all along, that I am not the best-qualified man available and, for that reason, I declined when I was first approached about taking the presidency. Under continued pressure, it began to dawn on me that I was probably the only one in the group who could give the necessary time to the job. I anticipate that it will take most of my time for the next year I also welcome the opportunity to help build up a needed institution "from scratch".

My excuse for declining in the first instance, was that I was too unsophisticated, not having participated, extensively, in the national activities of any of the geological societies. I was assured that was an advantage, in that I had not created any enemies. It is true that I am not mad at anybody, and I intend to stay that way. I hope it will be reciprocal, although I am
afraid it is hard to be an effective, executive without offending someone.

I am well-aware of my inadequacies, so I am leaning heavily on those who have wider experience in these matters. I solicit the help of anyone who wishes to see this movement succeed.

I am bound to make mistakes; indeed, I have already done so to my own great distress. I ask you to be patient with me in these matters. I have no personal ambition except to lay such a solid foundation for AIPG during my term of office, that an enduring structure can be built upon it. When that has been accomplished, I shall be glad to retire to the anonymity of my personal affairs.

I expect to send you a series of these bulletins, and they will all be 8 x 5 inches if possible, and have a sufficient margin on the left-hand side so they can be bound in ring binders. That is the way I am filing my AIPG correspondence. You may find it convenient to do likewise.

Martin Van Couvering
President, AIPG
cc: B. W. Beebe

APPENDIX 9—SELECTED SPEECHES AND PAPERS BY CPGs

Martin Van Couvering
Pasadena California — November 30, 1963
Bulletin No. 2

To All Members of the Executive Committee and the Steering Committee of AIPG

A few points are beginning to emerge from the confusion in my mind that was created by entering the battleground completely unprepared; then attending the meeting of the Steering Committee; followed by the convention of Engineering Geologists in San Francisco; our own Founding Convention in Golden; the GSA in New York and, finally, meeting with the House of Representatives of AGI plus numerous individuals.

The first, and most unhappy, thing that happened was that it began to dawn on me that we had appointed an Executive Director far in advance of our need for such an officer. The establishment to be directed is in the embryonic stage, and considerable time will pass before it reaches such proportions as to need a director.

If this had been an abstract matter, we might say "So what?". But "Bud" Rue accepted the responsibility we gave him so seriously that he talked of moving to the Denver area. It is a serious worry about his livelihood, I believe, as do we not now have and, for a long time, will not have enough money to provide a salary; and Denver is already overcrowding with "consultants", as witness the long list constantly seeking employment through RMAG.

In the circumstances, I felt my duty to warn him, and to do so immediately. So this became my first official act, and about as painful a step as I can imagine I have become very friendly with him personally, and we all know that he has probably been more influential than anyone else in getting AIPG moving. I trust that he will be properly rewarded in due course. The pill was all the more bitter because I had been one of those who proposed the Job of Executive Director for him. I hope this has taught me a lesson.

Martin Van Couvering
President, AIPG
cc: B. W. Beebe

Martin Van Couvering
Pasadena California — December 2, 1963
Bulletin No. 3

To All Members of the Executive Committee and the Steering Committee of AIPG.

So much remains to be done to get AIPG rolling. At this moment, none of us has paid his dues; indeed the amount of dues has not yet been set officially at $15.00. Both of these things await approval of the by-laws, upon which Howard Rothrock has been working.

Fred Earll was given the Job of preparing the application forms for membership. He cannot finish his Job until the constitution, as clarified by Allen Tester, has been approved, as both the constitution and the by-laws, together with the Code of Ethics, have to be subscribed to by the applicant. It has also been proposed that the applicant hold us harmless from any legal judgment for libel, etc., in case we find it necessary to expel him. Ben Parker is looking into this.

It would seem to me that, instead of reciting the constitution, by-laws and Code of Ethics on the application form, we could simply have the applicant sign a statement, saying he has read them and agrees to abide by them. However, I think a good place for a promise to hold us free from liability is right over his signature.

I have just received a suggestion from Bill Gussow that appeals to me, and that is that an applicant provide AIPG with a certificate attesting to his membership in a scientific society approved by us.

I think Tom Beveridge and I can take care of having the by-laws, which have not reached me yet, will probably clarify a number of points about which I am still in doubt.

Two things we will need, as soon as they can be prepared, are an emblem and official stationery. I should like to have as many suggestions as possible about the emblem as soon as possible. In our ambition to cover the whole field of geology, there may be a tendency to clutter up the emblem. I think we want it to be artistic and dignified. I have just been admiring the one on the booklet of the Illinois Geological Society. If Bud Rye didn't draw it himself, he can probably get some help from the person who did. Ben Parker has given me a design along somewhat similar lines.

I think Tom Beveridge and I can take care of having the stationary printed.

Of course, everything is subject to the approval of the Executive Committee.

Martin Van Couvering
President, AIPG

-251-
To All Members of the Executive Committee and the Steering Committee of AIPG

Obviously, one of our biggest and most important Jobs is to build up the membership promptly in order to give us strength, prestige and operating funds. This should be done as quickly as possible in order to take advantage of the momentum created by the interest in our founding convention. My experiences, so far, lead me to believe that there is a very large reservoir of prospective members. I believe the machinery for enrolling them need not wait for the availability of application blanks, but should be organized without delay, so we can go to work the moment the facilities are available.

It is very obvious, to me, that a selling Job has to be done too, for I was a skeptic myself and had to be convinced. I know there are many others. We can bring a lot of them into the fold too.

Although we are an aggregation of individuals, our constitution provides for districts, based on State boundaries. Because State registration is a sore point with many of our prospective members, I think the national organization should not take a position for or against, but let the members in each State decide whether they want it or not, with the national organization ready to help where needed.

It seems to me that our membership is too small, at present, to make it worthwhile to elect State officials of any kind, so I have taken it upon myself to appoint, for each State or district, a Coordinator of AIPG affairs.

The first of these was “Mike” Halbouty of Texas, who is well-known in the oil business for his energy and organizing ability. He asked to be a charter member and volunteered to help us. I tried to get him to raise funds for AIPG but he is already engaged on another fund-raising drive. As he is from Houston and Texas is such a large state and houses so many geologists, he will have to have some help.

As you know, I have already asked “Bud” Rue to be Coordinator for Illinois, and Wm. D. Hardeman for Tennessee. Hardeman is not a petroleum geologist. I asked Tom Beveridge to take Missouri. As rapidly as possible, additional coordinators will be named.

Martin Van Couvering
President, AIPG

The First Annual Meeting of the American Institute of Professional Geologists was called to order at 9:30 A.M., Friday, November 13, 1964, in the Silver Room of the Denver Hilton Hotel by William A. Newton, Chairman of the Program Committee.

Mr. Newton welcomed the members and introduced the members of the Program Committee: Dr. Robert R. Berg, Dr. William W. Mallory, Dr. Jay G. Marks and Dr. Robert H. Carpenter (who was unavoidably detained by business). Announcements were made concerning the luncheons for Friday, Nov. 13 and Saturday, Nov. 14, and the plans for the dinner, Friday evening.

Mr. Newton then introduced Martin Van Couvering, President of AIPG. There was a standing ovation for President Van Couvering. President Van Couvering took over as Chairman of the meeting.

President Van Couvering introduced the members of the Executive Committee in the order in which they were seated at the table: Thomas R. Beveridge, Secretary-Treasurer; Howard E. Rothrock and Adolph U. Honkala, members of the Advisory Board; Frank B. Conselman, Editor; Ben H. Parker, Chairman of the Advisory Board; William A. Newton and Fred N. Earll, members of the Advisory Board; Allen C. Tester, Vice-President, AIPG; and E. E. (Bud) Rue.

The President stated that the Institute is incorporated under the laws of the State of Colorado and declared that there was a quorum present so that the meeting could function officially.

Mr. E. E. Rue read the Minutes of the Founding Meeting of AIPG held at Golden, Colorado, November 15, 1963. Motion was made by Michel T. Halbouty that the minutes be approved as read. Motion was seconded and carried.

President Van Couvering then gave a short resume of the founding of AIPG, stating “It was my understanding that some of the members here were members of professional standards Committees of various geological organizations. It was decided that the only effective thing would be to form a new organization.

“These men came together at a meeting in Oklahoma City. About a dozen people were there - that was a steering committee. I did not plan to attend the Oklahoma City meeting but Frank Conselman called and insisted that I attend.

“Dr. Ben H. Parker presided and plans were made for the Founding Meeting to be held at Golden, Colorado, in November. Dr. Orlo Childs, President of the Colorado School of Mines provided the place for the meeting and also provided the space for the headquarters of the organization.

“The problem was how to get a start with no money, no organization, et cetera. Such things as a Code of Ethics, Constitution, and By-Laws all had to be put together. It took several weeks to get this done.

“Finally, application blanks had to be devised under the direction of Dr. Fred N. Earll.
“What you now see is really the growth of eight months rather than 12. I think there are now more than 600 applicants.

“Why are you in this thing? It is not because of prestige; it is because you want to do something for your profession. We are here to do this. We had to cover all branches of geology throughout the country. There are probably more than 20,000 geologists out of a population of around 200,000,000; we are fractionated besides that. We cannot accomplish anything unless we are all banded together, which is one of the main reasons for the founding of AIPG.

“We have set up the organization to have State Sections, because of the importance of the question of registration. There is great diversity of opinion on this subject. That is the basis for having State Sections. There will be representation by States on the Advisory Board of the Institute.

“It took a little time to get momentum. We now have three State Sections: Texas, as usual, had to be first; actually there are a lot more applicants in California than Texas. Mike Halbouty is head of the Texas Section. Next Section was Colorado with Bill Mallory as President; and then California with Arthur Spaulding as President. Elmo Adams is the delegate from California; Howard E. Rothrock from Texas; and Bill Mallory, the delegate from Colorado.”

President Van Couvering pointed out that we have a lot of distinguished geologists in our membership. He then introduced Dr. James Boyd, former director of the U.S. Bureau of Mines.

We are growing so fast that we have to have an Executive Secretary, a position which was authorized yesterday by the Executive Committee. He then introduced Arthur Brunton of Denver who has been appointed Executive Secretary.

President Van Couvering then introduced Dr. Thomas R. Beveridge, secretary-treasurer of the Institute, who gave the Financial Report of the Institute.

**Financial Report as of November 10, 1964**

**American Institute of Professional Geologists**

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receipts</td>
<td>7,875.00</td>
</tr>
<tr>
<td>Dues</td>
<td>2,625.00</td>
</tr>
<tr>
<td>Application Fees</td>
<td>710.00</td>
</tr>
<tr>
<td>Donations</td>
<td>3,000.00</td>
</tr>
<tr>
<td>Loans</td>
<td>6.00</td>
</tr>
<tr>
<td>AIPG Seals</td>
<td>735.00</td>
</tr>
<tr>
<td>Miscellaneous (16@4.00-5@11.50)</td>
<td>121.50</td>
</tr>
<tr>
<td>Total Receipts</td>
<td>15,072.50</td>
</tr>
</tbody>
</table>

President Van Couvering introduced the vice-president, Dr. Allen C. Tester, who gave the following membership report:

“A year ago this week the Institute was founded in Golden, Colorado - November 15, 1963. There were many who were apprehensive and even skeptical and some even denounced the project as just one more society - one more scheme - one more promotion that would not survive beyond the initial or early enthusiasm of a few dedicated supporters. On the other side there were some men who could recognize the need within the geological profession for an organization with the principles and the objectives of the American Institute of Professional Geologists.

“One individual was so certain that geologists would respond to the call of the Institute that he predicted that the Institute would have 500 members by the first Annual Meeting time. Some ardent supporters thought this was a very optimistic forecast.

“Gentlemen - the first year is now drawing to a close and I am happy to report that as of this morning, the Golden office has received over 600 applications for membership - 611 to be exact.

“This is a remarkable support of the ideals, principles, and objectives of the Institute as set forth in our Constitution and our Code of Ethics, and their implementation by our By-Laws.

“Basic concepts of a Constitution and Code of Ethics, and the Qualifications for Membership were presented at the founding meeting in November 1963 and approved in principle by those present. It was not until January 1964 that the final statement of the Qualifications for Membership were adopted by the new Executive Committee and not until February 17, 1964 that the By-Laws were adopted. Then, and not until then, could the application forms for membership be drawn and approved by the Executive Committee. By the time this was done, the forms printed and the green booklet printed and ready for distribution it was the last week of March 1964. I emphasize this sequence of events and these dates simply to show that although we are one year old as an organization, we have been open for business for only about 7-1/2 months.

“The Executive Committee is very happy that so many geologists have responded so quickly to the call for support and we are deeply gratified by the quality of the applicants for membership. When we publish the list of Charter Members, the names will stand out as a Who's Who in American Geology. The present president and eight past presidents of the American Association of Petroleum Geologists, the present president and two past presidents of the American Geologic Institute - a past president and several past officers and councilors of the Geological Society of America, 14 State Geologists, a long list of officers, present and past of several other important geological societies, a sizable list of executive officers and professors of Geology in many of the leading Universities of the United States, many executives and prominent geologists of oil companies and in mining and in other fields of exploration and development of natural resources. Almost every branch or type of geology is represented. As might be expected at the outset, geologists working in the field of petroleum are the most numerous - in all phases, exploration, development, research and administration, Mining geologists, engineering geologists, hydrogeologists, a broad group of industrial geologists, geophysicists are also represented. Among the professors all types of specialties are represented—stratigraphers, sedimentologists, petrographers, structural geologists, geomorphologists, oceanographers and even glacial geologists and paleontolo-
gists. A detailed list with specific enumerations would be too time consuming to present at this time. AIPG represents all fields and specialties of geology. We are proud of every member, and in all humility we thank these men for showing their intense interest in the betterment of the profession of geology and for their moral and prestigious support of the ideals and objectives of the American Institute of Professional Geologists.

“You may be interested in some of the details of the geography of our members and applicants - all of whom are eligible for Charter Membership. I must revert to November 5th when our total number of applications was 550. I have not had the details nor the time to assimilate the data on the last 50 or more applications.

“By States, the number of applications are from:

1. California 139
2. Colorado 95
3. Texas 64
4. New Mexico 16
5. Tennessee 16
6. Oregon 13
7. Oklahoma 13
8. Ohio 12
9. Wyoming 12
10. Illinois 12
11. Pennsylvania 11
12. Alaska 11
13. Missouri 11
14. Montana 11
15. Florida 9
16. Iowa 8

(approximately 25 percent of all eligible geologists)

17. Virginia 8
18. West Virginia 7
19. Mississippi 6
20. New York 6
21. Utah 6

“In all there are 42 States represented and there are one or more applications from the District of Columbia, Canada, El Salvador, Tripoli, the Philippines, Venezuela and Libya.

“There are 11 States with sufficient members to organize State Sections; four or more Sections can be formed by joining two contiguous States.

“AIPG is growing but we have much more work to do — to be fully effective and worthy of the profession the Institute must have many more members. I believe when this report is made next year, the numbers used will be hundreds and thousands.”

President Van Couvering introduced Mr. John T. Rouse of Pittsburgh, Pa., who is one of the candidates for the presidency of the American Association of Petroleum Geologists.

The President also announced that copies of the Newsletter “The Professional Geologist” are available on the table in the rear and urged everyone to pick up a copy.

President Van Couvering then introduced Michel T. Halbouty, President of the Texas Section of AIPG, who said: “We believe in Texas that AIPG is going to be one of the greatest organizations of Professional geology in this country and in the world. We will have a great membership. We are organizing rapidly. In Texas we are dividing the State into about 20 Sections. Our membership will increase very rapidly from month to month. I believe that the organization of State Sections is most important. We now have an Executive Secretary who will be able to assist you. You have three constitutions to work with. These Sections are most important to the growth of the organization. The future will be something we will all be proud of.”

President Van Couvering then introduced Dr. William W. Mallory of Denver, President of the Colorado Section of AIPG, who said that Colorado is proud to be the second State Section organized. Dr. Mallory then introduced the following officers of the Colorado Section: Jack W. Knight, Vice President; Keith M. Hebertson, Secretary-Treasurer; Dr. R. Dana Russell, immediate Past President; Dudley W. Bolyard, Harry W. Oborne and Charles S. Robinson, executive committee men. Dr. Mallory is the delegate to the Advisory Board. Dr. Mallory states that they had 32 out of 45 certified professional geologists at the Colorado organizational meeting.

President Van Couvering then introduced Arthur O. Spaulding, president of the California Section of AIPG, who said: “The chief problem in California is the threat of registration. It would appear now that the Senate Committee studying Public Law No. 1349 will not endorse it for presentation to the Calif. State Legislature. Our chief problem is obtaining cooperation in the matter of registration. The ideal would be for AIPG to be recognized as authorized body to administer State Law. At an early date we hope to have some kind of Model Law to present. We have not had the support of the engineering geologists which we had hoped to have.”

President Van Couvering stated that from now on screening of applications would be done by State Sections whenever possible. Mr. Van Couvering also said that the Newsletter will be the instrumentality which will keep us in touch with what is going on.

Recessed for 15-minute Coffee Break

President Van Couvering introduced Dr. Frank B. Conselman who gave the following report on the Newsletter: “First, I want to thank Ben Parker for putting the Newsletter together, arranging the format and seeing that it got through the printer. We are starting with eight pages but material is available for more pages. We will attempt to standardize probably on a 12-page publication of the type you see.

“We have printed extra copies which we would like you to use as an aid to recruiting. The question of advertising will undoubtedly come up. At the present time we have no plans to accept advertising. We have had some inquiries on advertising. We also have no cost figures. We are satisfied that we can afford it on our present budget.”
“This is a professional publication; it is not intended as a scientific publication. We are going to concentrate on the people in professional geology and on the factors affecting professional geology. We believe in letters to the editor. We believe in expressing your views. We have more latent talent in this organization than in any I can think of. We encourage you to write. We are interested in any items affecting the statutory depletion of any metal; matters of government policy are important to us; and anything that affects the economics of the industry. We want to know what is going on. We intend to provide choice quotes from quacks and our contemporaries so you can see what the public is exposed to. Some will be interesting, some funny and some unfortunate. All will be written with due regard to the legal complications involved. We are going to devote a page of every issue for the President. We will also have an editorial and sometimes a guest editorial.

“We want to feature news from the Sections. We are interested in what individuals are doing. We are interested in what you are doing. Names make news and we want this publication to get read. This is going to call for your patience and your participation. This Newsletter is going to be our publication for the time being. From now on it will be called the Professional Geologist. We plan to publish it every two months with probably 12 pages.”

President Van Couvering urged everyone to please send Frank “dope” on what is happening to people.

He also explained that Coordinators had been appointed in states where we do not have a State Section. He also requested that all State Coordinators present please meet for lunch with Bob Hancock for the purpose of discussing mutual problems.

President Van Couvering introduced Dr. Warren Beebe, Chairman, Legislative Coordinating Council, who reported on the Proposed Model Registration Law.

“For the past 10 years I have been struggling with Model Law. About 10 years ago the AGI Committee on Professional Standards started studying where it might lead. It leads to licensing and might lead to accreditation of our schools.

“It was evident at the meeting at the Univ. of Colorado in the spring 1957 that there was a great deal of confusion about statutory registration. Certification is a type of internal registration, and can be perfectly legal, if AIPG certification is accepted by the statutory bodies and the courts. Starting from here we can discuss the Model Law.

“What are we giving up and what can we gain? We are not trying to have legal licensing over all geologists per se. That is a local and State problem. A national organization can only advise and assist where necessary - it is a local problem. The AGI Professional Standards Committee is opposed to statutory registration for geologists. I hope that we can do it internally.

“We have had a number of very disturbing events in the past year or so.” Mr. Beebe pointed out the problem in California. “The line between civil engineering and geology is a wavy line - or maybe a jurisdictional problem. The law in California was exclusively introduced by an engineering group - the California Association of Engineering Geologists - without regard for other types of geology - they were disregarded. It was a hardship on geologists practicing in both petroleum and ground water. AIPG opposed this law. The threat still remains and we still have to settle this jurisdictional dispute.

“In Louisiana some legislators just introduced a bill. Through the help of Gordon Atwater and Grover Murray, they were able to shelve it by promising that we would have a Model Law available. There is a similar situation in Colorado. The law was changed somewhat. Idaho, the Philippine Islands, Alaska have problems at present. This is the reason we need a Model Law. In the State of Arizona it is illegal for a geologist to practice unless he is registered.

“What is the Constitutional basis for statutory registration. It must be in the public interest and be for the protection of public health, safety and welfare. This is a matter for the protection of the public; its purpose is not to organize a union or guild. We do not want to get into the situation of the lawyers and architects.

“The Model Law is not written for any specific State. It will contain certain general provisions. There are constitutional differences in each State. Each State is sovereign. There can be no national registration. It can only be done by the people of the State.

“The law must be broad and permissive. We want geologists to be able to pass easily from one State to another to practice. We have to have a Model Law that will satisfy 50 State Legislatures. We needed good legal counsel as it is a very specialized field.

“AGI appropriated the money. They have underwritten the entire cost of doing this job. We met with the AGI general counsel, Emmett Tucker. We had 16 questions for him which took 4-1/2 hours to answer. This was taped and the tape is available from AGI in Washington. During this meeting Mr. Beebe talked with men from the three organizations and we were fairly able to agree that we would have only one Model Law. AGI would furnish the money and AGI, AAPG and AIPG would furnish the manpower. Ben H. Parker, Gordon I. Atwater, Mason L. Hill, Ralph W. Marsden and many others from universities, state surveys have helped. The lawyers have thrown out many of the ideas which we have tried to incorporate. The proposed Model Law was sent to Mr. Emmett Tucker, attorney for AGI, and Mr. Milton Lunch, attorney for NSPE and NCSBEE. Their comments arrived last evening.

“First the legal background to safeguard life, health, and property and to promote the general welfare. Mr. Lunch, attorney of NSPE and NCSBEE stated that his opinions probably would reflect his engineering background. Some questions have been raised as to whether references to life and health should be included in the purposes as well as to protect property. State Legislatures will look more favorably on a law that includes in its purpose both the protection of life and health and property.

“In most states any type of licensing or registration legislation must be self-supporting. The state will not appropriate money for this - it must come from registration fees. The minimum cost for administering one of these acts for a year
will be at least $35,000. Only five states have a large enough number of people to support such a law - Texas, Louisiana, New York, Oklahoma and California have sufficient people to support it. Licensing by engineering bodies is not liked by many of our people. Licensing acceptable to engineering groups is not satisfactory for geologists, since there is no reciprocity you would have to take the examination in other States in order to practice. Easy movement between States by reciprocity or registration by endorsement is necessary for geologists. Engineers have a provision that a man registered in a State can register temporarily in another state with comparable requirements for 60 to 90 days without taking another examination, and may even be able to register through the State Board of Engineering Examiners, that is a private organization made up of public officials.

“AIPG is the only organization in the professional field that is available to all geologists that can meet its qualifications. We are told that this is unconstitutional. We must meet this problem.

Then we have geophysicists. A good many of these men are geologists. In this law instead of the term “Geologists or geology” we have used Geological Science or “Geological scientists”. We hope that will be agreeable.

“We run head-on into the engineers. Where should the engineer stop or the geology stop? Similar problems exist in mining geology or engineering.

“It is necessary to have free movement between States and reciprocity and the problem with engineers and geophysicists. Each state, of course, has an engineering fee each year. Most states have grandfather’s clauses. You have to be a resident of the State in which you apply. It is up to the people in individual states to protect yourselves from the “closed shop” or “professional guildism.”

“We will publish as much as we can of the Model Law in the Newsletter and all of the Model Law in successive issues of Geo-Times.”

There followed a question and answer session:

HALBOUTY: Can a National Act be approved by the National Government setting up AIPG as the certifying agency?

BEEBE: A National law is not possible, because of the sovereign rights of the States. Each State will have to have its own law as it wants it.

HALBOUTY: Between about 1935 and 1952 it was possible in Texas for a geologist to register under the Engineering Act. About 1952 this was changed and Texas Legislature said that no more geologists could register under the Engineering Act.

BEEBE: A minimum of $25,000 must be apparent before any registration act can be administered successfully. This is not a State Law but that is the minimum amount it will take to administer one of these State Registration laws.

PARKER: I have been interested in this subject over the years. My chief interest is in the problems of geologists. Those of us who are familiar with engineering registration know of the difficulties. Two routes are available - self-regulation and statutory registration. I am of the opinion that geologists can obtain certification and self-policing but know that the Model Law will be necessary for use in some States. It is for use only in those areas where it is necessary because of local conditions. We should work hard for acceptance of self-certification. That is the most important reason for AIPG. We are taking the first step toward getting all geologists together for self-certification so that it can be a means of recognition in many areas. AIPG must be accepted by all geologists and we must be able to say that AIPG does truly represent the majority of geologists capable of meeting AIPG standards.

President Van Couvering suggested that those who have further questions meet with Mr. Beebe. It was agreed that there would be further discussions of this subject in the afternoon session.

Questions and discussion on Model Law continued after lunch.

JOHN T. ROUSE: I think we owe Warren Beebe a vote of thanks for his work on the Model Law.

HENRY OBORNE: The most important thing is using your seals and qualifying before regulatory commissions, courts, etc. Is it possible that certification by AIPG will eventually result in every State recognizing AIPG?

BEEBE: It could develop that certification by AIPG could eventually result in de facto certification by all States.

BOB HANCOCK: Is there any organization that accredits schools? If not, can AIPG do it?

BEEBE: The Chairman of the Academy Qualifications Committee, Dr. Kuenst(?), suggested that the work “Professional” be omitted. At the Miami meeting we will try to go through the law and the recommendations step by step. We want to agree on one term, “Geologist” or “Professional Geologist.” If you are a geologist - is a professional geologist different from a geologist? Do we want to attempt to appropriate the term “Professional Geologist”?

CONSELMAN: A geologist is a professional geologist if he meets the requirements of AIPG.

PARKER: The Executive Committee of AIPG has filed for registration with the Patent Office the AIPG seal with the term “Certified Professional Geologist” registered as a collective term.

QUESTION: What can a younger geologist do?

VAN COUVERING: It is not the purpose of this organization to interfere with the livelihood of any geologist.

WILLIAM NEWTON: AIPG as a national professional institute does not have a classification for Geologist-in-Training but as the physicians have their “Doctors-in-Training” or the engineers have “engineers-in-training”, we have left it up to individual State Sections to have this classification for geologists if they desire. Both Texas and Colorado Sections have a place for a “Geologist-in-Training” until they have satisfied the requirements of experience.

BEEBE: The lawyer for the NSPE suggested that this classification be stricken from the Model Law. This does not mean that there is not a place for a “geologist-in-training.”

HALBOUTY: Among accountants in Texas, any accountant can practice but to be a CPA you have to have certain qualifications and certain experience.

--256--
WILLIAM D. CHAWNER: Would this law require that any geologist working for an oil company has to take the State examination?

BEEBE: He could not work for anyone other than his regular employer without taking the examination. As an employee of a company, he could take the examination if he desires. An employee in a company office does not offer his services to the public at large. The employee does not have to face this registration.

CHAWNER: What about “Farm-outs?”

BEEBE: That will have to be worked out.

THOMAS C. HISTAND: The use of the words “health and welfare” are certainly justified. He cited the example of an Indiana town which had a water reservoir on a porous limestone with the result that every summer they had to ration water. The geologist has more to do with health and welfare from a construction standpoint than any other of the scientists, especially in the matter of potable water.

BEEBE: This is why we have AIPG.

HALBOUTY: When will the work on the Model Law be completed?

BEEBE: The California people have been promised a copy of the Model Law by January 1965. After the conference in Miami, we will have a semi-final draft to be passed around so that the committees can report this to their individual boards and recommend that it be accepted. This is to be done before January 1.

QUESTION: Self-certification vs. statutory registration - how can members of State Sections advance this end?

BEEBE: We have to have the support of as many geologists as possible. We want to be sure that all of you who are qualified join this organization. Every time you put out a map, be sure you use your seal and be sure that your attorney qualifies you as an expert witness in court and cites the fact that you are certified by AIPG. You should inform him that this is the only body of geologists that can certify you as a professional geologist.” It will be solved over a reasonable period of time by the simple acceptance of AIPG by jurisdictional bodies, your clients and companies.

PARKER: I agree with Warren - only one foundation and that is merit. We must screen all applications most carefully, honestly, frankly, impartially and fairly so that no man will be admitted unless he has the qualifications, integrity and merit. The basis of true merit is the only way we can hope to develop a public image that will support a truly professional standard.

ELMO ADAMS: In order to get acceptance by the public, we will have to accept responsibility and stand up and be counted - let us get a decision in court that we stand in back of sound geological practice.

BEEBE: If you know of malpractice, you should prefer charges and appear against him.

WILLIAM NEWTON: It is the responsibility of every member not to sponsor anyone whom you know is not qualified. If you fall down, that person will bring in others. It is very important that you truly believe your sponsorship.

HONKALA: I would like to ask Arthur Spaulding what commitment has been made in California concerning presentation of this bill to the legislature?

SPAULDING: We have promised to deliver a model bill which we think is better than the one they are considering. We want something to represent the interests of all geologists. The Senate Committee must say “Yes” or “No” to Bill No. 1349. If they could see a better bill, they would accept it. In California, Los Angeles City, County and other subdivisions in the State have some form of registration locally. If there is a State bill, local bodies would defer to it.

HALBOUTY: In some instances, in some States, registration is going to be a necessary evil.

SPAULDING: Registration is a fact in California.

HONKALA: What happens to the out-of-state geologist who wants to practice in California?

SPAULDING: If we could get local organizations to accept AIPG, then we would do away with registration.

President Van Couvering introduced Ben H. Parker, Chairman of the Advisory Board, for a report.

Dr. Parker read Article VI, Section 1 of the Bylaws of the Institute. “Actually there is some confusion about the number of delegates to be elected. We will have a recommendation later in the afternoon. Technically we have had no Advisory Board; four men were elected at the Founding Meeting in Golden and now we have representatives from Texas, Elmo Adams from California, and Bill Mallory from Colorado. I suggest that the representatives that were elected last year be continued for another year. There will be a meeting of the carry-over delegates and the elected delegates in Room 1143 at 8 A.M. on Saturday morning, November 12.

“Our job has been to establish a foundation and get the work of the Institute started. That has been our objective this past year. We have had no staff, a limited budget and then a small part-time staff. Most of the work has been done by contributions from members of the Executive Committee and Officers of the Institute. One company has contributed one employee half time throughout the year; another company has given almost this same amount of time and I know of one individual who has contributed several thousand dollars to carry on the work of the Institute. We feel amply rewarded in the number and character of the applications that we have at the present time.

“We should amplify the treasurer’s report. It is true that we do have $15,000 in cash but we have outstanding notes of $3,000 and additional notes of approximately $6,000 for expenses incurred. At the end of the year we hope to be able to retire a substantial part of these obligations.

“Since the Executive Committee feels confident of the future growth of the Institute they have authorized the additional borrowing of $12,000 which will permit the employment of an Executive Secretary and employment of additional stenographic help. The only reason we can borrow is because we have a good banker friend among our members. We are going to work on a tight budget until we can secure more members and retire these obligations.
“To the question - have we rejected any applicants? The answer is Yes. Because of the outstanding character of our applicants we have rejected only a very small number. With the organization of State Sections, screening will be turned over to them. We hope that during the year the Executive Committee can turn over most of this work to the State Sections. We hope that the load of screening can be passed very rapidly to the various screening committees of the State Sections.

“I wish to extend for myself and for the Executive Committee our thanks for the great amount of work done by Warren Beebe on presentation and study of the Model Law.

President Van Couvering introduced William A. Newton, Chairman of the Public Information Committee, who made the following report:

“This past year several men have been appointed to this committee. Hence, the whole problem of public information resides in all of you.

“Subjects will come up in the various States which are pertinent to the national chairman. We would like to see the States autonomous in this respect so that each State puts out its own information. It is most important that we inform the public of the activities of the geological profession. Your sections can get a lot of good publicity out and by that means we will become better known.”

Mr. Newton gave the example of the booklet on water-witching. “This book had been advertised in the 'Denver Post'. This book is going through the mails. This type of thing will crop up in all of the States. We can establish a lot of stature by fighting this sort of thing. Each State Section should have such a committee. Everyone here is really on the public information committee.”

VAN COUVERING: Everyone can contribute in this field.
KEN WILSON: Is it within the property of this organization to make available to the public literature that is being distributed here? To what extent can the Institute offer printed material?

PARKER: The first issue of “The Professional Geologist” should be a good thing to circulate among geologists. The Executive Committee decided that we should plan to distribute certain amounts of this type of material. We hope to be able to mail issues to non-AIPG members. This issue will be mailed to some particular group and two months from now a different group will be selected to receive “The Professional Geologist.” The first issue will be sent to geological departments, selected libraries, and to officers of all geological societies who might be interested.

JOHN ROUSE: Asked to have 12 copies to take to the Council meeting of the Geological Society of America in Miami.

VAN COUVERING: I want to appoint the Nominating Committee - the names of the members will be announced later but I want to appoint Elmo Adams as Chairman. Also, I want to appoint Jay G. Marks of Denver as Chairman of the Program Committee for the Second Annual Meeting. Mr. Marks has assisted with this year's meeting.

There followed a SHORT RECESS.

President Van Couvering introduced Dr. Allen C. Tester, Vice-President of AIPG, who reported on the Executive Committee recommendations for changes in the By-Laws of the Institute:

First, Dr. Tester read from the last page of the By-Laws, Article XII, titled “Amendments”: “These By-Laws may be amended or altered by an affirmative vote of three-fourths of the eligible voters at an Annual Meeting, provided that the proposed amendment has been approved by the Executive Committee or is contained in a written petition, signed by at least twenty per cent of the Members of the Institute, and is presented for discussion at an Annual Meeting.

Dr. Tester explained that the Executive Committee has discussed all of the proposed amendments and has by majority vote entered in its minutes a formal resolution on each proposal. He further states that the Executive Committee recommends to the membership the adoption of each amendment in the form here presented.

1st Amendment refers to Article II, Section 1, titled “Classification”: “Resolved that the Executive Committee recommend to the annual meeting the adoption of an amendment to Article II, Section 1, ‘Classification of membership’, wherein the second sentence of this section would be revised to delete the words ‘approved by the Executive Committee prior to the Annual Meeting held in 1964’ and substitute therefor the words ‘whose applications have been received prior to January 1, 1965 and approved prior to March 1, 1965’.” In other words we will extend the Charter membership period.

PARKER: This change was recommended by the California Section and by others.

WENGERD: Can you still use members of other geological organizations as sponsors or must the sponsor be an AIPG member?

TESTER: This is not covered in this amendment but will be later.

VAN COUVERING: We think it is only fair to do this.

Dr. W. C. Hayes made the motion that this amendment be adopted. It was seconded by Harry Oborne and unanimously carried.

2nd Amendment: Resolved that the Executive Committee recommend to the annual meeting the adoption of an amendment to Article II, Section 3, Minimum Qualifications, paragraph C, Personal Integrity, subparagraph one in the last line, Strike out the word “First” and insert the word “Second.”

OBORNE: Brought up the question of foreign applicants who might have trouble finding five qualified sponsors.

VAN COUVERING: We will carry on as at present.

Motion for adoption of amendment was made by Michel T. Halbouty and seconded by H. D. Thomas. Motion carried.
3rd Amendment: Resolved that the Executive Committee recommend to the annual meeting the adoption of an amendment (to Article II, Section 4, Paragraph A, Procedure, last sub-paragraph) be made by striking in the second sub-paragraph thereof the words “the Institute membership shall exceed 300 in number” and substituting therefor the words “March 1, 1965.”

In other words, after March 1, 1965 the names of all applicants and their sponsors will be mailed to all members for comment, if any is necessary.

PARKER: It seemed fairer to have a cut-off time by date rather than by number.

ARTHUR BRUNTON: Is the intent to extend this period through the Charter Membership period?

PARKER: There is no connection.

Motion was made by Dr. W. C. Hayes that the amendment be adopted. Motion seconded by Maurice Brashears. Motion carried. (one “No” by Dudley Bolyard).

4th Amendment: Resolved that the Executive Committee recommend to the annual meeting the adoption of an amendment to Article IV, providing for the addition of the following sentence to the first paragraph: “The officers and Executive members elected at the Founding Meeting shall continue in office until their successors are elected in 1965, and thereafter assume office, pursuant to Sections one and two of this article.”

Motion was made for the adoption of this amendment by Michel T. Halbouty; it was seconded by W. W. Mallory. Motion carried unanimously.

5th Amendment: Resolved that the Executive Committee recommend to the AIPG membership at the annual meeting that the following substitution be made for Article VI, Section one (Advisory Board): After the first sentence delete the balance of the first paragraph and insert the following sentences: “Each Section shall be entitled, upon organization, to elect one Delegate to the Advisory Board. An additional Delegate shall be elected for each 100 members of the Section, or major fraction thereof. The scale of representation intended by this resolution is as follows:

<table>
<thead>
<tr>
<th>Section Members</th>
<th>Delegates</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-50</td>
<td>1</td>
</tr>
<tr>
<td>51-150</td>
<td>2</td>
</tr>
<tr>
<td>151-250</td>
<td>3</td>
</tr>
</tbody>
</table>

and continued for each additional increment of 100 as required.”

Motion was made for adoption of this amendment by Sherman Wengerd and seconded by Robert G. Maynard.

President Van Couvering introduced Dr. Frank B. Conselman, Editor, as the leader of the Members’ Forum on Institute Policy and Activities.

CONSELMAN: This is the time to make any suggestions or ask questions about the Institute - this is your session.

HALBOUTY: Those of you who are organizing State Sections should try to find out from those Sections already in existence what they are doing and try to coordinate your activities. We need to advise each other what is going on, trade ideas and inform each other.

RAYMOND ROBECK: We should spell out our name when it is used in public. The bulletin board here at the hotel should have read, The American Institute of Professional Geologists, instead of AIPG.

NEWTON: We have had suggestions that the name tags used at this meeting should have included the member’s town and state. We might also consider including the member’s specialty on the tag.

VAN COUVERING: We hope to have a list of specialties.

WENDELL EDGEILL: Can certain members of AIME sponsor members for AIPG?

CONSELMAN: AIME has many geologists in their membership.

PARKER: There have been some questions on this matter.

The Executive Committee has approved as sponsors members of societies who are included in the American Geological Institute. Members of these societies are acceptable as sponsors if the man is a professional geologist. The Mining Section of AIME is a member society of AGI but the Society of Petroleum Engineers is not.

HARRY OBORNE: I would like to speak of a case of malpractice. A Dr. Fisher, a county agent, has a program on a radio station and talks on ground water and he strongly recommends that one hire a water-witch. He makes the suggestion of writing so the U. S. mails are involved. Also there is a consulting firm in Denver and a photo-geologist and an associate who have perpetrated a geological report that I consider indefensible and I want to use my influence to keep any of these people out of AIPG. We have a firm duty to try to break up things that are questionable and unethical. I recommend this procedure to all of you.

BOB HANCOCK: In Oklahoma City, there is a local consultant who has been indicted. It might be wise for members to send in clippings for the file in Golden on such people.

JERRY NEWBY: That man has pleaded guilty. I think before the State Section is formed such matters should be referred to headquarters.

SPAULDING: What other duties do State Sections have besides screening within the State?

CONSELMAN: Screening, electing delegates to Advisory Board, who in turn elect members of the Executive Committee. Many of our national committees will have representation within each Section. State Sections will implement policies of the national Institute.

PARKER: Article VIII, Section 2, sets forth the duties of State Sections. You will have your own problems.

MILES GORDON: What about a professional geologist trained in one specialty practicing in another field in which he is not competent? What will you do about such cases? How will this be controlled?

CONSELMAN: I would refer the member to the Code of Ethics, “A Member shall not give a professional opinion or make a report without being as thoroughly informed as might reasonably be expected, considering the purpose for which the opinion or report is desired; and the degree of completeness of information upon which it is based should be made clear.” The best advice that he should suggest is that someone else does the job. Each of
us is bound by our adherence to the Code of Ethics.

PARKER: If the individual is not a member but makes application, when his name is published, you should send in this information.

CONSELMAN: Certification is an internal matter.

DR. W. C. HAYES: AIPG is an umbrella for all geologists. We must all use our discretion - he gave the example of the State Geologist who may have to comment on a wide range of geology.

CONSELMAN: We hope AIPG will be a unifying force among us.

JACK Q. TOMKINS: We will have to as a group come up with constructive action. We are thinking only of our internal image but we must think of our external image. Why can't you call up the water-witching county agent?

CONSELMAN: You would probably be liable to incrimination. AIPG can make this an impersonal action. If I thought I could handle the matter I would call him.

NEWTON: We have not been inactive although we had a limited number of members. I would call your attention to page four of the Professional Geologist showing what we have done to correct erroneous information and how we handled the letter which was sent to the State Boards and the National Council of State Boards of Engineering Examiners. We were able to stop this.

I recently received a letter from Harcourt Brace who is publishing a book on all the professions. They requested AIPG to furnish them with photographs of geologists in action. We furnished them with seven pictures. It is true that the State Section information committees will aid our growth.

HALBOUTY: Creation of an image is the most important thing we can do. We need to create an image as geologists. It is our responsibility now to create a strong and most effective image and be responsible to ourselves, to our profession and to the Institute. Any malpractice should be reported to the State Sections or to the Executive Committee and from then on our image will be maintained through national effort. The Executive Committee would be derelict if it does say something publicly.

TOMKINS: Is it best to act personally, locally or through the State Section? I personally would prefer an endorsement from someone.

CONSELMAN: If a member does not feel competent, he should ask AIPG.

WILLIAM THURSTON: What about the “crackpot” and also what would we do about the geologist who is unjustly accused of malpractice. The Institute has a duty to him as well.

CONSELMAN: I think we have covered this.

President Van Couvering resumed chairmanship of the meeting.

H. D. Thomas made a motion that the actions of the Executive Committee of AIPG during the past year be approved. Motion was seconded by Bob Hancock. Motion carried.

Meeting adjourned.
Dr. Tester made comparison between these data and those in the last issue of GEOTIMES of the distribution of geologists within corresponding fields or specialty areas. He pointed out that (1) there is a remarkable parallelism between the 750 charter members in AIPG and the 18,000 listed in GEOTIMES representing geology as a whole, (2) a substantial group in AIPG are not members of nor served by AAPG, and (3) about 60 percent of AIPG Charter Members are non-petroleum geologists. AAPG serves only petroleum geologists, whereas AIPG serves all geologists.

Dr. Meyer inquired if AIPG has more than “certification” as its function. He believes AIPG’s efforts have been very effective in trying to prevent unnecessary and perhaps ill-advised statutory registration by states and that all AIPG functions should relate to professionalism and not to technical aspects of geology.

He stated that SIPES takes in only independent geologists and only those who qualify for its certification. If the major problem of common certification between the three organizations relates to financial charges, maybe this aspect should be worked out to the mutual satisfaction of each, so as to allow certification by more than one of the organizations.

Dr. Childs expressed hope that AIPG would accept divisional status with AAPG, such as SEPM. He indicated that no identity would be lost, and AIPG could continue to serve non-AAPG members. If this could be accomplished, all certification could be brought under one umbrella — the AAPG. Applications could be considered by one Board and then referred to the Executive Committee of the appropriate organization for final action. Applicants could request certification as a “professional geologist,” an “independent geologist,” and “earth scientist,” etc. Certificates could also show the specialty area of the geologist, such as “petroleum geologist.” We could have a divisional status for certification and bring all the organizations into one system, if we are each willing to give a little at this time. Otherwise, each organization may go its separate way.

Dr. Sproule commented that these remarks point to the concept that AAPG has had in mind for some time. Our reason for proceeding with AAPG certification is that we recognized that SIPES and AIPG had different purposes in mind. One of the main problems facing the people who wish to be certified will be the need to choose between AIPG and SIPES. What is the relationship between AIPG and SIPES?

Mr. Speed stated that SIPES will also take in members who are not geologists, such as Petroleum Engineers, Geophysicists, Astronomers, etc.

Mr. Hardin expressed his objection to the SIPES constitutional requirement of keeping anyone out who is not an independent. AIPG membership covers the broad field of Geology. Of course, there is a difference in membership requirements. If we could get the various requirements to be the same, it would be a big help.

Dr. Murray: If AGI had undertaken certification a year and a half ago, these three organizations might not be in this position today. AAPG has been trying to find a solution, i.e., let AIPG do all the certifying. However, our legal counsel tells us that we cannot open our files up to another organization. If a mutually satisfactory arrangement is to be made, we must form some kind of relationship with one another. For example, the AMA certifies medical doctors and then specialists may be certified additionally in their chosen areas. The AAPG Executive Committee is prepared to make adjustments in procedures and requirements for certification and, if necessary, we will make our requirements exactly identical to those of AIPG. Is there a possibility that the APG Board of Certification could become associated in some way with AAPG so that AIPG would then have access to AAPG files and records and could then act in an advisory capacity to AIPG and to the AAP Executive Committee? As our procedure is now written, final approval for certification as a Petroleum Geologist rests with the AAPG Executive Committee.

Dr. Childs: Mr. Shepherd's point is a good one. This is the time to bring each society together when AAPG is just beginning its certification program. AIPG is already committed to its program, with 1,000 people now certified. SIPES is in the same position, and AAPG is committed as of yesterday.

Mr. Van Couvering: There must be goodwill between the three societies. We can't take members away from each other. I do not see that there is or should be competition.

Mr. Childs: We are starting on close roads together now, but we will get farther apart. We cannot ignore scientific values because we're going to be judging people on scientific values.

Mr. Van Couvering disagreed.

Mr. Childs: Ten years from now AIPG will inevitably overlap AAPG in purposes.

Mr. Speed stated that SIPES will take members not in AAPG.

Mr. Colle: SIPES' certification program was started because of the possibility of registration by states. It was hoped that our certification would be so strong that it would be recognized all over the country. We must determine how strong our certification program is going to be.

Mr. Van Couvering: Perhaps we could pattern certification after the American Medical Association by having one overall certifying organization, and then let those who desire to be certified also in specialty areas apply to the appropriate organizations and have a rider attached to their certificates.
Dr. Parker: This seems to be the only ultimate solution if we are to work together.

Mr. Sproule: One of our principal problems is the confusion that could exist on the part of legal persons and others who may be confronted with the necessity for comparing certifications by AAPG, SIPES, AIPG and others. If they are not identical or closely similar, the value of certification by any one of these groups might be seriously questioned by the public. It is doubtful that either the public or the professions involved could, however, seriously question the value of certification if the certification evaluation of a given specialist is carried out primarily by a specialist society. Thus, since AAPG is the top-ranking petroleum geological society on Earth and has already the finest file available on petroleum geologists, as well as a “built-in” group of top-ranking petroleum geologists, most capable of dealing with the certification problems of our own members, it is reasonable that the public and others should be prepared to accept AAPG certification of its own members.

At this point let us assume that AIPG and/or SIPES may be prepared to take charge of mechanical and other aspects of the affairs of our certified members, along with those of other members for whom they or other specialist societies have assumed prime certification responsibility. Such other specialist societies may be affiliated with AIPG and/or SIPES in like manner to the affiliation of AAPG. The “mechanical and other aspects” referred to above could be certain legal, political, registration or other problems, the scope of which would be decided by mutual agreement.

If the above should be acceptable to all concerned, AAPG would proceed as planned to certify our own membership and make provision for a close liaison with SIPES and AIPG by attaching waivers to our Application, Reference and Sponsor forms and letters. The applicants and their Sponsors and References would by such waivers permit any submission to be reproduced for the use and files of SIPES and/or AIPG. It should be noted, however, that a waiver system would be of no value to AAPG if AIPG and SIPES did not arrange for similar waivers for exchange of their own application material. This procedure would obviate the necessity for duplicating the sponsorship and related application submissions in the event that SIPES and AIPG are prepared to accept our screening of certified members at face value. Even if SIPES and AIPG are not prepared to accept the certification of AAPG at face value, a reciprocity in the matter of exchange of application and related forms and letters would be highly desirable, assuming the requirements related to the qualifications for petroleum geological certification is identical.

Acceptance of AAPG certification at face value, as is now done by SIPES would permit SIPES and AIPG to reduce their application fees by the amount of the cost involved in the screening process.

As we envisage this procedure it would not interfere with direct certification by SIPES and AIPG of those geologists and other earth scientists who are not members of AAPG or other specialist societies. At the same time we would have to acknowledge that SIPES and AIPG are Specialist Societies with broader and more varied terms of reference than those of AAPG, possibly even to the point of being Specialists in certifying petroleum geologists who may not be acceptable as certified AAPG members. In this connection, however, it is anticipated that cases of the latter would be rare.

As we see it, some of the dividends to be derived from adaptation of this procedure are: 1. It would reduce the risk of uncertainty in the public view as to the value of certification. 2. It would permit A.A.P.G. to pass along to an affiliated society or societies the handling of certain professional matters relating to certification with which we prefer not to deal. 3. These outside societies with which we would be affiliated would become “specialists” in the matters referred to under “2” above. 4. The cost of membership in two or more of the three societies would be reduced. 5. It would reduce the competition for membership that now exists as between these three societies. 6. Duplicate membership in two or more of these three societies would be encouraged.

It is assumed that any or all of the three societies may have to modify their constitution and/or Bylaws in order to effect the desired degree of cooperation.

Mr. Curry: Since AIPG accepts membership in AAPG as prerequisite, why doesn’t AAPG accept membership in AIPG as satisfaction of requirement for sponsorship and references? We could make AAPG the arm of certification.

Mr. Murray displayed a diagram proposing that AIPG serve as a “super board” to the other organizations and through affiliation of the “Boards of Certification” of the various specialty organizations with AIPG, the records of each could be made available to the “super board”.

Dr. Parker: Good will has been shown in this meeting. Ted Shepherd’s suggestion for a Continuing Committee is a good one. We should remember other groups that are not represented here today and being them into the Committee. One possibility, if such a Committee is organized, is that we should ask AGI to be represented on that Committee as well as AIPG, AIPG, SIPES, SEPM, and etc.

Mr. Van Couvering asked if such a committee would interfere with the local aspect of the organizations.

Mr. Harding: The wording of our tax ruling says that “so long as no considerable part of your activity is devoted to professional activities such as lobbying” that the tax status of AAPG would not be endangered.

Mr. Shepherd: AGI voted to have a Continuing Committee as the best way to find out what all the other societies are doing just as matter of keeping records.

Dr. Murray suggested, for the consideration of the group, that Ben H. Parker, Willis G. Meyer and G. Frederick Shepherd form a “nucleus committee” to give this matter further consideration. He also asked them to investigate other groups that should be brought into the discussion and planning. He indicated that the individuals present represented a sufficient number of the governing bodies of the three organizations that he would recommend giving the proposed committee authority to proceed to try to develop an overall plan.
which would be of benefit to certification and to the profession-something which would be, in their opinion, a workable scheme for effecting closer cooperation and coordination between the three societies.

Mr. Van Couvering agreed.

Mr. Gibson agreed.

Mr. Smith suggested that AGI not be included as an individual organization because it is not comparable to SIPES, etc.

Dr. Murray stated that he saw nothing wrong with observers for AGI sitting in the committee meetings. He asked if anyone was opposed to this action. No opposition was expressed.

Dr. Sproule suggested that other interested societies, particularly specialty societies, be informed. He stated that the whole thing should be written up with special effort made on a personal basis to involve all interested organizations.

Dr. Murray indicated he believed the Committee should work on that particular premise.

Mr. Speed: Other societies should have early part in the discussions.

Mr. Curry: Wouldn't it be part of the responsibility of AIPG to keep the whole profession informed of what is going on?

Mr. Van Couvering: Yes

Mr. Shepherd: There is one area of activity for which someone must take the responsibility. The entire effort would be more effective if the Committee had legal advice. To which organization or legal channels should the committee turn to in studying these matters?

Mr. Van Couvering volunteered the service of AIPG legal advisors.

Dr. Murray indicated that AAPG legal advisors would also be available.

Mr. Hardin recommended that the legal advisors be told of what the groups want and ask them to advise how to go about doing it.

Dr. Murray asked Dr. Parker, Dr. Meyer and Mr. Shepherd to accept appointment to the Committee. They agreed and he asked Dr. Parker, as a former AAPG President, to serve as chairman of the Committee. Dr. Parker said he would accept, with hesitancy, but would do so out of a feeling of obligation.

Dr. Murray: Do you want to set a time limit or goal to shoot at?

Dr. Parker: It would be beneficial to have sufficient time to get the feeling of AAPG members about certification when it is offered to them, to see how they react and get their comments.

Dr. Murray agreed that the reaction of AAPG members should be obtained.

Dr. Childs asked Dr. Murray if Mr. Smith should devise an instruction form to combine elements of the sponsor and application forms of the three organizations.

Mr. Van Couvering expressed opposition to sponsor forms.

Dr. Murray instructed Mr. Smith to prepare an insert (to accompany each AAPG application form) which would allow sponsors and applicants to permit their letters and forms to be used by other certifying agencies.

Mr. Shepherd inquired if AAPG legal advisors could prepare the form. This should be on all forms—for SIPES, AIPG, AAPG, etc. The SIPES representative agreed.

Dr. Childs: If this is accepted it could be the beginning of our cooperating in this matter.

Dr. Murray suggested that Mr. Smith let the Committee on Coordination look at the form when it is ready. He suggested at the same time that Mr. Van Couvering and Mr. Gibson follow the same procedure.

Dr. Parker: After careful study, AIPG has decided to adhere rigidly to requirements of a letter from sponsors rather than completion of a sponsor form. We don’t want to give the impression that this should be a common form. Experience has shown that a form is not very satisfactory for identifying a person’s qualifications, etc. A man wanting to be certified by more than one organization should not have to go back to his sponsors again. The same sponsoring letters could serve all societies.

Dr. Murray expressed hope that the Committee would be able to get together within the next day or two and, if necessary, the whole group could try to get back together again before the end of the Convention.

Mr. Van Couvering stated that he was very pleased that this meeting had been organized.

Dr. Murray then adjourned the meeting.

THE CHALLENGE OF PROFESSIONAL GEOLOGY*

By Frank B. Conselman, CPG 4

Chairman Unklesbay, Dean English, Distinguished Guests, Fellow Alumni, Ladies and Gentlemen:

An occasion like this always involves a great deal of nostalgia, a memory of things past that cannot be recalled, but which each of us remembers vividly in his or her own personal way. After a delightful luncheon like this, the contrast is particularly great with the hungry years I spent here from 1931 to 1934. I was then a mere slip of a youth—in fact, so “mere” that the secretary of the geology department, Miss Margaret Grace Susie Tillie Carter, felt sorry for me, married me, and has been fattening me up ever since. I now weigh sixty-five pounds more than I did in those days—salad days would be a good name for them, because meat courses were relatively few.

Now that I am approaching early middle age, I look about with a fresh perspective and a new appreciation of things past. I see Dr. M. G. Mehl, surely one of the most facile
teachers any University ever had. His courses were classics of their kind—any one of his lectures could have been taken down verbatim and published unchanged.

I see Dean Peck, who is respected by all Missouri alumni not only as a scientist, but admired also as a person—a man to whom academic honors are most becoming. It is gratifying to see Ray Peck accorded the recognition which he so richly deserves. I suspect that if any one man deserves major credit for bringing about the construction of this new Geology Building, Dr. Peck may well be that man.

And I see—who could miss seeing?—Walter Keller, a man who ranks by this time as a sort of 7th column on the campus. At Yale they once defined education as a student on one end of a log and Brander Matthews at the other. To me education is Walter Keller holding aloft a wooden crystal model and carefully, precisely and painstakingly explaining the crystallographic axes and their optics. I was fortunate to be here during Walter’s first years on the faculty—I would hate to have missed his kind of teaching.

By way of contrast, I recall that the medical school maintained on or near the site of the new building a cage full of monkeys, kept for experimental purposes. I remember frequently watching these little fellows—it didn’t cost anything—and reflecting that they were well fed and sheltered and enjoyed more security on such things than I did. But then I reflected further that they were being maintained in such smug security only as a prelude to experimentation over which they were to have no control. Coming as it did during the early days of the New Deal, with its social innovations, this observation had a profound effect on my own political philosophy. Life is much better outside the cage, regardless of the assured creature comforts within it.

I have entitled this talk “The Challenge of Professional Geology” and the first requirement of course is a definition of terms—just what is meant by professional geology? It is possible to offer a definition in terms of specifics of education, experience and ethical integrity, as the American Institute of Professional Geologists has done, but an even simpler definition comes to mind in reviewing the program notes about the speakers. In my own case they list some degrees and say I was a Gregory Scholar—a $50-per-month stipend which was quite large at the time—and a visiting lecturer at the University of Texas, a delightful interlude which unfortunately for me, but fortunately for Texas, lasted only three weeks. The rest of the time is summed up as “Petroleum Industry Geologist, 1935—“. This leaves a neat little interval of some 30 years. With the exception of a distracting four and half years in the army during World War II, that nondescript 30 years I like to think of as professional geology.

Geologists, of all people, should know about erosion, about the selective attrition of the soft beds and the soft parts, and the preservation of the hard layers and the hard parts. In recent years geology has suffered greatly from erosion, because our external boundaries have been invariably soft and weakly resisting. We have seen our geological functions encroached upon or assumed by non-geologists, and our most promising geological students diverted to other curricula. Yet the need for applied geology—and professional geology essentially is the adaptation of scientific geology to modern society—this need has never been greater, and is sure to increase with the development of new requirements and the depletion of old mineral reserves.

Less than two years ago a group of geologists who take such things seriously decided that something was necessary to give geology professional identity—to impregnate our unconsolidated, crumbling field with some sort of Canada balsam, or plastic, or resin. From this need, which existing organizations were not prepared or able to meet, there has developed the American Institute of Professional Geologists—AIPG—which now has enrolled or is enrolling over 1,000 professional geologists, including the elite of modern American geology. I am happy to see that AIPG's distinguished vice-president, Professor Allen C. Tester of the State University of Iowa, is here as the official delegate of his University, with his charming wife. In establishing any set of standards, it is indispensable to have men of unshakable integrity, like Dr. Tester, guiding the process.

Academic education is the chief means any science or profession employs in perpetuating itself as a discipline—for attracting capable newcomers and inculcating them with ideals as well as ideas. Knowledge without ethics is like a ship without a rudder.

Here with this beautiful and functional new building, I hope that the University is establishing not a cloister, not an ivory tower, but an outpost and a control center—a headquarters for scientific advance, not a headquarters nor a backwater. While these walls keep out the weather, I trust they will serve merely as a membrane where geology is concerned—a membrane permeable in two directions—inward as well as outward. I well remember life in old Swallow Hall. We were compartmented physically and ideologically. Up on the second floor were the so-called mineralogists, with a few surplus conodont-chasers. And down in the basement were the paleontologists—moles who emerged from their cubby-holes only for meals. The main floor was sort of no-man’s land on which both groups occasionally met and eyed each other with suspicion. These suspicions were usually justified.

I understand Swallow Hall was condemned in 1936, which shows how far you can go after others have given up on you. Yet we were attached to Swallow Hall—in one case, almost too attached. Three weeks after I arrived at Columbia a cyclone of sorts struck the campus and carried away one of the two spired towers of the geology building, and the other had to be removed in the interest of symmetry. During the height of the storm my office-mate, Oley Olson, ran up into the towers and attached himself to some sheet metal on the roof that was about to blow away. The wind was clocked, as I recall, at 100 miles per hour. Another five miles and Oley would have been detached and carried over to White Campus, and Swallow Hall would have anticipated the space program, to which it is now to be re-dedicated.

Thirty-four years ago we had no idea of the forms modern professional geology would take. Subsurface geology was virtually an unknown—a vast new world awaiting discovery. I am sure that we cannot forecast any more accurately what we shall need to know 34 years from now, at the millenium. Academic geology need not worry so much about the substance of its specialties so long as the methodology, the preci-
sion, the self-discipline and the intellectual honesty can be imparted to the extension of the basic geologic truths, and to the related scientific principles and data on which any specialty is based.

Modern professional geology has recognized the need for continuing post-university professional education, and many colleges are cooperating in providing sponsorship for advanced educational facilities. One with which I am personally familiar is the International Oil and Gas Educational Center of the Southwestern Legal Foundation, located on the campus of Southern Methodist University at Dallas. I have the honor to serve as chairman of the geological advisory committee, but secretary would be a more suitable title, in view of the composition of this group. The committee is made up of Ed Owen, Dilworth Hager, A. I. Levorsen, Wallace Pratt and Lewis G. Weeks, and I submit that there is no more distinguished geological advisory unit in the world—no major company, no research institution to my knowledge has this sort of combined talent available. I would urge that the University of Missouri do as the University of Texas and others have done, and establish its own board of professional advisors to provide orientation on the trends in modern applied geology.

In the meantime, I would assume that it would be in the best interest of any university to insure that its faculties remained current in their fields by making it possible for them to attend every scientific gathering at which serious technical papers were offered. A few weeks ago at New Orleans the AAPG had a convention at which outstanding papers were presented in the fields of structural geology, sedimentation and stratigraphy. Several times each year worthwhile programs and field excursions are offered that do much to advance our knowledge of our science, and to keep our viewpoints fresh and up-to-date. Geology is not what our last year’s lecture notes say it is, just because they say so. When geology teaching becomes static, something is wrong.

In dedicating this building, the University is establishing more than a shelter—more than a geological bower for health and quiet breathing. It must be a citadel from which fresh sorts are made, a bastion which will insure the preservation of the highest traditions and the inculcation in young geologists of the finest ideals of personal as well as scientific discipline.

In coming years society is going to have to solve the problems of providing enough resources of all kinds to meet the needs of the human population. To do this will mean control of population to acceptable limits for support by available resources, coordinated with conservation of resources to support the maximum number of people.

Population control, which used to be accomplished effectively by war and disease, can now be accomplished with less social shock by less drastic means. This is a biological, sociological and political problem. A solution is theoretically possible, if difficult to establish, but this is hardly a geological affair.

Provision of food and fiber is a problem for the agronomist and the distributor. They too have hopes for success. Here again, geology has no direct involvement.

But the supply of the mineral resources for our society, in adequate kind and quantity, is a problem for the geologist and his exploitive associates. This is a matter that will require increasing technical concentration and knowledge, as the more obvious supplies are discovered. It is a principal responsibility of professional geology, and of geological education. Assuredly the demand for trained geological scientists will greatly increase in the years to come.

Geologists will be, or ought to be, called upon increasingly in future years to give authoritative answers to problems involving mineral resources with political and strategic implications. We have a moral obligation to make sure that no erroneous decisions are taken by statesmen or politicians on the basis of false assumptions in our fields of specialization, through default of proper geological advice.

This building represents an outlay of $1.4 million dollars or, as they say in Washington, where a million dollars is the basic unit of cost, 1.4 megabucks. That is still a lot of money, and a lot of responsibility to the taxpayers of Missouri.

The University has provided the building. Now it is up to the profession to justify this fine new physical asset, and to make it a matter of scientific and ethical excellence as well. That is another challenge of professional geology. From what I have seen, I am confident it can and will be met.

The one man who is not here today, and yet probably belongs here more than anyone else, is the late Dr. Edwin Bayer Branson, who for so many years personified geology at the University of Missouri. One of our many unrealized ambitions has been to endow a lasting memorial to this truly great man—a man of infinite kindness as well as deep wisdom. But I am sure that in the hearts of all of us who knew him that memorial already exists.

It has been a very great honor to participate in this truly impressive occasion, and I greatly appreciate this chance to talk to you. Thank you very much.

*Speech delivered at dedication of the Geology Building, University of Missouri, Columbia, MO, May 1965.*

**The Responsibility of a Geologist to His Profession**

**By Dr. Grover E. Murray, CPG 94, President Texas Technological College, Lubbock, Texas**

Speech delivered to Second Annual Meeting Texas Section AIPG, Abilene, September 1966.

This paper is about the responsibilities of a geologist to his profession. This is, of course, a little different from consideration of geology as a profession. We are close enough to what we do—perhaps even too close sometimes—so that it behooves us once in a while to raise our eyes from our daily preoccupations. My emphasis here is on what the individual who follows the profession of geology owes to it, and to the world beyond geology.
If this sounds like a bit of philosophizing, I plead guilty. The dictionary lists another word that may fit a little better—

gologizing, Webster defines as discoursing as a geologist.

Ever since my undergraduate days at the University of
North Carolina, I have been intrigued and stimulated by the
broad scope of geology, which combines the knowledge and
methods of many other disciplines from astronomy to zoology,
including such basic sciences as physics and chemistry. It is a
discipline which is expansive enough to keep the imagination
stimulated and the mind occupied throughout a lifetime. Geology, I would say, is a way of life as well as a way of earn-
ing a livelihood.

Some of us take far different paths, such as association
with corporations or government agencies or academic insti-
tutions, or as independent operators. Some follow one path for
a while and then go into another and yet another.

As we go along—and particularly as we encounter suc-
cess in our profession—I think we have to elevate our sights.
We must be willing to devote some of our time and energy to
enhancing the profession which has nurtured us.

Fortunately, we no longer have to expend our energies in
the debate which went on for so many years over whether geol-
ogy is truly a profession. For example, the American
Association of Petroleum Geology is observing its fiftieth
anniversary. Other segments of our profession go back much
farther as organized groups. We can trace our history not only
to the eighteenth century in this country and in Europe but
also to the ancient Greek and Roman philosophers and, before
them, to the still older oriental cultures. We geologists are
indeed members of an ancient calling. Now that we have
reached the plateau of professional recognition, we can appro-
priately devote ourselves to improving our profession.

This may be done in several ways. As individuals, we can
affiliate with and participate in such organizations as the
American Institute of Professional Geologists and kindred
groups. These associations not only serve as means by which
we can communicate with each other—and, of course, that in
itself is important in our increasingly complex world—but
they also help us to present a united front and to speak on
appropriate matters with a coherent voice.

We should take advantage of the opportunity to con-
tribute articles to professional journals and to make talks to
genral or specialized groups of geologists. In this way we can
follow the time-honored custom of professional men in medi-
cine, the law, and other fields. We should take seriously our
obligation to add whatever we can to the store of knowledge
on which our successors will build.

We can and we must insist on high standards of ethical
conduct on the part of ourselves, or associates, and others in
the profession. It is painful enough to recognize less than ideal
behavior among our colleagues—but we cannot remain silent
and retain our personal and professional integrity. Our associ-
ations have adequate procedures for dealing with the occasion-
unpleasant situation, and we would be unworthy of our pro-
ession if we were to shrink from the necessity of keeping our
house in order. Certainly, we should prefer to do our own house-
cleaning rather than see it done by others.

We can stimulate learning by donating books and journals
on geology—as well as collections of geologic specimens—to
public and educational libraries. There is no reason why even
the smallest of town libraries or high school libraries or local
Boy Scout troops—should not have works on geology on their
shelves. My years in education have convinced me that the
spark of knowledge can be kindled in many unexpected ways
and places. By such gifts, and through the greater gift of our
time and personal interest, we can encourage promising stu-
dents to study geology and to take it up as a career.

As individuals, and as members of associations or soci-
eties, we can and should stand tall among the citizens of our
communities, our state, and our nations. It should be—and I
think it is—generally understood that geologists can always
be counted on as good citizens.

In this country, one of the most precious assets a man has
is his heritage of citizenship. I cherish the thought that, in
the United States, every private citizen has available to him
the powerful public implement of the ballot, by which he can
play a part in determining his own destiny. He also enjoys
many benefits as he goes about his daily life in an atmos-
phere of freedom—and he owes many debts to his country,
which can be paid in various ways in war and peace.

I am sure all of us in this room choose to be citizens first
and geologists somewhere on down the line. As geologists,
and as comparatively affluent and, I trust, enlightened indi-
viduals, we should remember the privileges of citizenship all
the more gratefully, as well as the obligations it entails.

So, I suggest that, even when we have fulfilled our
responsibilities to our profession, we should not rest there.
We still owe more than we ever can repay to the society in
which we live. In whatever ways we can find to do so, we
should leave something as token payment, and as enrichment
which can help the citizens of tomorrow.

We in geology should, I believe, concern ourselves more
often with the public good—particularly with the effects
which geology can have on the public. Failure to think in
terms of the public can deprive us and our profession of a
great deal of satisfaction and, more important, can deprive
our fellow-citizens of knowledgeable assistance we are in a
position to provide. We have much to offer in many vital areas
of human life. An obvious example is the location, use, man-
agement, and conservation of water resources. Geologists can
assist in making inland streams navigable; right here in
Texas, the Trinity River project is a type of effort worthy of
our professional contributions.

Geologists also have much to contribute to the study of
phenomena related to earthquakes. It should be a matter of
conscience to us to see that warnings of earthquakes and
landslides which can be predicted—such as those in
California—be communicated to the public without delay.

Geologists have been somewhat remiss, I believe, through
their failure to contribute their special knowledge, on a consis-
tent basis, in the planning stages of large building programs
and dam sites. We cannot afford to stand on ceremony and
wait to be invited, but should step forward and offer our serv-
ices as part of community efforts. Geological aspects of plan-
nning can have considerable effect on such factors as safety and
economy. In some cases, it was discovered belatedly that sites for major dams in the Tennessee Valley Authority were extremely poor from a geological standpoint. This type of situation can and must be avoided through the timely application of geological knowledge.

We know that the use of geological information has been valuable in constructing special foundations not only for a famous hotel in Tokyo but for buildings in Louisiana, California, Texas, and other parts of the world.

It is not just a matter of hiding our light under a bushel. It is a question of rendering proper service to society at every opportunity.

When I think of the kind of geologist who as a credit to himself and to the profession, through service to the public, I remember the outstanding record of the late Paul Weaver. Through a long career stretching from studies at Columbia University to professional employment with the United States Geological Survey; with private corporations in Venezuela, Mexico, England, and America; to a distinguished professorship at Texas A&M, he always found time to work on behalf of his fellow men. For instance, he was a member of committee of the Petroleum Administration for War during World War II. He also devoted a great deal of time to the scientific analysis and solution of water problems and to the study of the effects of subsidence, always keeping the public interest in mind.

In a large sense, those of us in the profession of geology can give a certain perspective to mankind. We are accustomed to thinking in terms of long periods of time, of stages and cycles in development, of great depths and heights and distances, and of the composition—organic and inorganic—of earth, sea, and atmosphere. From the study of this varied subject matter, in general and in detail, we can—or should—lead the way in many fields. The facts we find and organize can affect various disciplines and professions. For example, geologists have taught the lawyers a great deal about the nature of strata, and this knowledge affects the development and interpretation of the body of law concerning mineral property rights, offset drilling, and offshore petroleum exploration. Geology can participate in advancing many frontiers of knowledge—from here to the far side of the moon and throughout the expanding universe.

Report of the Committee on the Geologic Environment In the City of Los Angeles, American Institute of Professional Geologists


Introduction

Man’s continuing struggle with his natural environment has been nowhere more evident or more clearly documented than in the City of Los Angeles, where a burgeoning population has been accommodated within an area of strong topographic contrasts, intense episodic precipitation, and extremely complex geology. During the decade 1950-1960 the population of this metropolis increased about 25 percent, a rate of growth that has not slackened since. A particularly significant corollary of this impressive growth has been increasing use of so-called hillside terrain for residential purposes, a trend that has accompanied the extensive spread of settlement across the available basin and valley areas, and careful estimates indicate that at least two million people ultimately will be living in the City’s hills. It is mainly, though by no means wholly, in these areas of irregular topography that residents have been confronted by undesirable expressions of accelerated erosion and deposition, ground subsidence, mass movement of material, and combinations of these processes.

Floods, earthquakes, landsliding, and other so-called “catastrophic events” have repeatedly contributed to the natural scene since long before the beginnings of settlement in Los Angeles, and they will continue to figure strongly as environmental factors during the foreseeable future. Some of their past effects have been serious, especially since World War II when they have been accentuated by increasingly extensive and often unwise occupancy or modifications of the ground by man; in places, moreover, man’s activities have promoted landsliding and other objectionable ground movements where none had occurred previously.

The fundamental problem is one of distinguishing the naturally safe locality from the naturally unsafe locality, and of identifying the naturally safe locality that can be made unsafe through the actions of man. Here it is impossible to provide generalized solutions; to identify one area or one geologic formation, for example, as uniformly hazardous or uniformly free from hazard would be wholly unrealistic. Yet it would be quite improper to conclude that either the problem or its geologic setting is too complex to permit any satisfactory solution.

Role of the City in Regulating Surface Development of Land in Terms of Geologic Factors

Severe damage through gullying, sliding, and widespread deposition of debris was inflicted upon many parts of Los Angeles by heavy rains in January and March 1952. The extraordinary impact of this damage, which was most evident in newly-graded hillside tracts, led to enactment by the City of a forceful and comprehensive grading ordinance, the nation’s first regulatory measure of its kind. Soon thereafter the Department of Building and Safety began to require geological reports on certain (later on essentially all) hillside properties as parts of the documentary materials submitted with applications for grading permits. The City subsequently authorized the employment of geologists in order to devote more direct attention to geologic problems encountered in development of the land surface; at the present time four geologists are assigned to the Department of Public Works and two to the Department of Building and Safety.
To insure some control over the quality of geologic reports submitted to the City, an Engineering Geologists Qualifications Board was established by the Department of Building and Safety in 1957. Comprising both geologists and engineers, this board has since reviewed the training and experience of numerous applicants and has examined them orally in order to determine whether or not they should be certified to prepare reports that may be accepted by the City. About seven years ago this board provided a comprehensive annotated outline to be used as a guide in the preparation of engineering geology reports to assure that such reports would contain the information and recommendations required by the City and further to encourage the submission of uniformly better reports based upon thorough field studies and analyses of results.

About four years ago a Board of Grading Consultants, including some members of the Engineering Geologists Qualifications Board, was established by the Department of Building and Safety to provide judgment and advice concerning special grading problems.

At the present time the Department of Public Works is primarily responsible for supervising, inspecting, and approving grading plans and grading activities on public property, on existing or proposed dedicated streets or other public easements, and on slopes immediately adjacent thereto. The Department of Building and Safety has similar responsibilities for private property. Thus both departments are involved in the development of new residential tracts, and in other kinds of development as well. Both walk the difficult, and at times the narrow, path leading to land modifications that are practicable for the developer and safe for the user.

Geologists of the Department of Public Works (Bureau of Standards) have been engaged since January 1962 in detailed geologic mapping of about 75 square miles of the Santa Monica Mountains. The project, scheduled for completion in 1966, should provide data highly useful in further development of this part of the City.

**Progress During the Past Fifteen Years**

For purposes of clarification, geologic activities pertinent to development of the City's land surface can be grouped into the following three categories:

Basic geologic studies, including mapping over a wide range of scales, generally made or supported by Federal, State, or City agencies. Much work of this kind has been done within the City since the close of World War II, and the results of these and earlier investigations have contributed to a greatly improved understanding of the local geologic environment. Such results are necessary, but ordinarily are not sufficient, for direct appraisal of geologic hazards.

Specific investigations, in general highly detailed, made in connection with proposed property developments and aimed in major part at identification and appraisal of hazardous or potentially hazardous geologic conditions. These investigations normally are the responsibility of the developer, who retains the services of a consulting geologist or an organization with staff competence in geology. The scope, thoroughness, and quality of reports stemming from such investigations have varied over a wide range, but have improved impressively during the past decade.

Judgments relating to observed and inferred geologic conditions as described and analyzed in reports submitted to the City in connection with grading and building proposals. Activities in this critical area are quite properly the responsibility of City departments, so far as final decisions are concerned. For advice in making such judgments the Department of Public Works relies on in-house staff, the Department of Building and Safety on both staff and outside consultants. Where both departments have been involved in the same questions, their decisions have not always been mutually consistent.

Since adoption of the Grading Ordinance in 1952, more than 50,000 hillside sites have been graded for residential construction within the City of Los Angeles. During the same period of time approximately 35 homes were totally destroyed through landsliding, but of these, 11 were old homes built on level land adjacent to canyons in the Pacific Palisades district and several others had been built at hillside sites graded prior to 1952.

The number of homes damaged by erosion, flood waters, flood debris, and localized ground failure since 1952 is very much larger. However, records maintained by the Department of Building and Safety clearly show that damage to private property, reckoned either annually or by individual storms, has been consistently and considerably less serious and less extensive since 1952 than during 1952 and previous years. Regardless of how the comparisons are made, and regardless of how they are weighted according to various factors, the record plainly underlines the value of the initial grading ordinance and the procedures that stemmed from it during succeeding years. Even more salutary results can be recognized from the much stricter Grading Ordinance of 1963.

Without question, efforts made by the City of Los Angeles to protect its citizens from geologically-related disasters have yielded highly worthwhile results. Their total benefits cannot be fully assessed, however, as the basic aim has been preventive and as there is no satisfactory means for determining how many occurrences of ground failure have been forestalled in the face of the rapidly increasing development of hillside terrain during recent years. The number of these averted disasters probably is very large.

But of immediate and serious concern is the substantial numbers of failure that have been occurring despite all precautionary measures. Only a few of these have been of major magnitude, but many have endangered public safety and nearly every one of them has been a financial burden to the public. Further, an appreciable percentage of these failures can be correlated with ground that has received geological study during the past decade. Other factors remaining constant, some tendency toward an increase in number of failures can be expected as development on larger scales is extended into increasingly difficult terrain.

Finally, a sobering note can be added on the basis of probable climatic shifts during the coming decade. If we project the climatic cycles of the past few centuries, as established by meteorological records and the results of tree-ring studies, the
Southern California region should now be on the threshold of a so-called “wet cycle” of above-average precipitation. Several years of such precipitation could cause substantial modifications in the distribution of ground-water in numerous areas, including many of those in which properties were developed under “dry-cycle” conditions. Under wetter climatic conditions it is realistic to expect increased tendencies toward ground failure at some localities, especially where relatively unstable water-saturated materials could be severely shaken during a strong earthquake.

Expressed Criticisms Relating to Geology-Based Problems Within the City

Numerous critical comments and analyses were expressed to members of this committee during the past months, almost without exception in the interests of improving procedures for dealing with problems relating to the interplay between land development and geologic conditions within the City. These expressions ranged over a wide spectrum; many of them were received repeatedly and some of them appeared to represent near-unanimous views, whereas others were mutually incompatible. Inasmuch as criticisms and suggestions for improvement give better shape to the problem, a sampling of recorded comments is hereby furnished, without response or analysis, as a useful background for the conclusions and recommendations offered farther on.

All of the City’s geology-based responsibilities should be centered in one organizational unity of City government; the present system is confusing, slow and cumbersome, and frustrating to many of those who must deal with it.

Geologists and geologic decisions within the City’s departments are unfortunately controlled and/or dominated by engineers.

The results of basic geologic investigations undertaken by the City’s Bureau of Standards have not been made available to the public when needed.

Not enough detailed geologic investigation is done before the planning stage in development of properties.

Despite strong efforts within City departments to coordinate the work of geologists and engineers, and to develop more effective working relationships between them, strongly divisive influences are at work both within and without the City departments.

Decisions on geologic or geology-based questions, when made by more than one of the City’s departments, too often are in conflict. At best this leads to delays in obtaining grading permits, at worst to almost hopeless confusion.

Just as the City should not (and normally does not) provide consulting services for individuals or for organizations that are not parts of City government, outside consultants should not be used by the City to pass judgment on geologists or on geologic questions.

The Engineering Geologists Qualifications Board of the City has shown distressing indications toward the maintenance of a “closed shop” among engineering geologists.

The Engineering Geologists Qualifications Board and the Board of Grading Consultants, including as they do some geologists who are engaged in private consulting work within the City, could be liable to individual conflicts of interest.

The present Grading Ordinance is unrealistically rigid in its requirements, and does not permit certain desirable procedures based upon sound geologic judgments.

The present Grading Ordinance is not sufficiently stringent.

Variances from provisions of the Grading Ordinance are too easily obtained, and in some instances appear to be capriciously granted.

Variances from provisions of the Grading Ordinance are much too difficult to obtain.

The Grading Ordinance is not effectively enough enforced, probably because the City does not employ a sufficient number of people qualified to make inspections on the ground.

Some land developers are concerned only with making a substantial profit, and either are indifferent to geologic conditions or, aware of them, will “cut corners” despite the potential dangers involved.

Some geologists either cannot or will not deliver a thorough, penetrating analysis of a property. Others refuse to commit themselves, expressing their conclusions in terms that are too vague or too hedged to be fundamentally useful.

Not enough of the City’s geologists are sufficiently competent or experienced to participate in decision making relative to land development.

Conclusions

On the basis of our studies of the interactions and potential interactions among geologists, engineers, land developers and their contractors, the City of Los Angeles, and the geologic environment of the City, we present the following basic conclusions:

1. The City has made remarkable progress during the past 15 years toward solution of problems involved in surface development of the land, despite serious complexities of geology and fundamentally different interests among the various people and groups who participate in the land development. It should be understood that the ultimate goal of uniformly safe development can be closely approached but that it is not likely to be reached; nevertheless, further progress toward this goal must be continuously sought.

2. The present Grading Code of the City is soundly conceived, and it should serve effectively as a guide if it can be consistently enforced and if variances can be obtained without undue difficulty when they are fully justified through appropriate geologic and engineering studies.

A prime example of much-needed enforcement relates to the most widespread type of ground failure that has occurred within the City. This comprises slumps, “pop-outs,” and other relatively shallow-seated expressions of undesirable ground movement that have been identified chiefly with moderately-to steeply-sloped faces of constructed fill masses. Individual failures of this type generally have been small, but they have caused enormous total damage and they constitute a problem to which first-priority attention should be given. Some of
them can be correlated with masses of loose fill, but many others have occurred on the faces of fill masses that were developed under engineering control.

Our review of the situation strongly suggests that (a) the City's present specifications for compacted fill should insure satisfactory stability, (b) prisms of fill constructed in accordance with these specifications indeed prove to be stable, but (c) most currently-employed techniques of fill construction result in prisms whose sloping outer faces have "skins" of material, generally three to five feet thick, that do not actually meet the City's specifications in terms of degree of compaction. These more loosely-compacted "skins" tend to pit, slump, and even to "peel off" during periods of exceptionally heavy surface drainage, whereas more fully compacted fill is remarkably resistant to such failure.

Present methods of fill placement and compaction cannot eliminate the relatively weak "skins" and hence some modification must be introduced if the existing specifications are to be met. For example, each prism of compacted fill could be overbuilt in an outward direction and, after upward building to designed grade, its sloping outer face could be cut back in order to expose appropriately compacted material along the entire face at the position originally designed.

3. A thorough geologic investigation should be made in advance of plans for development of a property. Results of the investigation should be transmitted to the Departments of Building and Safety, City Planning, and Public Works before the project is carried into the engineering stage. Indeed, the wise developer would seek the results of at least a preliminary geologic investigation before deciding upon the purchase of the property.

4. Immediate responsibility for providing the detailed information necessary for sound grading design and development should rest with private geologists and engineers. Overall responsibility for proper development should lie with the land developers and their contractors.

5. Primary responsibility for the City's geologic work, including basic studies and decision making, should rest in one organizational unit.

6. Effective working relationships between geologists and engineers engaged in studies of problems of mutual interest and concern should be encouraged in every possible way. Despite some reports to the contrary, much already has been accomplished in this area by the Grading Division, Department of Building and Safety, and by the Bureau of Standards, Department of Public Works.

7. The City should not continue to rely upon services of outside geologic consultants under conditions that would permit any possible conflict of interest.

8. The City should seek a satisfactory alternative to its present certification or "licensing" activity with respect to engineering geologists. It is much more desirable to focus upon the merit of a report and the work that lies behind it than upon more personal factors.

9. The Department of Building and Safety and the Department of Public Works have contributed significantly to the progress noted in our initial conclusion. However, these departments are now seriously understaffed with respect to qualified geologists, engineers, and inspectors.

10. The public should be better informed, and from uniformly responsible sources, concerning the geologic environment in the City of Los Angeles. Here the City's government could usefully increase present services, for example, by means of further basic geologic studies, by programming such studies in advance of land development and by promptly making their results generally available, by maintaining complete and accessible files of surface and subsurface geologic information, by issuing simplified information and instructions to owners and prospective owners of hillside properties, and by recording identified geology-based hazards through the State Real Estate Commissioner. Finally, all persons dealing with the land surface should be made acquainted with the fundamental difference between geologic data, as presented in a report or on a map, and the interpretation of such data that is essential for identification and appraisal of hazards.

Special Recommendations

Some of the foregoing conclusions are incompatible, wholly or in part, with current operations and operational structure of the City of Los Angeles. Toward resolution of these difficulties and toward the improvement of pertinent geological practice within the City, we respectfully submit the following special recommendations:

1. An Office (or Department) of Geology, headed by a Chief Geologist, should be established within the City's governmental framework. The Chief Geologist should be exceptionally well qualified in terms of ability and experience, and his position should correspond in status and salary bracket to the existing position of Petroleum Administrator. Like the Petroleum Administrator, the Chief Geologist might well be installed within the Office of the City Administrative Officer, in which event the position could be created by ordinance. Alternatively, and more desirably from the standpoint of effective operations, a Department of Geology and Mineral Resources could be established to include both the Chief Geologist and the Petroleum Administrator, whose work would be closely allied. As justification for this new department, the City not only inspects geologic conditions and polices certain geology-related activities within its 460 square miles, but it also is a major land owner in the Los Angeles Basin and Owens Valley areas through its independent or proprietary departments. Lands under the control of these latter departments are known to contain important mineral deposits.

2. The Chief Geologist would have jurisdiction over all geologic efforts by the City, and all geologists now working in City departments would report to him. He would assign geologists to departments according to needs for their services, and he would be responsible for coordinating and evaluating their activities. His relationships with departments might well be analogous to those between the City Attorney and those departments that require legal services.

3. It would be desirable to establish an Office of Grading, headed by a Chief Grading Engineer with jurisdiction over
all grading responsibilities and activities of the City. He would operate at a level essentially equivalent to that of the Chief Geologist.

4. A position of Assistant Chief Geologist should be established at a substantial salary level. The incumbent should be a person well qualified to assist the Chief Geologist in a highly responsible manner.

5. The Engineering Geologists Qualifications Board should be dissolved, and appropriate changes should be made in the language of the Grading Code and other written materials to eliminate reference to his board and to “qualified” or “approved” geologists. It is recognized that the Qualifications Board has performed a valuable and essential service, but this service properly represents a transitional period in the evolution of the City’s geologic program. Recommendations one and two above would permit any geologist to practice in the City, but his work would stand or fall on its own merits as determined by the Chief Geologist and his staff. The City thus would assume a more direct role in appraising the quality of geological reports and the soundness of geology-based recommendations submitted to City departments.

6. The Board of Grading Consultants, with its vital review function, should comprise the Chief Geologist, the Assistant Chief Geologist, and two highly qualified soils engineers who are not engaged in private consulting work within the City.

7. The considerable expense that would attend the recommended reorganization of the City’s geological activities could be met, wholly or in large part, through the charging of substantial fees for grading permits according to a scale based upon size and location of the properties involved. This would transmit the cost to the land developer in return for prompter and more decisive action, and the developer doubtless would in turn pass this cost along to the purchasers of his land. This would place the ultimate cost where it belongs; the citizen who chooses to live in terrain requiring special geologic attention to insure an improved measure of safety should expect a correspondingly higher cost for this added necessary service.

8. If Recommendation five were translated into action, the City of Los Angeles would no longer be assuming a local responsibility for registering, qualifying, or certifying geologists in a field that is extraordinarily difficult to define. In our view, regulation of some kind is highly desirable for professional geologists as a whole, and such regulation should be introduced at the State level. We recommend, therefore, that the City’s 1967 Legislative Program encourage introduction of a bill in the State Legislature (preferably the Assembly) that would provide for the chartering of geologists on a profession-wide basis. Chartering of geologists as a public corporation is the preferred alternative to a program of direct registration which, in 1963 and 1965, failed to win the Legislature’s approval.

August 25, 1966

---

**The Impact of Natural Resources on Society**

By Michel T. Halbouty, CPG 10
Consulting Geologist and Engineer, Houston, Texas

The title assigned to me for my few keynote remarks this morning is "The Impact of Natural Resources on Society." I rather believe it could, or probably should, be the other way around. "The Impact of Society on Natural Resources."

It has been said that this planet constitutes a great ball of minerals, which largely determine man’s physical environment by providing the ultimate source of a vast number of raw materials and energy essential to progress.

Minerals are closely associated with man’s material and intellectual development.

The development of minerals in human life is, with the exception of clay and stones, relatively recent. In the earliest days of modern civilization, the emphasis was on precious stones rather than the more practical treasures of the earth’s crust.

Scientific study of minerals was hardly known prior to the 19th century on any significant scale. What we did know, up to a few centuries before Christ, was apparently lost. The father of modern mineralogy was a German who called himself Georgius Agricola (Ag Creek ca la) but whose real name was George Bauer. He lived from 1494, two years after the discovery of America, until 1555, about the time of the first application of geophysics.

Most of the advancement in mineralogy has been made in this century.

Natural resources have had quite an influence on the development of our society, in the progress of our country, and in the exercise of freedom.

Yet it is our society—our form of government, the intelligence of our people, their willingness to risk and try something new, and their ability to get the most good out of what they have—that has had great impact on the use and supply of raw materials. And, in turn, those resources, used in the best interests of the most people in this country, have brought us to where we are today.

When this country was founded, with its small population and its vast, unconquered and undeveloped expanse, it was an accepted belief that its natural resources were unlimited. It was a self-sufficient world of its own. It was beyond anyone’s imagination that we could ever possibly utilize or consume the bounties of nature here in such immeasurable abundance.

As the poor and homeless and unwanted millions streamed onto our shores from every corner of the earth and pushed relentlessly westward and populated all of the land we could buy, barter, acquire by treaty, accept into statehood by admission, or otherwise until we had expanded from Maine to Hawaii and from Florida to Alaska, we gradually increased the lot of every citizen, increased per capita consumption, and provided the American family with not only the necessities and conveniences, but the comforts and luxu-
ries of life until we have now begun to wonder whether or not our resources can withstand the assault.

Today the question has reached a point that makes it foremost in the minds of all who think in this country. It supercedes questions of war and peace and poverty and crime. It involves our continued existence.

By the end of 1965, the United States had nine per cent of the Free World population and consumed about 35 per cent of its mineral supply.

It is being anticipated by the forecasters that by 1980 the consumption of minerals in this country will increase by at least 50 per cent, and possibly will double. By then our share of the world’s population will have dropped to 7.7 per cent but we will have 29 per cent more population that we had at the end of 1965. The free world’s population, according to the estimators, will have increased 50 per cent.

Even today we have great dependence on foreign imports for our mineral supplies. About 75 per cent of our needs of 20 different important mineral commodities come from overseas. This is attributable largely to lower labor costs, lower taxes, lower costs for pollution control, and more abundant, cheap supplies of mineral deposits abroad.

If the trend increases, we will be importing a major portion of our iron, copper, lead and zinc, thus adding to the number of important commodities for which this country is already dependent on foreign sources.

To reverse this trend, if it is possible at all, we must update our technology in exploration and discovery beyond the outcrops. We must learn to explore the extreme depths, improve our mining technology, learn to recycle scrap and waste more efficiently, and learn to substitute some of our abundant materials for those in short supply. In addition, we must look to the sea for new sources.

In the past, this country has enjoyed the highest standard of living in the history of mankind because we have enjoyed an abundance of mineral resources.

Not only has petroleum been almost exclusively an American industry for the first three-quarters of a century of its life, but it has made the use of other minerals far more effective than they have been elsewhere on earth.

We have also been blessed with a sufficiency of most of the essential metals and nonmetal minerals to support both industry and agriculture on a grand scale. In this connection, I speak of iron, lead, zinc, copper, pumice, barites and sulphur, potash and lime, among others.

In energy we passed from the wood, coal and kerosene ages into the use of liquid fuel without missing a beat. Our expansion and progress and prosperity have been so rapid they could scarcely be called orderly.

To examine the impact of mineral resources on society we have only to look back a century, whereas most other civilized countries would have to look back at least a millennium.

If we are not to stop where we are and let the rest of the world pass us by, we will have to remain sufficient in all minerals necessary to our existence. And that’s where we come in.

I believe our profession has done more to assure self-sufficiency than any other. While it will be necessary to make a few relatively simple adjustments in technology, and a few here and there in government approach to our problems, we know we have sufficient deposits in fossil fuels to last us as far as we can see into the future.

There is an overwhelming abundance of coal. Shale oil, while a debatable subject to say the least, is here for our use as soon as we develop the intelligence to handle it. Natural gas and crude oil in their conventional forms exist far beyond our present imagination within the continental limits of the United States. The recent billions of barrels of oil discovered on the north slope of Alaska is merely an indication of what we have yet to find in new petroleum reserves.

As we need new technological progress in oil and gas exploration, drilling, and production, there is also great need for new concepts in mine system engineering to come up with whatever else we need in all types of minerals.

And these systems and technologies are already appearing on the scene. Tunneling equipment we could not even imagine a few years ago is already available and being improved dramatically each day.

New ideas in extraction, mobility, and use already exist in varying stages of development. Fortunately, our system of government and the opportunity to profit by the development of such knowledge does not make it necessary for these ideas to all be born in this country. The free enterprise system has brought the best minds and inventions of the world to our country with the greatest ideas when it was found they would flounder in other environments.

In the petroleum industry, for example, we are indebted to France for the electrical log, to Germany for the seismograph, to an Englishman for the art of distillation, to the Chinese for the birth of drilling ideas, and to many others.

This brain power immigration is still going on, although it has slowed some in recent years. One reason could be that we have projected an unfortunate image, whether it is deserved or not, in many foreign countries. This is a matter that needs considerable attention.

As we approach the coming decades and the next century we have many challenges. They run the gamut from the elimination of obvious social ills and injustices to the more obvious and simpler problems of air and water pollution and the production of sufficient food, shelter, clothing, and medicine to care for the expanding populations.

We have a challenge in conservation. With the world’s production of 40 million vehicles each year our consumption of steel, lead, copper, zinc and aluminum in this one field alone is a staggering amount of minerals. It has been suggested that the extension of the present 7-year average life of a car to twice that amount would be one easy step. Another, in the same field, would be to salvage and use the above-ground high-grade metal resources of more than nine million tons annually which is now shamefully wasted.

The natural resource of petroleum is an example of the word “impact” on society. No one even suspected its existence as a commercial product for almost 400 years after the white man first inhabited this continent.
Yet, in less than 110 years since its discovery as a useful industrial product, it has succeeded in supplying every American industrial and agricultural worker with energy equivalent of 244 men before 1859. Petroleum fuel gives each of us the use of the equivalent of 2000 men to push his automobile along a modern highway. A locomotive engineer controls energy equivalent to that of 100,000 men and a jet pilot the equivalent of 700,000 men.

The humblest American enjoys the services of more slaves than were once owned by the richest nobles, and he lives better than ancient kings. The average citizen's family in this country has been provided with the equivalent of 33 faithful household helpers, all on duty 24 hours a day, seven days a week, and 365 days a year, plus an additional day in leap years.

So, for a single natural resource, petroleum, that is quite an impact on society.

But take all of our other resources, such as water, and coal and iron and copper and sulphur, and on and on ad infinitum, and see how one after the other has been fitted into the scheme of things.

Petroleum and all of these other raw materials we call natural resources were here long before we were. They were also in other parts of the world in even greater abundance, and are still there, but man did little with them. There was civilization. There were the Greeks and the Romans and the Persians and the Medes and the philosophers of Cathay, the intellectuals of Great Britain and France and Italy. And there were artists and writers and craftsmen whose great works we still admire.

Yet those natural resources remained below the earth's surface, for the most part totally unused, because the impact of the society founded with our Declaration of Independence only benefited the remainder of the world in direct proportion to the freedom, education and responsibility of individuals in other countries.

Think for a moment of sulphur and what contribution it has made to the welfare and progress of this country and mankind in general.

There was a time, little more than a century ago, when almost all of the sulphur of the world was dug out of the bowels of the earth by slaves from mines in Sicily.

Then came Herman Frasch with an idea. This was aided by cheap fuel which was discovered at Spindletop by Captain Lucas, and the world supply of this most precious commodity, sulphur, was multiplied thousands of times overnight at a price within the reach of everyone.

You can take that story a step further to the remarkable additional steps in the recovery of sulphur that are being revealed before our eyes as we assemble here this morning.

Consider the advances we are making in the fields of plastics and other substitutes now in use in construction, manufacturing, agricultural, and commercial fields. Give a little thought to natural gas, an industry that was almost nonexistent until after World War II, and the natural gas liquids industry, both of which have combined with the oil industry to bring about the fabulous petrochemical industry.

These are the fields you and I know about and can see around us and in our daily work. But there are so many other fields where equal progress has been made in mineral resource development.

Today our advanced society is worried over whether or not it can continue to live in the manner to which it has become accustomed. It has seen the finding of oil and ore and other mineral resources by surface indications and other simple methods of exploration come to an end. In this land of plenty we have begun to depend on imports from other parts of the world where these minerals are now more abundant.

The first reaction of some people is to turn to the government and ask in loud, booming voices, "What are you going to do about it?" What the government starts doing—the only resort of government, I guess,—is to chip and gnaw away at man's freedom, to blunt man's ingenuity, ambition and hope in the process, and provide more socialistic answers.

We've almost reached that point. In fact, I guess we might have passed it had not those scientists, like us, with a remaining source of inspiration and determination, inherited from their forefathers, aroused themselves to the situation and started to do something about it.

First, they started looking to the sea where we now know that natural resources abound. They then began to consider the second layer of the earth, and even some of the first layer where we were unable to explore in years before.

Now there is a renaissance of bold technological thinking and doing in this country which is the equivalent of that of those pioneers of the mid-nineteenth century when Drake's first well fired the imagination of common men, and the beginning of this century when it was rekindled with the great Lucas gusher.

In between those years, we saw the railroads link up the east and the west, we fought a stupid and destructive war between the states, we saw the industrial revolution come to life, and we saw mankind advance and progress more in fewer years than even the most enlightened minds of old could imagine possible.

While we have always depended on technology, never before have we done so much more than we do right now. We need the men with the minds to develop the tools and the techniques to explore for and produce the raw materials we know exist in quantities sufficient to propel us into the 21st century with the wherewithal to meet the challenges, to eliminate ignorance, poverty, war, and most health hazards, and to supply man with those things he now needs and cannot afford, to continue to increase his lot on earth, and maybe even on other planets, and in space, with products and systems that you and I cannot even imagine here today in this room.

There have been many predictions made about what life will be like in the year 2000. It could be pretty dreary compared to the way we live it today unless we meet some goals.

There is no doubt we are accelerating the depletion of our established domestic sources of minerals. Our high-grade reserves of metals and minerals have long been exhausted. Some metals we have never had in quantity.
So, today, we need bold new concepts, new imagination, ideas in systems, tools, machinery and revolutionary procedures to keep us on our road to Utopia.

The continuation of our progress and prosperity depends on an adequate supply of all essential minerals, including the fuels to energize our power and transportation. We will need the sulphur and phosphates to fertilize our tremendous agricultural needs; and the steel, copper, aluminum, lead, zinc and other metals with which to build. These are the basics of our economy and the multipliers of our Gross National Product. They are the essentials for full employment, the elimination of poverty, the advancement of education, and the continued development of freedom.

There is no doubt in my mind that we have the physical resources to accomplish all that is needed to continue the progress of mankind both here and abroad. But we must have leaders with vision and daring, scientists and technologists who are willing to risk doing something different. We will have to get below the outcrops and into the second layer of mineral treasures where we will undoubtedly find far more than we have ever imagined.

The lack of our key resources at reasonable prices can substantially affect our standard of living. If we do not increase our mineral resource base, each of us eventually may have about half of the commodities to provide for our everyday living as we have today.

For example, electric automobiles have been proposed as the solution to the air pollution problem. This does not represent a solution because we do not have the metal resources to build the fourteen billion pounds of batteries required to power the automobiles we have today, let alone double that number as estimated for 1980.

We must tell our youth that a career in the earth science and mineral engineering fields can provide identity with social, with economic and with technical issues that will have an impact on the future of this nation and, indeed, on the world at large. They must be told that such a career can provide visibility and rewards through achievement and recognition.

The scientist or engineer who through application of petroleum chemistry discovers how to burn gasoline in an automobile without polluting the air beyond acceptable limits can be a national hero.

The scientist or engineer who discovers how to recover economically the four million troy ounces of gold that now exists in the low grade ores in the United States can counteract the gold drain and will also be a national hero.

There are hundreds of new ideas and scientific breakthroughs needed to assure adequate mineral supplies now and in the years ahead—which in turn will require hundreds of national heroes to produce.

Geology, geophysics, chemistry, mineral engineering and their allied sciences will have to produce these men and hope that they will meet the challenges which lie before them.

The answers to these formidable challenges will be found, I am certain, in education and research. The needs of our people are great and growing. This is no time to sit on our hands and dream. It is time to think—time to get up and work. If we fail, a civilization could perish.

“Speech at Fourth Annual Meeting Texas Section AIPG, Austin, Texas, September 1968

Motivation and the AIPG

By James R. Dunn
From 1968 TPG

It has long been clear to psychologists that to a large measure a man’s motivations determine his effectiveness as a human being. So also with the motivations of an organization. I think, therefore, that a discussion of the motivations of geologists might help in defining those of the AIPG and make it more effective by more precisely defining its goals.

Motivations

At its simplest, geologists have two major areas of interest: “scientific” geology and “applied” geology. Usually the good scientist is not a good applier, and the geologic applier may be responsible for the wildest and most improbable “scientific” concepts. What applied geologist has not at times felt uncomfortable (or inferior?) when talking to a basic researcher, on finding that he could understand little or nothing of what the researcher said? His discomfort may have increased when he found that the researcher knew little and cared less about the practitioner’s own interests. The fact is that although they are both geologists, the two have little in common in perspectives, goals, or motivations.

My thesis is that a failure to define precisely and accept this dichotomy within geology has lead to motivational confusion and has greatly weakened the geological profession.

A research geologist usually solves a problem for its own sake, for the satisfaction he receives in fitting a piece into a scientific puzzle. Such research is internally oriented, introverted in aspect, and has little to do with the external application of geology to socio-economic problems. On the other hand, a geologist who applies his knowledge to the needs of society is externally oriented and shares his knowledge and ability. As Marlene Dixon said in the May 1968 Professional Geologist, he holds “the client’s interest above his own.”

This recognition of two motivations is in no way meant to be a criticism of either—it merely describes a state of affairs. Quite probably, the good research scientist must be internally motivated; and similarly, the good applier must be externally motivated.

Standards of Success

It is not surprising that such different views of geology lead to different goals and standards. A scientist is likely to evaluate his success by the number of papers he has written (although, of course, posterity may judge him on other terms). The applier should evaluate his success by such things as contributions toward development of mineral resources or major construction; more broadly, in terms of socio-economic
APPENDIX 9—SELECTED SPEECHES AND PAPERS BY CPGs

Dunn

progress. Papers written or scientific problems solved should be only an incidental spin-off.

But I think that geologists frequently confuse scientific goals and socio-economic goals. How often does a geologist handle an applied problem as though it is a research problem, failing to see problems as a series of scientific exercises? Situations are, I think, the result of motivational failure, a schizophrenic attitude in which a man doing practical or applied work has some of the standards of the basic scientist and a conscious or unconscious wish to be accepted and/or admired by the basic scientists.

The Cause of Confusion

Unfortunately, geology is taught to a very large extent by geologic theoreticians, whose standards, goals, and motivations are mostly those of the basic scientist. Often they either disparage or ignore the applied aspects of geology. A student is sensitive to such attitudes and cannot help being influenced by them. These attitudes are reinforced when the student sees his admired professors pick their best students to go into basic research and send the less able ones out into industry. The implication that applied geology is a simple and somehow a second-rate profession cannot escape him. So, if he goes into applied geology it is with a feeling of inferiority and with the feeling that he'd like to show his professor that he can be a research scientist. Hence split motivations.

The situation may be aggravated if the geology department, in its feeling that applied work is somehow inferior, fails to train the student adequately to do applied work. He now has 2-1/2 strikes against him: confused motivation, a sense of inferiority, and poor training. It is only 2-1/2 strikes because, surprisingly, some geologists manage to survive the system and still be effective.

Some Possible Answers

Other sciences long ago recognized the problem and split into differently motivated groups: research chemists and chemical engineers; physicists and mechanical engineers; physicists and electrical engineers, etc. I do not advise such a split in geology because of the limited size of the profession and the great difficulty in splitting small departments. But there are other possible answers, and here, I think, the AIPG can be of great service to the profession, and, more important, to the environment we live in.

First, maybe we should clarify our own motivations. Should not our AIPG constitution state first and foremost in its Statement of Purpose (better, perhaps, Purpose and Responsibilities?) that we are concerned with the “effective use of geology toward the betterment of our socio-economic environment.” Not to state this clearly and early makes us seem narrow and parochial at best, and nonprofessional at worst—for, by implication, we are not putting the “client’s interests above our own.” Once it is clear that we are not just looking out for ourselves, we can then emphasize the socio-economic importance of geology to students and young geologists. This should not be hard to do. In this day of highly idealistic students, the Peace Corps, and the questioning of former standards, promotion of the importance of geology for the betterment of man is in the trend. The rewards gained from helping the economy of a country by developing its mineral resources and its land can be very great in terms of personal satisfaction. In human terms, this sort of goal is far better than the puristic scientific ideal.

It should be further stressed to young geologists that economic entity can be immensely complex, and that such work needs our best men, not our mediocrities.

In what other ways can we as an association help geologists to find themselves, to clarify their motivation? Several things come to mind.

1. We could write up case histories in which geologists have used their knowledge to better the socio-economic environment of man. These accounts should come from such diverse fields as paleontology, mineralogy, petroleum geology, mining geology, engineering geology, conservation, and environmental geology. By pointing to such accomplishments with professional pride, we serve several purposes. We categorize ways in which geology has been used successfully. We clearly present an alternate definition of success to the scientific definition. We collect case histories that can be readily taught to young geologists.

In these case histories we should stress the complexity and the frequent multi-disciplinary nature of such projects. This needs to be done so as to show that geology, properly applied, is at least as mentally stimulating and intellectually demanding as a piece of good basic research.

2. We could show how geologists can be more outwardly oriented, how they can learn to see better the problems of their environment and help to solve community problems. Professional prestige and respect is a natural outgrowth of effective service. Talking among ourselves results in little appreciation by the general public, but showing an interest in others results directly in prestige—and, just as important, results in work.

For instance, how many geologists have thought of joining, as associate members, crushed stone producers, sand and gravel producers', or construction company associations? How many of us are in planning associations or engineering societies? Once our energies are clearly directed outward, and we realize we must look at the problems of the people, joining such groups is a logical step.

3. We should, I think, analyze the problems of geologists in each field, separately, to find out how they can be more effective. Frequently, effective work is not a matter of training, for most graduate geologists have been at least moderately well trained. The difference between being effective and ineffective is often our individual perspective and motivation.

The prestige, I feel, is developed through outward orientation, service, professionalism, clear motivations. Perhaps we in the AIPG can encourage geologists to join the world, and to have pride in geology well applied. In so doing, we help ourselves as a society.
APPENDIX 9—SELECTED SPEECHES AND PAPERS BY CPGs  

Comments to the Association of Geologists at their Annual Meeting in San Francisco — October 23, 1969  

By R. Dana Russell, CPG 172

Thank you, Lloyd, for inviting me to this meeting; I am pleased to be here and to be able to bring all of you greetings from your fellow organization of AIPG — the American Institute of Professional Geologists. We had our annual meeting two weeks ago in St. Louis, attended by both your current president, Lloyd Cluff, and your incoming president, Dick Lemke. At that meeting, Dick pointed out that the word “Professional” in our name creates considerable misunderstanding among members of other geological organizations — a common reaction is “What’s with those guys, do they think they’re, the only professionals?” Of course we don’t, but we do find the many connotations of the term “professional” confusing, and wish, with Dick, that we could find a suitable substitute. Unfortunately, there just aren’t any good synonyms. Yet understanding of what we are trying to do, for all geologists, is so important that I hope you’ll bear with me for a few minutes while I try to explain what we mean by “Professional,” and why we complement AEG, AAPG, GSA, SEG, and the many other geological organizations, rather than compete with them.

Not everyone considers the term “professional” one of approbrium. Many of our academic colleagues consider it one of opprobrium, believing that it connotes commercialism. Certainly that’s one of the recognized meanings of the term, the one specifically applied to the oldest profession - to quote Webster: “participating for gain or a livelihood in an activity often engaged in by amateurs,” and the amateurs have pretty well taken over the oldest profession. But Webster also defines profession as “A calling requiring specialized knowledge and often long and intensive academic preparation, used by way either of instructing, guiding, or advising others, or of serving them in some branch of learning or science.” This is the meaning we profess, and I think that all of us are professional in the sense of this definition - our academic colleagues, government employees, company employees, and consultants - we all either instruct, guide, advise, or serve others, using our knowledge of the “learned profession” of geology. How, then, does AIPG differ from AEG and other geological organizations? It differs in its orientation and functions; AIPG is exclusively concerned with those aspects of the geological profession that are largely ignored by most other groups.

The most obvious characteristic of a learned profession is its body of scientific theory and knowledge. Geology is one of the oldest of the physical sciences, going back to Greek and Roman times, so by now we have a very large body of organized geologic knowledge that has been increasing exponentially in recent years. Essentially all of our geological societies are concerned with maintaining and expanding, and most of them with applying, one or more scientific or technical aspects of this body of knowledge - AEG, for example, is concerned with the development and application of geologic knowledge as applied to engineering problems; AAPG with its development and application as applied to petroleum exploration and production, etc. AIPG, on the other hand, is not responsible for any of these scientific or technical aspects of geology; our responsibility is solely for those matters that concern geology as a profession. We are dedicated to the professional advancement of all geologists, regardless of specialty or occupation, and we wish to work with all the other geological groups in achieving this end. We have, as you know, been designated by the American Geological Institute as the member organization to which all matters of professionalism shall be referred.

What do we mean by “professionalism” and “professional matters”?

1. We mean establishing and maintaining high professional standards. This, in turn, means evaluation of the education and other training, the professional competence and practice, and the professional ethics, of every applicant for certification as a professional geologist.
2. We mean protecting the public from charlatans and other nonprofessionals.
3. We mean establishing the legal status of professional geologists and protecting them from repressive legislation.
4. We mean educating the public and governmental bodies on the contributions geology can make in all fields - application, and especially these days in the use, enjoyment, and control of our physical environment.
5. And finally, we mean providing a single, strong organization that is willing to stand up in public and speak, firmly and objectively, on public matters where geologists can make special contributions; that can speak for all branches and all specialties of geology, and do this even if it means becoming involved in political activities.

You, of course, as AEG members, are also concerned with these problems, as are members of other geological groups, but you are primarily concerned as individual members of the geological profession. AEG, as an organization, is only incidentally concerned with these professional matters — if it became too concerned, its tax-exempt status as a scientific and educational organization would be jeopardized. Besides, it represents only one segment of the profession. AIPG is exclusively concerned with these matters, and for the entire profession. And these professional problems are tough ones; there’s plenty here to keep us busy without competing with other geological organizations on technical problems.

Finally, you may ask how much progress we’ve made in our nearly six years of history. We’ve increased in size from a handful of founders to about 2000 active members in 27 State Sections and 23 foreign countries. We have a headquarters staff of one Executive Director and one secretary; these two are ti, only people in AIPG receiving either salary or expense funds. Essentially all our work is done by volunteers, yet in five short years these dedicated professional geologists have accomplished a great deal for all of geology and all geologists. A sampling is listed on the sheet entitled “A Few Salient Accomplishments of AIPG .... if you’re interested, copies are available on the able by the door. If you are eligible for membership and are not now a member, we welcome your application — come join us in helping to raise the professional standing of all geologists.
History of Registration of Geologists in California-- The Sequel

By Henry H. Neel, CPG 528

[TPG Editor’s Note: this is the final part of Henry Neel’s Article “The History of Registration of Geologists in California.” The main part of which was reprinted from the California Section Newsletter of May 1979, and reprinted in the September Issue of TPG. This was published as a reminder that the promotion of the profession of geology has serious opponents]

Toward the end of the campaign, a very interesting but alarming development underlined the necessity for regulation to eliminate the rascals from the profession. A flood of telegrams, letters and telephone calls began to come in to several legislators on committees or in other positions which could influence the fate of the bill.

These were all signed by fictitious names, in many instances cleverly contrived by using the first name of one well known geologist combined with the last name of another. As the scheme progressed the perpetrators became more desperate and started using the first and last names of actual geologists with a different middle initial. The ultimate came when they actually forged in its entirety the name of one of the top officials in the California Division of Mines and Geology.

At the same time telephone calls were received from people purporting to represent governmental bodies and in at least one instance the call was actually charged to the telephone number of the Santa Barbara County Board of Supervisors.

There was a liberal use of organization names which were so close to actual names as to indicate they were intentionally misleading, as for example, “The American Geological Society.”

This prompted some of the national societies to join forces and retain a well-known firm of private investigators to try to apprehend the perpetrators. Our investigation, although it produced some very interesting results, did not develop evidence sufficient for criminal prosecution. Before it ended it became obvious that there were a significant number of unqualified charlatans who were so fearful of regulation that they were willing to perform outright criminal acts in order to defeat the bill.

In the end this fracas was probably all to the good. It certainly convinced those geologists and legislators who harbored any doubts as to whether or not such regulatory legislation was needed. And it so incensed many of the legislators to think that anyone could take them for such fools that they swung to the side of regulation immediately.

Subsequently the geophysicists who had declined to associate with the geologists in seeking registration from the outset, actively sought and with the aid of the geologists, were successful in amending the code to include geophysicists in registration.

I wish to acknowledge the generous help of Wes Bruer, Bob Paschall, Glenn Brown, John Curran and Lowell Redwine in the preparation of this article.

Letter to the Editor

“Our Professional Image”

By Fred L. Fox, CPG 1273

From 1970 TPG

A recent editorial in TPG points up one of the basic problems yet to be solved by the geological profession. It is the problem of our professional image.

Who needs a professional image? WE DO. And we must destroy the seemingly harmless image we now possess—many still think of the geologist as a rather seedy (albeit scholarly) type picking at an outcrop with his leather-handled Estwing. It’s difficult to conceive of the work of such an individual as relevant to the “real world” of today.

A certain smugness in some corners of our profession perpetuates this ancient problem. No one can argue with the logic that a geologist who is a good man on a civic committee does more for the image of the profession than if he wore a purple uniform to work. However, this neatly avoids the real problem. More smoke is added by slating that any image necessarily must include the consultant, professor, company man, and laboratory researcher, among others. This approach fails to account for the fact that more than one profession may be involved here.

Geology includes a spectrum varying from a pure science on one hand to engineering (making practical application of the knowledge of pure science) on the other. Practical application ranges from a minimum at the purely scientific end of the spectrum to a maximum at the interface with engineering.

Geology is a “new” profession compared with the older established ones (medicine, law, religion, higher education and aesthetics). Because it is a profession, geologists tend to consider themselves professionals. This is not necessarily the case. True professional status requires the practice of a recognized profession in accordance with the ethics and standards of conduct required by that profession, and that a person be practicing at a professional level—that it is his life, so to speak. It is possible to be a geologist without being a professional, and vice versa. Further, possession of the title does not make one a professional.

If the professor, consultant, company man, government man and lab researcher are considered in this light, the apparent conflict lessens considerably. A professor of geology may be a professional and a geologist at the same time and still not be a professional geologist. His professional status may come from his position in the field of higher learning rather than the field of geology. If teaching is his life, this is the case. The consultant usually is a professional geologist. He puts his name and reputation on the line daily, staking his livelihood on it. The status of a company man depends upon...
his position. If his skill and expertise are independent of his employer and if his employer accepts the role of client, there is no reason why the company man cannot enjoy true professional status. The government man is similar except that the security of employment might tend to blunt the challenge to pursue creative work (a requirement of professional endeavors). The lab researcher may be a professional and/or a geologist, or simply a highly-trained technician. A professional image is cultivated by the true professional. The doctor is proud of his professional image just as the lawyer is proud of his. Men of the cloth even wear what might be considered a uniform. It’s not purple, but there’s no mistaking it. Geologists should be so lucky.

The problems inherent in fabricating an all-inclusive image for engineers have no counterpart in geology. A petroleum engineer has little in common with an aeronautical engineer—they apply knowledge of different sciences to different fields for different ends. They do not work with the same materials in the same environment. Engineering requires application—both ends are open.

Geologists, regardless of their specialty, share the same basic science, even though the application may vary considerably. The search for an all-inclusive image for “The Engineer” may well be hopeless, but should not be so for the geologist as a professional.

The need for a professional image is more acute at that end of the profession interfacing with engineering. Engineering and mining geologists are close to this interface—it is from these disciplines that we hear the cry for recognition (identification) loudest. This fact of life is the source of considerable friction between engineering and other geologists. As we move toward the other end of the spectrum, the need for an image disappears somewhere in the fog beyond the stereotype of the seedy scholar with the Estwing.

From out of this fog come the voices of the smug. These stalwarts of the Old Guard who long ago relegated their battered Estwings to the shelf more recently have opposed California registration, and even opposed the specialization of engineering geology in other quarters (because it would result in higher salaries for those deserving them). They attempt to dictate professionalism in spite of their having abandoned their profession long ago.

It’s not naive to seek a professional image. It’s naive to allege that geologists don’t require one while trying to maintain a holier-than-thou attitude. We’re not in a position to sit on our laurels—we’ve got damned few. We occupy a lower rung on the professional ladder than do those professions with some sort of image.

In this age of relevance and practical endeavor, let’s set about creating a relevant image that will enable us to raise our profession to the level it deserves. Our workshop is the natural environment. What could be more relevant?

Fred L. Fox, CPG 1273
September 20, 1970
Berkeley Heights, New Jersey
From November 1970 TPG

APPENDIX 9—SELECTED SPEECHES AND PAPERS BY CPGs

1. Cultivate the general public.
2. Cultivate influential professional groups.
3. Publicize the benefits, values or needs of geologic input.
4. Try to overcome unpleasant public “memories” of unsatisfactory relations with geologists.
5. Emphasize case histories.
6. Feature the preventive as well as the corrective.
7. Give recognition to achievements of individual geologists for the benefit of the profession as a whole.
8. Render a general public service.

Committee Membership
Standing committee consists of three members, each serving a 3-year term on a staggered basis; one new committee member to be appointed beginning the first day of January each year.

Special publicity task groups, subcommittee or associate committee members to be appointed by the committee chairman as needed.

Periods of service of such task groups, subcommittees or associated members should be determined by the members of the standing committee.

Duties
1. Standing Committee
   A. Conduct continuing study of public relation problems
   B. Present policy questions to AIPG Executive Committee
   C. Collect and catalog material submitted to the committee for publication
   D. Review and edit articles, scripts and other materials submitted to the committee for publication
   E. Inform and advise Executive Committee of developments which need public relation attention.
   F. Prepare interim reports as requested
   G. Provide advice to the section regarding layout, format, and other aspects of newsletters and other printed material
   H. Provide liaison with national public relations committee of AIPG
   I. Assist in preparing publicity for state section annual meeting and other special meetings as required
   J. Prepare an annual public relations report and submit recommendations at the annual meeting
   K. Perform work required by Executive Committee
2. Special Committees
   A. Develop different methods of communication with the public related to the field of the special committee
   B. Solicit material for distribution
   C. Contact outlets
   D. Foresee policy questions
3. General Duties
Organizing the Public Relations Effort
1. Select media and devices
   A. Newspapers and journals
      (1) Press releases
      (2) Interviews and selected articles
   B. Personal contacts

   (1) Speaking engagements
   (2) Day-to-day contact with various members of the “public”
   C. Radio
   D. Television
   E. Direct mail
   F. Newsletters
   G. Brochures
   H. Exhibits
   I. Seminars and conferences
2. Select specific projects
   A. Help develop a geological education program
   B. Develop a speakers’ bureau (See Attachment A)
   C. Develop a permanent display or exhibit for use at professional or technical meetings of other societies, engineers’ weeks, community activities, etc.
   D. Help develop and distribute career guidance materials
   E. Develop public service press releases on temporary issues (See Attachment B and C)

Attachment A
American Institute of Professional Geologists
__________ Section
Speakers’ Bureau

The ________ Section is organizing a Speakers’ Bureau for the benefit of ________ professional societies, civil organizations, etc. A brochure will be published listing each of the available speakers, their topics, and pertinent information regarding the presentation. It is intended that the list of subjects will cover major areas of geology.

Volunteer speakers are the best speakers. We would appreciate receiving appropriate information from each member of the section who is willing to further the public image of geology and the role of the professional geologist.

In order to evaluate the response of the entire section, we are asking all members to return this questionnaire. Those who do not wish to speak should indicate this in the appropriate place; those who are willing should fill out the remainder of the questionnaire so that we will have enough information for the brochure.

The prompt return of this questionnaire will help us form an effective Speakers’ Bureau. It should be sent to:
Chairman
State PR Committee
Thank you.

******************************************************************************
I will represent the ________ Section as a member of the Speakers’ Bureau
Yes ______ No ______
Subject(s) ________________________________________________________________

Type and Size of Audience:
Technical _____ Large Groups _____
Non-Technical _____ Small Groups _____
APPENDIX 9—SELECTED SPEECHES AND PAPERS BY CPGs

Simpson, et al.

Both _____ Both _____

Length of Talk(s) ______________________________

Visual Aid Requirements ________________________

Talk Can Be Presented: Evenings_____ Noon_____ Breakfast_____ Weekends_____

**************************************************

Attachment B
Typical Technical Press Release
(Submit on prepared News Release copy)

Name and Address
Of releasing office

Contact: Chairman - PR Committee or others as applicable

Date: Immediate release, or release at will, or time as applicable

Geologists Have Story To Tell

Geologists have a story to tell the American public and they have organized a group to explain their place as professionals in society. This group, known as the American Institute of Professional Geologists (AIPG), has outlined a series of objectives they wish to achieve through a public relations effort.

Objectives tell story:

To tell thought leaders in government and business what Professional Geologists are and what they do.

To clearly establish the need for Professional Geologists in terms of public safety, conservation, improvement of the environment, and economics.

To convince those who should be retaining Professional Geologists of the wisdom of doing so.

To underscore the importance of Certification or state registration by AIPG.

To upgrade the utilization and regard for the value of Professional Geologists in terms that are directly translatable into reasonable fees for the value of work done.

To clearly stake out the professional domain of Professional Geologists and protect against encroachment by other disciplines, engineering, or scientific.

To improve the self regard for their profession of AIPG members. To help AIPG build its membership.

To make the voice of AIPG heard vigorously when legislative, regulatory and political matters of concern to members are being debated or decided.

AIPG has matured quickly as shown by its rapid growth and now must recognize its need for the kind effort required to fully capitalize on its progress.

How to Reach Objectives:

There are several approaches AIPG can take and they are based on two major tactical considerations: (1) AIPG story and its membership must be told—through aggressive public relations action to develop the coverage necessary in established media, and (2) news-making events and projects must be created that will dramatize the role of AIPG in the life scenes of the nation.

Basic Articles to Tell the Basic Story:

The relationship of Professional Geologists to the everyday life of people must be told to the mass audience and in more specific terms to specialized audiences. Getting the story of Professional Geologists out on a broad scale is a basic requirement for reaching the objectives.

Typical publications with the following kinds of articles can be:

“Geologists Aren’t What You Think” for Reader’s Digest.
“To Help Save Our Planet, An Environmental Geology Approach” for Look magazine.
“What Geologists Can Tell Us About Our Earth” for Parade.
“Geologists Move Into The Corporate Suite” for Business Week.

Literally dozens of science and environmental writers are interested in new copy themes. Some of the major newspapers such as the New York Times, Chicago Tribune, Los Angeles Times, and etc. Others are syndicated through Associated press, United Press International, Reuters, Halls and Field - New York Times. The kinds of topics that have been mentioned for specific articles will be fed to writers and editors—whether with specific publications or free-lance—to help get the story out.

In addition, special interest publications that will do the membership the most good will get heavy emphasis—such as the Saturday Review, which gives coverage to environmental topics every month and which reaches the thought leaders of the country. And there are specific publications reaching those who should be hiring Professional Geologists—such as American City, Engineering News Record, and Roads and Streets.

Speaking Out to Hit Key Groups:

It is recognized that the time of AIPG leadership is limited and their time should be utilized accordingly. But the fact remains that AIPG leadership personifies the message and leadership people must be used carefully and wisely. Much of the editorial material already prepared should be tailored for personal presentations by AIPG spokesmen on crucial occasions. For example:

Government: Opportunities to participate in key advisory groups, panels, committee hearings, and fact-finding bodies should be developed. While some of this comes to AIPG routinely, the program for such participation should be planned so that AIPG people can be placed where they will get the most exposure and produce the most results for the limited time available.

Television: Many shows are available where the Professional Geologists’ story can be told in terms that relate to the mass audience; these include Today, David Susskind, Tonight, National Educational Television, and Public Broadcasting Laboratory.

Radio: Interviews should be arranged with network shows such as Monitor and CBS Dimensions as well as syndi-
cates that service hundreds of radio stations pre-recorded programming.

**Local Sections:**

State section officers and leaders should have a Speaker's Kit containing a general speech, special openings and endings, platform hints, slides, and publicity materials so that they will feel more comfortable in booking their own appearances at state and regional meetings of chambers of commerce, fraternal organizations, businessmen's clubs an even national meetings that might occur in their area.

**Creative Publicity to Build Awareness:**

Maximum exposure goes to those who create reasons for it. Lots of things happen, and can be made to happen, that will produce news coverage in the general business and trade press—the news to be solid as well as creative, professionally sound as well as current, and genuinely helpful as well as exciting.

A Year-end statement by the AIPG on the “Geological State of the Nation”.

“Progress Report on the Environmental Geology”.

Specific AIPG accomplishments as they occur.

To cultivate editorial understanding and receptivity, an annual press seminar must be instituted in New York. This is a required technique for sensitizing press to the importance of the subject matter; more importantly, it educates the media to a point where they feel comfortable handling the material given them throughout the year.

Still another creative publicity tool for telling the Professional Geologists' story is the syndicated mat service, a technique available for moving basic material into selected weeklies.

Another way of getting important people to see the story is to place articles in the house organs of corporations that use geologists. The petroleum companies are the first that come to mind.

**An Awards Program to Recognize Friends of AIPG:**

AIPG should recognize those outside the field who have contributed in some way to the well-being of Professional Geologists. This will involve their endorsement and produce appropriate publicity. For example, could the Apollo 11 crew be cited in some way to get national attention for them as well as to parallel AIPG’s. And then develop ways of working into their programs so their resources help AIPG, too.

For example, one idea is that AIPG should sponsor a week all its own, such as the National Engineers Week of NSPE; but the practicality of this for AIPG would have to be judged in light of relationships with other groups that might have comparable observances as well as AIPG’s own abilities to sustain a truly national program of this kind.

AIPG can provide its members the public relations service that a mature Institute should. It is known how to reach the general public as well as special interest groups and influential to improve understanding of what the Professional Geologist does, to polish his image by burnishing away ignorance and misconceptions, and to call attention to the disaster that can be avoided with Professional Geologists’ talent. In fact, if AIPG is to discharge its responsibilities to the professionals who support it, then an aggressive public relations program of the kind outlined must be pursued.

There is a sensitivity to the special needs for accuracy, authenticity, and ethical presentation when representing a professional organization. But if the members of AIPG wait for the world to discover them, they will wait an awfully long time.

This material was taken freely from a letter written by Harold Bergen, President, Ruder and Finn, to Arthur Brunton, October 28, 1970. It has been used because of the
Future Education for Professional Geologists
By Robert R. Berg, CPG 35
Texas A&M University
College Station, Texas 77843

Abstract
The professional geologist of the future will need to know more than rocks. He will need more science, more mathematics, and above all, he will need to know how to solve problems in a quantitative way. The day of the arm-waving classicist is long passed, and the geologist of the future must be trained to use his basic science in the solution of practical problems. Geology, like other physical science, is amenable to the analytical method, but modern textbooks pay only lip service to the quantitative approach by displaying equations and then neglecting to put in numbers for the variables. Environmental problems that involve rocks will require solutions in a form that can be used by engineers, and such a form demands at least a good estimate of variable quantities. Natural resources cannot be found by imaginative thinking alone, but the search will require the best methods of applied science. Unfortunately, some teachers are still raising students in their own image, neither well prepared nor properly motivated to attack and solve a practical problem.

Future geological education must aim to produce professionals, as well as scientists, who are well versed in geology and ready to apply their knowledge to the discovery of resources, to orderly development of resources, and to planned use of the environment.

Introduction
My eagerness to participate in this session on professional geology stems from a lecture tour earlier this year during which I visited a large number of universities across the United States. I was surprised to learn of faculty attitudes quite different from my own.

First of all, many departments seemed to be training laboratory scientists to whom a trip to the field for collecting rocks was incidental to the analysis of rocks in the laboratory. Furthermore, no company recruiters had visited these departments in a number of years, and their undergraduate students went on to graduate school while their graduate students generally went to teaching. In other words, they were training a future generation of laboratory scientists with little or no interest in applied science.

Secondly, some geology faculty, both young and old, seemed suspicious if not openly hostile to the idea that their budding young scientists might some day be asked to be exploiters of natural resources. These faculty were teaching science for its own sake with no regard to the practice of science.

I think these attitudes are wrong. Our society needs both scientists and practitioners of applied science. Geologists have much to contribute to our way of life, not only as explorers and exploiters, but also as conservationists.

The Professional Geologist
The professional geologist practices geology; that is, he applies geological science to the solution of practical problems. This definition distinguishes him from teachers and researchers. Characteristically, the professional geologist has contact with and serves the public, and therefore, he does not necessarily serve his science as well. His primary loyalty is to his employer, his client, or to the general public; and his practice is guided by the highest principles of ethical business conduct.

Professional Education
Future education for the professional geologist, then, must teach applied science as well as science. My concern in professional education is not so much what is taught, but how it is taught. There are others better qualified than I to argue over details of curriculum. I am more interested in the attitude of both teachers and students toward their science and how they will use their science in future years.

Today we accept without question that geological training is broadly based on a study of mathematics, physics, chemistry, and other sciences, but I doubt whether this acceptance is real. Are students merely taking courses in these subjects, or are they required to use this knowledge in the study of geology?

There are some of us, not recent graduates, who have had the former experience: we studied the calculus but were never asked to solve a problem in geology that required calculus. I believe the same situation exists today in most geology departments. The lack of problem solving in geology applies not only to mathematical problems but also to practical problems of applied geology. Students learn the fundamentals of the geology by the classic observational method, that is, by observing and interpreting relationships of rock units in the field and by examining their composition in the laboratory. The method of geology is deductive, and this is a sound method—as far as it goes—but the method does not provide for the orderly development of hypotheses, and testing of hypotheses, by quantitative methods. Neither does it yield solutions in real numbers.

Why should we look toward quantitative solutions? There are two answers to this question: (1) more precise answers mean better understanding and better science, and (2) quantitative answers are the only way that our understanding can be applied to the solution of practical problems in the real world. In other words, our understanding must be conveyed to engineers in terms of real numbers.

The engineer needs to know facts. It is not enough to say that a certain slope will fail, but we must state the probability of failure under given conditions of rock type, climate and angle of cut. It is not enough to predict the presence of an aquifer at a certain depth, but we must state the expected yield in gallons per day and the quality of water in parts per million. We must learn to communicate our knowledge to the people who can use it. This is what professional practice means.

Does our present educational system teach this kind of geology, and does it produce geologists who are willing and
able to practice? From some of the attitudes that I have heard expressed, I do not think so; but it is not easy to find statements of attitude.

One example, however, I can cite. A leading geological educator at an eastern University has said (and I quote from a publication):

“We hope to train our own (students) more effectively in chemistry and physics, and let the graduate school take care of the more elaborate training. We just want to show them what geology is like and then turn them over to the graduate schools.”

This statement conveys the impression that this man and his department do not even teach geology, much less professionals. I have sympathy for his students because they probably believe they are learning geology.

Fortunately, there are other educators who understand what professional geology means and the role that professional geologists play in our society. I quote John Maxwell on undergraduate training (Weaver, 1965):

“Somehow we must bring to the attention of the public that the health of the body politic depends on continued imaginative development and explorations of earth resources—minerals, water, hydrocarbons—on land and under the oceans, and on sound development of our remaining living space. The applied geological sciences provide the basis for this continued orderly development.”

If such ideas are instilled in our undergraduate students they will know why they are learning geology and, more importantly, they will learn to recognize, those problems to which their special knowledge can be applied for the ultimate benefit of society.

Science vs. Non-Science

Professional geologists often have definite attitudes toward education, attitudes which they have gained in the hard world of professional, practice. They tend to contrast their training against the tasks they had to perform in later years, and they sometimes find that their education seems incomplete. From professional geologists we often hear the plea that geology students should have more business courses, law, economics, or, in other words, they must also be trained as businessmen as well as scientists. I can’t agree. The geologist should be trained as a scientist to practice his science, and training for business is not geology.

An interesting story on this subject was told by Orlo Childs. After assuming the presidency of the Colorado School of Mines, he polled the alumni on the appropriateness of the education they had received and asked for suggestions on improvement of the curriculum. The replies he received were readily categorized according to the age and experience of the respondents.

Those under the age of 30 years who had most recently entered the business world replied, “Give your students more training in practical subjects.” Those between the ages of 30 and 40 years who had gained more years of experience said, “Give the students more training in the fundamentals of their science so they can solve future problems.” Those between the ages of 40 and 50 years who had reached the management level said, “Give your students a better background in business and economics.” Those above the age of 50 years who had reached a more comfortable stage said, “Give your students more courses in humanities so they can better appreciate the arts and literature.”

It is obvious that a limited number of years in formal training cannot satisfy all the desires of the future. No single curriculum can prepare a man for all possible circumstances, but whatever the course of study, it should provide a core of basic knowledge as well as the desire to think, learn, and inquire beyond the bounds of his specialty. If a geologist later chooses a business career, he must be prepared to extend his knowledge in that direction.

I am inclined toward the attitude of the 30 to 40 year-olds, although I am no longer a member of that group. The future professional must be taught the basic principles of geology and other physical science. If his knowledge of fundamentals is sound, he will not have to rely on old solutions to old problems but will be better prepared to find his own solutions to new problems.

Quantitative Geology

During the past few years, there has developed an idea that geology can be quantitative or “mathematical”. This is an admirable idea, but these terms are apparently applied to the application of mathematical and statistical techniques to analysis of data and not to the analysis of phenomena. In other words, empirical analysis seems to be the principal objective in “mathematical” geology.

Such an approach is often necessary in applied geology, but it is the method of expediency and not the method of science. It results in solutions but does not uncover fundamental relationships in nature.

There is another method for the solution of geological problems, and this is the analytical method of physical science. This method applies the laws of physics and chemistry to the explanation of geologic phenomena. The method has been applied with some success in geochemistry, geohydrology, structural geology, and it is seldom applied in other types of geology.

Modern textbooks are proliferating in the use of equations in teaching geology, but after scanning some of these textbooks, it becomes obvious that these are equations presented without solutions. Commonly, an equation purports to illustrate a process, but no numbers are given for the variables and no answers are derived.

For example, a new textbook on processes of sedimentation has a chapter on “Dispersal of Sediment” that begins by presenting the equation for the Reynolds number. The text goes on to say that under most conditions this number ranges from 300 to 600, and therefore, most sedimentation takes place under conditions of turbulence.

As an introduction to the study of sedimentary processes, these statements are inadequate. The student has every right to know what this equation really means, and why the variables are related in a dimensionless group. More important to the geologist is to what velocities of flow does the equation apply, and what are the effects of flow on grains of different size and shape. None of these questions are
answered by the textbook discussion, and the real meaning of
the Reynolds number is not revealed.

Unfortunately, most students never ask the proper ques-
tions, and they may learn when they begin to apply geology
that inadequate or even wrong answers can result from the
equations they have learned.

What is involved here is a matter of attitude on the part
of the student as well as the teacher. The attitude of some
teachers seems to be that they shall pass on to students myth
and conjecture rather than science that is soundly based on
the understanding of process. The attitude of many students
seems to be acceptance without questioning.

The day of the arm-waving classicist is long passed, and
the geologist of the future must be trained to use his basic sci-
ence in the solution of practical problems. Geology, like other
physical sciences, is amenable to the analytical method which
follows a well-known pattern: (1) basic assumptions, (2)
hypothesis, preferably an equation which relates dependent
and independent variables, and (3) the testing of the hypo-
thesis by experiment or observation. All of this can be done in a
quantitative manner.

An example of the analytical method is as follows. Suppose
we wish to know those fundamental properties of a
rock that control its permeability (Berg, 1970). We recognized
that permeability is a dependent variable, and one which is
determined by the fundamental properties of composition,
grain size, and bedding. In order to solve this problem, we may
make a basic assumption, that is, that the permeability of a
sedimentary rock, for example, a sandstone, depends primari-
ly on some mean pore size. This pore size, in turn, is a function
of composition, grain size, sorting, grain shape, packing of
grains, grain orientation, and on bedding.

With this large number of independent variables, the
true relationship among the variables will be very difficult to
derive. Therefore, we may begin our analysis by restricting
composition to highly-quartzose sandstone, and we thereby
reduce the number of variables because highly-quartzose
sandstones commonly have a restricted range of grain size,
they are well sorted, and the grains are well rounded. To fur-
ther simplify the problem, we may further assume no bed-
ding, that is, an isotropic medium.

In other words, we have made several basic assumptions
which simplify our analysis of the quantitative relationship
that exists among the independent variables. Then, by
the process of dimensional analysis, which is an empirical
method, we can derive a quantitative expression that relates
the dependent variable, permeability, to three main inde-
pendent variables: grain size, sorting, and porosity.

One may object that we have solved the problem for only
a special case, that of highly-quartzose sandstone. However,
this special case was determined by the basic assumptions of
the problem, and the derivation of a quantitative relationship
yields a significantly better understanding of the physical
properties of the rock. Furthermore, even though the equa-
tion has a rather limited application, it can be applied to the
solution of many practical problems because most aquifers
and oil and gas reservoirs are highly-quartzose sandstones
and, therefore, of economic importance.

The analytical method in the solution of geologic prob-
lems can have scientific as well as practical consequences, but
it will take a decided change in attitude on the part of geolo-
gists before such methods can be widely applied. Unfortunately, most students and teachers are more inclined
to non-quantitative methods.

Future Employment

Any plea for better professional training presupposes a
continued demand for trained professionals. There are some
who might doubt that professional geologists will be needed
in our society. These people have been shocked by recent fluc-
tuations in the job market, particularly on the part of the
principal employers, the oil and mining companies. I am more
optimistic, and I believe that the market for trained profes-
sional geologists will continue to be strong despite minor fluc-
tuations in the demand.

By this time, any geologist should know what jobs
depend on economic considerations rather than on other
needs which our society may have. Short term fluctuations
have always been common in the past and will continue into
the future as long as we have a free enterprise system.

What does employment offer for the beginning profes-
sional? I recall that about thirty years ago, as an entering
freshman in the School of Mines, University of Minnesota, I
was given a directory of alumni. At first, I was somewhat dis-
mayed to read the many terse biographies, such as “graduat-
ed 1922, employed by the South Rhodesian Mining Company,
deceased in Africa, 1924”, or another one, “graduated 1926,
employed by the Amazon Exploration Company”, and the rest
of the line was—blank, as if this man had disappeared into the
jungle and had not been heard from since.

I quickly realized some facts of geological employment.
First, there had been a large demand for explorers and
exploitors of natural resources during the prosperous period
of the 1920’s. Secondly, geologists travel a lot. Thirdly, there
were some inherent hazards in such employment. Fourth, the
natural high attrition rate in some forms of employment
would probably result in a steady demand for geologists. I
believe this demand will continue, but not for the last reason.

In order to justify my optimism for the future, let us look
at what is probably the largest segment of professional
employment, the oil and gas industry, for which some facts
and figures are available. These facts may tell us something
about future opportunities.

We are all familiar with M. King Hubbert’s predictions for
the future of oil and gas production in the United States
(Hubbert, 1971). Our annual production of oil has now peaked,
or is about to, at over three billion barrels per year so that
about half of our ultimate production remains in proven
reserves or is yet to be discovered. Some people call this a pes-
simistic interpretation, but I prefer the more optimistic inter-
pretation that the glass is half full rather than half empty.
There is the very real question, however, whether this business
will continue to support a large number of geologists.

Although the number of geologists employed in the oil
and gas industry is unknown, it may be possible to estimate or even
project employment by looking at the annual membership of
the largest scientific society concerned with oil and gas, the

APPENDIX 9—SELECTED SPEECHES AND PAPERS BY CPGs

Berg
American Association of Petroleum Geologists. The present membership of about 15,000 probably represents three-fourths of those employed in oil and gas exploration so that total employment may be about 20,000. If King Hubbert is correct, the employment in the United States must inevitably decline, and it might even follow the production decline curve. However, the short term view is optimistic. Within the next fifteen years a large number of petroleum geologists will retire because the mean age of petroleum geologists is estimated to be fifty years and the distribution is heavily skewed towards the older professional. This means that large numbers of young geologists must enter the field if exploration in the United States is to develop the proven reserve of 55 billion barrels and discover the remaining 50 billion barrels of oil.

This analysis neglects, however, the world demand for petroleum, and again King Hubbert has presented the total world production curve. Most petroleum geologists are employed in the United States, but future development of world reserves suggests that increasing numbers of geologists may be employed in oil and gas exploration abroad, particularly when world production peaks about 25 years hence. Most of these can be U.S.-trained geologists if they are well educated and oriented toward professional practice.

What about other opportunities for geologic employment, outside of the oil and gas industry? Total employment of geoscientists has continued to increase in recent years (Henderson, 1972). The total number is estimated to be on the order of 35,000, and most of these are geologists who are employed in the United States. Who could have predicted thirty years ago that 20,000 geologists would be continuously employed in oil and gas exploration during the period 1960-1970, or that public awareness of environmental problems would develop to produce greater employment opportunities for future geologists.

What other opportunities lie ahead in the most distant future I cannot predict, but we all recognize the present or impending shortages of all natural resources, first of all oil and gas, then metals, and perhaps even ground water. As these non-renewable resources are consumed, the search for additional supplies will intensify. Consequently, the demand for geologists, as well as other applied scientists will continue to increase as shortages grow. The opportunities of the future are uncertain, but I am sure they will be there for the professional geologists.

Conclusion

The future will demand highly-trained professional geologists who are ready to solve practical problems. They must be well equipped, not only in science, but with a highly professional attitude. Geological education should aim to produce these professionals, as well as scientists, all of whom are well versed in geology and in the other physical sciences and who are willing and able to apply their knowledge to the discovery of natural resources, to the orderly development of these resources, and to planned use of the environment.

From December 1972 TPG

---

**Industrial Employment of Geologists**

1972 Draft Report by AIPG Committee on Professional Employment Standards,

Ellis L. Krinitzsky, Chairman

[Note: This report was not endorsed by the 1972 AIPG Executive Committee. Following the report are comments by Past-President Robert Berg, and letters to Dr. Krinitzsky by 1972 President Neilson Rudd, and 1973 President Ad Honkala]

This article presents the results of a study made in 1971-72 to determine general practices by industrial employers of geologists and corresponding employee sentiments. This study is the latest in a series made over the past four years by the Committee on Professional Employment Standards of the American Institute of Professional Geologists. The views expressed should be regarded as those of the authors and they may or may not reflect the views of the Institute. Data processing was done by the authors and by McKinsey & Company, Management Consultants of San Francisco.

The results are from questionnaires sent to geologists in oil, engineering, and mining companies on a random sample from rosters of their scientific societies (AAPG, AEG, AIME). A total of 2250 questionnaires were sent to oil geologists and 194 to others. There were 1204 replies or 53 percent. Of these, 1036 were usable: 968 from oil geologists and 64 from engineering geologists. There were four returns from mining geologists, too few to form a category. The remaining forms were not used because of gaps in their data.

The respondents provided data for 179 companies. However, only 36 companies, all of them in petroleum, had five or more returns. It was only for these that data were tabulated on a company basis although all returns were used for industry summaries.

**Age**

The general age levels were:

<table>
<thead>
<tr>
<th>Age in Years</th>
<th>Mean</th>
<th>Max</th>
<th>Min</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum</td>
<td>43</td>
<td>78</td>
<td>24</td>
</tr>
<tr>
<td>Engineering</td>
<td>40</td>
<td>63</td>
<td>28</td>
</tr>
</tbody>
</table>

Assuming that 45 is the mid-professional age where people work from 25 to 65, then industry is close to this mean. However, age groups on a company basis and by ten-year levels afford some interesting comparisons. Table One presents these data for the 36 companies for which five or more returns were received. All of them have an extraordinary shrinkage in persons over 55. Nearly half of the companies have no one of that age responding. What does this signify? It could be partly that this group preceded the post-World War II expansion. But the numbers are so small and the situations where there is no one at all of this age are so frequent that there must be another factor, namely the easing out of older people. Despite this, the companies are still largely staffed with men who are close to middle age, and the figures show there is an effort made to add young people. This takes place in an industry that overall has been shrinking for more than a decade. Some older people must even now be on their way out.
It is a management precept that old people are not best for a company. Solely in terms of cost and efficiency, this is largely true and managements are wise to eliminate them. But what is good for a company's balance sheet can be disastrous for the individuals involved, especially if all companies follow the same policy. The practice generates a social problem and should be of concern to all who work in this field.

We may note that about a fourth of the companies in table one appear not to have enlarged their ranks with people aged 25 to 35. On the other hand, a very few companies appear to have done so strongly.

Experience

The experience level was:

<table>
<thead>
<tr>
<th>Experience in Years</th>
<th>Mean</th>
<th>Max</th>
<th>Min</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum</td>
<td>18</td>
<td>50</td>
<td>1</td>
</tr>
<tr>
<td>Engineering</td>
<td>14</td>
<td>35</td>
<td>4</td>
</tr>
</tbody>
</table>

When experience levels are examined in detail, they turn out to be very closely correlatable with age. Geologists do not have experience in other fields nor is there any mobility between geology and other lines of work. When a geologist does other work, he does it by abandoning geology.

Highest Degree

The degree level was:

<table>
<thead>
<tr>
<th>Percent</th>
<th>BS/BA</th>
<th>MS/MA</th>
<th>PhD/DSc</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum</td>
<td>48</td>
<td>43</td>
<td>9</td>
</tr>
<tr>
<td>Engineering</td>
<td>60</td>
<td>35</td>
<td>5</td>
</tr>
</tbody>
</table>

The data are presented by company and by age in Table 2. Throughout industry there has been a striking upgrading of the degree level of the youngest group of respondents—those who are 25 to 35 and were hired in the last ten years. Also, those who have held on over age 55 are strongly represented with advanced degrees. It may be inferred that older people who have left the companies were not as well educated as those who have been recently hired and those older ones who have been retained.

Salary

The general salary level was:

<table>
<thead>
<tr>
<th>Annual Salary ($000)</th>
<th>Mean</th>
<th>Max</th>
<th>Min</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum</td>
<td>20</td>
<td>150</td>
<td>10</td>
</tr>
<tr>
<td>Engineering</td>
<td>19</td>
<td>40</td>
<td>11</td>
</tr>
</tbody>
</table>

The mean salaries for Petroleum and Engineering are practically the same.

Salaries by company and by age are presented in Table 3. Some really large differences between companies exist, as between Lone Star and Marathon.

Lower-paid men in the 46-55 age bracket may earn less than men 20 years younger in the same company. Essentially this table shows that experience is worth very little in terms of dollars. Also, significantly high salaries are relatively infrequent.

More important than salary is the satisfaction that goes with it. For all employees, 62 percent expressed satisfaction with their earnings. Comparisons between some companies show a considerable range, namely from 100 percent satisfied at Superior to seven percent at Lone Star. Chevron pays a little better than Cities Service, but geologists in the latter company are a bit more satisfied.

Some men commented that they no longer receive the cost-of-living raises that traditionally followed settlements between the companies and refinery workers. Other companies still give these but call them merit raises, thus really eliminating merit raises. In any case, there is an awareness of the relation between the pay scales of geologists and those of “blue collar” workers.

Level of Responsibility

Responsibility was divided into five categories as follows:

I. Aids others. Works under direct supervision.
II. Assumes broader work under general supervision.
III. May supervise a group of I and II geologists.
IV. Has responsibility for many types of work or work over large areas.
V. Is in the upper management level or has technical responsibilities of comparable importance.

The distribution of responsibility and corresponding salaries for all petroleum geologists was:

<table>
<thead>
<tr>
<th>Response</th>
<th>No.</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>54</td>
<td>6%</td>
</tr>
<tr>
<td>II</td>
<td>295</td>
<td>30%</td>
</tr>
<tr>
<td>III</td>
<td>155</td>
<td>16%</td>
</tr>
<tr>
<td>IV</td>
<td>297</td>
<td>31%</td>
</tr>
<tr>
<td>V</td>
<td>167</td>
<td>17%</td>
</tr>
</tbody>
</table>

Salary

<table>
<thead>
<tr>
<th>Responsibility</th>
<th>Mean</th>
<th>Max</th>
<th>Min</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>16</td>
<td>25</td>
<td>10</td>
</tr>
<tr>
<td>II</td>
<td>17</td>
<td>95(?)</td>
<td>10</td>
</tr>
<tr>
<td>III</td>
<td>19</td>
<td>32</td>
<td>11</td>
</tr>
<tr>
<td>IV</td>
<td>20</td>
<td>40</td>
<td>10</td>
</tr>
<tr>
<td>V</td>
<td>28</td>
<td>150</td>
<td>11</td>
</tr>
</tbody>
</table>

For engineering geologists it was:

<table>
<thead>
<tr>
<th>Response</th>
<th>No.</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>0</td>
<td>--</td>
</tr>
<tr>
<td>II</td>
<td>6</td>
<td>9%</td>
</tr>
<tr>
<td>III</td>
<td>9</td>
<td>14%</td>
</tr>
<tr>
<td>IV</td>
<td>21</td>
<td>33%</td>
</tr>
<tr>
<td>V</td>
<td>28</td>
<td>44%</td>
</tr>
</tbody>
</table>

For categories I through IV, there is a very meager increase in mean salary with increase in responsibility. This applies both to petroleum and engineering. Salaries do not rise appreciably except in the category of greatest responsibility. In petroleum work some people may earn very high...
salaries but they are very few in number. Eighty percent are in categories where the mean salary is $20,000 or less. In engineering more people are able to reach higher levels of responsibility though their corresponding salaries are lower than for petroleum work and their opportunities for peak salaries are less. The conditions in engineering may be such that there is a greater opportunity for independent creative work than in petroleum.

Demotion

Employees were asked if they had ever been demoted in their level of responsibility. In petroleum, 25 percent said they had. In engineering, it was eight percent.

Job Satisfaction

Questions were asked regarding job satisfaction in terms of security, company training programs, challenging work, and personal development. Such values can be more important than money. The employees were also asked if they would rather be working for another company. The overall results were as follows:

<table>
<thead>
<tr>
<th>Percent Petroleum</th>
<th>Percent Engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfied w/ security</td>
<td>64%</td>
</tr>
<tr>
<td>Satisfied w/ training</td>
<td>64%</td>
</tr>
<tr>
<td>Satisfied w/ work</td>
<td>76%</td>
</tr>
<tr>
<td>Satisfied w/ personal development</td>
<td>60%</td>
</tr>
<tr>
<td>Would rather work elsewhere</td>
<td>18%</td>
</tr>
</tbody>
</table>

In these figures, feelings and facts do not necessarily correlate. Geologists in companies with terrible records of repeated waves of firing often feel secure. This feeling of security in the face of obvious fact may be a tribute to creative management techniques. One employee wrote, “Two recent company-wide cutbacks are not typical of what I expect to be normal policy.” Then he went on to indicate that this was indeed normal and had been going on since 1965.

Respondents listed their overall satisfaction as follows:

<table>
<thead>
<tr>
<th>Percent Good</th>
<th>Percent Fair</th>
<th>Percent Poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum</td>
<td>55%</td>
<td>35%</td>
</tr>
<tr>
<td>Engineering</td>
<td>70%</td>
<td>28%</td>
</tr>
</tbody>
</table>

Some men indicated dissatisfaction with their companies in terms of money, security, training, challenging work, and personal development and then noted that their overall satisfaction was good. It appears that where insecurity is high and where repressed desires are high, job satisfaction may also be high. These are people who are well managed and who know realistically what the company is about.

The degree of satisfaction by company is summarized in Table 4. These are expressions of subjective judgments, and they may not square very well with other values. On the whole, general satisfaction is high and some companies rate high marks on all counts. A more considerable variation is found among those who would rather work for someone else. In 16 companies, 15 percent or less would want to work elsewhere. In three companies, more than half of the respondents would rather work elsewhere. These figures may be telling us something.

Company Growth

Is your company stable? expanding? retrenching? The feeling for all respondents is:

<table>
<thead>
<tr>
<th>Percent Stable</th>
<th>Percent Expanding</th>
<th>Percent Retrenching</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum</td>
<td>44%</td>
<td>28%</td>
</tr>
<tr>
<td>Engineering</td>
<td>24%</td>
<td>68%</td>
</tr>
</tbody>
</table>

Layoffs and Hiring

A series of questions were asked regarding layoffs, the ages of people laid off, and the practices in hiring. The responses were subjective and difficult to quantify.

Nevertheless, the data show that many companies have let geologists go due to mergers in the past ten years and that these were generally people in their thirties, forties, and fifties and, less frequently, in their twenties and sixties as well. Virtually all companies except for a few of the very smallest have laid people off or forced them into early retirement for reasons not due to mergers, in this same period and in the same wide age range. Layoffs and forced retirements are not the whole story of course. One geologist wrote, “Resignations due to degrading work assignments and adverse working conditions far offset any need to have layoffs.” Another said, “Not a single geologist has ever retired—they are all forced to resign in their forties.” This was from a company that had no one in its over 55 returns. Another geologist observed that “. . . There is a general tendency among most (if not all) petroleum companies of finding ways of separating older employees from the company. Most of these ways are quite subtle, but effective.” Another said, “I do not know of a single geologist in my company who has retired at age 65.”

These layoffs, retirements, and resignations are now an accepted fact and the reluctance to discuss these activities is diminishing. It is simply the way in which business is conducted.

Many have urged the publication of a list of companies which do these things to geologists, in the nature of a public censure. Such a list would include virtually all the companies. No doubt some companies are very bad in this respect, but our data are inadequate to rate companies on such a basis. In search of further data, questionnaires were sent to the companies involved in the present study. Only a fifth replied; these replies were too few to be useful.

Collective Bargaining

Is anyone interested in collective bargaining? The results from all respondents are:

<table>
<thead>
<tr>
<th>Percent Yes</th>
<th>Percent No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum</td>
<td>33%</td>
</tr>
<tr>
<td>Engineering</td>
<td>19%</td>
</tr>
</tbody>
</table>

The response is overwhelmingly against such representation.

An interest that does exist is strongest among younger people and it may be growing. Also, attitudes vary greatly within individual companies. Companies in which a desire for collective bargaining was expressed by 50 percent or more are:
APPENDIX 9—SELECTED SPEECHES AND PAPERS BY CPGs

Krinitzsky, et al.

<table>
<thead>
<tr>
<th>Company</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Getty</td>
<td>67</td>
</tr>
<tr>
<td>Signal</td>
<td>50</td>
</tr>
<tr>
<td>Std Oil Calif</td>
<td>50</td>
</tr>
<tr>
<td>Texaco</td>
<td>50</td>
</tr>
<tr>
<td>Texas Pacific</td>
<td>57</td>
</tr>
<tr>
<td>Union Texas</td>
<td>50</td>
</tr>
</tbody>
</table>

Many smaller companies with few respondents also had majorities. These are not listed because of the statistically small samples.

A middle-aged Humble PhD, not well paid, wrote, “For me in my company I don’t want unions. I much prefer a company to force compliance to company policy—at the risk of losing one’s job. If one doesn’t like the policy—quit. Other companies may exploit their people worse than Humble. That, I feel, is the free enterprise system. I hope it lasts.” That may very well be the consensus today.

In previous inquiries, we asked if a professional association such as the AIPG could be helpful to the profession. Always we had a majority answering yes. Unions and a professional association should not be thought of in the same category. However, traditionally there has been no strong support by geologists for either.

Comments on
“Industrial Employment of Geologists”
by Robert R. Berg, CPG 35

General
The tone of the manuscript is prejudiced, with a strong feeling of bias against the companies. I say “feeling” because there are few places that I can identify a specific statement of bias, but the impression is there, particularly in the first half.

Introduction
I believe it would be appropriate to expand on the idea that the respondents expressed their “sentiments”, that is, opinions rather than facts. Some company people have criticized the questionnaire because it asked for answers on company policy and history from people who were not qualified to state these facts. My answer is that we were seeking to establish opinion and not fact.

Expression
The writing could be improved considerably in many places. Some examples are the reference to “shrinkage in persons” and the redundancy “doing other work means abandoning geology”.

Some of the categorical statements are objectionable. For example, what justification is there for “an industry that overall has been shrinking” when the overall industry is in great shape and has continued to increase domestic production “for more than a decade” to all-time highs? If exploration is meant, then it should be specified. Another example is the “management precept”; I have never heard of this from any authority.

Also, the “social problem” referred to implies a concern for social workers and not for geologists, a misinterpretation with which I happen to agree.

Salary
One specific statement that displays bias is the unfair comparison between Marathon and Lone Star. From tables one and two it appears that Marathon geologists are older and better educated which may explain their better salaries. Furthermore, the number of Lone Star respondents is small and may not be representative of their geologists, because I would guess that Lone Star employs about 25. A more objective interpretation would include the statement that “the figures do not represent average salary for some companies because of the small number of respondents.”

The use of company names in the text is not appropriate because such use invites comparisons, as above, which may be grossly unfair. A less heavy-handed approach would be to let the reader find his own comparisons in the tables.

I also object strongly to the implication that experience should be rewarded rather than ability. In fact, I believe that lack of ability should be unrewarded, to put it in another way.

Company Names
The use of names in the text and tables might be questioned on the basis of propriety. On the other hand, the real value of the questionnaire is that for the first time companies are evaluated publicly by their professional employees. The publishing of names risks the wrath of many loyal company geologists (and potential AIPG members) as well as managers, but I favor the use of names in the tables because it makes the data considerably more meaningful and interesting.

For those who may be squeamish about identifying employers, there is an alternative that would enable us to judge the response to the published article. The companies might be numbered in the tables, and a key to the company names could be supplied to those who request it by writing to AIPG Headquarters. However, I do not favor this devious approach.

Conclusion
My impression is that there is a large degree of satisfaction on the part of employed geologists, and that this is clearly brought out by the tables. Further, I conclude that there must be a great deal more satisfaction among the 47 percent who did not return the questionnaire.

The statistics are fascinating, to say the least, and my opinion of some companies has changed now that I see the figures. For this reason I believe these facts should be published and that they will generate an interest in professional affairs and in AIPG on the part of many geologists. The results are indeed a significant contribution to our total professional effort. Therefore, they must be presented and interpreted in the best manner possible. The present manuscript does not do this.

[Dr. Ellis L. Krinitzsky, AIPG letterhead]
September 6, 1972

Dr. Ellis L. Krinitzsky, AIPG
Waterways Experiment Station
Vicksburg, Mississippi 39180

Mr. Miles Rader, AIPG
217 Pearl Street
Denver Colorado 80203

Dear Ellis and Miles:

I have received your comments and perhaps it would be wisest if we let the matter drop at this point. However, I find myself unable to do so without making the position of the Institute, the Executive Committee and myself more clear.

First, speaking directly to the point raised in Rader’s letter suggesting that we looked to major companies for financial support. This suggestion has been made on a few occasions by a few members as we fight our seemingly chronic financial problems, but it has never received serious consideration for exactly the reasons Rader suggests. We want to be beholden to nobody.
Second, do not make the mistake of assuming that the Institute and particularly the Executive Committee is not concerned by the employment practices of some major companies, particularly in the oil industry. We are very much concerned about them and count on the data gathered by such committees as yours to give us the facts with which to seek correction. But for the Institute, at its present size, to declare open warfare on the petroleum industry would be as unrealistic as for an ant to declare war on a herd of elephants. While I don’t believe it would happen, they could literally stomp on us and put us out of business by discouraging their employees from institute membership. Certainly, overt controversy simply would put them on the defensive whereas private diplomacy, armed with good factual information, may accomplish some good. These are questions of policy and strategy which the Executive Committee must weigh against the other needs and programs of the Institute and the profession.

A committee is the investigative arm of the body which appoints it and is in no sense autonomous. Your committee has done a good job of developing some very useful information but it is the Executive Committee’s responsibility to decide how that information will be used. In our opinion, the report as submitted was an overt challenge to open warfare with the petroleum industry, the publication of which as an official Institute document would greatly damage our opportunities for negotiation regarding employment problems not to mention jeopardizing many other useful Institute programs.

Thirdly, speaking now as an individual member of the Institute and not as an officer, I would be most reluctant to see such a report published by the Institute because I don’t believe the philosophy implied by the interpretations of the data presented is representative of that of the great majority of our members. No one is forced to seek industrial employment. I would hate to think that there were many geologists so naive not to recognize that there is no tenure for a professional employee in a competitive industry beyond that which the individual earns for himself by proficiency and productivity. Presumably, the reason man enters industrial employment, as opposed to governmental, academic, or research positions which offer a higher degree of job security, is that they foresee higher income, opportunities for more rapid advancement, more exciting work, etc. In a sense, they are gambling and presumably they must realize that this entails some risk.

The name of the game in industry is profit. That is what men seeking industrial employment are seeking for themselves and what their employers are seeking. When profits shrink, they reduce expenses and when you reduce expenses, you start by getting rid of those which have the highest cost/benefit ratio. I feel it would be entirely appropriate for the Institute to make the risks of industrial employment well known to all geologists and all those who are considering entering the field and to warn them that, as Harry Truman said, “If you can’t stand the heat, stay out of the kitchen.” I think the Institute can, and in some instances has, done some good in pointing out to management the high cost of recruiting and retraining a geological staff as opposed to the costs of maintaining such a staff during periods of budgetary retrenchment. But I find I embarrassingly presumptuous and naive for us to attempt to dictate to management how they shall make their decisions. If it is not naive, it is alarmingly close to unionism to think we can usurp this management prerogative.

In the past year I’ve looked at over 100 job applications from geologists who were either unhappy with their major company employment or had already resigned and been discharged. It was something of an eye-opener. Over 80 percent simply did not have modern technical proficiency. Most of them clearly hadn’t cracked a book since the day they graduated. Of the remaining 20 or some who we evaluated more thoroughly, many had job aptitudes, personality problems or other difficulties which would render them of questionable value as employees. Of the remaining six or seven, those who had the professional proficiency and personal character which would make them good and productive employees, five had found new positions even before our interview and decision-making process had been concluded and all, including the one we did hire, were employed within six weeks of their first contact with us. In short, the qualified men were not unemployed long. If we are a profession as we claim, our concern is that the best possible level of geology be practiced to the greatest possible benefit of society and I doubt very much whether it is our primary concern to insure the employment of those who can not keep pace with our rapidly developing science. Again, I do not mean to say that we simply write them off, but I think we would do better to turn our efforts towards making them aware of the realities of the geological profession and encouraging and aiding them in maintaining a level of ability and productivity which will in itself insure their employment.

Sincerely yours,

Neilson Rudd
President

[Carbon copy of a letter headed AIPG letterhead]
August 7, 1973
Dr. Ellis L. Krinitzsky, President
Mississippi Section
American Institute of Professional Geologists
P. O. Box 631
Vicksburg, Mississippi 39180

Dear Ellis:

I would hate to think that there were many geologists so naive not to recognize that there is no tenure for a professional employee in a competitive industry beyond that which the individual earns for himself by proficiency and productivity. Presumably, the reason man enters industrial employment, as opposed to governmental, academic, or research positions which offer a higher degree of job security, is that they foresee higher income, opportunities for more rapid advancement, more exciting work, etc. In a sense, they are gambling and presumably they must realize that this entails some risk.

The name of the game in industry is profit. That is what men seeking industrial employment are seeking for themselves and what their employers are seeking. When profits shrink, they reduce expenses and when you reduce expenses, you start by getting rid of those which have the highest cost/benefit ratio. I feel it would be entirely appropriate for the Institute to make the risks of industrial employment well known to all geologists and all those who are considering entering the field and to warn them that, as Harry Truman said, “If you can’t stand the heat, stay out of the kitchen.” I think the Institute can, and in some instances has, done some good in pointing out to management the high cost of recruiting and retraining a geological staff as opposed to the costs of maintaining such a staff during periods of budgetary retrenchment. But I find I embarrassingly presumptuous and naive for us to attempt to dictate to management how they shall make their decisions. If it is not naive, it is alarmingly close to unionism to think we can usurp this management prerogative.

In the past year I’ve looked at over 100 job applications from geologists who were either unhappy with their major company employment or had already resigned and been discharged. It was something of an eye-opener. Over 80 percent simply did not have modern technical proficiency. Most of them clearly hadn’t cracked a book since the day they graduated. Of the remaining 20 or some who we evaluated more thoroughly, many had job aptitudes, personality problems or other difficulties which would render them of questionable value as employees. Of the remaining six or seven, those who had the professional proficiency and personal character which would make them good and productive employees, five had found new positions even before our interview and decision-making process had been concluded and all, including the one we did hire, were employed within six weeks of their first contact with us. In short, the qualified men were not unemployed long. If we are a profession as we claim, our concern is that the best possible level of geology be practiced to the greatest possible benefit of society and I doubt very much whether it is our primary concern to insure the employment of those who can not keep pace with our rapidly developing science. Again, I do not mean to say that we simply write them off, but I think we would do better to turn our efforts towards making them aware of the realities of the geological profession and encouraging and aiding them in maintaining a level of ability and productivity which will in itself insure their employment.

Sincerely yours,

Neilson Rudd
President

[Carbon copy of a letter headed AIPG letterhead]
Professional Employment Standards Committee, past and present, and express the Executive Committee's advocacy of greater activity on the part of the PES Committee.

As is so often the case there is no absolute solution to difference of opinion. My hope is that you will continue to support professionalism in geology and to seek every means of supporting it.

You may be interested to know that I interviewed a young lawyer as a legislative counsel this past Saturday. Lobbying was one of the strong points presented by your group to me, and I have pledged to try to have such a person in Washington before my term of office is over. We hope only for a part-time employee, living within our budget. If all goes well we may have one for this session of Congress. Additionally, the Executive Committee has approved a series of Guidelines to Professional Employment for Geologists which will be distributed as an aid to geologists in all forms of employment.

I hope that I will be able to visit with you in New Orleans this October 12-13.

Sincerely,

Adolf U. Honkala

CC: Brunton

Executive Committee

---

The Professional Geologist Today
--What Direction?

By Henry H. Neel, CPG 528

(Excerpts from a speech delivered to the California Section AIPG, Ninth Annual Meeting, Ventura, September 15, 1973)

When I first received the notice of the program for this meeting, I was particularly struck by the title which was assigned to my talk, “The Professional Geologist Today: What Direction?”

All I could think of was the late Carlton M. Carson, known to most of us as “Kit,” who for so many years held forth as the Dean of Geologists in Ventura. In addition to being a great micropaleontologist and geologist, Kit was a stickler for the proper usage of the English language. He had a large collection of redundancies frequently used by many of us, which he referred to as “hollow tubes.” The hollow tube was, so to speak, the holotype of his collection, which included such things as round circles, three-sided triangles, refer back, etc. One of his favorite quotations, often used to reflect his own state of mind, concerned a young man who became so confused that he leaped on his horse and rode off in all directions. Sometimes I wonder if that is not the direction of the Professional Geologist today.

First, I would like to establish, at least for the purpose of this talk, a definition of Professional Geologist.

In the formative years of the Institute, there were some heated discussions as to just who should be considered a Professional Geologist. With all due respect to the academicians, there were those who considered that a professor of geology was a professional teacher and was no more entitled to be classed as a professional geologist than a professor of English was entitled to be called a professional Englishman. Only the fact that most geology professors performed or had performed occasional consulting jobs saved the day for them. This is now reflected in state licensing requirements which limit the experience allowed for academic work and teaching.

Let's consider for a moment terminology used a few hundred years ago with the beginning of masonry. Following the Crusades when the intricacies of Middle-Eastern masonry were brought back to Europe, the masons established a very strict codification of the qualifications of a mason, beginning with the apprentices who worked up to the position of journeyman masons and thence to Master Masons. Only the few who were able to plan and direct the work of many journeymen achieved the title of Master Mason. The Master Masons formed their own guilds of free or unindentured masons which achieved such an honored position in society that many important and influential people who were not of the profession of masonry were accepted into the order. These became known as Accepted Masons, hence the origin of the Order of Free and Accepted Masons.

In my opinion, the term Professional Geologist as used in our organization refers to the Master Geologist who is able to plan and direct geological enterprises using the services, if necessary, of many journeyman geologists. This is in no way intended to demean the ability of the journeyman geologists. They are indispensable and many of them have capabilities in their specialties far exceeding those of the Master or Professional Geologist. However, they are not necessarily blessed with the drive and the ability to plan and direct large geological enterprises.

According to the estimates of the American Geological Institute, there are approximately 35,000 geologists in the United States. Of those, I believe perhaps less than 5,000 can be classed as Professional Geologists according to this definition. About half of those belong to AIPG.

You may not agree with my definition of a Professional Geologist, but to quote Humpty Dumpty in Alice in Wonderland, “When I say a word it means just what I choose it to mean—never more nor less,” at least as far as this talk is concerned.

With the proliferation of geologic specialties which we see today, it can be truly said that the science of geology is riding off in all directions. But this does not necessarily mean that this should also be true of the Professional Geologist. Not only are there differences in techniques of various specialties, but there are vast differences in the philosophies. The individual geologist can and should follow in any direction in which his particular specialty leads. And no man should be criticized for the direction he chooses. However, even though he espouses one type of geological philosophy in his specialty he must be aware of and respect the philosophies of other geologists and realize when these should be used in any geological enterprise.

The work of the exploration geologist in petroleum or mining depends on 35 percent imagination, 35 percent intuition, and 30 percent facts. On the other hand, the engineering geologist is involved in investigation rather than exploration, and his work is founded on detailed and painstaking examination combined with mathematical resolution, which leaves little or no room for imagination and intuition.
You exploration geologist types, of which I am one, consider yourselves a hero if you are correct one time out of ten. Any petroleum geologist who has that sort of an average on wildcat wells is exceptional. If you were an engineering geologist working on the geology of dam foundations, you had better be right one hundred times out of one hundred, or you are dead.

There is no room for playing the odds when dealing with human lives. The geologist who investigates the geological conditions which are critical in any type of construction work, whether it be dams, buildings, tunnels, or what have you, has no room for intuition and imagination. This type of geology requires meticulous, detailed, and thorough work with mathematical precision and no room for conjecture. On the other hand, all of us in the petroleum business know that there would never be a wildcat well drilled if we had to have all of the answers before we could make a recommendation.

Notwithstanding the fact that geological specialists are of extreme importance, we must not lose sight of the fact that they may not be complete unto themselves, and we must have the overview of the Professional in order to apply the work of specialists to the solution of the problem. The Professional can perceive the direction which should be followed to solve a geological problem. The Professional may be a specialist in a particular field, but he must be aware of the other geological specialties which apply to his immediate problem. He must realize that none of us can be all things. The true Professional is one who can sort out all of the various specialties involved and know his own limitations. He must be able to call in those who can make up for his own deficiencies and integrate their knowledge and expertise with his own to provide a complete geological input for the project.

The Professional Geologist must get into the planning phases of anything which might involve geology, and this means many things which even most geologists might not be aware of. He must foresee the need for geology before plans are made, not after the "ox is in the ditch" and it is too late to do anything but try to make the best of a bad situation.

It is up to the Professional Geologist to actively advocate the proposition that since all human activity is based on earth, the earth sciences are basic to the planning of any human endeavor.

All Professional Geologists, regardless of their specialty or philosophy must carry this message. This must be done, not in a self-serving way, but in a truly concerted effort to demonstrate that all human endeavor, no matter what it might be, can benefit from consideration of geological factors in the planning stages. You might get a job for someone else instead of yourself, but you are advancing the Profession, and any advancement of the Profession will be beneficial to all of us.

The profession of geology may appear to be riding off in all directions, but this is not necessarily true. It is actually taking different routes to arrive at the same destination, which is the recognition of geology as an indispensable factor in the efficient but conservative use of all of the resources of our planet and a total dedication of all disciplines of the science to the benefit of humanity.

Excerpts from a speech delivered to the California Section AIPG, Ninth Annual Meeting, Ventura, September 15, 1973.

---

Environmental Geology —
A Wasted Asset

By Allen F. Agnew, CPG 240

(The banquet address for the Annual Meeting of the Virginia Section, in Richmond on October 12, 1974.)

Last year the AIPG produced an excellent brochure entitled "Earth Resources as Foundations for Environmental Planning." This brochure is to be distributed to the State Sections of AIPG, for them to pass along to the State Legislature or Assembly, to planning organizations and firms, to banks and other investment concerns, to environmental organizations, to John Q. and Mary Public—in short, to all who we professional geologists feel have a need to hear the word.

This AIPG Environmental brochure described eight areas wherein the specialized knowledge of the professional geologist could be of help (and should be used), as follows:

1. Water resources planning
2. Geologic hazards
3. Energy needs
4. Land-use planning
5. Mined-land reclamation
6. Waste Disposa
7. Mineral resource conservation
8. Park and Open Space planning

But has this brochure been distributed as widely as it should be? Have each of us professional geologists done as much as we can to tell the story of professional geology in the environment? Have each of us actually thought about it enough so as to crystallize our own views and thereby understand the magnitude of the opportunity that we have—as well as the magnitude of our responsibility to society?

The answer to these questions are obvious—with mighty few exceptions, the answers have to be a resounding series of NO's! The private consultant is more likely to be able to answer "yes" to at least the last of these three questions, for his very survival depends on it. The government types, like myself, although blessed with a little more security but certainly less opportunity for reward than the private consultant, have a greater responsibility then the private consultant to do this job of telling our story because we influence policy decisions that affect large segments of society everyday. And the university professors, bless them, have an even greater responsibility to lead, for they are supposed to be at the forefront of thinking (and listening), of infusing new brains (students) with new ideas, zeal, and ethics, and of communication with a wide variety of publics through countless educational avenues. But let's not forget the industry types, all of whom have the opportunity and the responsibility not only to see that professional geology is involved in environmental mat-
APPENDIX 9—SELECTED SPEECHES AND PAPERS BY CPGs

...ters that are their individual company’s concern, but also to assure the high quality of their company’s performance which may affect large segments of society.

How do we answer these questions? How can we answer them? Let’s turn to a couple of examples of the need for professional geological input to environmental problems. Each of us has our own horror story to tell about the lack of use, or the misuse of professional geologic help in specific cases—which has cost time through delays, dollars through destruction and reconstruction, and sometimes even injuries and loss of life.

But first, let’s philosophize for a moment. The bad results, we are likely to say, were due to Geologic Hazards, whereas many were actually caused by human error. The good results we should also relate to geologic hazards, the difference often being caused by human correct answers. Since the term “geologic hazards” has a negative connotation to many geologists some would have us drop it from our vocabulary. However, these things are truly hazards; what results when the triggering mechanism of the hazard is fired, is governed largely by good advance preparation, by a well constructed and implemented hazard game plan, and by a thorough and systematic recovery or mop-up operation.

And now for two examples. In the July 4th issue of Engineering News Record (p. 12) there was a news item entitled “Clay Seam Shift Causes Major Damage to 200 Piles.” The report said that “the shift of a clay seam has caused major damage to the pile foundations of a 10-story federal building under construction in Chicago.” According to the General Services Administration, which is in charge of construction of the $40 million building, “recent heavy rains triggered the shifting of the seam.” The shift bowed about 200 of the building’s 700 steel-encased concrete piles by amounts ranging from four to 24 inches. The piles, 75 feet long and 18 inches in diameter, were damaged 25-30 feet below grade, in the middle of a 35-45 foot thick bed of soft blue clay, having a compressive strength of 1-2 tons per square foot, which in turn rested on silt and sand. Above the troublesome soft blue clay at the top was 6-7 feet of overburden.

The bottom 30 feet of each pile was encased in smooth steel casing, and the rest of the pile in corrugated steel; the failure occurred in the corrugated steel section with the smooth steel section staying in place. As a result of bowing, some of the pilings developed hairline cracks, so GSA decided to repair the damage by augering a 38-inch diameter hole “down around the bow in the piles to the unaffected area. New steel casings will be installed and the hole filled with concrete.” Who helped the GSA decide? “Soil specialists,” according to the news item.

Admittedly, the news report may have been garbled or it may have omitted significant information, but one is nevertheless forced to ask a few questions: Was there a professional geologist on the job? Does the GSA have professional geologists on its staff or attached to its inspection teams? What is the geologist’s opinion of the cause of “the shift” and how it could have been avoided and how it might have been solved without another failure?

This is not meant to sound like a professional football team’s player-owner or player-manager dispute, but, let’s face it, engineering firms do do the design and construction and they do need specialty teams if they are going to overcome the opponent. But, perhaps the soil specialist was a geologist. All right then, if he is a geologist, he should be called a geologist.

Now let’s turn to my other illustration, and this time let’s single out a noted geographer as the manager who has selected his team’s players. The occasion? Well, this game is a project funded by the National Science Foundation under the RANN program called “Environmental Threats to Man.” A University of Colorado team was assembled by Dr. Gilbert F. White, Director of the Institute of Behavioral Sciences, to include the following specialists: economists, engineers, geographers, a law-yeer, meteorologists, psychologists, and sociologists; they were assisted by experts in the National Center for Atmospheric Research, Travelers Insurance Company, Colorado State University, several federal departments (Agriculture, Commerce, Defense, Housing and Urban Development, and Interior), plus selected State and municipal agencies across the country.

What is this game? “Assessment of Research on Natural Hazards” is the title, and the first half of the game is to be played in two parts (or quarters): (1) the present and prospective losses from natural hazards, and (2) the alternative feasible ways of reducing their unfavorable economic and social aspects. Following the intermission (or based on the results of these first two quarters), the second half’s goal will be to outline the character and magnitude of research efforts needed, together with their short-term and long-term payoffs.

Sounds like a good game plan. But that team! It’s lacking a very important key player—the geologist.

Here is manager White’s book of game plans:

Avalanche  
Coastal Erosion  
Drought  
Earthquake  
Flood  
Frost  
Hail  
Hurricane  
Lightening-caused forest & range fires  
Landslide  
Tornado  
Tsunami  
Urban snow and ice  
Volcano  
Wind

Manager White calls this his book of “geophysical hazards.”

Have you heard enough? Then let’s go back to our title “Environmental Geology—A Wasted Asset.”

When we think of wasted assets, we usually think of misuse of them—such as scraping off huge areas of ground so as to build a housing complex, with the resulting erosion and stream pollution.

But isn’t nonuse just as serious as misuse? It certainly can be when you consider the potential geologic hazards that are overlooked or misjudged, the mineral resources that are inadvertently (and many times, deliberately) covered up, the fact that Mother Nature is the world’s greatest “polluter,” and
the environmental overkill in recent years by misguided zealots.

These four items are mostly due to ignorance, but in some cases they are due to deliberate decisions made for non-geologic reasons. It is our job, as professional geologists, to take care of that ignorance aspect; this will help not only the truly ignorant ones, but also will help the decision-makers who feel that geologic concerns are the least important ones.

So, what’s the solution? Communication!

What shall we communicate? Facts and interpretations. We must not hesitate to provide the latter—interpretation—for, after all, we are professionals and let us never forget that we must be accurate with our facts.

Communicate with whom? Policy makers at every level in both industry and the government. Oh, yes, in educational institutions and public interest groups, too—for they also have their peck-order, policy-making hierarchies.

How shall we communicate? With every technique we can muster. Formal written reports, of course. But even more important are written and oral statements presented at both formal and informal meetings of committees and commissions, before organized groups and in conversations with individuals.

Remember—the most important (and certainly the most abundant) decision-makers are nearly always non-geologists. They are the governmental officials (municipal or county or state or federal), they are the company brass, they are the planners, they are the housewives, they are the farmers, and the drugstore owners and other nongeological types.

Therefore, (1) we must speak short and to the point, (2) we must speak without geologic jargon, (3) we must speak with feeling, and (4) we must speak often.

We’re all in this together—all of us professional geologists. As you may know, I spent my first several professional years in the Wisconsin lead-zinc district. The Cornish (or Cousin Jack) lead miners have a saying that was adopted by others and is most appropriate today for us professional geologists as we think of Environmental Geology being a wasted asset.

Let’s get the lead out!!

President’s Report
At 1974 Annual Meeting
By Frank B. Conselman, CPG 4

My subject is the state of the Institute, and at the risk of scooping myself, I can sum it up in one word: Hopeful. We hope it will get better; and we hope it won’t get worse; and hopefully, your President will survive this year without getting impeached.

All of us are aware of the turbulent situation in which we are now living, not only nationally but worldwide, and we recognize that this turbulence affects not only economics and politics, but inescapably also science and technology. All of these factors enter into professionalism, and it is our professional concern, as practicing geologists, that is the reason for AIPG’s meeting here today—in fact, for its continuing existence.

It is very appropriate that the Institute should convene once again on the campus of the Colorado School of Mines, because it was here that AIPG held its founding convention, eleven years ago this month. We met under the auspices of Mines’ President Orlo E. Childs, a past president of AAPG, who extended the hospitality of this truly renowned institution, provided us with physical facilities for our first months, and himself became a charter member of the Institute. In this he was fully supported by the late Dr. Ben H. Parker, then chairman of the Board of Colorado Mines, and also a past-president of AIPG. It is appropriate for me to state publicly, here in Golden, that Ben Parker was as fine, as honorable, as unselfish, as inspiring a professional scientist and gentleman as I have ever known, and that I shall be forever grateful for the association I was privileged to share with him. I am sure that anyone who knew Ben as a friend would feel precisely the same admiration for him that I did.

But my subject is now 1974. I am pleased to report that your Institute is not only viable and active, but growing and improving, thanks to the efforts of its members and, particularly, its working committees. I shall not infringe on the prerogatives of the chairmen whose reports you will shortly receive by disclosing the details of the progress we have made, but I can offer the following summation.

First - In numbers. We have 2,372 active members in good standing, and issued Certificate No. 2671.

Second - In finances. We are solvent and have adequate working capital in the bank to see us comfortably thru the year. This results not only from conservative budgeting but also from the wise ministrations of our Executive Director, Arthur F. Brunton who, I may say, has been with us from the start of this organization, at considerable personal sacrifice, and year in and year out has kept the amateurs temporarily occupying Institute offices straightened out and pulling together, and who more than any one man in the history of AIPG has been responsible for our accomplishments.

Incidentally, one of the speakers yesterday referred to the AIPG “management” in a rather playful way as being potentially in opposition to what he was about to say. I was so much amused by the thought of our actually having an establishment that I failed to learn what daring concept he expected us to oppose. If we have a management, it’s Art Brunton. The rest of us are just a transient group of stand-ins, taking time away from our work and doing the best we can, while hoping that we don’t foul up things in the Institute any worse than our own affairs become fouled up behind us at home, if you understand what I mean. One of the facts of life in any association, I suppose, is that its elected officers not only draw legitimate criticism, which they need, but also become the targets of every cheap-shot artist in the business. I have unfortunately only a limited number of cheeks to turn, and there is always a strong temptation to seize one of the dead cats by the tail as it goes sailing by and sling it back, with a little something on it. I find that yielding to this temptation is really quite gratifying and serves to break the monotony, and can strongly recommend it to my successors.
Returning to the subject of finances, we have had a pleasant surprise the form of an income item of several thousand dollars net from sales to date of the Professional Guideline series. These fine publications are largely the work of one man James Dunn of the New York Section and I wish to express on the behalf of the Institute our obligation to him for his imagination and industry on making this most worthwhile series available to the profession. Incidentally, we have these Guides in stock, and you should order them if you want them because supply is limited.

One of the major professional straws in the wind is a strong upsurge of activity within the Sections in the field of registration. If this momentum continues among the various states, statutory registration will soon be on top of us, and we had best prepare. I strongly urge that the goal of interstate reciprocity not be neglected. I believe in registration personally, but registration without reciprocity is reprehensible.

With reference to the state sections, I am delighted to report that the Advisory Board, made up of section representatives, is now living up fully to its expected function and is providing most valuable input to the Executive Committee.

I know all of us are vitally interested in the continuing adventures of the PUPO Committee, a committee formed by the American Geological Institute to plan a unified professional organization. It is important to remember that this committee, of which I am chairman, is not an AIPG Committee but an AGI committee, and represents recognition of the fact that AGI does now indeed see the need for a single geology-wide professional organization. This realization was stimulated by our own past-president Dana Russell when he was president of AGI, and takes us back to where we were a dozen years ago, when AGI was asked to sponsor a professional society, and declined on legal grounds. The period of more than twelve years has not been entirely wasted, because this time AGI will proceed with legal sanction and we have meanwhile had the benefit of AIPG's constructive experience over the past decade.

The question naturally arises, "What's wrong with using AIPG as is?" This can be answered rhetorically by any loyal AIPG member--there's nothing wrong with AIPG. Unfortunately, some of our less successful or less venturesome competitors profess not to believe that this is the right answer, and rightly or wrongly accuse us of shortcomings, or ambiguities, or exclusions, that make AIPG not an acceptable vehicle for unification, from their standpoint. Almost all of these objections, in my opinion, are unreal and based on misinformation. This gives us two alternatives--we can snort "Poppycock" at such allegations and do business as usual, or we can make whatever adjustments are necessary in the interests of unification, provided that the basic purposes and mechanisms of AIPG are not impaired. I feel, your Executive Committee feels, and most professional geologists apparently feel, that the goal of unification is important enough to justify modifying AIPG's non-essentials, to reach this objective. That is, we want a single membership list, including all classes of professional geological scientists, not only in fact but in appearance.

The PUPO Committee consists of one representative from each of AIPG, AAPG, SEXG and AEG, plus observers from the State Geologists and SEPM. We have been meeting, hassling, and rassling since last winter, and if we didn't like and respect each other personally we would have flown apart many months ago. We have had arguments and made compromises and we have adjusted to legal advice. Within the next few weeks we shall submit to the AGI Governing Board, at Miami Beach, what will in all likelihood be a unanimous report. The structure of the PUPO Committee being what it is, it is a foregone conclusion that the weighted votes of the Governing Board will pass it, since the AGI Governing Board is made up of the member society presidents, a substantial voting weight of whom are represented on PUPO.

We shall then come down to the nitteaceous grit, as we say in sedimentology. The finally adjusted legal version of the proposed new organization will be circulated to each member of AIPG for study and vote.

What will be circulated in effect will be a new Constitution, By-Laws, and Code of Ethics for the new society, which will be called the Professional Association of Geological Scientists or, preferably, the Association of Professional Geological Scientists. This will be nothing more or less than the present AIPG equivalents, with a few semantic changes and minor administrative rearrangements but essentially the same system under which AIPG has operated fairly successfully for the past 11 years. I recommend that you approve and hope you will, but of course any membership of the caliber of AIPG will reach independent individual judgments. One thing I urge is that we avoid last-minute minor tinkering at this time. If the substance is acceptable, accept it. We can do additional adjusting and fine tuning later, after the vehicle is in being.

We hope to gain (1) members; (2) breadth of scope; (3) fresh talent; (4) additional finances; and most important, (5) increased effectiveness and prestige, by absorbing parallel memberships. We shall, in effect, be accomplishing in early 1975 what we could not accomplish in 1962.

Meanwhile, let's not lose our momentum. Let's keep at work, let's add members, and let's maintain our morale. And let's avoid internal bickering. I get awfully tired of hearing for the umpteenth time some newcomer to the trenches exclaiming, with an air of self-righteous indignation, "The trouble is, we keep talking to ourselves!" Some of us have spent the past 20 years talking to anyone who would listen, in all parts of the social and political structure, even tho our latest zealots weren't present on such occasions. We mustn't expect miracles, particularly as outnumbered as we are, and we mustn't fall into recriminations among ourselves because these miracles haven't materialized. We're working on them, and we now have improved machinery including a legislative counsel at the national level. We have obtained membership in the Committee of Scientific Society Presidents. The sections are becoming increasingly involved at the state level, and we have input potential right down to our communities. We are not idle, and we won't be.

No account of the State of the Institute would be complete without a report on the State of the Institute's number one man--Martin Van Couvering, our first president, our first Ben Parker medalist, and our most beloved member. I called Pasadena yesterday afternoon and can report that Martin is,
In his words, "feeling quite good and convalescing rather nicely" from a recent operation. He sends his warm regards and says that he will see us in Tucson next year. I know all of you join in advising Martin Van Couvering of our delighted anticipation of having him with us again.

Is The Game Worth The Candle?  
(Reflections on Registration of Geologists)  
By Ian Campbell, CPG 19  
From October 1975 TPG

A short time ago, AIPG Editor Ross Shipman asked me to prepare a note on what I really thought about registration. (He knew that I had been a member of the California State Registration Board since its inception in 1968). I chose this title because, despite its old-fashioned phraseology, it succinctly provides the key to the whole matter. Moreover, the title, though perhaps out of fashion today, may very well be in fashion tomorrow. Furthermore, it will serve to remind us all that oil and gas are finite resources, and that the time may come when we must again use renewable resources such as beeswax and mutton tallow (limited in supply as they are) for illumination.

But my task is not to preach conservation; rather it is to illuminate the problems of registration. Casting back some ten years or so when I was one (of many!) California geologists who, if not opposed to registration was at least no more than lukewarm to the idea, I recall very clearly what changed my attitude. It all began with a number of disastrous landslides in southern California the most notorious being the Portuguese Bend landslide of 1956. In the ensuring years several counties and cities enacted ordinances requiring geologic reports on proposed developments, especially in hillside areas. Although there was no great uniformity in these ordinances, virtually all stipulated that the required report be made by a "qualified geologist". Who is a qualified geologist? Certainly the developers and the general public who needed his services did not know. And as always there were unprincipled characters who, seeing a new moneymaking opportunity, were quick to adopt the title of "geologist" with often the flimsiest professional backgrounds. Inevitably, therefore, each local government had to decide on qualifying criteria and establish its own local board to review applicants who wanted to practice in each local area.

The net effect was that, before long, a geologist who, if not opposed to registration was at least no more than lukewarm to the idea, I recall very clearly what changed my attitude. It all began with a number of disastrous landslides in southern California the most notorious being the Portuguese Bend landslide of 1956. In the ensuring years several counties and cities enacted ordinances requiring geologic reports on proposed developments, especially in hillside areas. Although there was no great uniformity in these ordinances, virtually all stipulated that the required report be made by a "qualified geologist". Who is a qualified geologist? Certainly the developers and the general public who needed his services did not know. And as always there were unprincipled characters who, seeing a new moneymaking opportunity, were quick to adopt the title of "geologist" with often the flimsiest professional backgrounds. Inevitably, therefore, each local government had to decide on qualifying criteria and establish its own local board to review applicants who wanted to practice in each local area.

The net effect was that, before long, a geologist who wanted to practice in the greater Los Angeles area must first file applications pay fees, and pass examinations (each somewhat different) in perhaps half a dozen local jurisdictions. One did not need to look far ahead to see development of a wholly chaotic situation, based on local rivalries and pressures on local boards and governments. The simplest and the best solution seemed clearly to call for statewide standards and statewide controls, as had been in operation for many years in other professions, such as medicine, architecture, and civil engineering.

While enactment of state registration and regulation would simplify bureaucracy and make for economy in the registration process, the fundamental reason for state registration of any profession is the benefit of the public. This point cannot be over-emphasized for, all too often, proponents of registration seem to think only that it will enhance the profession, will provide stature on the witness stand vis-a-vis an unregistered adversary, or will enable larger fees to be charged. But if these be the only reasons for pushing a registration bill, I would say, "forget it". Most thoughtful legislators will readily see through such selfish objectives. Unless they are convinced that their constituents will be benefited, the legislation will not (and, in fact, should not) go through.

No matter how high-minded the legislation, it must be recognized that the public benefit may be minimal. Yet in a state as prone to a variety of geologic hazards as is California, even "minimal" may represent a large dollar benefit through exclusion of the charlatans and supervision of the inept practitioners who otherwise would be, in a sense, "robbing the public" with useless or downright dangerous reports. At the same time, registered professionals do acquire an enhanced status. Yet in this there are handicaps as well as benefits—the non-registered geologist may feel that he has unjustifiably acquired "second-class citizenship".

Registration when first proposed in California threatened to bring a bitter schism within the profession. Petroleum geologists, in the nature of their practice, saw little need for registration; engineering geologists were eager to have it, as a solution to the multiplicity of qualifying boards. At one time it was proposed that only engineering geologists should be registered. Petroleum geologists, understandably, were not about to vote for something that would make them second-class citizens. Fortunately many geologists in all specialties within the profession recognized that it was to the ultimate benefit of all to work together. Thus the successful bill enacted in 1968 provided for registration for all qualified geologists, while only those with specific experience in engineering geology would be additionally certified as such. This solution was admittedly something of a political compromise and, as with all compromises, it has brought a good deal of unhappiness in certain quarters and at certain times. Nevertheless it has worked, and a certain unity has been maintained within a profession notorious for splitting into specialties and rivalries.

Another essentially political element in the registration bill was the inclusion of a "grandfather" clause. This is not unique to the geologists. No registration bill is ever likely to pass without some concession to those who have been practicing their profession successfully for years but are so far removed from text books and school days that the mere thought of an examination brings panic. In the twelve-month period during which "grandfathering" was permitted, California received nearly 3,000 applications (almost one-third from outside the state). The standards provided for certain essentially minimal qualifications, and even these could not in all cases be fully tested. Thus there are licensed geologists whose professional aptitude and practice may leave much to be desired. Nothing can be done about this unless one of them, in the course of his practice, authors a thoroughly inept report and someone calls the attention of the board to it. At that time,
and following a prescribed investigation procedure, the board can suspend or revoke his license. As yet, we have had no such cases, although the board has in a number of instances administered a sharp “rap on the knuckles” to some who were seemingly not doing their best. When violations of the act seem to have occurred, the board must work through the attorney general’s office and its often over-worked staff who are extremely reluctant to undertake a case in which conviction may be at all uncertain.

The foregoing paragraphs are simply by way of providing background information before attempting an answer to the question in my title, which ideally would call for a cost-benefit analysis. Since the first applications were received in 1969, the California board has received in fees from the profession (most of which presumably has been passed on in one way or another to the public) some $540,000. Some of this has provided 4900 certificates (suitable for framing) to the registrants; some has paid for reviewing applications and denying licenses to obviously unqualified would-be practitioners; some has paid for design and administration of the six examinations that have been taken since the grandfathering period ended; some has paid for professional investigations of alleged violations of the act; some has provided for hearings employing expert witnesses before professional hearing officers in order to adjudicate equitably various disputed cases; some has provided information and data to other state boards and to groups in states desirous of learning details of the California law and experience; some has provided recompense (at $25/day!) to board members for time spent at board meetings; some has provided salary to one executive secretary and one assistant; some provides overhead and administrative charges to the State Department of Consumer Affairs, the agency within which the board is housed.

Has the game been worth the candle? How much has the public purse benefited from exclusion of charlatans; how much from improved practice on the part of some who in making a report would otherwise not have given of their best - knowing that no law or agency could call them to account? How much has the practicing geologist gained through increased stature in the courts and before civic bodies? How much has the profession gained through the unification that has come through efforts to bring about reciprocity in registration for geologists under a board of geologists?) that we hope will burn for some time, and perhaps ever more brightly. As the more inept among the “grandfathers” pass on

The figure includes approximately 900 geophysicists, and also 900 engineering geologists who, in addition to certificates for registration as geologists, receive another “diploma” attesting to their certification as engineering geologists.

---

### Congressional Testimony

**Statement of Arthur O. Spaulding**

President of the American Institute of Professional Geologists before the Senate Interior and Insular Affairs Subcommittee on Minerals, Materials and Fuels

**March 17, 1975**

Regarding Senate Bills No. 81, 130, 426, 470 and 521

My name is Arthur O. Spaulding, and I live at 124 Cherry Street, Denver, Colorado, 80220. I hold Bachelor of Science and Master of Science degrees in geology from the California Institute of Technology, and I am Registered Geologist No. 21 in the State of California. I am a member of the American Association of Petroleum Geologists and former president of its Pacific Section. I am also a member of the Society of Petroleum Engineers and a former director of its Los Angeles Basin Section. I have worked for the Shell Oil Company as a petroleum engineer and for the State of California as an appraisal engineer for mineral deposits, principally oil and gas. From 1962 to 1973 I served the City of Los Angeles as Assistant City Administrative Officer in Charge of Petroleum Administration. Last year I acted as a special consultant to the Western Oil and Gas Association, managing the Association's Outer Continental Shelf Environmental Assessment Project, and now I am General Manager of the Rocky Mountain Oil and Gas Association. I appear before you as President of the American Institute of Professional Geologists and speak for that organization.

Owing to the large number of bills before you for consideration, I intend to treat some of them rather sparingly and concentrate on others which I deem more important. In all my remarks, however, I intend to stress the fundamental necessity of understanding geological concepts in the management of OCS lands. To ignore geology in developing leasing policy for public lands is to overlook an extremely useful science.

**S. 130**

Because it is short and relatively simple to understand, I should like to comment first on S. 130. The bill proposes to provide for the payment of revenues derived from federal Outer Continental Shelf lands to coastal states affected by offshore operations. Such payments would be in the form of compensation to the states for their expenditures which may be necessary to accommodate OCS development operations. Thus, the bill is similar to the 1920 Mineral Leasing Act wherein payments are authorized to states, if U.S. public lands are under development.

There is a precedent for payments of this kind in California, where tax revenues from state tide and submerged lands are shared in rather modest proportion with the counties contiguous with state leases. Further, experience in the City of Los Angeles in connection with urban drilling and production shows that complaints about such activities virtually cease when the payment of oil and gas royalties to property owners commence, but in this case it must be remembered that the royalty recipient has a vested interest in production.
When considering the virtues of S. 130, the Committee must bear in mind that OCS lands belong to all the people of the United States, and it is difficult to counter the argument that, if coastal states must contend with any inconvenience stemming from OCS operations, coastal states will also derive the benefits of greater business activity and tax revenues, as interior states do not. On the basis of my experience, it is my impression that S. 130 would make OCS operations more palatable.

S. 470

S. 470 proposes to suspend OCS leasing to mid 1976 or to an earlier date, if Coastal Zone Management programs have been satisfactorily completed. My single comment here relates to the time element involved in postponement.

It has been evident for decades that the United States would eventually run short of energy, a point upon which I shall expand below in connection with S. 426. The President and the Congress should have been aware of this approaching and inescapable condition for the past ten years and they should have been earnestly contending with the problem since 1970, when domestic U. S. petroleum production began its current alarming decline. Already, we are at least five years late in coming to grips with the issue of developing new domestic supplies, and further delay will serve only to exacerbate the impasse. The Committee must face the question, "Can the United States afford the luxury of deliberating an extra year and spending 25 billion additional dollars for imported oil?"

S. 426

This bill, sponsored by Mr. Hollings and others, proposes comprehensive amendments to the Outer Continental Shelf Lands Act. The amendments I wish to address in my role as a professional geologist are those related to exploration performed by the federal government, the management of public lands and the vital aspect of time in commencing leasing and exploration.

Before I begin my commentary, however, I note that Sen. Hollings stated in his introduction of S.426 that in all the years of rapid consumption of petroleum "we never really saw the handwriting on the wall" to the effect that the days of cheap energy (read oil and gas) are numbered. With all due respect to the Senator and the multitude of others who failed to read that handwriting, that message has been in print at least since 1949 when Scientific American published a forecast of supply and demand and predicted the end of the era of cheap petroleum production. For the committee's information I am attaching a copy of a letter which I wrote to Calvin S. Hamilton, Director of Planning for the City of Los Angeles in 1970. This letter has turned out to be an accurate forecast of events which have transpired since that date.

In his preamble to S. 426 Sen. Hollings builds a substantial case for developing the OCS lands of the United States in order to provide new domestic petroleum supplies and thereby reduce our dependence on foreign oil. Quite properly, he advocates that this development program proceed in a way consistent with the values of these lands, both intrinsically and environmentally.

We heartily endorse Sen. Hollings' conclusion that OCS drilling and production proceed at once to alleviate our domestic supply shortage and the paralysis which is currently afflicting our economy. And we agree that no offshore work should commence, if adequate measures to protect the marine and coastal environments are not taken in advance. We believe, however, that his proposed program of federal exploration to determine the presence or absence of hydrocarbon reserves is ill-conceived, as it fails to consider the risk inherent in looking for something which may not be there.

Reading Mr. Hollings' opening remarks, I have the clear impression that he believes it is both inevitable and assured that substantial volumes of oil and gas will be found in the frontier areas of the OCS. My message to you gentlemen is that such is by no means the case. Despite glowing reports of the productive promise of certain regions of the OCS, it must be understood that prospects for finding hydrocarbon reserves are based upon meager information, and exploration will be fraught with a high risk of failure.

The Committee could be flooded with statistics to illustrate the risk attending petroleum exploration. For example, it may be readily documented that only about two per cent of wildcat wells are ever successful in discovering commercial oil and gas fields. Rather than present the Committee with this kind of information, I should like to draw upon my own experience as a geologist and as an administrator of public lands to advise you to leave petroleum exploration to those prepared to undertake the high risks involved.

Only under the unusual circumstances of federal acreage being essentially proven productive by adjacent drilling, should the government consider entering directly into the oil business.

To illustrate my advice to you, I should like to describe several examples involving leases issued by the City of Los Angeles. One parcel of nearly 10,000 acres located not far from the Wilmington Oil Field, which is the second largest oil field in the conterminous United States, was leased in 1968 for a bonus payment of $2,513,000 dollars. Subsequently, a wildcat well was drilled and abandoned and the lease surrendered. In another case a parcel of 1500 acres was leased for a cash bonus of $1,100,000. A test well drilled and re-drilled without finding commercial hydrocarbons, despite its location adjoining established production.

The point of these examples is that many oil prospective areas appear to possess outstanding promise and turn out to be barren of commercial hydrocarbons. In each case the lease was situated quite close to proven production and in areas where a great deal was known about subsurface geological prospects. A more recent and extreme example has occurred since the sale of OCS leases seaward of the Mississippi, Alabama and Florida coast lines; more than $200,000,000 for drilling rights to one tract, and no commercial oil or gas has yet been found.

These failures may be attributed to bad luck, and, of course, that is true, but the point should not be lost upon the Committee that all of these prospects had been conceived by highly competent geologists with years of oil exploration experience, and still the holes were dry.
The lesson that I am trying to convey is that all is not oil that iridesces. There may be glittering prospects of substantial hydrocarbon accumulations in OCS frontier areas, but all of these are located in the minds of geologists and are anything but tangible. When Senator Hollings metaphorically speaks of appraising an antique to determine its value before selling it, his bird is in the hand and not obscurely located beneath thousands of feet of rock.

In my opinion, the most likely outcome of a federal oil and gas exploration program would be the discovery that many attractive oil prospective areas will turn out to be barren of production. As a result, exploration will condemn these areas rather than demonstrate their productivity, and any speculative values which may have once been attached to these prospects will have been destroyed. The recent OCS sale seaward of South Texas displayed the truth of this probability, when two deep stratigraphic tests revealed the absence of rocks in which hydrocarbons might accumulate in certain portions of the sale area. The upshot of such exploration will inevitably be vastly reduced cash bonuses for leases, if bonuses are paid at all.

In short, my counsel to you is that risk ventures should be undertaken only by those who are prepared to take risks and not by the U.S. taxpayer. I shall outline below, however, a means by which the U.S. may give effect to risks inherent in exploration without sacrificing all of the speculative attraction connected with leasing in unexplored areas.

Management of Public Lands for Oil and Gas Leasing:

From the foregoing it should be clear that geology plays an important role in determining the terms under which leasing of public lands should be proposed. If the potentialities of finding oil and gas are considered poor based upon geology, it would be inappropriate to lease such lands with the high expectation of developing production. Conversely, lands situated near production may have a high probability of being productive. The manner in which leases are offered for sale should reflect the quality of oil prospects within them.

If we assume a parcel of land has little promise of being productive, how should a lease be offered under competitive bidding procedures. It may be that the only value such lands possess is speculative and that the only oil and gas revenues which these lands will return will be in the form of cash bonus payments. Therefore, the leases should be drawn to capitalize upon this speculative potentiality. In other words minimum royalty terms should evoke maximum cash bonus bids.

On the other hand, if lands to be leased are relatively certain to be productive, as was the case at offshore Long Beach where production had been established at both ends of a prominent geological structure, the lease should be designed to give effect to such a probability. At Long Beach bids were received on the basis of an interest in net profits, and no base royalty was involved.

For the intermediate case where neither dry holes or commercial production would be surprising, consideration should be given to both a base royalty and retention of an interest in net profits to be shared after payout of exploration and development costs. Obviously, a lease provision to share in net profits will have the effect of lowering a cash bonus bid, but it does furnish the mechanism for participating in commercial production.

As an illustration of these procedures and the importance of geology in leasing, the City of Los Angeles owns certain lands near the Wilmington Oil Field. Early in the 1960’s these lands were considered attractive for their hydrocarbon potential, and the City prepared these lands for oil and gas leasing. Against my advice, the bid factor was selected as a percentage of net profits to be paid to the City in the event of production. No base royalty was involved, and no cash bonus was required. The successful bidder bid approximately 75 percent and subsequently drilled two dry holes and surrendered the lease. As a result the City received no cash income of any kind related to the oil and gas potential of these lands. My guess is that, had the lease provided for a base royalty and a fixed net profits interest with the bid factor being cash, a substantial bonus payment would have been made.

The Importance of Timing in Commencing OCS Leasing:

S. 426 proposes to establish a moratorium on leasing in virtually all OCS areas except the Gulf of Mexico until federal oil and gas exploration has been implemented. Approval of the bill will therefore delay the development of new domestic supplies of oil and gas for years.

With regard to the need for new petroleum supplies I can speak authoritatively chiefly for the western portion of the United States where most of my experience has been. In this region with the sale of OCS leases this year and their successful development, it will be fully ten years before domestic supplies come into some semblance of balance with demand. I suspect the same conditions pertain to the remainder of the country. In the meantime we must continue to obtain our supply requirements from abroad probably at a cost of about $25 billion per year.

The moratorium proposed in S. 426 will further increase our dependence on imported oil as domestic reserves decline and energy demand increases. Natural gas, which is expected to be in such short supply by the end of the present decade in California that curtailment of residential deliveries may be necessary, will also be adversely affected by the moratorium. Again, you gentlemen should ponder the question, "Can we continue to afford the luxury of depending upon others for such vital commodities as oil and gas?"

The day of decision is at hand.
Energy-Minerals-Development:
The PROs vs. The CONs

By Burdette A. Ogle, Ph.D., CPG 348
Presented at California Section AIPG Meeting 1975

Most of us are trained to do something which is constructive, like find oil, find coal, find gold, look at dirt to see if it's good dirt, tell others about the above so they can do it, too.

Until a few years ago, that's what I thought it was all about. Plus hoping someone might even pay us now and then. What I'm saying is that those of us who do things and want to get things done are the PROs, that is, we're for it. It also can mean we're the Pro-fessionals. We're the ones who are aware that our local, state, federal and worldwide economics and the livelihood of our people depend on us finding new sources of energy and new supplies of other minerals; and getting the construction done so that a person can have things like a safe water supply, a place to live, safe factory sites, and all those other good things that engineering geologists tell me they get mixed up in. It all seems so "American" that who could be against us?

But on the scene we have the CONs, the against-everything-gang; name it and they're "agin-it". Say "Energy", and quicker than you can say "Ad hoc" there's a new committee formed to fight it. When I say "new committee", it's new in name only it's the same old bunch but they keep changing letterheads and bumper stickers. This is in addition to the old standby no-growth outfits like the Sierra Club that have a paid professional staff to be alert to offer instant opposition to any new development announced. Unlike our side of the coin, the CONs don't have to have any credentials except loud mouths and turbulent attitudes. Nor do they offer any workable alternatives just plain Con-trary, Con-verse, Con-tadiction, Con-volute, and Con-stant. The CONs have much of the news media in tow and probably a large number of politicians in pocket, or maybe it's partly the other way around.

There is no question that the CONs are out to stop you cold in anything you do involving energy-minerals-development. And, when they stop YOU, they stop the country, especially as far as future energy and mineral supplies and resource development are concerned. Reasonable people, as we like to think we are, will say "Now why would the CONs want to do that. Let's just sit down and reason together and reach a workable compromise." With the hard-core CONs there is no compromise, there are no alternative sincere suggestions made by them.

Somewhere I was drawn into representing the AIPG at OCS hearings, mainly because of my involvement in offshore work, and since OFFSHORE OIL is kind of a flash word and the battle cry to any CON worth his/her/its placard, we who go to these dismal orgies, get the full vent of the CONs' spleen. But it does give a chance for close-in case study, if you can stomach it.

Now, as to who they are and why they are taking these actions: CONs come in varied sizes, shapes and descriptions. Many are fringe members caught up now and then because it seems like the "in" thing to do. But the deeply-involved CONs are the ones we want to study because they pack the punch. Some typical characteristics are:

1. The majority is Upper Middle Class, which is a pretty broad term. This type is usually in the middle-age category and they are generally well-off due to inheritance, early retirement, or in the case of women, free time has developed because the kids are no longer under foot and the "old man" is off playing golf, involved in various middle-aged pursuits, wrapped up in business with lots of travel, dead, divorced, or a choice of the above, not to exceed three.

2. Most are probably college graduates, but few have had any scientific or engineering background. Rather, they're from history, sociology, political science and legal backgrounds. However, education of any type is neither a qualification nor deterrent since no one asks them for any credentials. Their degrees as "Environmentalist" or "Conservationist" are self-declared.

3. Many are very intelligent and quick to catch buzz words, for example:

a) Eco-system - which I think refers to echoes, usually listening to one's own strident voice; or b) Socio-economic - which I think is more socio, such as welfare and food stamps, than economic; or c) The ENVIRONMENT - said with reverence--which ordinarily means to them: "I want things to remain as they were when I got here, and if you come here you'll ruin it."

4. Most are hypertensive, intense and in need of "a cause." Some such as those called "Entertainment Personalties," are self-conscious about making all that money for so little effort and jump onto the bandwagon with money and personal appearances to show that they "relate" to the important issues and the "peepul."

5. A great number of the hard-core CONs are the liberals in this country, usually liberal democrats, but which actually are equivalent to what is thought of as Socialists elsewhere. In most rhetoric today The Environment said with reverence is subordinate to the anti-business furor of some organizations whose members drive around in their cars on gasoline, wherever that comes from, and live in condominiums lit by electricity, wherever that comes from, and heated by natural gas, wherever that comes from.

6. A certain segment which is relatively new is the young CON group, made up mostly of liberals in their 20's. These show up at many hearings driving their VW vans plastered with appropriate bumper stickers, presumably powered by gasoline which they apparently believe dropped from the sky. Many of the young CONs were left without an "anti" cause when the Viet Nam war ended and just sort of slid sidewise naturally into the "Environment" thing. It was a way to continue the same political stance and get some press attention. Usually this type is even more prejudiced and less informed than the older CON. For example, at an offshore hearing in Santa Barbara, where I testified, three young CONs from Isla Vista, a center of anti-everything, adjacent to the University of California, captured 30 minutes of the hearing. Peering through their granny glasses and shaggy hair, they stood up there in their Earth shoes, and mumbled vaguely about

APPENDIX 9—SELECTED SPEECHES AND PAPERS BY CPGs

Ogle
all the reasons oil companies should be kept out of the Santa Bar-bar-a Channel, but mainly because they had driven anchovies and sardines from the California coast!

7. Small in number, but very powerful, are the CON politi-
cos. Their votes on local, state and federal legislative and
administrative bodies can cause tremendous damage to
to any efforts of the PROs. The hard-core CON politico is
firmly committed to his/her/its cause, sometimes to “Save
the ENVIRONMENT,” but very often to advance anti-
business, anti-capitalistic political philosophy. Many are
pushing for action which will stymie and hamper private
enterprise in the development of energy, while pushing for
government to take over oil and gas companies. This tac-
tic ties in neatly with raising obstacles under the environ-
mental damage ruse. The proposals of some politicians
are clearly so strong against any development which is
necessary for our national existence that one wonders if
even more sinister motives are involved, but I have no
proof of that. (See The Disaster Lobby, Prophets of Doom
and Other Absurdities, by M. Grayson and T. Shepard:
Follett, Chicago, 1973.)

There is also the opportunist type of CON politico who is
more the typical politician. He/she/it jumped on the
Environmental bandwagon when it seems like a vote-getting
idea and is also making political hay with "Blame the Oil
Companies" and other anti-business sports which they con-
ceive as what the liberal bloc of voters want. This type can be
very adept at moving back and forth as the hot air blows.
They are very conscious of the news-media and as long as the
liberal press slants the news and uses selective reporting to
attack energy development, they are misled as to what many
constituents really want.

How they do it and something of the consequences: First,
as to the various citizen CONs, that is, those who do not hold
political office: They have to be alert to any new development and
take immediate action in order to get a quick start on
clobbering it. This takes time, devotion to the task, and
money. Most have much free time for reasons noted above and
many are very dedicated. Many have a fair supply of their
own money but a great deal of money is also raised by contri-
butions, subscriptions, benefits, grants from foundations, and
undoubtedly from other sources unknown to me, but which
may find it expedient to back such causes to obtain some
desired end result.

They also have some special opportunities ordinarily
denied to the PROs. One major factor is the free publicity
which is readily available today in the liberal-dominated news
media. Read your papers and note how quickly the Sierra Club,
for example, can get a position established with interviews,
reports, analyses, and pictures on the first to fifth page, then
try and get a PRO’s rebuttal in the same paper. It’ll land, if at
all, as a one-liner below the obituaries. A consequence is that
there is no free press, free radio or free television where honest
presentations of both sides of a question can be aired.

The usual approach to stop a project is delay. Call for an
injunction; object to the Draft Environmental Impact
Statement as inadequate; circulate a petition; go to court on
any trumped up basis; pressure the politico CON to push
through some new delaying ordinance or law which may hold
things up until it is appealed or overcome. A PRO might expect
that to be believable in an objection to a proposed plan, he
would have to offer a reasonable, workable alternative. This is
not a requirement for the CON. This is one reason it is so easy
for him to spring into action to attempt to stop a power plant,
or stop an offshore oil well, or a coal mine.

A CON may ask for delay of a project until we have a
National Energy Policy, or a National Conservation Strategy
or a Coastal Plan. But, really, I’m convinced now that the key
hard-core CONs are too well-informed not to know that none
of the alternatives or national policies suggested is going to
offer any near-term help. As other energy sources may
become important in the distant future, undoubtedly the
same CONs, if alive, would fight them as destroying aesthetic-
values and disrupting the "fragile" ecosystem.

The consequences are all too clear to the PROs. They also
appear to be clear to the top CONs: If we don’t have adequate
domestic energy and minerals, our way of life, our economy,
and our national security will be destroyed.

One approach that the CONs use effectively is incessant
propaganda to the young, phrased as "environmental educa-
tion." This takes place in the public schools, private schools,
ballet schools, children’s organizations and clubs, from
kindergarten through graduate school. Largely this is
because the liberals dominate the educational system today,
and as noted before, the CONs and political liberals are so
hard to unravel one from the other. Children's books such as
the one showing the poor baby seal covered with oil are put
into the hands of six year olds, thereby propagandizing
against the oil companies at an early age.

While it is admirable to involve the young in learning to
save the outdoors, it could well be done without the CON
approach of negativism toward the other vital needs of our
society. The consequence is that the PROs have a hard job to
change these early misconceptions, and the young may be
brought up to create their own self-destruction.

Of course, the strongest thrust is from the political con-
trol attempt by the CONs. If cleverly handled, a limited num-
ber of determined people can influence many relatively acqui-
scent, busy types of citizens. The consequences are that peo-
ple who often really didn’t mean to sponsor activities that
may lead to their demise are borne inexorably forward into
the spinning buzz saw by the hard-core CONs. Once an ordi-
nance or law is passed, its consequences are upon us all and
it’s hard to turn around.

Finally: What we the PROs had better do about it:
Whatever I said about how the CONs do it applies to the
PROs. It takes time, devotion to the task, and money. Today,
right does not make might. Knowledge and training as to
what is really needed to make our country sustain itself are
disdained. It’s as if those involved in business are tainted.
The same weird rationale would have plumbers doing frontal
lobotomies.

What about a "plan"? In various organizations we’ve had
national committees and sub-committees and sub-sub-com-
mittees. Some of the simple obvious ways to attack the CONs
are:
1. Don’t allow them to "take over" public hearings. Work to
get time allowed for PRO statements in force. That is,
Finally, we as individuals, can have an effect by being involved on the local political levels. Obviously, getting involved in the political scene in an effort to get non-CONs elected. But even if your existing representative is a CON, there apparently is some power in writing numerous letters to that person, even though I sometimes feel it’s like throwing your stamps into file 13.

2. Give talks to groups outside the energy, and mineral businesses. Civic organizations, clubs, student meetings, and so on may want speakers. I don’t think it does much good to talk to CON groups as it would be a staged affair to ridicule you.

3. Communicate your thoughts on a personal level with children, yours and others, and with acquaintances, and neighbors and friends. This may mean alienating a few people but some people are just plain ignorant of the facts, or misinformed and might want information. Unfortunately, some of us are so sensitive or polite, that we just shut up when people around us start attacking the energy or mineral business.

4. Getting our message across to the news media is a formidable task. About the only way I can see, without a lot of money for public relations people and ads, is the “Letters to the Editor” route. Many papers are so prejudiced that only a few PRO letters get published, but I suspect that if a large number on the same vein keep coming in, one now and then will sneak through.

5. Obviously, getting involved on the local political levels is another way to be effective if this is feasible to you.

6. We must primarily work through our organization, such as the AIPG, and give them time and money. Representatives of large groups can have much muscle in contact work with Congressmen, Senators and such public office holders.

7. It might be helpful if we in the AIPG had a more clearly stated policy or platform on specific issues such as offshore drilling and strip mining.

8. Finally, we as individuals, can have an effect by being active in the political scene in an effort to get non-CONs elected. But even if your existing representative is a CON, there apparently is some power in writing numerous letters to that person, even though I sometimes feel it’s like throwing your stamps into file 13.

United States Mineral and Energy Resource Policy Recommendations

(Presented to the Democratic National Platform Committee by Fred L. Stead on May 1, 1976 and to the Republican National Platform Committee by John A. Taylor on August 11, 1976)

It is imperative that this nation have a comprehensive mineral and energy resource policy, and that the Party consider the development of such a policy as basic and paramount in the preparation of a progressive and meaningful party platform for 1976. The continued vitality, security, stability, and welfare of the nation is dependent on the intelligent, orderly, and continued development of our natural resources. Though this nation will never again be mineral and energy self-sufficient, we can decrease our dependence on foreign sources. The inconveniences we experienced during the oil embargo imposed by the OPEC countries in 1973 and 1974 will be multiplied into privations if our dependence on the whims of foreign governments continues to grow.

We, the geological scientists, represent the scientific and technical basis for all mineral and energy resource exploration and development. We are, therefore, more acutely aware of the difficulties of finding economic and adequate supplies, and of the increasingly great lead times required between discovery and production. As the difficulties of finding the less obvious mineral deposits have increased, so have our regulatory difficulties increased. We find ourselves beset by a growing mass of conflicting Federal, State, and local regulations and areas available for exploration are being withdrawn at an alarming rate.

Public Lands

The Mining Law of 1872 was enacted not only as an instrument for the regulation of exploration and production of resources from public lands, but it was also intended as an incentive measure to encourage the development of our natural resources. Regrettfully, the states were given the right to promulgate rules and regulations for the location and development of public lands over and above the rules and regulations set out in the Mining Law. In recent years, some states have taken advantage of this right by establishing rules, regulations, and rents on public lands that seriously hamper and, in some instances, have the effect of prohibiting exploration. It is an interesting fact that the 14 states having over 90 percent of the total public lands are those states with the largest portion of undeveloped natural resources. Obviously, these states must have some voice in the future development of these mineral assets, but not to the detriment of the interests of the remaining 36 states.

Environmental Considerations

Early in the 1960’s, the public became increasingly aware of our growing environmental problems. A major part of the publicity was given to those who greatly exaggerated the problem, and the public reverted from its excesses of waste and pollution to excessive zeal for preservation. In many instances, it is obvious that little thought has been given to the economic
consequences of these preservationist measures. Since 1968, the percentage of public lands withdrawn from mineral exploration and development under the Mining Law increased from 17 percent to 67 percent, and the percentage of public lands withdrawn from mineral exploration and development under the leasing laws increased from 24 percent to 73 percent. Many of these withdrawals, particularly the wilderness and primitive area withdrawals, were made after little more than cursory investigations of their mineral potential. In addition to these actual and de facto withdrawals, much of the remaining public lands are now subject to so many conflicting rules and regulations as to make exploration extremely difficult, if not impossible. Management of the public lands is the responsibility of two Departments of the Federal Government, and eight separate agencies within those Departments. It is evident that there has been little communication between these agencies relative to the promulgation of rules and regulations.

A Single Agency

We sincerely urge that the party consider a policy for the establishment of a single, apolitical agency, with departmental status, and staffed with the best people available with sole responsibility for all mineral and energy resource exploration and development of public lands and the outer continental shelf. We also urge that this department be charged with developing a uniform interpretation of the mining and leasing laws at all levels of government. Mineral and energy resources on public lands can be developed in a manner compatible with the environment, and a single set of rules and regulations must be established that will not only allow such development, but will encourage and promote such development. During our many years of overabundance, we seem to have forgotten the one basic economic principle that made this country strong and free. A stable, healthy economy is absolutely dependent on the production of new raw materials. Every dollar that is printed and put into circulation must represent an equal value of new material produced, whether it be farm produce, lumber, oil, gas, or the many minerals with which we are so richly endowed. This has not been the case in recent years.

Exploration Funding

It is the responsibility of the geological scientist to find new deposits of mineral and energy resources, and to develop methods of exploration and exploitation that minimize environmental degradation. No other profession is as aware of the increasing odds against making a successful discovery, or of the resulting increased costs of production. Every successful oil or gas discovery must pay for 17 unsuccessful attempts, and every successful mineral discovery must pay the exploration costs of five to seven marginal or unproductive prospects. It is interesting to note that, while the price of oil and gas are regulated, no one has even suggested that the prices of material and services required by the industry be regulated. As a consequence, since 1972, oil drilling and completion costs have increased four-fold, while the price of oil has only tripled.

It is important to fully realize that the vast sums required for exploration today cannot be supplied by small independent corporations involved in only one phase of the business. The large mineral and energy corporations must remain integrated so that a small profit in each step of producing, refining, and marketing adds up to the billions of dollars required for continued exploration. While costs increase, we find our industry beset not only by continued price regulation and increased taxes, but with the new threat of forced divestiture. If each corporation is limited to only one phase of the process, its margin of profit for that operation will have to be increased many times to provide the funds necessary for future exploration. The resulting increases for all phases of an industry's services can only result in prohibitive costs for the consumer.

International Policies

While the geological scientist has not been educated in international politics and economics, so many hundreds of our professionals work in foreign countries that we naturally gain some experience and knowledge relative to the international situation. Our professionals returning from tours of duty in foreign countries seem to be more aware of the political instability of some foreign governments than are our public officials. We find our diplomats concentrating their efforts in highly unstable areas such as the Middle East, and apparently unconcerned with regard to maintaining friendly relations with the relatively stable countries in this hemisphere plus Nigeria and Indonesia. Most, if not all, of our import requirements of strategic mineral and energy resources would be guaranteed through a revised approach to these stable countries. We urge that you consider a policy of integration of our national and international energy policies. We have urged the establishment of a single departmental agency to oversee our domestic mineral and energy resource development. We further urge that this department be allowed to contribute to the formulation of our international mineral and energy policies.

Nuclear Energy

An intelligent mineral and energy resource policy must recognize that nuclear power is an integral part of our future energy budget. Great progress is being made in the development of "fail-safe" nuclear power plants and in the safe storage of nuclear wastes. Public acceptance of these power plants will occur in the near future. At that time, we must have supplies of uranium available for use. It is prudent, therefore, that the Federal government reinstitute its domestic uranium ore purchasing program. Foreign governments have placed high priorities on the production of uranium for internal use, and this commodity will not be available for import at any price.

National Security

In conclusion, we cannot stress too strongly the importance of an integrated mineral and energy policy to our national security. The increasing chaos of laws, rules and regulations besetting the mineral and energy industries is forcing us into great dependency on foreign sources. As we have seen, these sources are subject not only to periodic interruption, but to absolute termination. At the onset of World War II, this nation was producing its known mineral and energy resources at a rate far below capacity, so it was relatively easy to bring ourselves to a war production status simply by producing at maximum capacity. Should another such crisis arise, we will not have the unused production capacity of the 1930's, and the
normal lead time from discovery to production of most of our metallic minerals is 15 years. A crash program could not possibly reduce this lead time to under eight years—an eternity in an emergency. As scientists, we are confident that our energy and mineral problems can be solved, or at least alleviated, but not under the chaotic and uncoordinated myriad Federal and State regulations facing the energy and mineral industries today. The Party must face up to this challenge and act immediately—or bear the responsibility for inaction in the eyes of the American voter.

**Congressional Testimony**

(Testimony before House Subcommittee on Science Research and Technology regarding H.R. 35 - A bill to reduce the Hazards of Earthquakes and for other purposes, by James W. Skehan, S.J., CPG-1505, and Edward F. Chiburis, Washington, D.C.).

Mr. Chairman and members of the Subcommittee on Scientific Research and Technology. I am Professor James W. Skehan, S.J., representing the Association of Professional Geological Scientists (APGS) nationwide. APGS, on behalf of whom this testimony is given, is an organization of over three thousand (3,000) geological scientists whose professional activity encompasses many fields of geology. I am Director of Boston College’s Weston Observatory, a research institute in geophysics and geology. With me is Professor Edward Chiburis, who heads up our seismology program at Weston Observatory. It is relevant to the present topic to indicate that Weston Observatory has the longest record of monitoring earthquake activity of any currently active institution in northeastern U.S., our observing facilities dating to 1930. Additionally, I served last year on the Earthquake Hazards Committee of the Association of Engineering.

The Bill appears to be adequate in its overall emphasis and scope. That there is a critical and timely need for such legislation is clear as evidenced by, among others, the increased construction activity in areas of high and moderate seismic risk, the siting of nuclear power plants throughout the U.S., and unusually high and devastating seismicity during the past several years in various parts of the world. The potential for catastrophe exists in many metropolitan centers in the U.S. should an earthquake of the size of the San Fernando event of 1971 occur in any of them. In this regard, although the eastern U.S. is commonly and erroneously believed to be earthquake free, the population density in the East, the older types of construction in many cities, the relative number of nuclear plants in operation or planned, and the lack of earthquake awareness on the part of the citizenry, all make the eastern (and particularly the northeastern) U.S. very susceptible to the ill effects of earthquakes. It is for these reasons that sufficient emphasis and support be given in the administration of the Bill to research programs directed toward understanding the seismotectonic processes in that section of the country, as well as to the western U.S., where the seismic problem is obvious.

Just as the Bill points out that it is not desirable to concentrate in one place the expertise required to address the many facets of earthquake hazard reduction, so too is it not desirable to concentrate in one place the storage and distribution of physical data related to earthquakes. Therefore, consideration should be given to the concept of Regional Data Centers, which would encourage the involvement of and stimulate those researchers most familiar with the seismotectonic processes in their own areas, and would provide more immediate access to those data appropriate for the region.

Advances in earthquake prediction require a prior knowledge of fault locations and a sufficient amount and accuracy of earthquake locations to determine which faults may be active, if not known from geologic observations. In California and to a lesser degree in the entire western U.S., the larger fault zones have been mapped and there is a large amount of information as to what faults are known or may be active. This, unfortunately, is not the case in much of the Eastern United States. Two decades ago only a few faults had been recognized and mapped in New England. Geological mapping in the meantime has shown that region to be highly faulted. A new map of the Boston region shows it to be at least as much faulted as comparable areas in Southern California, and is indicative of faulting in the region. But vast areas in New England and much of the East Coast is lacking this important data base upon which to build an adequate Earthquake Hazards reduction program. Limitations of funding in recent years and other priorities than earthquake hazard reduction have limited the amount of such basic mapping particularly in the eastern two-thirds of the United States. Fortunately, the use of archival geophysical surveys and the use of Satellite Landsat images can help speed the process. The development of such maps as the Boston Sheet proceeding along with the acquisition of more precise locations of earthquakes from improved permanent and portable seismograph networks will enable the identification of active faults in the region.

The information on regional geology also is necessary for, and is part of, the development of regional tectonic studies. These studies subdivide regions into areas of differing geologic histories and movements. It is this information when fully integrated with the earthquake history of a region and the effects (intensity) of the earthquakes that results in seismic zoning or micro regionalization.

The regional geologic and tectonic studies are critical to the program in the east. We have programs at Weston that has assessed the needs for earthquake hazards reduction in the northeastern U.S. and have been cooperating with University, state and Federal agencies to acquire the necessary information.

One of the problems of the past and present is that while there are many very excellent geoscientists on the East Coast, they have been trained and specialized in fields that only indirectly contribute to the types of studies mentioned. There is a shortage of people on the East Coast with the proper background for the regional studies.

A program such as that envisioned by H.R. 35 can only be successful if it addresses, at least in part, the question of training of geoscientists in field geology and geophysics.
Concerning the level of funding, it appears to be sufficient, provided that higher priority be given, at least initially, to Physical Studies and to Structural Studies. In this way, as full an understanding as possible of the various physical processes and their associated effects can be obtained before bringing to full support levels those programs for Social, Legal, and Economic Research and for implementation.

Relevant to funding, we believe it would be more effective to designate a single agency, rather than two, to administer the program. We further believe that the National Science Foundation would be the appropriate agency for this function because of its long experience in working with those organizations in the public and private sectors that are most qualified to solve this problem.

__Congressional Testimony__

(Permission before the House Committee on Interior and Insular Affairs in regard to H.R.39 – Alaska National Interest Lands Conservation Act by T S Ary, Denver, Colorado on June 4, 1977)

Mr. Chairman, Members of the Committee, Ladies and Gentlemen, my name is T S Ary. I am appearing before you today to discuss the Alaska Land Bill (H.R.39), as an Exploration Geologist, a member of and in behalf of the Association of Professional Geological Scientists (APGS).

APGS is an organization of professional geological scientists dedicated to maintaining a professional attitude and approach to the geological sciences. As geological scientists we are dedicated to the task of providing this country and the best possible technical knowledge in the field of Geology and Minerals.

It is the policy of APGS to express to the public and to legislative bodies the role of geology and the opinions of professional geological scientists. The APGS appreciates very much the opportunity to appear before this Committee to present testimony on H.R.39 – “The Alaska National Interest Lands Conservation Act”.

I have spent the last 25 years as an explorationist. I have degrees in Geology and in Mining Engineering. I have worked as a small independent miner, prospector, consulting geologist and an officer in a major exploration corporation. I have worked in numerous areas in Alaska prospecting for several commodities. I am, therefore, qualified to speak on behalf of the small prospector as well as the corporate exploration manager about the mineral importance of Alaska lands. Contrary to Mr. Rider’s statement, the Alaska lands contain tremendous economic potential for natural resource development.

The principle that the use of land for the extraction of minerals is its highest and best use was recognized at an early date and was incorporated into both the Common and Civil law systems respecting the relative rights of surface and mineral estate owners. Little has occurred that would warrant the abandonment of this policy of mineral dominance.) To the contrary, the rapid disappearance of shallow mineral occurrences and the fantastic increase in metals consumption in the United States economy, indicate that a continued policy of mineral dominance is not only justified but required. The APGS, in urging a continuation of policies, recognizes that the highest and best use of public lands is to have the lands managed in a multiple-use concept. The development of their mineral resources must be recognized as asserting the best public interest (not merely acting from self-serving motives); for it is only by preserving as much of the public lands as possible for mineral development and providing the necessary incentives for industry to develop the minerals, that the United States can hope to satisfy its requirements for metallic minerals from domestic sources.

In order for the exploration geologist and the mineral industry to continue vigorously to develop the domestic mineral resources of the United States, the public lands must remain available for prospecting.

H.R.39 is cited as the “Alaska National Interest Lands Conservation Act”. And I would like to emphasize the word conservation, not preservation!! National interest is not too difficult to define. It is in the national interest to keep available for prospecting those Alaska lands which many factions desire to withdraw before an adequate inventory of the resources has been completed.

The term “Conservation” is a little more complex to define. It is all things to all people. It is what the eyes of the beholder wishes it to be. Webster’s New World Dictionary of the American Language defines conservation as “conserving, protection from loss, waste, etc.”. This is the context in which geological scientists look at our natural resources. With adequate control, the non-renewable resource can be recovered, the ground properly reclaimed and used again for renewable resources. Anything less would be a wasting of our nation’s resource base.

Secretary of Interior, Cecil D. Andrus, in his statement of April 25, 1977 before this Committee, chose to view H.R.39 as “... the highest environmental priority of this administration...” There was little mention in his statement of the national interest in the discovery of new minerals and energy. Anything less than true conservation or multiple-use of these lands will only add one further escalator in the ever increasing inflationary spiral.

We have many responsible geologists in our membership. We are concerned about the need to balance the competing arid worthy objectives of the development of our natural resources and the protection of our environment. Bills such as H.R.39 are forms of environmental overkill and do not consider the national interests, the national or state economies or the economic havoc which they cause. H.R. 39 as now written is a preservation Bill. The representative of Senator Hart of Colorado acknowledged this in his testimony.

Only a nation such as the U.S., with its affluence, can consider locking up so many acres of prospective resource rich lands. The developing third world nations consider resource development as the answer to their development problems. With resource development, they are raising their standard of living, reducing unemployment, improving their health, welfare, and educational facilities. It is in their national interest to develop their God-given natural resources. In contrast, H.R.39 appears to have been designed to protect Alaska
at the cost of its economic viability and its population - native and non-native.

The mineral industry has, over the past 200 years, provided the raw materials and energy which has allowed the United States to become the foremost power in the world. If we lose the opportunity to prospect for, discover and develop additional raw materials and energy resources, we will revert back to That pastoral character who is satisfied to sit and contemplate the beauty and serenity of this great country and allow it to disintegrate into a state or condition of the totalitarian countries.

Mr. Chairman, we believe the Alaska lands should be managed under the basic guidelines. That have been set forth in prior legislation which has been adopted by the Congress on several different occasions.

The Alaska Statehood Act, and the Alaska Native Claims Settlement Act made it very clear that Congress intended to give the Alaskans the necessary resource base to be self-sufficient. The BLM Organic Act of last year established for the most part that public domain lands will be retained in federal ownership and managed under a multiple-use philosophy.

The Congress set forth the nation’s mineral policy objectives in the Mining and Minerals Policy Act of 1970. The Act declared that it is the continuing policy of the Federal Government to encourage private enterprise in the development of economically sound domestic mining and reclamation industries and to foster and encourage the development of domestic mineral resources.

H.R.39 does not encourage the development of the Alaska lands, nor does it provide access to the natural resources which could allow Alaskans to be self-sufficient, nor does it retain the lands in Federal ownership to be managed under a multiple-use philosophy. No! H.R.39 proposes that 217,455 square miles, or almost 37 percent of the state of Alaska - an area approximately equal to the entire states of Utah, Arizona, and the land West of Denver on the state of Colorado - be withdrawn from mineral entry.

Just consider what effect a withdrawal of that magnitude in the early life of these states would have had on the history of the U.S. Think of the valuable mineral resources in those states which would not have been available in the national interest and to the people of the U.S.

The APGS objects to H.R.39 for the above reasons. The Bill would deny the nation potential sources of energy, copper, molybdenum, tungsten, chrome and nickel so critically needed, which may be located in the large areas covered by the proposed withdrawals.

The Bill denies access to most of the lands proposed to be withdrawn from mineral entry. It would also tend to neutralize or deny those rights given to the citizens of Alaska under the Alaska Statehood Act and to the native corporations under the Native Claims Settlement Act. H.R.39 would tend to deny the movement of resources across the withdrawn lands from lands not withdrawn. I question if this is in the national interest. It certainly is not in the best interest of the natives of Alaska.

At this point in time, it is premature to withdraw these lands from mineral entry. The amount of exploration which has been conducted in Alaska is minimal. Our knowledge of the geology is limited. It has only been recently that we have had the equipment, ability and the need to start a thorough examination of our last frontier state.

Before such large amounts of lands are withdrawn, an inventory of the lands should be undertaken. This responsibility was recognized by Congress when the Wilderness Bill was enacted into law. Members of Congress at That time provided for examination of the resource potential prior to a lock up of chose natural resources.

Geological scientists discover mineral and ore deposits only where they exist. Access to the lands is necessary to allow us to search for the hidden deposits. Without That right of access, we will never find those hidden ore bodies in the areas proposed for withdrawal under H.R.39. Mr. Chairman, this question of access is very important to the members of APGS. Without this access, we cannot adequately discharge our responsibilities to provide a continuing supply of raw materials for our economy.

As I mentioned earlier, we have just scratched the surface of Alaska. We have scant knowledge of the extent of Alaska’s mineral potential. If Congress closes the access door to Alaskan lands as proposed by H.R.39, Congress will be locking away an uninventoryed resource base of tremendous size. APGS believes that such a policy would be poor land use planning and would be contrary to our national interest and to the spirit of the Mining and Minerals Policy Act of 1970.

APGS recognizes that there are many uses to which Alaska lands can and should be put. It is in our national interest That these lands be administered under the concept of multiple-use to provide the necessary flexibility and balance which is needed to produce the maximum returns from our Federal lands.

The industry and the U.S. Forest Service have established a working relationship under the multiple-use concept which would prove to be valuable in Alaska. A true multiple-use management system of the D-2 lands appears to be the best approach to the situation. It would allow for the proper evaluation of land use alternatives and allow for decisions to be based upon facts rather than emotions. H.R.39 now embodies a single purpose thrust, the wholesale withdrawal of lands based upon the administration’s highest environmental priority. Economic considerations should also be a part of the discussion of D-2 lands. The Alaska Statehood Act, the Native Claims Settlement Act, and many other Congressional actions have recognized this fact and have taken it into consideration. H.R.39 appears to ignore this fact.

APGS would urge this Committee and Congress to keep in mind all of the nation’s needs and goals when considering the D-2 lands. We need a balanced bill which will take into consideration those competing but worthy objectives, the development of our natural resources and the protection of the environment. There should be no single land usage which dominates all others and works against the national interests.

We should have a sound multiple-use administrative concept and policy that would allow the maximum usage and create the maximum return from our public domain.
Thank you very much for the opportunity to present this statement.

---

APGS 1978 Annual Banquet
“An Approach to Regulatory Reform”

By Hon. Harrison H. Schmitt, Geologist
United States Senator, New Mexico

I do wish there were some way in which in a very short period of time we could see a relief to the cost, the time and loss of motivation that come with Federal regulation. It is not going to happen in a short amount of time. As a matter of fact as we used to say in the flying game, we are “well behind the power curve” right now. You have heard lots of horror stories today, and I am sure you know many more to tell. I am looking forward to seeing the transcripts so I can replenish my supply of horror stories about Federal regulation and its impact on the cost of doing business, the time it takes to do business and, maybe more critically now in many areas, on the motivation of people to even try. That is becoming as serious as the cost and time it takes. I am hearing those kind of horror stories more and more frequently.

Well, the basic problem legislatively, and must be solved, is that most of the law today that we as Americans, whether we are in business or not, have to deal with is regulatory law. Most of what Congress does is inconsequential compared to what you have to deal with on a day-to-day basis or that anybody in this country has to deal with on a day-to-day basis. The Congress has gotten into a habit of passing enabling legislation which transfers law-making authority to other agencies and departments of government. The cost of doing so is rising at the rate of something on the order of 15 percent or more annually. I am sure you heard today what that estimated cost is according to recent studies. For next fiscal year, it is something well over $100 billion. You can even take it up higher, depending on how you allocate cost. And that is for the private sector alone, and does not include the local government, state government and federal government of its own regulation. We are rapidly approaching a cost to the individual American man, woman and child of something in the order of $1,000 per year, just to handle federal regulations. Now again, that’s a different kind of horror story, that’s sort of a mega-horror story that is often hard to comprehend. It is easier to comprehend the specific examples that I am sure you exposed each other to today and we continue to do so.

My inclination after really realizing the depth of our regulatory problems in the course of the 1976 campaign, talking with New Mexicans, knowing it was there, but finally getting my own exposure to the horror stories that they had, whether it was mining, or ranching, business, education or just government itself, they were there. And I decided that it would be foolish for me to try to cover the whole waterfront when I got to Washington. In my first two years in every kind of legislation I knew that needed to be treated, I picked one of the most fundamental areas of legislation that was effecting the State of New Mexico, and obviously the whole country, and that was regulatory reform. So about 18 months ago, after a great deal of study of the issue and of the law, particularly the Administrative Procedure Act, I introduced a Bill that received a number, S2011 (many of you I think have already been exposed one way or another to that Bill) and began then to try to move that measure through the committee structure of the Congress. It was not only something that had to be done, but also it was something to teach me how to do it better next time, for that and other forms of legislation.

Well, we spent about 16 months pushing and shoving and trying to find a subcommittee chairman who was sympathetic to this activity, so that we could get some hearings. The first subcommittee chairman I picked was Jim Alien of Alabama. He was sympathetic. However, the Panama Canal came along, and Jim was diverted, and unfortunately died soon after that issue was resolved, at least temporarily. And so I found, however, that Paul Laxalt of Nevada was very interested in this issue. Many of you know Paul, and know why. Obviously for many of the same reasons New Mexico is interested. And Jim Abourezk, believe it or not, was acquiescent because it was the subcommittee on Administrative Procedures that needed to hear this Bill within the Judiciary Committee. So with Paul’s assistance and Jim Abourezk’s acquiescence (since he was retiring and, by the way, moving to New Mexico for a few years) we were able to get three days of hearings on S2011. As a result of those hearings, a new Bill has been drafted and was introduced at the end of the last session. I will polish it up a little more and introduce it again next year.

What I want to do tonight is to tell you what we are trying to do with S2011, the son of S2011, and the grandson of S2011; and I use that because I can’t remember the rest of the numbers. It took me six months to remember S2011. The basic approach is to give the Congress a period of time after the final promulgation of a regulation to review that regulation and its economic impact, its judicial impact and whether or not it is the intent of the letter of the law before the regulation becomes law. The way we propose to do this is as follows. The basic administrative procedure for regulatory promulgation would not be changed significantly, except to require with the initial publication of the new regulation a preliminary Economic Impact Statement by the agency wishing to so promulgate a regulation. It would be the regulation and that statement that would be available for public comment during the comment period. Then the agency would be further required to submit the final regulation and a final Economic Impact Statement to the Congress when they are ready to start the “90 day clock” for Congressional action, if Congress chooses to act. That Economic Impact Statement would be reviewed by the General Accounting Office as an administrative arm essentially of a joint committee formed by members of both Houses. Originally, we had thought we would refer each regulation to a standing committee, but the State legislatures, who have been a tremendous help to us, strongly recommended against standing committee referral. They have found in their own experience that 34 state legislators have acted in one way or another in this matter, in regulatory review. They recommended a joint committee because you avoid the internal biases either for or against an agency...
that a standing committee almost automatically develops. So the new Bill will call for the formation of a joint committee.

So the regulation and the Economic Impact Statement would be referred to the Congress for a period of 90 days. During that period of time either an individual Congressman or Senator or the joint committee itself could introduce resolutions of disapproval of the regulation. And if that resolution of disapproval was not reported out of the joint committee within 45 days, the expedited procedure would take place so that the regulation still would have to be considered on the floor of whichever body the resolution was introduced. And if either body voted for that resolution of disapproval, passed that resolution, then the regulation would not become law. It does not mean that the agency could not go back and try again, but that particular resolution, as worded would not become law. The only way that this could be circumvented, and this may sound a little complex and I will try to explain why we are considering doing it this way although it is not a final decision, is to have the other House that did not act, veto the action of the House that voted to disapprove. The reason it may be necessary to have that complex procedure has two facets to it. One is that it is still constitutional, there is a major constitutional question about whether you can have a two-House veto and not have that veto signed by the President. That is a question of how you interpret Article I, Section 7 of the Constitution. On the other hand, there is a limited constitutional question about a one-House veto although I believe that that constitutional test can be met. There are something like 264 laws already in the books with some form of Congressional veto, many of which are one-House vetoes. The House has consistently over the last several years voted two to one in favor of one-House vetoes. The Senate has consistently avoided that issue until this last session of Congress when in one case they voted two to one against a one-House veto. (HDD regulations in that case). Why is the Senate so opposed? Well, it appears from my research among my colleagues, that they are opposed because they don't want the House to have the authority to veto something the Senate and the House jointly have previously approved. A regulation only indirectly has been approved by the Congress, because the Umbrella Legislation was approved but the Senate generally doesn't want the House to be able to veto something that they said was okay for an agency to do. So we are exploring whether or not the veto of the veto would be an acceptable procedure; you still avoid the constitutional problem of both Houses acting in the same way on the same matter and therefore, the President having to get involved. I realize that this sound complex. We may find a better way to do it, but it looks like that may be the only compromise that is possible in the next few years for the House and Senate to agree on a one-house veto is for the other House to veto the veto.

Within this Bill we would also provide for a resolution of reconsideration of an existing regulation rather than require, as some states have, a complete recodification of existing regulations and an examination of their intent in the letter of the law and the economic impact. We would provide for the introduction of a resolution of reconsideration. If a resolution of reconsideration under an expedited procedure were approved, by either House, the agency then would have to set regulation under the expedited procedure for Senate and House consideration. There are, I am sure, many other details that might be of interest to you - if you are interested in this approach. Do not hesitate to correspond with me, and we will put you on our mailing list and send you copies of the Bill and other information necessary to evaluate it. But I think as near as I can tell after two years now in the Congress working very closely with people like Congressman Levitas of Georgia, Bill Archer, and others who are very interested in this fundamental problem, I don't see any other way in which Congress can take control again in the making of law and still have the government operate in a very complex society where some regulation is obviously going to be necessary. If we can once again get Congress to take control then, I think, we are going to see the situation automatically improve, possibly without a great deal of Congressional action. That has been the experience of the States. As soon as some kind of review mechanism exists, the agencies begin to clean up their act—and very rapidly clean up their act. Whether they do or not, I think, it is something that has to be done and Congress is going to have to learn how to deal with approving law, or disapproving law, whatever the case may be, that is created by non-elected bureaucrats. This is our fundamental problem. Laws that are giving you most of your problems and that most of you have talked about during this session are laws that were created by people you had nothing to say about electing other than through your vote for the President of the United States. And even that vote is seriously diluted by the distance between the President and the people that promulgate legislation. Now we are not just talking about the mining industry or the ranching industry or agriculture or government or banking, we are talking about our whole society now underneath a web of legislation, many of which you never heard of, and many more of which will appear during the 96th Congress - in spite of everything we try to do. There is though, I think, great encouragement in some of the things that I hear others are going to propose this year. On a piecemeal basis, we have undertaken a significant de-regulation of the airline industry where the government becomes more of a referee than a regulator and that the marketplace becomes the regulator and that obviously is what I believe in there. There are rumors that some of our more liberally-oriented friends are interested in deregulating the trucking industry. That’s going to be a lot tougher problem. At least, I understand there is a Bill or two being drafted to try to do to the trucking industry what was done to the airline industry. I think they are going to find the deregulation of the airlines was child’s play compared to trying, in a piecemeal way, to de-regulate the trucking industry. We shall see. The attitude though is useful to me in trying to get the general approach through the Congress.

There also is most importantly, a ground-swell of discussion, of communication with the Congress about the fundamental problem that we face in regulation. Even the President has indicated he’s interested in gaining control of the United States government. That in itself is encouraging. He has indicated that on several occasions over the last three years, and we continue to wish him well. But I am afraid it is in the area of regulatory control that it is going to take some specific Congressional action along some line and the only one I can find that really seems to make general sense is the one I prescribed to you. Let me say again that the cost of regulation is the fastest growing component of regulation. It is not yet the major single component of regulation, but is the fastest growing component of inflation. The size of our federal deficit in all
the direct and indirect ways in which it increases money supply without an increase in goods and services is still the fundamental pressure that we all feel. The cost of importing foreign energy at least a third more the cost of what we could produce it domestically is another major component of inflation. The loss of productivity because of a variety of problems, not the least of which is a lack of investment in private and public research and development for new technologies, is another major component of inflation; and of course, increases in payroll costs through tax and wage increases in another. But I submit to you that wages and prices unless in excess of the inflation rate by significant amounts are not nearly the contributor to inflation that they are being made out to be. Wage and price controls, whether mandatory or voluntary as with hospital cost controls, or controls of that kind are treating the symptoms of the problem and not the basic problem. They go after the victim, literally, of the problems. The people who are having to live with inflation are the ones you are asking to control it, and they have not control of it, because the five other things that I listed are not within the control of the people; and those are the fundamental push on inflation rates today. And so, although we must work, I hope we can work in a positive way on these other issues besides regulation in the next Congress. We certainly must get control of regulation, not only because it is the fastest growing contributor to inflation, but because it is on the verge in many sectors of our economy of stopping us dead in the water. And if you don’t believe it can happen look at what happened to new plants in the nuclear industry. They stopped, and for only one reason - regulatory control. It is now the time frame that to construct a nuclear plant from beginning to end is beyond the ability of risk taking within the private sector. It can happen to you and whatever industry you are in. You know it as well as I do. It can happen very fast at the rate of which regulatory burden is increasing. So don’t give up on it. Keep talking about it, keep helping us. There are those of us that are trying to get control of the monster in Washington; we need your comments, not only on the legislation that comes down the Pike, but any ideas you have that may help. We also need to be asked to help in fighting the detail problems whenever they occur. This is now to design legislation in order to fix a problem. So let me ask you. Many of you have been in touch with me on other occasions. We have talked on many other occasions. Let’s continue to do that and let us continue to look for friends who can help us beat the problem.

Thank you very much Grover, all our distinguished guests at the head table, distinguished Honoree it is quite a career we have heard about tonight; and I hope that all of you will continue to make this organization in which I was privileged to talk to about five years ago, under a different name, I understand it is going to be that name — I am a little confused. I am very happy to be a part of it in an indirect way, and I hope we can continue to associate.
percent success for all graduates with MS and Ph.D. degrees. This strong market demand has also drawn from the departmental staffs of colleges themselves, and 58 percent of all schools polled (88 percent of the 10 largest departments) feel that the loss of personnel to industry will adversely affect the future quality of their programs. While 55 percent of all schools report losing from 16 to 50 percent of their staff, only 20 percent of the larger schools report such a huge loss of staff. It would appear that larger schools were less affected by staff reductions.

Slightly over 50 percent of both large and small departments polled reported that the future need for geologists would have no influence on their departmental plans concerning the numbers of students who would be graduated or accepted. This reply is perhaps because about 50 percent of the departments had reported that the number of students accepted or graduated was simply out of their control. Thus it would appear that there is more administrative control than departmental control of future geological manpower, and perhaps even more power over programs, appears to be exerted by college and university administrators rather than by geologist-educators. Can we assume the administrators are reacting more to student demand or fiscal considerations?

Relations between industry and college geology programs

Regular presentations by industry are invited by 54 percent of the departments. At 65 percent of the schools, interviewers are requested to make presentations in order to tell students what companies expect and want from new graduates. An outside “expert in residence” (sometimes in the position of an adjunct professorship) is maintained at only 18 percent of schools; yet such a position is filled at 90 percent of the 10 largest departments. The concept of using outside employed professionals to teach their expertise on a part-time basis was considered at 66 percent of the departments. In turn, only 31 percent of departments have considered providing short courses for working professionals. Only 19 percent of all schools have an advisory board of alumni or industrial representatives; yet 91 percent feel that such a board can be beneficial to fund raising. Only 24 percent of the schools have some type of summer employment or student internship program. It is interesting to note that 40 percent of the larger departments have advisory boards, but only 11 percent of them have internship or job training programs.

Of the departments responding, 64 percent consider professional certification of geologists as beneficial, even though only 17 percent presently have certified professional geologists on their staffs. Others (36 percent), express the opinion that professional experience is a positive factor in the hiring of faculty. However, industrial experience ranks in the lowest priority as a hiring requirement, even behind personality. The dominant requisite for the hiring of faculty is the Ph.D.

Over 80 percent of the colleges encourage or obligate their faculty to publish, and 75 percent encourage or obligate their faculty to procure external funds. Most departments (94 percent) permit faculty to consult, and 79 percent recognize consulting as a good feature.

Factors affecting quality of faculty, students, and programs

In 1981 shortages in university faculty were evident. One of the four most important problems stated by respondents was the need for more and better quality teachers. Industry demand was designated as a significant factor in the loss of faculty at over half the schools. The present (1981) demand for BS level geologists must have also exerted an enrollment decrease in graduate schools. If severe enough, a future shortage in geologists with advanced degrees could result.

The student-to-teacher ratio in most schools is higher (20:1 to 10:1) than the average desired ratios expressed by individual departments (11:1 to 8:1). It would appear that within very small departments (less than three) faculty members must carry abnormally high work loads to provide desired courses for their majors. In addition, demands by the colleges to perform and publish research, and to acquire grant monies places further stress on faculty. Despite the shortages noted by the schools themselves, most are optimistic about their quality, and 62 percent rate their special subfields of emphasis in geology as good to excellent.

Of the responding departments, 62 percent favor screening-geology-major applicants, but only about 40 percent presently do so. Of those which perform screening, only one in four will reject more than 20 percent of its applicants.

Only 40 percent of departments admitted having specific criteria to qualify prospective geology majors. Overall, there appears to be no uniformity in terms of courses or curricula that one could term as “universally characteristic” for a degree in geology. This is especially true in the supporting sciences (mathematics, chemistry, physics, biology) but is less true within the major. The courses physical geology, historical geology, mineralogy, petrology, structural geology, field geology, paleontology and stratigraphy-sedimentation are required in most schools. Field courses are not required for a degree in 23 percent of the departments, but 90 percent of the ten largest schools require field courses—and this same percentage (90 percent) of the large departments require field camp. Only 63 percent of the total response indicate field camp is required. Internships and student summer employment programs are actively supported by only about 30 percent and 24 percent respectively of the schools replying.

Questionnaire opinions on departmental evaluation by the AIPG

Clearly, most departments do not wish AIPG to become so autocratic that control over geological education by AIPG would be comparable to control by the American Medical Association (AMA) of medical schools (68 percent were opposed to such control). However, departments overwhelmingly favored both the concept of establishing standards for evaluation and an effort to stabilize the profession so that future graduates are not faced with erratic cycles of job shortages due to saturation of the job market by more geologists than the market will accept. Over 94 percent of respondents favored curriculum evaluation and most respondents indicated that a ranking of geology departments might even be desirable. Most (62 percent) indicated that a system of ranking would be useful to students, prospective employers, and would be helpful in relationships between the department
and the local college (university) administration. It is interesting to note that despite the clear margin favoring evaluation (85 percent), respondents were evenly split (50-50) as to whether such efforts would be appreciated by the overall academic community.

Answers of large and small departments

From the questions asked, it generally appears that there are only a very few differences in the answers from all departments and those from only the ten largest departments. Some differences have been mentioned earlier in this report, others follow.

It seems that only 13 percent of the largest schools agree that greater control should be exercised over who enters the profession; whereas 32 percent of all schools expressed a positive feeling about more such screening and control.

Concerning the four major problems affecting geology departments, it may be interesting to note that replies from all schools list the following as the most important problems:

63% Need more financial support
58% Wish more and better staffing
57% Want more and better equipment

While the bigger departments want:
80% More and better staff
60% Better students
50% Better accommodations
50% Better salaries for staff

If we take some latitude with an interpretation of these percentages, it would appear that the larger departments have: less need for direct financial support but have a greater desire to build bigger and better staffs, and they feel that the quality of their students is not up to par.

Future Trends in Professional Geology
By Daniel N. Miller, Jr, CPG 64
From 1981 TPG

At the risk of offending old friends in Geology and with the distinct possibility of arousing the wrath of others, consider the following personal comments as I launch into a prognosis describing areas where professional geological scientists will be needed after the turn of the century.

I envision two very different scenarios for geology and geologists, either of which has a chance of developing depending upon the social-political route that the nation takes during the next decade. One course of action assumes that "federalism" will dominate following the current trend; in which case independent professional geologists as we know them now, will blend into and become a part of the bureaucracy. All the geological R & D and most of the more important exploration for mineral resources will only be possible through direct authorization and funding from federal agencies. The other course of action assumes that federal agencies will continue to manipulate strategic minerals and regulate activities on public lands, in which case private industry will attempt to operate at arm's length from government much as it does now. There are obviously other scenarios involving the geological scientist of the future that could be presented as well: but these two, are fundamental to everything else that might be postulated.

There will be some individuals (those who have spent a lifetime in government service or in academic positions) who disagree; those who say it really doesn't matter who, government or private enterprise, provides the funds and who conducts geological investigations as long as sufficient goods and services are provided for the nation in an acceptable manner. Such simplistic reasoning indicates a disregard or perhaps a lack of understanding of the role mineral and energy resources play in world politics or in the national economy. But, there is ample evidence to suggest why this lack of understanding is prevalent among certain groups. For the past several decades geological departments of colleges and universities, state and federal agencies, quasi-private research organizations and many large consulting firms have organized their operations to pursue the federal money tree. The practice has become acceptable, and in some cases a very necessary part of conducting the business of doing geology. Someone has to provide the financial means of paying for the investigations and publication of the results. Therefore, it should be apparent that whoever controls the purse strings charts the geology of the future and the route that professional geologists will have to take to survive.

Following the first scenario then, I can easily envision geology and geologists in the 21st century under direct federal supervision much as it is today in the majority of other nations. Subjects for investigation will be designed and financed in Washington based on national policies of concern for mineral and energy resources, land use planning and management, environmental concerns, and most importantly, control over the economics of resource development. Federal agencies will establish the priorities and resource needs of the nation, and then exploration, development, transportation, and perhaps even marketing will be handled by separate agencies and/or special quasi-governmental groups that handle federal contracts. All work will be conducted on cue in concert with other federal management programs. Individual projects will be planned and executed by teams of geologists rather than individuals. Each geologist will be assigned specific duties or responsibilities that will limit the scope of knowledge available to any one person or group. Anyone even suspected of consorting with outsiders from industry will be transferred into closet positions, or manipulated into undesirable situations that force resignation. Much of the effort will be directed at continuously updated data banks and national computer networks. All files and records of geological data will flow to and from centralized clearing houses and graded as to confidentiality.

Private files and records will be suspect and unacceptable for use in government reports. The economics of mineral operations will be handled exclusively by federal employees in offices that will be off-limits to the public. Geological and engineering reports of production, mineral values, and taxation will be made public, but represented and handled in such a way that they cannot be substantiated by outsiders.
By that time, most of the important physical and many chemical relationships on the earth’s surface will be constantly monitored by sensors in space. Working models will be used to monitor river flows, volcanic and seismic disturbances, sedimentation and erosion, all mineral and mining operations, and all types of land development. Subsurface investigations of every kind will be supervised directly by federal personnel. Data obtained from geophysical and geochemical investigations and drilling will be carefully screened and available only to qualified personnel. Published reports of geological investigations will flow out of Washington en masse in an effort to attract attention, and compete with other federal agencies for funding. The data contained on published reports or maps will be thoroughly edited for information that could reveal geological relationships other than those discussed in the report.

What will the professional geologist be doing all of this time, you might ask. To this I can only reply that professional geologists will be “federal” geologists totally dependent upon the federal system. Teachers of Geology, or individuals trained in geological subjects will work in advisory capacities doing the leg-work for city, county, and state governments or planning groups. Independent geologists will for practical purposes become an extinct species.

The second scenario assumes that the social-political climate of the nation will change from the path it is on now. Private industry, universities, and other groups will play a more active role and somehow be able to finance geological investigations and research without federal assistance. For this to happen, the nation may have to experience at least a serious, long-term threat or a major catastrophe wherein problems associated with resource exploration and land development can be better handled by independent experts and private companies rather than government. Obviously, during a time of crisis the Congress responds much faster to the priorities of problems at hand. Unfortunately, Congress also has a very short memory with regard to resource development and will not solicit outside experts and company participation until the problems become crucial.

Certainly we must assume that by the year 2000 and beyond that nations will continue to exercise strategic political maneuvers even to the point of war for mineral and energy resources just as they have done throughout history. However, it should have become clear to both our government and industry by that time, that neither can survive alone, and that international policies and mineral operations must work compatibly or the nation will suffer the obvious consequences.

Between now and the first quarter of the 21st Century Geology as a science, and geologists as professionals, will experience rather traumatic changes. Private sources of funding will be essential to colleges and universities for academic pursuits that influence the availability of undergraduate scholarships, graduate student programs, and faculty administered research projects in specialized fields.

The academic trend will be toward ever increasing technical specialization that in turn will dictate the manner in which geologists of the future approach and synthesize geological problems. Digitized data, electronic data processing and totally automated computer generated maps and scenarios will become the standard modes of operation. For every one geologist who gathers basic field data there will be a dozen other geological interpreters (specialists) who spend their time manipulating and programming data in an attempt to identify meaningful relationships. Geologic time and spatial relationships of rock units will be determined almost entirely on the basis of geophysics and geochemistry that measure infinitesimal bits of time and matter. Drilling and logging operations for example, will automatically record porosity/permeability, temperature and pressure, and fluid and mineral content through established signatures. Mining operations will be programmed from start to finish with alternative options for every conceivable type of circumstance that might be encountered.

There will be a far greater need then than there is now for resources; including all forms of energy and minerals, heat and water. Technology will have changed to utilize hydrogen and atomic energy as fuels, but all forms of hydro-carbons will be in ever increasing demand by the petrochemicals industry. Helium will be one of the more sought after resources, hence there will be an even greater need for exploration geologists who can locate economically valuable deposits.

By the twenty-first century surely all of the continental margins, thrust belts, and other regions of the world presently blanketed by thick overburden and late Tertiary volcanics will have been explored for hydro-carbons both on the continents and beneath the sea.

The fundamental difference between this scenario and the first one described will be the economic motivation of free enterprise competing within itself for achievement toward a myriad of different national needs. Exploration for and development of resources and related geologic activities will be structured on a local rather than a national scale. Geologists will function more independently and aggressively in pursuit of the proof of their concepts and the monetary return for their labor. Individual companies will continue to compete for geologists with innovative ideas on how to conduct resource assessments and other operations in the most efficient manner. Unlike the federalism concept, geologists will have more individual freedom to think, and to gather, exchange and discuss information. Data and records will be more readily available to a broader spectrum of competent professionals and most important there will be fewer rules and regulations to stifle initiative, motivation, and investment.

But what of those geologists who are not engaged in resource exploration? Those being trained even today for professional careers in paleontology, geomorphology, environmental geology, and waste management, etc.; where will they be by the year 2000 and beyond? In my opinion they will be only a memory of a by-gone era, superseded by competent life scientists, chemists and engineers with a general knowledge of geological concepts. The demand in the professional fields will be for specific solutions to individual problems, for quantification of data, proven analytical techniques, and usable end products; not studies, reports, or investigations simply for the sake of knowledge gained. Obviously basic geologic research will still be conducted but opportunities for employment will be very limited.

Development geologists with specialization in one or more mineral or fluid commodities, or types of deposits, will
still be in constant demand, but much of the work will be accomplished through instrumentation and data processing far more sophisticated than what we know today.

Mapping will assume a totally different role as technology improves to include instant-playback TV monitors that can handle the three linear dimensions plus time, with printing capability, linked with computer nets that allow continuous manipulation of data and information as new thoughts are conceived. Most of the traditional concepts of stratigraphic and structural geology will be tested and found inaccurate or incomplete. Whole new concepts of geology utilizing principles like topology will very likely replace our present approaches to reasoning.

As a generalization, the need will be for geologists with a very high level of engineering and technical competence, skilled in the theory of measurement and thoroughly familiar with the organization of quantitative data and programming. In effect, all geology will be quantitative, and those unskilled in precise technology will simply not be able to compete.

As to where professional geological scientists will be needed, I don't believe the fundamental needs of the nation and the world will be significantly different that they are now. The search for economic minerals, fuels, water, and inert gases will continue. Integration of geological concepts with constantly emerging technologies in physics, chemistry, mathematics, and economics will be commonplace.

The major different between the two scenarios is whether the nations progress and accomplishments are better served by regimented organization and coordinated planning of its affairs, or through the multiplicity of benefits and economic stability that result from the efforts of hundreds of thousands of individuals and companies, competing within private enterprise. Under the concept of federalism that the nation is just now beginning to experience, we have seen how geological organizations and resource management agencies can be manipulated within the law by a few well positioned government officials. And what is even more important we have witnessed the propaganda campaign against the mineral and energy industries that was swallowed hook, line, and two ounce sinker by the public, by the majority of university faculty, and most important, by the youth of the nation who are the only reserve of geologists, geophysicists, mining engineers, and scientists who will still be there in the 21st century. (Reprinted with permission from Houston Geological Society Bulletin, December 1980).

APPENDIX 9—SELECTED SPEECHES AND PAPERS BY CPGs

Future Trends in Professional Geology

— Update
By Daniel N. Miller, Jr., CPG 64
From 1991 TPG

Ten years have passed since Dan wrote his paper. A lot has happened during the intervening time. Consequently, I thought you might be interested on how Dan views things today vis-a-vis 1982, so I have asked AIPG President-Elect, Daniel N. Miller, Jr. to give us an updated perspective. In case you don’t remember what was presented in the 1981 article, it is reprinted below. -Editor

At the risk of offending old friends in Geology and with the distinct possibility of arousing the wrath of others, consider the following personal comments as I launch into a prognosis describing areas where professional geological scientists will be needed after the mm of the century.

I envision two very different scenarios for geology and geologists, either of which has a chance of developing depending upon the social-political route that the nation takes during the next decade. One course of action assumes that “federalism” will dominate following the current trend; in which case independent professional geologists as we know them now, will blend into and become a part of the bureaucracy. All the geological R & D and most of the more important exploration for mineral resources will only be possible through direct authorization and funding from federal agencies. The other course of action assumes that federal agencies will continue to manipulate strategic minerals and regulate activities on public lands, in which case private industry will attempt to operate at ann’s length from government, much as it does now. There are obviously other scenarios involving the geological scientist of the future that could be presented as well: but these two, are fundamental to everything else that might be postulated.

There will be some individuals (those who have spent a life time in government service or in academic positions) who disagree; those who say it really doesn’t matter who, government or private enterprise, provides the funds and who conducts geological investigations as long as sufficient goods and services are provided for the nation in an acceptable manner. Such simplistic reasoning indicates a disregard or perhaps a lack of understanding of the role mineral and energy resources play in world politics or in the national economy. But, there is ample evidence to suggest why this lack of understanding is prevalent among certain groups. For the past several decades geological departments of colleges and universities, state and federal agencies, quasi-private research organizations and many large consulting finns have organized their operations to pursue the federal money tree. The practice has become acceptable, and in some cases a very necessary part of conducting the business of doing geology. Someone has to provide the financial means of paying for the investigations and publication of the results. Therefore, it should be apparent that whoever controls the purse strings charts the geology of the future and the route that professional geologists will have to take to survive.

Following the first scenario then, I can easily envision geology and geologists in the 21st century under direct federal supervision much as it is today in the majority of other nations. Subjects for investigation will be designed and the distinct possibility of arousing the wrath of others, consider the following personal comments as we launch into a prognosis describing areas where professional geological scientists will be needed after the mm of the century.

I envision two very different scenarios for geology and geologists, either of which has a chance of developing depending upon the social-political route that the nation takes during the next decade. One course of action assumes that “federalism” will dominate following the current trend; in which case independent professional geologists as we know them now, will blend into and become a part of the bureaucracy. All the geological R & D and most of the more important exploration for mineral resources will only be possible through direct authorization and funding from federal agencies. The other course of action assumes that federal agencies will continue to manipulate strategic minerals and regulate activities on public lands, in which case private industry will attempt to operate at ann’s length from government, much as it does now. There are obviously other scenarios involving the geological scientist of the future that could be presented as well: but these two, are fundamental to everything else that might be postulated.

There will be some individuals (those who have spent a life time in government service or in academic positions) who disagree; those who say it really doesn’t matter who, government or private enterprise, provides the funds and who conducts geological investigations as long as sufficient goods and services are provided for the nation in an acceptable manner. Such simplistic reasoning indicates a disregard or perhaps a lack of understanding of the role mineral and energy resources play in world politics or in the national economy. But, there is ample evidence to suggest why this lack of understanding is prevalent among certain groups. For the past several decades geological departments of colleges and universities, state and federal agencies, quasi-private research organizations and many large consulting finns have organized their operations to pursue the federal money tree. The practice has become acceptable, and in some cases a very necessary part of conducting the business of doing geology. Someone has to provide the financial means of paying for the investigations and publication of the results. Therefore, it should be apparent that whoever controls the purse strings charts the geology of the future and the route that professional geologists will have to take to survive.

Following the first scenario then, I can easily envision geology and geologists in the 21st century under direct federal supervision much as it is today in the majority of other nations. Subjects for investigation will be designed and the distinct possibility of arousing the wrath of others, consider the following personal comments as we launch into a prognosis describing areas where professional geological scientists will be needed after the mm of the century.

I envision two very different scenarios for geology and geologists, either of which has a chance of developing depending upon the social-political route that the nation takes during the next decade. One course of action assumes that “federalism” will dominate following the current trend; in which case independent professional geologists as we know them now, will blend into and become a part of the bureaucracy. All the geological R & D and most of the more important exploration for mineral resources will only be possible through direct authorization and funding from federal agencies. The other course of action assumes that federal agencies will continue to manipulate strategic minerals and regulate activities on public lands, in which case private industry will attempt to operate at ann’s length from government, much as it does now. There are obviously other scenarios involving the geological scientist of the future that could be presented as well: but these two, are fundamental to everything else that might be postulated.

There will be some individuals (those who have spent a life time in government service or in academic positions) who disagree; those who say it really doesn’t matter who, government or private enterprise, provides the funds and who conducts geological investigations as long as sufficient goods and services are provided for the nation in an acceptable manner. Such simplistic reasoning indicates a disregard or perhaps a lack of understanding of the role mineral and energy resources play in world politics or in the national economy. But, there is ample evidence to suggest why this lack of understanding is prevalent among certain groups. For the past several decades geological departments of colleges and universities, state and federal agencies, quasi-private research organizations and many large consulting finns have organized their operations to pursue the federal money tree. The practice has become acceptable, and in some cases a very necessary part of conducting the business of doing geology. Someone has to provide the financial means of paying for the investigations and publication of the results. Therefore, it should be apparent that whoever controls the purse strings charts the geology of the future and the route that professional geologists will have to take to survive.
for mineral and energy resources, land use planning and management, environmental concerns, and most importantly, control over the economics of resource development. Federal agencies will establish the priorities and resource needs of the nation, and then exploration, development, transportation, and perhaps even marketing will be handled by separate agencies and/or special quasi-governmental groups that handle federal contracts. All work will be conducted on cue in concert with other federal management programs. Individual projects will be planned and executed by teams of geologists rather than individuals. Each geologist will be assigned specific duties or responsibilities that will limit the scope of knowledge available to any one person or group. Anyone even suspected of consort with outsiders from industry will be transferred into closet positions, or manipulated into undesirable situations that force resignation. Much of the effort will be directed at continuously updated data banks and national computer networks. All files and records of geological data will flow to and from centralized clearing houses and graded as to confidentiality.

Private files and records will be suspect and unacceptable for use in government reports. The economics of mineral operations will be handled exclusively by federal employees in offices that will be off-limits to the public. Geological and engineering reports of production, mineral values, and taxation will be made public, but represented and handled in such a way that they cannot be substantiated by outsiders.

By that time, most of the important physical and many chemical relationships on the earth’s surface will be constantly monitored by sensors in space. Working models will be used to monitor river flows, volcanic and seismic disturbances, sedimentation and erosion, all mineral and mining operations, and all types of land development. Subsurface investigations of every kind will be supervised directly by federal personnel. Data obtained from geophysical and geochemical investigations and drilling will be carefully screened and available only to qualified personnel. Published reports of geological investigations will flow out of Washington en masse in an effort to attract attention, and compete with other federal agencies for funding. The data contained on published reports or maps will be thoroughly edited for information that could reveal geological relationships otherwise than those discussed in the report.

What will the professional geologist be doing all of this time, you might ask. To this I can only reply that professional geologists will be “federal” geologists totally dependent upon the federal system. Teachers of Geology, or individuals trained in geological subjects will work in advisory capacities doing the leg-work for city, county, and state governments or planning groups. Independent geologists will for practical purposes become an extinct species.

The second scenario assumes that the social-political climate of the nation will change from the path it is on now. Private industry, universities, and other groups will play a more active role and somehow be able to finance geological investigations and research without federal assistance. For this to happen, the nation may have to experience at least a serious, long-term threat or a major catastrophe wherein problems associated with i-l-resource exploration and land development can be better handled by independent experts and private companies rather than government. Obviously, during a time of crisis the Congress responds much faster to the priorities of problems at hand. Unfortunately, Congress also has a very short memory with regard to resource development and will not solicit outside experts and company participation until the problems become crucial.

Certainly we must assume that by the year 2000 and beyond that nations will continue to exercise strategic political maneuvers even to the point of war for mineral and energy resources just as they have done throughout history. However, it should have become clear to both our government and industry by that time, that neither can survive alone, and that international policies and mineral operations must work compatibly or the nation will suffer the obvious consequences.

Between now and the first quarter of the 21st Century Geology as a science, and geologists as professionals, will experience rather traumatic changes. Private sources of funding will be essential to colleges and universities for academic pursuits that influence the availability of undergraduate scholarships, graduate student programs, and faculty administered research projects in specialized fields.

The academic trend will be toward ever increasing technical specialization that in turn will dictate the manner in which geologists of the future approach and synthesize geological problems. Digitized data, electronic data processing and totally automated computer generated maps and scenarios will become the standard modes of operation. For every one geologist who gathers basic field data there will be a dozen other geological interpreters (specialists) who spend their time manipulating and programming data in an attempt to identify meaningful relationships. Geologic time and spatial resolution ships of rock units will be determined almost entirely on the basis of geophysics and geochemistry that measure infinitesimal bits of time and matter. Drilling and logging operations for example, will automatically record porosity/permeability, temperature and pressure, and fluid and mineral content through established signatures. Mining operations will be programmed from start to finish with alternative options for every conceivable type of circumstance that might be encountered.

There will be a far greater need than there is now for resources; including all forms of energy and minerals, heat and water. Technology will have changed to utilize hydrogen and atomic energy as fuels, but all forms of hydrocarbons will be in ever increasing demand by the petrochemicals industry. Helium will be one of the more sought after resources, hence be in ever increasing demand by the petrochemicals industry. There will be an even greater need for exploration geologists who can locate economically valuable deposits.

By the twenty-first century surely all of the continental margins, thrust belts, and other regions of the world presently blanketed by thick overburden and late Tertiary volcanics will have been explored for hydrocarbons both on the continents and beneath the sea.

The fundamental difference between this scenario and the first one described will be the economic motivation of free enterprise competing within itself for achievement toward a myriad of different national needs. Exploration for development of resources and related geologic activities will be structured on a local rather than a national scale. Geologists will function more independently and aggressively in pursuit
of the proof of their concepts and the monetary return for their labor. Individual companies will continue to compete for geologists with innovative ideas on how to conduct resource assessments and other operations in the most efficient manner. Unlike the federalism concept, geologists will have more individual freedom to think, and to gather, exchange and discuss information. Data and records will be more readily available to a broader spectrum of competent professionals and most important there will be fewer rules and regulations to stifle initiative, motivation, and investment.

But what of those geologists who are not engaged in resource exploration? Those being trained even today for professional careers in paleontology, geomorphology, environmental geology, waste management, etc.; where will they be by the year 2000 and beyond? In my opinion they will be only a memory of a by-gone era, superseded by competent life scientists, chemists and engineers with a general knowledge of geologic concepts. The demand in the professional fields will be for specific solutions to individual problems, for quantification of data, proven analytical techniques, and usable end products; not studies, reports, or investigations simply for the sake of knowledge gained. Obviously basic geologic research will still be conducted but opportunities for employment will be very limited.

Development geologists with specialization in one or more mineral or fluid commodities, or types of deposits, will still be in constant demand, but much of the work will be accomplished through instrumentation and data processing far more sophisticated than what we know today.

Mapping will assume a totally different role as technology improves to include instant-playback TV monitors that can handle the three linear dimensions plus time, with printing capability, linked with computer nets that allow continuous manipulation of data and information as new thoughts are conceived. Most of the traditional concepts of stratigraphic and structural geology will be tested and found inaccurate or incomplete. Whole new concepts of geology utilizing principles like topology will very likely replace our present approaches to reasoning.

As a generalization, the need will be for geologists with a very high level of engineering and technical competence, skilled in the theory of measurement and thoroughly familiar with the organization of quantitative data and programming. In effect, all geology will be quantitative, and those unskilled in precise technology will simply not be able to compete.

As to where professional geological scientists will be needed, I don't believe the fundamental needs of the nation and the world will be significantly different than they are now. The search for economic minerals, fuels, water, and inert gases will continue. Integration of geological concepts with constantly emerging technologies in physics, chemistry, mathematics, and economics will be commonplace.

The major difference between the two scenarios is whether the nations progress and accomplishments are better served by regimented organization and coordinated planning of its affairs, or through the multiplicity of benefits and economic stability that result from the efforts of hundreds of thousands of individuals and companies, competing within private enterprise. Under the concept of federalism that the nation is just now beginning to experience, we have seen how geological organizations and resource management agencies can be manipulated within the law by a few well positioned government officials. And what is even more important we have witnessed the propaganda campaign against the mineral and energy industries that was swallowed hook, line, and two ounce sinker by the public, by the majority of university faculty, and most important, by the youth of the nation who are the only reserve of geologists, geophysicists, mining engineers, and scientists who will still be there in the 21st century.

Ten years have passed since an article entitled “Future Trends in Professional Geology” was published in The Professional Geologist (Ja~ 1981). It is now mid-term for the projections made at that time, which were directed toward a prognosis of professional geology and geologists in the twenty-first century.

For the new members of our organization~ and perhaps for many of the older ones who did not see the article or don’t remember it, many of the items and activities mentioned then, are more obvious now. The events that have taken place thus far have been traumatic for many thousands of professional geologists. Others in our profession have not yet experienced the influence that these actions are having on our local, state and national economies, and seem oblivious to the changes that are materializing all around us which will directly affect their future during the next decade. Clearly, the nation has committed itself to what was described in the original prognosis as “federalism”, the first scenario. The authority of federal government agencies has continued to expand out of all proportion to the need. As a result, major employers of geologists in the extractive mineral and fuel industries have directed their operating objectives and budgets to other parts of the world. Smaller organizations have had to shift their business interests to include different types of services in order to survive. Many colleges and some universities have shut down or severely curtailed their Departments of Geology. State geological agencies in many cases have been reduced to merely service organizations for other state offices, and innumerable individuals and consulting groups have simply gone out of business. For the most part, those organizations and academic departments that have survived have done so, directly or indirectly, through grants and contracts from agencies of the federal government.

This is not the result of depressed market conditions, as many people would have you believe, as much as it is the effect of restrictive and onerous legislation that inhibits exploration and development and other geologically related activity throughout the nation. The bureaucrats and legislators involved are marching to a different drummer and the words “geology, geologists, exploration and mineral development” are not included in their lyrics.

More specific details regarding federal encroachment cited in the original prognosis are already evident and are expanding rapidly. It is quite probable that within the coming decade we will experience a time when certain segments of private enterprise will be deemed by bureaucrats to be incompetent and unreliable without federal guidance and oversight. Watch
and listen carefully during the next few years as Congress brings the 1872 Mining Law up again for Congressional review, and continues to sustain broad and more restrictive moratoriums on off-shore leasing and drill-hag for oil and gas. Check out some of the new state laws and referendums that will directly impact mineral industry operations state wide. Examine a few of the newer text books on Earth Science being used in our junior high schools and colleges today. Take note of the public media-hype that seldom even mentions geologists or the practical application of fundamental geological principles to interpretation of earth history, or exploration and development problems related to mineral resources.

I think now that this trend is irreversible in the United States. Geology and geologists have already lost too many battles. Some of us didn’t fight hard enough, some of us didn’t try. So, be prepared for the next ten years and listen for what many of our recent graduates of academic institutions and research oriented organizations have dubbed ‘The New Geology’. Find out what this means and then brace yourself for the answers.

Comments on Professionalism In the Academic World

Excerpts of a speech given By Dr. Lee C. Gerhard, CPG 3461, at the 1983 AIPG Annual Meeting at Jackson, Wyoming, and reproduced in November 1984 TPG. Dr. Gerhard is an educator and former Kansas State Geologist.

It is a great pleasure to be invited to address you this morning. When called about making a presentation to you, I was requested to speak about professionalism in the academic world. My title is not misleading, because students, their professors and their joint practice are inseparable and must be discussed together in the context of the modern world of collegiate and graduate education.

I must confess that I find the topic rather more complicated than I had first thought when I accepted Don Cardinal’s invitation. What could be simpler than to discuss “Ivory Tower” professional behavior and standards? I now realize that we must address issues of both education and social change. Our issues can be local, but many are national in scope and import. As I look about me, I can see that most of us have been out of formal schooling for more than a year or two.

In the time that I have I would like to accomplish four things. First, I would like to discuss with you what “professionalism” is in the academic world. Second, I would like to describe for you some of what the academic world looks like today, far different than that of our early training. Third, I must describe some of the problems that face our academicians today that are not of their own creation, including those imposed by an increasingly schooled, but uneducated, society. Finally, I would like to suggest to you some solutions to these problems that my academic colleagues might adopt and some which you, as individual professional geologists, as citizens, and as national leaders, can use as a basis for action. It is not my intent to make a political speech out of a serious topic, but some national concerns affect our professional world. I will regret any offense you may individually take to my remarks, but I will not regret taking this opportunity to state my position on these issues.

Academic Professionalism: Defined Characteristics

All geologic academicians, whatever level, are learning, if they indeed are professional geologists as well as being professional in education. Closed minds and dogmatism have no place in academic professionalism, although we all suffer the malady on occasion. Continued renewal of the learning process is part of the professional responsibility of the educator.

Paraphrased, to educate is to learn.

Absolute integrity of science and ethics is as crucial to the academician, student or professor, as learning itself. Without integrity of science, graduates will have little reference base upon which to model their professional standards. The ethical integrity of the faculty is the role model of the student. We do well to never forget that bond. Integrity includes the meeting of professional requirements as well, whether student coursework and field exercises or simply the proper facility preparation for classes. Integrity means proper regard and reference to the work of others. Professional geologists in the academic world have an obligation to teach and defend the standards of professional behavior. It is incumbent upon the academician to stand and be counted when these standards are challenged or denigrated; to defend highest quality and standards in education, research, and student guidance. Participation in professional society and community affairs is an integral part of professional behavior in the academic world. In this respect academicians have identical responsibilities with all geologists.

Our academic professional colleagues bear nearly all the responsibility for continued development of our science by study, interpretation, and publication of new scientific results and theories. Most of the new concepts and changes in major areas of geologic thought stream from the ivied halls of academia. Let us not forget in our discussions here that we are all indebted to academicians and great thinkers for the foundations of our geological businesses, whether mining, oil, or other areas of geology. Nowhere else in our field is there sufficient freedom of communication as well as the interplay of geological subfields that lead to new ideas and concepts. Major research labs do well, but few of them permit the communication of ideas to the outside world until the competitive advantage has been exercised. It is clearly incumbent upon our academic geologists to train our successors and to provide them with the new tools to complete the tasks we are unqualified to finish. Granting of academic tenure does not relieve the individual of the obligation to lead in the advancement of the science.

I would extend these concepts. Although our academic institutions are generally characterized as being quite liberal, as contrasted with the very conservative business establishment, faculties tend to be extremely conservative in their resistance to change, to new ideas, to flexibility of approach;
all of which are the hallmarks of the industrial approach to solution of geologic problems.

Perhaps liberal means popular conservatism, and conservativism means popular liberalism. Let me leave this topic by admonishing both myself and my colleagues with these words translated from Sophocles:

“I beg you, do not be unchangeable
Do not believe that you alone can be right,
The man who thinks that,
The man who maintains that only he has the power to reason correctly, the gift to speak, the soul...
A man like that, when you know him,
Turns out to be empty.”

**Today’s Academic World**

For the professional geologist, the academic world of yesterday was one in which the research and teaching went on in a leisurely manner and where a major publication was the result of years of study. Society national meetings were dominated by a few speakers with new and weighty topics. Students often had personal friends on the faculty, and some of those friendships have endured the ravages of several employment cycles. Technology was limited in the laboratory, and great emphasis was placed on performance in field courses. In fact, some geology majors studied geology as a “Gentleman’s Science,” pursuing only a degree and not a practice. That world ended with the beginnings of “Publish or Perish” and the last of the Korean War Veterans as students. What was “scholarly research” became “Federal support for higher education research subsidy.” Research was not the end; financial gain for the institution was. It still is, only now it is institutional survival that is a central question, rather than growth. We demand that our institutions and professional faculties give us a fair return on the public investment, yet the public investment is ever lower as a percentage of the total budgetary need. Research funds are near an all time low, legislative committees have less money to allocate because of both the state of the economy and bulging federal “entitlement” programs. Institutions wrestle with inadequate equipment, facility, and faculty. Faculty pay in our field today is relatively 50 percent lower than it was 20 years ago, compared to oil industry compensation. Accountability no longer means being accountable for quality and performance, it means “Let’s see how many students we can cram into a course to save faculty salaries, and how many fewer labs can we get away with”? These are not questions asked at the university administration level—these come from the high levels of state government. What was once a sacred cow is now the public whipping boy. Faculties face litigation over grades, lecture material, student discipline and many other real or imagined grievances. In many institutions faculty are rated not on the significant research and student success they attain, but on the number of students “processed” (as contrasted with “educated”) and the number of contact hours in the classroom, without regard to the output of instruction. Standardization, financial restraints, litigation, electronic information transfer techniques, and lack of dedication to basic communication all serve to constrain today’s education process and to frustrate the true professional geologist in the academic world.

**Some Underlying Problems**

Both philosophical and technical problems underlie today’s problems in education. National attention has been focused upon the deficiencies in primary and secondary education by both the present administration and those power-seekers who will campaign for the Presidency. The real problem is not teacher evaluation, it is a combination of permissiveness in the home, inadequate subject matter in teacher training, misplaced priorities in education and a single, unifying theme of social mediocrity that pervades our system.

Let me suggest some examples of the problems. Teachers of our children learn to teach from teachers who were taught by the same system, learning techniques and theories of teaching, but not, in many cases, strongly grounded in the subject matter taught—if only one knows how to teach, then the subject matter becomes immaterial. The result of that is inadequate education for our children at best. More realistically, our children have been used as white rats in non-licensed human experiments for at least thirty years. Education theory at one time virtually eliminated mathematics, writing and science rigor. Our children were test subjects without our sanction. Human experiments are tightly regulated and controlled under federal statutes, except for education. Another quick example: How about expenditures for athletic facilities when computers are unavailable to the students in the classroom?

The other aspect of society that I believe undermines present and probably future improvements in educational quality stems from a social pressure being exerted upon us to consciously strive to be average. I first encountered this in a church sermon in Midland, Texas. “Do not strive to do better or more than others. Strive not to excel.” How many more times I have heard this in federal and state legislation, in court rulings, in election rhetoric. Ladies and Gentlemen, striving for anything less than excellence is an intellectual crime. Place these ideas in the classroom and the results are grade inflation, cheapened degrees, and unchallenged, bored students. The present society stress on average and mediocre performance does not build national character nor moral fiber. It builds what we see as the decay of a “liberal” society. Mediocre expectations lead only to mediocre results.

**Some Solutions?**

After that digression into educational foundations, perhaps you can better appreciate the problems facing the geological professional in the academic world of universitites, who must try to bring young people back into the mainstream of competitive life. Many of our bright young people do not have the necessary skills to survive when they enter college. Many are poor readers, poor speakers, and write with elementary school sophistication. The professional geologist must be dedicated to education and science and have considerable patience. Here are some suggestions that are both old and new, but which can serve to distinguish truly professional geologic service from that of lesser stature.

1. The geological professional will bring the real world into the classroom. Despite other’s opinions to the contrary, I
strongly encourage use of real models and data in the classroom, including the financial, legal, and ethical problems of the geologic industries. We have a responsibility to the students to give them a fair appraisal of life after school. Our job includes insuring that they have the knowledge and tools to be effective for at least five years after they leave our care, and the foundations to learn additionally during those five years so that they remain competitive for the rest of their career. Some of my colleagues from other institutions protest that the job of the university is to educate, that they are not faculty members in a “Trade School,” and other such arguments. Nonsense. Our responsibility is education, but in the world today, the students have the right to expect training that will enable them to be competitive in the job market. The days of the “Gentlemen’s Degree” in geology are gone. We must face the world and our market if we are to do an effective job of education.

2. The geological professional is a professor. Professors must profess, not merely recite. Proper classroom preparation is not only a survey of the appropriate literature and text books which reflect what others have thought and interpreted, it must include what the faculty member believes, backed by the data and rationale that leads to these ideas. Be honest, my friends—if your idea is pure air, say so, but don’t either hide the concept nor pretend it is data-supported. Encourage discussion of your ideas as well as those of the literature—that is why you are there. Ph.D. degrees are not necessary to recite literature. Do not back away from scientific controversy, but plunge ahead with your students, helping them to become creative by exploring and critiquing ideas—including your own. Be prepared to have your balloons burst frequently—mine usually are.

3. Set professional standards of excellence for yourself and your students, including participation in public affairs as a scientist. As difficult as it is to be verbally critical of others’ work, it is necessary to be objective and demanding in appraising the performance of others and to expect them to be equally demanding of you. If you expect excellence, it is likely to occur. If you expect mediocrity, the best that you will receive is mediocrity. The challenge exists in all levels of work, including the challenge to graduate study and research. “We both know that you are intellectually capable of better than this!” is one approach. It is not necessary to be blunt, in fact, tact is a blessing as long as the message is clear. Led students into excellence rather than permit the system to reward mediocrity. We can all do this in our daily work and each of us can change society.

I also wish to recommend some changes in the system of education and professional activities to the academician. College professors are rarely truly accountable for their work. The only effective evaluations of professorial efforts are in the ultimate success of students, acceptance of published adjudicated research results, and effective consulting. Although consulting is commonly discouraged, or at least not encouraged by university administrations, it is a most effective and immediate evaluation of professional work. Clients either are satisfied or not; they are usually quick to make their opinions of the work known. Really poor work will result in professional society complaints and litigation. Consulting brings the real world into the classroom in a way that no other activity can. Certainly, having to explain to your students a scenario for a mining or energy plan based on your own real and successful experience can have a dramatic impact on the view the students toward their profession. I strongly recommend that consulting be given academic recognition at the same level as research. Much research now is only academically credited if it brings in funding to the institution, rather than for its quality and significance.

Finally, and perhaps least likely to be popular with my colleagues, I propose to eliminate academic tenure as we know it today. The only protection it now provides are for those who cannot speak without social invective and those who no longer produce professional academic work beyond the specified minimum trade union requirements. We don’t need those people in the professional practice of geology or in any other field. I firmly believe a system of overlapping contracts of gradually increasing length can be adapted from the business and sports world into the academic world. Certainly many football coaches operate in the academic world on this system now. Let’s encourage productivity of science and keep our educational program vigorous.

Concluding Statement

Educated and productive people infused with the spirit to succeed and excel are the strength of the free world. Professionalism in the academic world must produce these people, or we all ultimately will fail. All of us, in academia or business, share responsibility for excellence in our field. I appreciate the opportunity to express my views. Thank you for listening to my words; I hope you heard me. Good day.

Reflections on Professionalism in Geology

By Richard M. Foose, CPG 439
From July 1984 TPG

Ask an AIPG member what he/she thinks is the most important aspect of membership in the Society. Very likely it will have something to do with the recognition by peers and others in the geologic profession and with “professionalism.”

That would be my own response. I would like to think that all of our members have aspired to the achievement of professional accomplishment, that they have professional attitudes, and have conducted their business and their interpersonal associations with the highest possible professionalism.

What does that mean? Do all our members think of the same things when talking about being “professional”? About some things I think there would be nearly unanimous agreement. Most would certainly subscribe to the expectation of the qualities of honesty and integrity among our fellow members. Most, I believe, would subscribe to the expectation that every AIPG member has become master of extensive substantive knowledge about geology or one of the sub-disciplines in
the geological sciences and has also gained demonstrated experience in those fields.

But now I think that there might be widespread disagreement among my “professional” friends and peers—both members and non-members of AIPG—concerning the adequacy of an individual’s knowledge and/or experience. Certainly I have heard strongly held views expressed concerning the need for “proof,” for “examinations,” for “licensing,” for some stamp of conformity and acceptance that says it’s all right to call that person a “professional” but not another. Some of the arguments are persuasive; never more so than when the finger is properly pointed so as to expose a charlatan or an incompetent.

Indeed, I think it is possible and correct for AIPG or any other professional organization to establish truly minimal requirements regarding evidence of mastery of substantive knowledge in the geological sciences.

But the ice gets “thin” at this point. Who is going to say how many and what specific courses should be required in the academic background of a future professional? And who is able to evaluate the quality or the extent of the experience that the maturing young “professional” has enjoyed. Will it be an individual; will it be an AIPG committee; will it be Industry? Will it be Government?

Strong as our individual views might be, I think most would concede that there are no simple answers and that establishing conformable requirements might demand a level of wisdom not easily to be found within our society.

Although such a goal might not be achievable, I dare to suggest there are some things all of us can do to help improve the level of professionalism in AIPG. From a vantage point that has involved 45 years as a geologist in state and federal government, in industry as a consultant, and in academia, I have come to appreciate the remarkable diversity of academic and experiential backgrounds of my fellow geologists. I would not change that! And I shudder to think that some might try to make all others conform. Would they have us subscribe to the same level of mediocrity, protectionism, and “old-school-tie camaraderie” that has successfully been achieved by several well known professional associations in this country?

What can we do to improve our professionalism? We can keep the spirit of inquiry. We can insist that young geologists recognize that ours is a dynamic science within which it is possible to raise new and, as yet, unanswered questions. We can challenge our friends, our peers, and ourselves to always seek the best answer to problems and not to succumb either to the arrogance or the dullness of those who automatically have “the right answer” or “the only answer.” We can—and should—challenge Academia (where the embryonic professional is born), Industry, and Government all to examine their own practices and customs so as to insure that the attitudes and the practices of professionalism are rewarded and that those who have become “comfortable,” or “secure,” or who no longer are willing or able to phrase the fundamental questions are not rewarded. Within my own professional lifetime I have been privileged to observe, even to participate in, some exciting changes in the geological sciences. For example, there has been a vast improvement in the ability to quantify our observations of the earth and there have emerged highly useful concepts that serve to unify widely scattered data about the earth. These achievements have resulted from unusual acts of professionalism by those willing to ask tough questions and to seek hard-to-find answers. And all too often it required acts of courage to fly in the face of comfortable or “pat” answers that no longer were adequate.

Professionalism is an attitude; it is a frame of mind. Let us all encourage it wherever and whenever we can. And let us shun all attempts to confine or restrict it.

---

Congressional Testimony
National Policy for Ground-Water Protection


Mr. Chairman: - Thank you for the opportunity to present this statement in behalf of a national policy for ground-water protection.

My name is Allen F. Agnew, and I have three degrees in geology from Stanford University and the University of Illinois. I am a Registered Geologist in Oregon with Certification in Engineering Geology, a Certified Geologist in the State of Indiana, and possess national certification by the American Institute of Professional Geologists. I am a geological consultant and a part-time Professor of Geology at Oregon State University where I teach courses and supervise graduate-student research in Hydrogeology and Engineering Geology. My 42 years of professional experience, with Federal and State governments and with universities, has been spent mostly in the field of geology as applied to societal problems. Before coming to Oregon in December 1981, I spent eight years with the Congressional Research Service of the Library of Congress, where I was Senior Specialist in Environmental Policy and provided information to Congressional Committees and Members of Congress on mineral resources and ground-water resources. I am currently a member of the Ground Water Advisory Committee of the Oregon Department of Water Resources.

Water In General

The Earth is a water world. Water is one of the controlling influences on climate and weather, and it is also critical in the formation of soil. As water circulates from the ocean to the air, then to the land and back to the ocean, some of it passes through the ground along the way.

Water is usually abundant, and relatively inexpensive. However, even in those areas that have adequate amounts on an annual basis, its supply is inadequate at some times of the year. Thus in the normally wet western part of Oregon we faced many weeks of rainless days this past Summer and Fall - before the Winter storms set in with a vengeance.
By the same token, the eastern Oregon "desert," which usually receives only 10 inches of precipitation annually, has just experienced the wettest Summer underfoot in decades - because of runoff from the abnormally heavy snowfall and rainfall during the past two Winters.

We tend to take water for granted, Mr. Chairman, because it is not too expensive - except when we can't get any that is usable. So, we recognize our need for clean water for the various uses that we have developed over the years. As a result, we have passed laws and promulgated regulations that should permit us to have access to the quantity we need when we need it, and the quality of water that our uses call for.

Unfortunately, laws and regulations aren't enough. They must be set in an administrative framework that enables us to manage this vital resource properly. In the U.S.A., this means several levels of government. And, because water use affects other natural resources, its management is intimately tied to the land from which it is derived and to which it is returned.

A complicating factor, as you know, is that a large part of our fresh-water resource is invisible - the resource is buried in the ground. We have thus come to realize that the most valuable part of this water resource is hidden, and we see it only as it comes to the surface either through natural springs or seeps - or through wells that we have constructed to tap this underground wealth.

One of the most important aspects of our ground-water supply is that it contributes the baseflow to the streams and rivers - which enables them to flow long after the meltwaters and floodwaters have subsided.

So, in addition to having the legal and regulatory framework for us to administer this resource, we must understand the interactions of all parts of the water cycle. In this way we can manage our surface water and ground water on a coordinated manner. Such understanding comes not only from what we know already, but also from the additional information that we learn about the complex hydrologic systems underground through our ongoing research studies.

**Plea for a National Ground-Water Protection Policy**

Mr. Chairman, we need a water policy, and it must be a national one. A national water policy must not be solely a Federal one, for it depends upon State water policies also. But it cannot be merely a collection of State water policies, because water (both surface-and ground-water resources) is shared among two or more States - whether as river basins or underground.

The national water policy must consider not only quantity but, because water's quality is what makes it valuable, our national policy must provide for acceptable chemical and bacteriological levels so that water's many uses may be served. Our water is not used once and then returned to the atmosphere to continue its cycle; rather, it is used again and again and again.

We all live downstream, as you know. Therefore, we must ensure that after we use the water, we return it to the hydrologic cycle with such quality that it can be used by the next person or even re-used by ourselves. Understanding this concept requires not only comprehension, but making it happen requires commitment.

However, such commitment by the individual citizen - through his taxes and water-use fees, which are expressed by his votes - can be achieved only through education. The individual citizen/taxpayer/voter must understand the water resource, so he can make wise choices about how to protect his investment therein.

**E.P.A. as the Catalyst**

All of the foregoing comments cry out for a national policy to protect our Nation's water resources, both above and below ground. Several years ago, we saw an awakening to the magnitude of our water-pollution problem and the beginning of an attempt at the Federal level to grapple with solutions to this huge problem that is so vital to everyone.

The Proposed Ground Water Protection Strategy of the U. S. Environmental Protection Agency, published in November 1980, had been prepared by its Office of Water and Waste Management, with active participation by State and local government officials, business, environmental, academic, and public-interest groups. Following the public hearings a couple of months later, little more was heard of this effort.

On February 2, 1983, E.P.A.'s Office of Drinking Water released a draft Ground Water Policy, but the Cabinet Council was still considering it several months later, and E.P.A. said it would require additional work and revision before formal release.

E.P.A. Administrator William Ruckelshaus said in June that a task force was studying how to protect our Nation's ground water, and would report in the Fall. It appears that that deadline must be an elastic one, for I have not heard of the release of the Task Force Report.

As a hydrogeologist, I belong to several professional geological organizations whose committees have been preparing issue papers and submitting testimony to Congressional Committees and to State Legislative Committees for the past several years, on matters dealing with the Earth's resources. Such testimony before the Congress (especially as it relates to programs of the E.P.A.) has helped document, "again and again, our need for such a groundwater protection policy - particularly by the National Water Well Association, the Association of Engineering Geologists, and the American Institute of Professional Geologists.

To aid in this communication effort, I am pleased to attach to this statement a recently published educational document on Ground Water, prepared by an AIPG Task Force of which I was a member. We hope that this report, and similar ones which we have in preparation on hazardous wastes and on radioactive wastes, will help every citizen/taxpayer/voter to understand this valuable, hidden resource - and the great need for its protection.

**Specific Issues**

The protection of our ground-water resources should be one of our highest priority items. We need to prepare for the contamination that occurs daily, and to design ways to prevent or modify it so we can reclaim our misused ground water.
But an equally sincere effort must be made to rectify the
damage that we have done to our ground water in the past.
Unfortunately, some of this ground water is so contaminated
that we will have to leave it alone - it is either so difficult
technologically, or so impossible economically, that to apply
large investments of time and resources would be unwise.

Happily, some of this past contamination is manageable,
and we have the knowledge and money to deal with it. There
are many ways to contain and to rehabilitate ground water
that is contaminated, although they are not inexpensive. A
great deal of study must precede any decision as to which
method or combination of methods will work best at any spe-
cific site, to contain or to control the ground-water contamina-
tion.

Many specific issues could be addressed, but in this tes-
timony I wish to focus on only two of them: data require-
ments, and aquifer management.

Data Requirements: Hydrogeologists and ground-
water engineers must work with specific sites because of the
variability of geologic conditions from place to place.
Therefore, site-specific studies are called for, usually with the
collection of new data.

However, specific sites are set within a larger, regional
framework of geologic conditions, so a broader gathering of
data is valuable in establishing the larger system of which
the smaller one is a part. Thus we need the kinds of data that
have been gathered for many decades by Federal agencies
(such as the U. S. Geological Survey's Water Resources
Division) and by State agencies (such as the Oregon
Department of Water Resources).

Furthermore, the regulatory agencies (such as the U. S.
Environmental Protection Agency and the Oregon
Department of Environmental Quality) must exercise their
management functions over hundreds or even thousands of
specific sites - most of which have not been studied as inten-
vously as suggested above.

Therefore, we need not only to acquire new data, both
locally and regionally, but we must also be able to use the
massive amounts of such information that we already have in
agency files and data banks. What we need most of all is
ready access to these mountains of information, in a usable
time frame. The quality of the data must be included, because
poor data are worse than none at all. And, the system (or sys-
tems) must be compatible and easily used.

Most data banks were begun decades ago, with the data
entered and processed by hand methods. The explosion of bits
of information now flowing from automatic monitoring and
recording equipment has for the past decade required com-
puter entry/storage/retrieval systems. Designing the system,
entering the data in the bank, and providing for the retrieval
of huge masses of information has presented many kinds of
challenges to data-processing people.

We need to assure continued investment in these valu-
able data-gathering and processing activities, at both Federal
and State levels. The alternative is unthinkable - assuming
(incorrectly) that we have adequate information to make the
required decisions regarding ground-water pollution and con-
tamination will surely reduce our effectiveness to little more
than arm-waving. Such subjective basis for decision making
may be soul-satisfying, but it is hardly adequate for solving
the problem.

Aquifer Management: Recognition that our surface-
water and ground-water resources are part of one system is a
first step. Unfortunately, when we developed our water law in
the U.S.A. more than a century ago, we did not understand
this integration of the water resource - so our laws considered
surface water and ground water as separate systems.

And, water-management institutions that were devised to
administer the laws and promulgate the regulations like-
wise considered surface water and ground water as separate
packages. Now, we know better, and in recent years several
States have attempted to patch together their water agencies
so as to better manage this integrated resource.

Several examples of such co-operative management are
well known - ground-water storage of surface waters for later
use has been practiced successfully in Orange County,
California for many years, in Peoria, Illinois, and on Long
Island, New York. In other areas (such as Kansas and other
Mid-Continent States) ground-water management districts
have been formed so as to "pool" this resource and enable it to
be shared by those who need (and have the legal right) to use
it.

Such management of aquifers (the underground rock and
sediment that contain and transmit water) presents a chal-
lenge in many areas of the U.S.A., however, because our water
laws and water-management institutions are not well suited
for the task.

Both of these issues need to be addressed on a national
basis - to set the framework for Statewide consideration. Both
are essential elements of a national ground-water policy.

Summary

The need for a national ground-water protection policy is
obvious. Beginnings have been made toward defining the ele-
ments of such a policy. However, follow-through has been lack-
ing in the past.

A national ground-water protection policy must provide:
a more thorough understanding of the hydrologic (plumbing)
system, which can only come about through new research
knowledge and reconsideration of past research contribu-
tions;
an awareness of the legal and institutional requirements, if
we are to do a better job of managing this resource; and
a better comprehension, by every citizen, of this resource that is
so vital - its occurrence, its competing and conflicting uses,
and the legal and institutional framework by which it is
made available.

To achieve a national ground-water protection policy will
be no small task. After the formulation of such a policy, it will
demand the dedicated efforts of all actors on the stage - govern-
ment, users, (especially polluters), and educators. But most of
all, it will require the continued commitment and support of
the voting public.

Thank you, Mr. Chairman, for the opportunity to present
this statement. If there is any way in which I can help in our
search for a national ground-water protection policy, I shall be glad to assist in this urgent endeavor.

---

**Congressional Testimony**

**National Mineral and Materials Policy**

By Ernest K. Lehmann, CPGS 583 on June 26, 1984, before the House Subcommittee on Mining, Washington, DC.

The American Institute of Professional Geologists (AIPG) is honored to be able to present the following comments and suggestions with respect to the proposed National Miners and Materials Policy Act of 1983 (H.R. 3717) introduced by Representative Marriott. Since the Institute represents a broad spectrum of professional geologists, it is uniquely qualified to speak to some of the issues addressed by this important legislation.

The Institute is an organization of over 4500 professional earth scientists from all parts of the U.S. Members of AIPG are engaged in metallic, industrial, geothermal resources, the coal industry, ground-water resources, and engineering geology. The members of AIPG come from industry, federal, state and local government, colleges, universities, and research institutions. The Institute deals with the professional concerns of geologists, and as part of these concerns it addresses matters of public policy.

The Institute supports the thrust of Representative Marriott’s bill. We believe that the measures proposed will provide a useful focus for implementation of a more cohesive U.S. minerals policy.

In commenting on H.R. 3717, we would particularly like to focus on TITLE I - FINDINGS AND PURPOSES and TITLE III - MINERAL AND MATERIAL AVAILABILITY. We feel that these are the areas of our membership's competence and our organization's main concern.

After commenting specifically on these two Titles, we would like to offer the rationale for our comments.

REGARDING TITLE I. FINDINGS AND PURPOSES:

The Institute specifically supports:

The continuity of a strong healthy domestic industrial base, specifically a fuel and non-fuel minerals industry, is essential to national economic prosperity and critical to the national security.

The United States currently lacks the known reserves from which to produce certain strategic and critical minerals that are essential to that economic prosperity and to the national security.

The identification of potential recoverable deposits of all minerals, including strategic and critical minerals, is dependent on the continuing advancement of the geological sciences and on the advancement of exploration techniques.

Government, as it relates to minerals, is most effective and serves the nation best in the area of basic geologic and exploration research and in geologic and geophysical regional mapping and reconnaissance, whereas the private sector is best suited to do the work required for the discovery and detailed exploration and development of mineral deposits.

The private sector is effectively prohibited or discouraged from mineral exploration and development by de facto and de jure withdrawals from mineral entry of about 40 percent of the nation’s on-shore federal public domain; withdrawn lands include many acres of considerable prospective mineral wealth.

Therefore, we generally support the purposes of the act, especially insofar as they encourage exploration and development of domestic mineral resources and promote increased knowledge of the nation's mineral potential, and promote research on exploration methods and extraction and recovery technology

REGARDING TITLE III - MINERAL AND MATERIAL AVAILABILITY:

The Institute specifically supports:

Section 301(b) in that it confirms, continues, and strengthens the traditional role of the U.S. Geological Survey in assessing the geology and mineral resources of the nation and especially of the federal lands and, with the U.S. Bureau Mines, in fostering research on exploration theory and methodology.

Sections 301(c), (d), and (e) in that they focus the attention of the Department of the Interior on those minerals that are critical to the national defense and to the national prosperity, and in that they direct the Secretary to focus on those lands from which private enterprise has been effectively excluded.

Section 302 in that it reinforces the traditional mission of the U.S. Bureau of Mines in its research and data collection roles.

**Background and Rationale**

As background and rationale for our support of this legislation, we offer a summary of observations on the inter-relationship of strategic and critical minerals with the evolution of exploration technology and the problems related to mineral exploration and development on the federal lands.

1. **The Critical Nature of Mineral Supply.**

Minerals provide the building blocks of all modern society, whether industrial or post-industrial, and the importance of the non-fuel minerals has been well documented. Each American uses over 18,000 pounds—9 tons—of non-fuel minerals each year.

In 1983, these basic raw materials had a mine-mouth value of $21 billion dollars which, when added to $4 billion of recycled materials, $4 billion of imports, and $215 billion of value added by processing and importing processed materials, produced a value of $244 billion worth of materials of mineral origin, about five percent of the U.S. Gross National Product. The importance of the $21 billion primary extractive minerals industry, though small in size (0.7 percent of GNP), must be judged in this larger context of added value. These materials, along with agricultural products and energy, supply the basic framework of our society.
APPENDIX 9—SELECTED SPEECHES AND PAPERS BY CPGs

Lehmann

The availability of mineral supply is thus critical to the national prosperity in time of peace and, because of its essential nature, to the national security in times of both peace and war.

2. Dependence on Imports.

Though the United States is splendidly endowed with a variety of mineral deposits, it is nevertheless heavily dependent on foreign imports for a large number of highly critical minerals. We believe the chief reasons for dependence on foreign imports to be economic, institutional, and policy-related factors, all of almost equal importance.

Moreover, public policy over much of the last thirty years has acted as a disincentive to mineral exploration and development. Such policy disincentives have included increasing withdrawals of public lands from mineral entry, and complex, lengthy, and costly environmental regulations and procedures.

Many of the most critical minerals, for example, tungsten, tin, cobalt, chrome, etc., occur as relatively small deposits requiring extraction by labor-intensive methods; this circumstance favors those deposits which are located in countries with a low-cost labor supply and little environmental or social regulation or protection. Further, the proliferation of state-owned mining enterprises and the policies of international financial institutions result in the production of many minerals and metals that are, for political and economic reasons internal to the producing countries, subsidized, driving down world prices and making potential U.S. production uneconomic.

Truly geologic factors are less vital. We have not as yet discovered within the United States economic deposits that could supply a significant portion of the nation's needs for nickel, cobalt, chromium, tin, diamonds, and many other materials. More will be said on this below.

3. The Strategic Nature of Minerals.

Many mineral materials are vital to the national defense and insofar as the U.S. supply of these commodities is subject to interruption by competition in the world market, by political developments in the supplying countries, or by direct armed intervention, these critical materials become strategic. For example, cobalt is a vital component of the superalloys necessary to build jet engines. Chromium is an alloying agent for corrosion-resistant steels, without which large segments of American industry would have serious production problems. Bauxite is the essential raw material for the production of aluminum. Each of these commodities is produced chiefly in areas of potential political unrest, is subject to extreme international competition; and must be transported across sea lanes subject to hostile intervention.

4. Reducing the Reliance on Imports.

No discussion of strategic and critical materials is complete without some discussion of the stockpile. There is no doubt that, for the short term, an adequate national stockpile, managed so that neither quality nor quantity of the material stocks becomes outdated, is the most rational and probably lowest-cost solution for responding to short-term crisis. It does not, however, follow that the stockpile is the best long-term solution to import dependence.

A viable active private-sector-minerals industry, constantly adapting the quality and quantity of its product to the marketplace, constitutes a living, self-managing stockpile. It also obviates the temptation to use the stockpile for short-term political considerations as opposed to national defense needs.

However, any effort to increase domestic production must recognize certain inherent characteristics of mineral resources and supply.

In part, the United States's dependence on foreign imports is due to the fact that, no matter how richly endowed geologically, the nation lacks the geologic environments within which conventional sources of certain strategic and critical minerals and metals are known to occur. In part we lack deposits because we have examined only a very thin and superficial slice of the earth's crust, and our search has been inhibited by a barren blanket of geologically younger materials and by the oceans. Thus it follows that if through inventive and creative research we can identify geologic environments which may be host to "unconventional" deposits of critical materials, if we can improve our methods of search to allow us to look deeper and to more readily penetrate the obscuring blanket, if we can improve our ability to process currently uneconomic or low-grade materials, if we can cut costs of mining and producing, if we can produce in a manner both economically and environmentally acceptable, then we may be able to increase our domestic mineral resource base and reduce our import dependence.

The single most important factor in exploration leading to the discovery of new sources of supply, either conventional or unconventional, is access to land on which to explore. The federal government owns one third of the nation's land; the states own additional large areas. Clearly, policies that restrict access to these large tracts reduce the chances of discovering new supplies. H.R. 3717 begins to address this need in that it provides for a method of limited exploration of the 40 percent of federal lands that have been withdrawn.

H.R. 3717 also addresses the reality of mineral exploration, and thereby may help to reduce import dependence, by recognizing that geology is an evolving science, that new theories and concepts as well as new exploration tools allow the profession to look again at areas already explored and make significant new discoveries. That this can be done if the theory, the financial means, and the land are available can be readily demonstrated. To name just a few examples:

New geologic concepts led to the discovery of the New Lead Belt in Missouri in the mid-1950s and ended the U.S.'s 50 percent dependence on lead imports by the late 1960s.

Geologic concepts and diligent exploration led to the discovery in 1967 of significant and probably economic deposits of platinum-group metals in the Stillwater Complex in Montana. This discovery is expected to reduce by six percent to 10 percent the almost total U.S. dependence on imports for these critical metals.

Improved exploration methodology and changing geologic concepts have lead to the discovery of one major and several smaller copper-zinc deposits in Wisconsin that could, if these deposits are developed and smelting capacity increased, substantially reduce U.S. dependence on imported zinc metal supplies.
Changing concepts and technology have led to recent interest on the part of industry in the possibility of domestic diamond production. No commercial deposits have yet been found, but hitherto unexplored areas are being searched.

The original wilderness legislation failed to recognize the reality of evolving geologic concepts. It provided for an assessment of wilderness areas in only a cursory manner and placed a finite time on private exploration in wilderness set-asides. Since geology is not static but evolving, some mechanism for re-evaluation of these areas seems wise public policy. H.R. 3717 addresses this problem.

Even though we believe the American mineral industry to be the best “stockpile” from which to draw supplies in a national emergency, any plan to utilize inactive or undiscovered resources must recognize the long time frame that is required to go from the inception of exploration, to discovery, to development, and finally to production. Each step is measured in years. Hence, there is a need to foster continuing exploration efforts and development and production from discovered resources. Laws which appear to provide for initiation of exploration or development at the time of initiation of a natural emergency are unrealistic. The search for mineral deposits must be an ongoing process.

Lastly, H.R. 3717 tries to address the reality that mineral exploration involves very limited and, if properly done, temporary disturbance of the environment. By the nature of exploration work, a large number of targets must be examined, but very few will be discoveries of any economic consequence. Since exploration can be done in an environmentally acceptable manner, a relatively open policy of exploration should be favored so that many targets can be tested to discover the few economic ones. Since mineral deposits are where they are and must be extracted where found, we favor H.R. 3717 in that it fosters research on environmentally acceptable development and extraction methods. Such research would be an important aid to the domestic minerals industry and would materially assist in protecting our environment.

The AIPG has been structured to unify the certification of all geologists and to speak for all geologists in professional affairs. But with approximately seven percent of all geologists and less than five percent of petroleum geologists as members are we able to do that which we have been structured to do? How far have we come in meeting the goals set forth by the founding fathers of our institute?

In considering these facts your executive board was brought back to the question of professionalism, professional practice, professional conduct, and our perceptions of what it means to be a professional. This retrospection led to some strong points made by Ben Parker in his presidential address to the National AAPG meeting in 1961 (see herein). As a first step in trying to strengthen our section, the Board felt it would be appropriate to provide an insight as to one of our founder’s perception of professionalism among technical people; hence, the main body of this editorial.

You are urged to read this message since it is just as valid today as when the address was delivered 25 years ago. We will all see in reading this address that professionalism is not, or at least should not be, a passive quality. As we reflect on Parker’s words, it will be apparent that membership alone in AIPG does not in a single stroke make one a professional. Professional practice is an on-going, active undertaking; it requires a sense of giving as well as receiving. It also requires a specific education, but attaining one or more degrees does not bestow professionalism; rather, these attainments are only one step in becoming a professional.

Today the constitution of the AIPG states such purposes as:

1. Strengthen the profession of geology;
2. Establish and evaluate professional qualifications;
3. Establish ethical standards to protect the public and geological sciences from nonprofessional practices;
4. Evaluate continuously the ethical conduct of geological scientists;
5. Monitor and influence governmental activity and public opinion in matters relating to geology.

The Executive Committee at the Colorado Section through a recent poll of members found that the most common reason for joining the AIPG was certification. Prominent leaders of our profession have spoken to this issue in the past:

Wallace Pratt, 1966: “If we geologists do not ourselves establish and put into effect standards of professional adequacy, government will set up its own standards.”

Martin Van Couvering, Pres. AIPG, 1965: “In areas where registration is not imminent, AIPG hopes to make its certification so effective that legislation will be unnecessary.”

Sherm Wengard, Pres. AAPG, 1971: “We should work toward a single professional-affairs society dedicated to professional enlightenment of all earth scientists; hence, the main body of this editorial.

James E. Wilson, Pres. AAPG, 1972: “... there is a growing pressure state-to-state to register, license, certify or in some fashion assure the public of a ‘truth in practice’.

Why AIPG?

By Bob Sprinkel, CPG 2602

In the February 1987 monthly meeting of our section a number of shortcomings of AIPG were expressed. The emphasis appeared to be more on our weaknesses than on our strengths. If we subscribe to the axiom of “no pain, no gain,” then that meeting attained a certain measure of success. However, the problems discussed found no ready solutions at the meeting. Since the theme of the meeting had ostensibly centered on membership in AIPG “why join it—why stay in it?”—the section’s Executive Board spent the better part of its March meeting discussing the impact and apparent meaning of the statements made at the February section meeting.
or not, that is the trend in governmental thinking and public expectancy... I have a deep and growing conviction that . . . (b) a 'federation of professionalism' for earth scientists is most desirable to the point of becoming imperative.

Often our members ask the question: “What does the AIPG do for me?” In a scientific organization such as the AAPG with goals to develop, gather and disseminate technical knowledge, the benefits are tangible. The benefits from a professional institute are less so. Succinctly put, a professional organization offers the opportunity for the individual geologists to advance his profession and enhance his professional stature.

To paraphrase a famous statement: “Ask not what my profession can do for me but rather what can I do for my profession.” Indeed, what have we done and what are we doing to advance our profession?

Survey of Participation of Members

A phone survey of members of AIPG was recently conducted by Larry Cerrillo. The purpose was to obtain information that might help our section better provide for the needs of existing members and provide guidelines for encouraging new members. The following four questions were asked:

1. How many meetings per year do you attend?
2. What would cause you to attend more meetings?
3. What was the main reason you joined AIPG?
4. Do you feel the Colorado Section is satisfying that reason?

The answers to these questions were as follows:

1. Ten percent attended eight or more. Ten percent attended three or four.
2. The section needs to provide meetings at more convenient locations, meetings at other than lunch time, programs of general or universal interest, and program notices more in advance.
3. One hundred percent in one fashion or another stated they joined for certification as a professional.
4. Yes—but! The buts were generally constructive comments that included the following:
   We need informal functions to improve familiarity.
   We need more workshops and educational programs.
   We need informal functions to improve familiarity.

Attendance at the monthly meetings does not, in itself, a professional make; however, it does help to strengthen the role of AIPG. Input from the members is the only way an organization can exist and function for the purpose intended. If people join for certification as a professional, then the organization can exist and function for the purpose intended.

Like many other members, I joined AIPG primarily for certification. At the time, the state legislature was discussing the possibility of registration, and if possible I wanted to be “grandfathered” because I hoped to eventually go into consulting, where the certification would be very valuable. I did not know I would be involuntarily going into consulting during one of the worst times geologists have ever known.

Since being terminated by the Colorado Geological Survey a year ago, I have done many different jobs, including a little consulting, leading tours, conducting museum workshops, writing, and a lot of teaching in the Jefferson County secondary schools. Those were and are the paying positions. I have been doing a lot of other work that paid nothing, but was also rewarding. Unfortunately, the overall pay has been insufficient to maintain our previous lifestyle, and certain curtailments have been necessary. I'm sure many of you are in or have been in similar positions and can understand. Hence, my decision to let my professional society memberships drop, at least temporarily. To retain my AIPG membership meant paying those dues plus my AGI qualifying society dues. That is a hefty chunk of an already burdened budget when those payments are not necessary for the current work I am doing. So why do I say I am still a member? In preparation for this talk I got to thinking of the benefits I personally have derived from my membership and decided those benefits were of enough value to me to scrimp in a few more places and get my membership dues paid. Among other things, I would have had to get my business cards reprinted, without the AIPG logo and my certification number, and that would have been a bother.

After certification and the receipt of the national and local newsletter, probably the most important benefit to me is the contact I have with other professionals in multiple fields. The diversity of contact provides me with a sense of perspective for the field of geology that I would not have otherwise, because like most professionals I tend to deal primarily with people in my own specialty or subdiscipline. I enjoy the luncheon meetings and other gatherings, but of course I could get that contact from numerous other organizations.

I like feeling that maybe we can make a difference politically and professionally, at least in a small way. An article in Thursday’s (February 12, 1987) Rocky Mountain News stated that the “Interior secretary predicts [a] gas crunch.” Don Hodel said he was deeply concerned about the situation with the domestic oil and gas industry, and our country’s dependence on foreign imports. Since he was the keynote speaker at AIPG’s national conference in September here at Keystone and that was the issue addressed, I would like to think we had at least some impact on his perception of the problem. Is that a tangible or intangible benefit? I suppose it makes some difference as to what results stem from his concern and the concern of other people in similar positions. We as an organization have the collective knowledge and the legal position to be able to educate these key leaders, and we have a responsibility to do so. That was one of the major goals of the AIPG in its initial organization. I hope we have not lost sight
of that goal. I believe we are still making strides toward it, and I want to be a part of that.

Why don't more geologists, particularly those in government and academia, choose to join? For many it is the high cost of the dues, with little they can actually hold in their hands in return. When I asked my husband about it, he cited those two reasons, plus another one from his office at the USGS. Many of his co-workers don't know what AIPG does or what benefits it has for them. I would say that if that is the case, we haven't done a good job of educating our potential members. Most of the USGS people he and I have both talked to had no idea that their boss, Don Hodel, would be the speaker at our national meeting. For that matter, most of them didn't know there was a national meeting locally. Maybe they can't read, maybe they didn’t do a good job of advertising. Whatever the problem was, it is one we can remedy by educating them about the benefits of AIPG for such people.

Regrettably, one of the last reasons I can offer for why some geologists don’t join, should not even be an issue. Geologists of my acquaintance have expressed disgust over the behavior of certain prominent members of our organization, an organization that says it prides itself on the ethics and integrity of its members. In some of those cases I feel this may be a valid criticism. Those geologists are or have been employed by some of our high-placed members and are seeing the behavior they are, simply because of that relationship. For those geologists, bringing up the kind of criticism or charges necessary for reprimanding our prominent members would cost the employed geologists their jobs. Does this mean we are doing a good job of self-policing? I don’t know, but I think it is one issue that deserves to be addressed. We are not getting some of the members that we should because they are seeing being set for them by our membership is not always the example we should be setting.

Overall, I think those problems are minor ones, and solvable. I am proud to be a member of AIPG, and I hope that the relationship is a long and productive one.”

John Donnell, consultant and formerly with the U.S. Geological Survey, addressing why government geologists should join AIPG.

“Under the heading Representative in the AIPG Membership Directory, it states, ‘Geology is both a science and profession. In our scientific life we are primarily concerned with internal communications and the dissemination of knowledge within the geologic community. This is very appropriate since in taking the title geologist we identify ourselves as scientists first and foremost.’ This statement accurately represents the views of the typical geologist in the USGS. He is concerned basically about conducting research on his assigned project and making the results of his research available to the public in general, and to the geologic community in particular, through a government publication or some other scientific journal.

Another statement under the heading Representation is, ‘On the other hand the world in which we practice is one of budgets, laws, politics, and competition.’ All of us are affected by these business aspects of geology. Very few geoscientists in the USGS perceive that this statement pertains to them. Each Survey scientist operates within a budget allocated by the U.S. Bureau of the Budget and passed by Congress, a budget not directly determined by what contribution the project makes toward return on original investment. Politics and competition only indirectly affect the Survey geologist.

It is evident from available statistics that geoscientists in the USGS see no compelling need to apply for membership in the AIPG. A total of 76 geoscientists from the USGS in the Denver area are members of the RMAG, and of this group 45 are also members of the AAPG. In contrast, only four people from the Denver Sector of the Survey are members of AIPG. Neither the director of the USGS nor the chief geologist of the Geologic Division is among the nationwide group of 56 Survey employees who are members of the AIPG.

There are at least three very logical reasons why USGS scientists should apply for membership in the AIPG:

1. **The membership of the AIPG, in contrast to that in other geological societies, consists in large part of independents and consultants in the field of economic geology.** A membership in the AIPG would enable the commodity geologist employed by the USGS, who delineates areas prospectively valuable for oil and gas and mineral deposits and estimates resources for the commodities in these areas, to gain the additional perspective of the geoscientist who evaluates the resources from the view point of extracting the commodity at a profit.

2. **AIPG is the geological organization that lobbies for the profession as a whole.** Benefits derived by the entire profession through these efforts will also accrue to the geologist in the USGS.

3. **Unfortunately, our society is becoming increasingly litigious.** Geologists in federal and state agencies as well as those in the private sector are frequently being called upon to testify as expert witnesses in trials involving geology. In the eyes of the public in general and the legal profession in particular, greater credibility is attached to the testimony of a witness who is licensed or certified in his field of expertise than to the testimony of one who is not. Membership in the AIPG will provide the certification that may be extremely helpful in the future to the geologists in federal and state agencies.”

Laura Wray, a geologist for AMOCO, was not yet a member of AIPG and she was asked why she decided to apply for membership. Her remarks came to the newsletter in the form of an outline, which is reproduced here.

**Professional Diversity**

AIPG offers that while maintaining a focus among the related sciences.

*Is an attractive drawing card that could perhaps be enhanced.*

My limited but somewhat diverse background indicates my interest in geologic diversity.

Academic diversity in college and grad school evident.

Work with the USGS involved contact with geologists who had diverse backgrounds.
Taught geology at an outdoor educational institution—helped design outdoor geology courses that were integrated with botany, geomorphology, wildlife management and outdoor sports such as rock climbing, spelunking, canoeing and backpacking.

Such an integrated approach is very successful for outdoor education so why not for AIPG?

At AMOCO, I collaborate with reservoir engineers, geophysicists, landmen, attorneys and field personnel.

**Topics relating to professional diversity that might be appealing**

Joint presentations by two or more specialists who would combine their research to present a broader perspective, i.e. Analysis of a gas field infill drilling program from the standpoint of engineering, geology, legal aspects, surface problems, ecology, economics, etc.

Geological, engineering, ecological and logistical concerns involved with mining operation—how are they related and in what manner do they pose serious conflicts? How are those conflicts resolved? Are there mutually agreeable solutions?

**Panel Discussions**

Environmental impact concerns of a particular study—how are problems assessed and what solutions can be offered that are mutually agreeable to everyone?

Ethical discussions—what are the diverse interests that need to be addressed and how can the proper solutions be reached? Possible subjects might include the dilemmas that arise between ecological and developmental objectives. Specifically, what are the various concerns that arise when proposing the tunnel from Empire to Winter Park?

**Educational programs could incorporate professional diversity**

Interdisciplinary field trips (geology and botany, geology and engineering, minerals and petroleum geology, etc.)

Interdisciplinary courses designed to cover several inter-related topics.

AIPG sponsorship of cross-disciplinary training.

**Ron W. Pritchett**, CPGS 7063, contributed the following guest editorial after the meeting, incorporating some of the more pertinent discussions following the panel talks, plus his own observations and commentary.

“After thinking about the comments of other members, here are some thoughts of mine:

1. The National Office must be responsive to members;
2. AIPG must be visible to the public;
3. AIPG must advertise;
4. AIPG conduct is best understood by example.

Points two and three: The National Office is the center for general public relations and guidelines for local relations. As Graham Curtis noted, AIPG should lend its name and motto in support of educational broadcasting programs and publications. AIPG must advertise with press releases, endorsements, lobbying in government, and statements of purpose in national publications. I'd like to see a public service announcement in the *Wall Street Journal*. For examples of style, note the ads published by the American Gas Association. AIPG does not preserve its credibility by talk. Misconceptions flourish unless AIPG distributes information to the public.

Point 4: There are no professionals—there are only people who adopt professional attitudes. Civilization is defined by the considerate acts of people. By identifying professional concepts, I believe we recognize those patterns of behavior which define civilization. The task is complex, and it is refreshing to list a few essential examples of professional behavior, for use in explanation to the public and to potential members of what to expect from an AIPG member. As John loey said, the granting of a degree doesn't produce a “professional.”

The tests of practical experience are necessary for the AIPG mantle. Here are some examples of what an AIPG member should do in daily trials:

- maintain high competence independent of payment;
- advertise in a responsible way, by example where possible;
- encourage the competition;
- check work so it is guaranteed;
- report instantly when errors are found;
- work objectively when surrounded by panic;
- be aware of conflicts of interest, and make conflicts known to employers;
- have the courage to object to the words and deeds of employers. All AIPG members face, on occasion, the difficult choice of making the boss mad or shutting up. As we get older, we tend more toward silence (usually for good reason) when the one who pays the bills makes decisions. But there are times when the situation is wasteful, dangerous, ill-advised, unethical, illegal, or all of the above. In such cases, the participants abandon civilization, unless someone speaks up and places professionalism above self-security;
- dismiss cynical attitudes. Professional conduct is search for the positive. An AIPG member is the source of optimism and creativity, especially in difficult times;
- protect the employer's interests, however small, and pass on opportunity, however great, as if the employer is innocent; do not gather information for the destruction of another's interest or be a party of such activity. Planning for tough negotiation is one thing—getting information for sabotage is different. Attorneys and ruthless (or desperate) bosses have made adversarial work so common that honest behavior is generally viewed as stupid and naive. AIPG members actively resist treachery and its processes. Sometimes this requires enough courage to object to the law.

So we risk going broke, being fired, and being in contempt of court to call ourselves members of AIPG. Being an AIPG member demands a fee which is a statement in itself of the extra discipline and consideration given to employers. The consideration goes beyond the technical and clerical roles of scientists. Some employers don't want professional attitudes. Some don't know what they are. Some employers expect AIPG members to be clerks and technicians only, as if the AIPG package can be bought. Using again the test of civilization, it seems clear that clever, mercenary behavior is not professional behavior.
More than a few companies and organizations would not meet the standards for individual AIPG membership. Certainly the public image of ethics in companies has not been helped in view of media coverage of the recent activities of Texaco, Mesa Petroleum, Petro-Lewis, Martin Marietta, NASA, and certain investment banks and brokerage houses. Such activities might serve as topics for serious and lively debate.

AIPG is not so much an elite club as it is a group of people who bring reason to business, as defined by the dispassionate lessons of history. Does this mean that AIPG members should resign from suspect organizations? On the contrary, AIPG members should be inside of troubled organizations.

Discussions on these topics are welcome. One of the saddest changes for me to witness in the last few years has been the abandonment of AIPG concepts as times got tough. If we're so smart, maybe we can produce some answers for the hard times.”

Furnished by the Colorado Section and published in the August 1987 TPG

The 21st Century: An Introspection
A Report of the July 1987 Penrose Conference Held at Steamboat Springs, Colorado
By Heidi A. Horten*

(From GSA News and Information, v. 10, n. 5. According to Michael Wahl, CPG 1189, Executive Director of GSA, this is the first report ever published on results of a Penrose Conference. The conveners of the conference are AIPG members. Their names appear at the end of the report. We thank GSA for permission to print this.)

“As we share viewpoints this week about the next century and the role of our profession in the service of mankind, let it be perfectly clear from the outset that the changes we are most likely to face are those that we identify as needed within our own profession. Only if we are able to succeed in this task, can we hope to play an influential role in policy change in other areas be they social, political, or environmental.” Paul L Hilpman, July 1987.

The conference, “Geological Decisions for the 21st Century,” held in July 1987 at Steamboat Springs, Colorado, was intended as both an overview of current and projected geologic issues confronting the geoscience community and a probing of the question of how geoscientists can be more effective in dealing with the political decision-making process. That initial intent was loaded, and the outcome of the conference was far more dramatic than the conveners or participants anticipated.

To appreciate why this conference evolved beyond its intent, the intermixture of the participants needs to be understood. The most influential factors in this conference were the variety of geoscience backgrounds and the involvement of its participants. The 73 conferees from across the United States and Canada represented the following areas:

- Academic - 17 people (23%)
- Industry - 19 people (26%)
- Federal Government - 24 people (33%)
- State Government - 11 people (15%)
- Other - two people (3%)

They included a geologic hazards expert; a political scientist/resource economist; hydrogeologists; petroleum and mining geologists; an ethics specialist; a city water-quality advisor; specialists in high-level radioactive-waste disposal; geologists who have had federal government appointments in Washington, D.C.; university professors; current and former state geologists; a vice president of an electrical utility firm; current, former, and appointed Congressional Fellows; and graduate students. This diversity of participants, together with the controversial Penrose topic, allowed for an auspicious exchange of ideas.

When these individuals convened, they addressed the question of what geoscientists must do (and how) to make appropriate contributions to society in the 21st century. The conveners had identified issues of concern in the conference agenda:

- selection and monitoring of sites for high-level radioactive waste storage and disposal;
- hazardous-waste and toxic-waste management;
- offshore petroleum and mineral leasing for exploration and development;
- onshore petroleum and mineral exploration and development on restricted areas of public lands;
- hydrogeologic aspects of water-quality and water-supply management;
- interbasin/interstate water transfers;
- liability for catastrophic events in areas of mapped geologic hazards; and
- geotechnical aspects of increased development in currently underdeveloped environments.

The conference participants broadened that discussion of issues to include:

- improvement of geoscience education (precollege through postgraduate and the lay public);
- development of interrelational skills (compromise, sharing of credit, respect);
- university/government-agency/industry collaboration;
- interdisciplinary collaboration;
- development of a professional identity; (Emphasis by AIPG Editor)
- emphasis on the establishment of ethical standards; and
- development of professional quality assurance/quality control.

Several points evolved as major topics, but the overriding issue of political realities sparked the initial discussions.

Political Realities

To be effective in resolving geologic issues, geoscientists must participate in the political arena. But, as various participants indicated, most geoscientists do not know how to be politically effective, and too often their input on geologic issues before local, state, and federal governments is weak or nonexistent. (For example, currently, 40 Congressional com-
mittees are dealing with U.S. ground-water issues, but there are no geologists in Congress and just a handful of advisors.) Geologic decisions will continue to be made in the political arena, whether or not geologists are willing to participate. Geologists cannot afford to be naïve about the political process. Technical decisions almost always take a back seat to political realities.

Moreover, some legislators take on a new issue only if it promises personal high visibility. In order to significantly affect an individual legislator’s position over time, geoscientists must get involved with candidates before and during the election process. Then the candidate values the support and has a history for appraising and valuing judgment. Most geoscientists lack an understanding of this political reality mainly because most of their activities are discipline-oriented and are not involved with interdisciplinary communities that function in the political, everyday world. Most important, geoscientists lack a track record in political decision making.

Geoscience Image

At the heart of this issue of the geoscientist’s political effectiveness is image: the geoscience community has a significant public relations problem. The public generally perceives scientists as arrogant and condescending, attempting to impress with their knowledge. Scientists talk about methods, not about results and implications. They are perceived as accountable only to themselves: they determine the course of their study, regulate and referee each others’ studies, and provide the results to that scientific community. The public seldom understands or appreciates the why and wherefore of research.

Geoscientists, in particular, are viewed as indecisive: “on the one hand, this might be the situation, and on the other, it might be that.” It is difficult to quantify uncertainty. However, the geologist must know when to be a scientist—informed, rational, and objective—and when to be an evaluator of a scientific issue—informed, rational, and subjective.

Other disciplines (e.g., medicine, law, and chemistry) have visible, aggressive organizations, but not so the geological community, despite the fact that the geoscience story is interesting and immediately applicable. One possible mechanism to promote the geosciences would be a widespread public education program—not just the occasional public television documentary, but a series of programs.

Geoscience Societies

One strongly spoken consensus of the conference participants was that, to resolve the problems of image and political effectiveness, the geoscience community must reorganize itself. All 18 member societies of the American Geological Institute (AGI) should gain one national and/or international voice in the political arena. AGI is not allowed to speak for the whole geoscience community as other professional associations (e.g., American Medical Association, American Bar Association, American Chemical Society) speak for their memberships. A united front could show the public that geology is a relevant and serious science. (Emphasis by AIPG Editor)

Beyond the Agenda

The issues of geology, politics, and image had produced an almost adversarial climate at this conference. The conference had moved through flaunting of pedigrees, discussions on tangents, and conference-room rearranging. By the third day, driven by the dynamics of the issues and the frustration of the participants, the focus of this Penrose Conference took a turn. What participants described as “Brownian movement” and “heat-lightning atmosphere” developed into a dynamic forum on issues of environment, technology transfer, education, and, in particular, ethics of the geoscience community. Spontaneous ad hoc committees formed on ethics and the role of geology in the 21st century and met late into the night. The results of these meetings and of the final two days of the conference were dynamic. A sampling of these discussions is provided below.

Ethics

An ethics panel report on the moral responsibilities of geologists sparked much excitement among the conference, to the extent that they encouraged establishment of ethics forums at GSA conferences. Discussion of hypothetical scenarios involving ethical issues confronting geoscientists produced the following issues and recommendations:

1. The boundary between factional decisions and value decisions is determined by ethics. (Emphasis by AIPG Editor)
2. GSA and other geological societies should be encouraged to prepare special publications, to facilitate communication, and to conduct forums on ethical concerns for geoscientists.
3. Geoscientists, as a group, should consider adopting clearly defined ethical guidelines for performance and conduct.
4. Geoscientists should prepare themselves to operate effectively within an increasingly litigious society.
5. Geoscientists should become aware of their ethical obligations to society so that they can respond to an increasing (and increasingly urban) population’s demands on energy, resources, environment, and economics, and the evaluation of the quality of life.
6. Geoscientists must learn about the differences between corporate (organizational) ethics and individual ethics, and must become flexible in order to adjust to the inherent problems.
7. Geoscientists should understand that the changeability of corporate organization and of corporate ethics will continue to have a major effect on the career expectations and working conditions of individual geoscientists.

As a result of these insights, a Task Force on Ethics will propose to establish a team at GSA’s Annual Meeting and in each GSA section meeting to exchange information and to conduct seminars.

Role of Geology in the 21st Century

An ad hoc group generated, and subsequent conference discussion agreed on, the following major issues that will demand increased geoscience input:

1. Population.
2. Climate and climatic change (sea-level rise, atmospheric geochemistry, response of hydrologic systems, etc.).
3. Food (productivity, especially as affected by soils and ground water).
4. Resource base (water, mineral, soil, energy, forests, and their world distribution and economics of use).
5. Land use (hazard evaluations, urbanization, marginal land).
6. Oceans (basic science, resource utilization, mineral resources, waste sinks, buffering, etc.).
7. Human health (as affected by water quality, risk assessments, geoepidemiology).
8. Technological advances (including information exchange and education).

Possible changes in how geoscientists participate in their profession were identified, including:
• an integrated, multidisciplinary approach;
• geologic prediction;
• improved data collection, management, and analytical techniques;
• quality, high-resolution data;
• awareness of community and local constraints; and
• perceiving geology as a business as well as a science.

As the discussions proceeded, the participants acknowledged that the realities confronting these probable future issues and changes are the following:
1. Geoscientists generally have a very poor record for making accurate forecasts. Absolute forecasting probably cannot be accomplished.
2. The perception of decision makers (the public) about the irrelevance and utility of the geoscience profession must be changed through an orderly educational process.
3. As a professional community, geoscientists must reverse the present downward trend in earth-science enrollment through universal education.

It is the intent of the ad hoc group to present an appropriate forum for these ideas at a future GSA Annual Meeting.

Education

The topic of education permeated most of the discussions. Following is a sampling of the issues raised.
1. Geology courses, from the primary grades through college, are thwarting students’ natural instincts to learn about the earth. The frequent form of instruction—lecturing by instructors, memorization by students—is utterly obsolete.
2. Communication about geology should be cross-cultural and should be in language that the layperson understands, not in scientific jargon.
3. Education in the geosciences must become more global. The focus for many university courses is regional to that institution. We must broaden that focus so students can understand international conditions for them to be effective worldwide.
4. Many participants were unaware of AGI’s National Center for Earth Science Education (NCESE). Established in 1986, the NCESE was created as a result of the AGI Conference of Earth Scientists to Plan Improvements in Pre-College Science Education. The purpose of the NCESE is to assess, evaluate, and produce systems to implement a complete update of education in the earth sciences at all levels, from precollege through university. This scope includes statistics gathering and analysis; curricula research and development; teacher preparation and training; and assessment of ongoing scientific research and technological advances and their application to curricula. (For more detailed information on NCESE, see the April 1987 Geotimes article by Andrew J. Verdon, Jr.)
5. Geoscientists are not more involved in precollege education because the rewards (other than personal) are nonexistent. Universities do not recognize the organization and leading of high-school field trips as exemplary scholarship. Instead, at the university level, “grantsmanship” equals scholarship (i.e. good marketing of research programs equals promotion of the science).
6. Peer review of university research and curricula is inbread. The broader geoscience community must be allowed to participate in recommending and reviewing research and program needs in order to produce more useful students.
7. University tenure is a stumbling block that inhibits creativity.
8. The National Science Board report “Educating Americans for the 21st Century” completely ignored the existence of the science of geology. What should the geoscience community think (and do) about such an oversight? As A. G. Unklesbay stated in Environmental Geology & Water Science (1987, v.8, no. 3, p. 105), “Perhaps it happened because the members of the commission and the participants in their many conferences were not aware of geology and geological resources. If this is true, it must be because geologists have failed to make the American public appreciate the fact that we live on Earth and depend on its resources for our well-being. It is time we get on with the job.”
9. Geoscience curricula are lacking at the secondary-education level. Only eight percent of the U.S. secondary schools have geoscience courses in the curricula. The National Association of Geology Teachers and the National Association of Science Teachers should combine efforts to promote geoscience education and textbooks nationwide.

Technology Transfer

Speakers on technology transfer provided some overview thoughts (and just as many challenging questions) for the conference to consider:

The geoscience community should emphasize communication with users, including nontraditional users such as the political community.

Funds need to be solicited/acquired to bridge the gap between basic research results and application. A coordinated national program at technology-transfer centers should be enforced.
Technology may be more advanced than the user's needs. Therefore, education must accompany research products, and appropriate technology must not be overlooked.

Questions included

How do we get groups to cooperate and to give as much as they take from technology transfer?

Should geoscience funding agencies (National Science Foundation, Environmental Protection Agency, and others) require that proposers identify potential technology-transfer applications and methods of information dissemination in their research proposals?

Is technology transfer self-destructive? Does it give a competitive edge to foreign countries?

How should geoscientists prepare themselves for the impact of high-tech advances on society and on the geoscience community, within the context of national as well as global economics and international interdependence?

Conclusions

The overwhelming message that emerged from this Penrose Conference is that geoscientists must evolve beyond the incestuous practice of their science. Geologists have a responsibility to society to share their knowledge of the earth and its processes. Geoscience curricula should not solely be intended for grooming future geoscientists. Geologists, as educators, must go beyond the college classroom to elementary and high schools, and to the public at large. Every applied geologist, each according to his or her own capability, must attempt to tell the geologic story as it pertains to the issues at hand—whether it be the siting of a radioactive-waste disposal facility or the locating of a new subdivision in an area of expandable clay.

The role of geology is interdisciplinary and political. When working with other people, economics-dominated and value-ridden as we all are, geologists must understand the ethics involved in their profession. Otherwise, the science of geology is not useful, not effective, and not credible beyond the college classroom.

*Author Heidi A. Horten created this report based on the notes and input of the following conveners.

David A. Stephenson, Phoenix, Arizona (CPG 3237 & Principal Convener)

Allen Agnew, Corvallis, Oregon (CPG 240)

Charles Mankin, Norman, Oklahoma (CPG 1415)

Daniel Miller, Boise, Idaho (CPG 64)

Critique of Penrose Conference

By Jennifer Hess

GSA Congressional Science Fellow

In July I was fortunate to attend GSA's Penrose Conference on Geological Decisions for the 21st Century, in Steamboat Springs, Colorado. During the meeting a great deal of discussion focused on the need for earth scientists to become involved in the political decision making process. The question that naturally follows is how best to accomplish this task. I thought it would be appropriate for me to share some of my observations on how an individual can become involved on the Hill.

In sharing information with Congress there are three important musts. You must understand the system, you must know the issue, and you must recognize the pitfalls.

The System

To understand the system, you need to know how Congress is organized. In each of the two chambers, the Senate and the House of Representatives, literally thousands of bills are introduced each year. To effectively handle the volume of legislation introduced, the bulk of the work is handled by committees, each with its own jurisdiction (although jurisdiction can overlap between or among committees). Each House or Senate member sits on four committees. To handle the volume of work, committees are divided into subcommittees. Subcommittee titles and jurisdiction can be restructured at the beginning of each Congress by majority vote of the committee.

The House and Senate Budget committees are responsible for developing the overall budget for the federal government. Authorizing committees are responsible for individual agendas, developing their budget ceilings and overseeing their programs and priorities. The House and Senate Appropriations committees are responsible for legislation that enables the agencies to expend funds. The Senate Finance Committee and the House Ways and Means Committee are responsible for taxes (as well as other legislation).

In order to become involved, it is necessary to know which committee or committees have jurisdiction over the issue of interest, and who sits on the committee. This is not difficult to determine, and it considerably narrows your target audience. If a senator or representative from your home state sits on the committee, so much the better. Legislators like to be involved with their constituency. This is particularly true in the House, where members must be reelected every two years. Remember to use the district offices as well as the D.C. offices. It is also important to recognize that the staff is the backbone of the committee. Most of your interactions will be with staff. On the staff level, committees and subcommittees are divided by party. There is a separate staff for the majority and minority parties. The key staff members are the committee and subcommittee staff directors and the chief counsel for the majority and minority. In some committees, majority and minority staffs work closely with one another; in others, the work is done separately.

A division of labor also exists in the legislator's personal office. In general, the administrative assistant is the chief of staff. A legislative director may supervise the work of the legislative assistants. Each issue before Congress is assigned to one of the legislative assistants. Identify the person responsible for your issue of interest by calling the legislator's office. Legislative assistants can generally be reached by phone, although you might have to wait a few days for them to return your call. Again, if you are a constituent, your call will generally be taken promptly. Legislative correspondents re responsi-
ble for tracking the mail and responding to requests made to
the office. The appointments secretary controls the legislator's
calendar. Because the legislator's schedule is always hectic, 15
minute appointments are the rule, not the exception; so if you
are fortunate enough to get an appointment with a legislator
instead of a staff member, brevity is the key. The legislator's
press liaison works with the media.

The Issue

Senators and representatives get emotional letters from
constituents every day. To really provide input, you must estab-
lish yourself as an expert. When contacting an office by mail,
include your credentials, a 1-2 page fact sheet, and a summary
of your position on the issue. You may write in response to an
issue or to provide general background. Remember that legis-
lators and staff are dealing with many diverse and technical
issues, many of which demand immediate action. Therefore,
the more specifics you can provide about an issue, the better
your information will be received. Facts, figures and statistics
are welcome information that staff many not know are avail-
able or do not have the time to research. Also remember that a
letter of complaint cannot stand on its own. Legislators and
staff spend a lot of time drafting the best legislation they can.
If you disagree, state why and then offer an alternative. I've
seen meetings between senators and interested parties fall
apart when complaints are made but no alternatives are sug-
gested. Solutions provide the basis of dialogue. If you agree
with the legislator's position, thank him or her for that sup-
port. Positive comments are always noticed.

If you are so fortunate as to be able to meet with a legis-
lator or staff member, you should speak in layperson's terms
and state your case as briefly as possible. Always bring a
short position paper (1-2 pages) or fact sheet to leave with the
office. Media interest is of overriding importance in any office.
Therefore, issues having media appeal sell more readily than
those without.

The Pitfalls

Scientists are generally viewed with less regard than any
other group on the Hill. From my observations, they are per-
ceived as people who don't understand the system, who have
little ability to talk with people outside their profession, and
who think that being correct is always enough.

To be involved on the Hill, we must learn that budgets,
limited time frames, regulatory impacts, and public account-
ability are all factors that must be considered by Congress.
Scientific facts are not the only criteria for public decision
making. The approach is often different legislators are work-
ing against the clock; scientists want more time. Legislators
are more willing to take risks; scientists want to be sure of
the outcome. So don't get technical, get political. Have the
facts, but be prepared to suggest alternative solutions.

Strategic Minerals - A View From the
Geologic Profession

By Ernest K. Lehmann, CPG 583

Mineral raw materials are basic building blocks of the
physical structure of our society. Without iron and steel, copper,
cement, sand and gravel, aluminum, diamonds and a host of
other 'basic commodities, we would have no roads, no
buildings, no tools, no furniture, no transportation or commu-
nications as we know them. We would be back to a pre-stone
age existence. Even Stone Age man used mineral materials
for tools.

Because these truly basic building blocks constitute a
relatively small proportion of the GNP and are produced by a
relatively small segment of our society, the mineral industry
has relatively little political power. On the other hand the
process of producing minerals disrupts the landscape and on
occasion has apparent adverse impacts on the environment.
Therefore mineral production triggers negative reactions in
some segments of the society. This unfortunate lack of politi-
cal clout and the sometimes negative image of the industry do
not decrease its importance.

There is an increasing awareness at least by some
thoughtful people, such as those here today, of the essential
nature of the products of the minerals industry. There is the
understanding by you that some of these products are strat-
egic and critical to the society. As you know, without cobalt,
safe and efficient jet engines cannot be built; without man-
ganes there can be no production of basic steel; platinum
group metals are required in oil refining; diamonds to pro-
duce cutting and grinding tools; bauxite to produce alu-
minum. The list goes on and on.

Because of this essentially, strategic and critical miner-
als are an issue of great national import and there is no sin-
gle group better qualified to discuss the issues related to
strategic and critical minerals than the members of the geo-
logic profession who constitute the membership of AIPG.
Basically the problem is a supply problem and the geologic
profession is the profession concerned with the identification,
delineation and evaluation of the supply of minerals.

In order to discuss questions related to strategic and crit-
cical minerals, we should first define our terms, establish the
scope of the problem, identify who has the problem, and
examine strategies for dealing with the problem. We can then
suggest essential ingredients of a policy to be adopted by
AIPG, by the profession and by the nation.

First then, let's all be sure as to what we mean by "strate-
gic" minerals. Various definitions for the quality of being
"strategic" have been suggested. For our purposes let me sug-
gest that in order to be "strategic", a material must be "criti-
cal" and its source of supply must be "vulnerable" to interrup-
tion. To be "critical" a material must:

1. be essential to the national defense or industry and
2. lack suitable substitutes.

To be "vulnerable", the sources of supply must be subject
to substantial disruption. The combination of these attributes
constitutes the quality of being "strategic".
Because of the vagaries of domestic demand and geologic setting of individual nations, a substance strategic to one nation may or may not be strategic to another. A national strategy and response to strategic minerals issues needs to take into account not only the geology of the particular country and its industrial and military needs but also the competing or complementary strategies of allies and competitors.

From the U.S. viewpoint, in spite of our widely diverse geology and resource base, we are critically dependent on imports for a major portion of the supply of many minerals.

The U.S. Bureau of Mines maintains data on a large list of mineral commodities. Of these, about 33 are ones for which the U.S. is a net importer and Canada is not a significant supplier. Of these 33, OTA's 1985 study on strategic minerals vulnerability concludes that there are 20 where there is a high degree of geographical and political diversity, leaving 13 which for the U.S. are strategic. This list includes platinum, diamonds, cobalt, beryllium, chromium, vanadium, graphite, rutile, bauxite, tin, tantalum, and columbium. Of these, four appear especially important: platinum, cobalt, chromium and manganese.

Many of the 86 commodities tracked by the USBM are critical in that they are essential in one way or another to our civilian economy or to our military security. Many are also strategic and critical to other major industrial powers and to developing economies. Sources of developed supplies of these commodities are limited. A study by the USBM shows that for 13 commodities, four countries control from 40 percent to 100 percent of the world's production and eight countries from 60 percent to 100 percent of the supply. This includes some minerals other than the OTA's 13 strategic minerals.

We also need to understand that the list of strategic minerals is not fixed and may be changing for any individual country. For example in the case of the U.S., the list may be rapidly growing because of the decline in domestic production capacity of metals such as zinc and copper.

Let us examine briefly the reason many of these minerals appear in the U.S.'s list of strategic minerals. The chief reasons for dependence on foreign imports are economic, institutional, and political. These three factors are of almost equal importance. Purely geologic factors are less vital, at least for the U.S., as reasons for a weak and declining domestic mineral industry and our increasing dependence on foreign ores.

An economic factor that is critical is that mineral prices are in a large measure cyclical but difficult to predict, while production capacity is inflexible. This creates a high degree of economic risk and uncertainty for investors and makes investment in mining unattractive.

The nature of the occurrence of many of the most critical minerals, for example, tungsten, tin, chrome and cobalt, is as relatively small deposits requiring extraction by labor-intensive methods; this circumstance favors those occurrences which are located in countries with a low-cost labor supply and little environmental or social regulation or protection. Further, the proliferation in the developing world of state-owned mining enterprise, often aided by international financial institutions, results in the subsidized production of minerals and metals for political and economic reasons internal to the producing countries. However, this subsidized production drives down world prices and makes many potential U.S. producers uneconomic.

Some of the reasons for dependence on foreign sources are of a purely geologic nature. We have not as yet discovered within the United States economically significant deposits of nickel, cobalt, chromium, tin, diamonds, and many other materials that could supply a significant portion of the nation's needs.

Still other reasons for dependence are institutional and political. Public policy in the U.S. over much of the last thirty years tended to create disincentives to mineral exploration and development. Policy disincentives have included increasing withdrawals of public lands from mineral entry and complex, lengthy, and costly environmental regulations and procedures.

For all of these reasons, growing dependence on mineral imports is increasingly placing ever more commodities into the category of being strategic. This is because the U.S. supply is increasingly vulnerable to interruption by competitive forces in the world market, by political developments and unrest in the supplying countries or by direct armed intervention.

What are the strategies for reducing our reliance on imports? The strategies include: (1) stockpiling; (2) substitution; (3) conservation; (4) diversifying foreign supplies; (5) increasing domestic supply. Let me briefly touch on these.

Stockpiling:

Stockpiling is not a new concept. Joseph advised the Pharaoh to stockpile grain against lean years. The US defense stockpile began in 1939 before the US entry into World War II and has continued since. However the stockpile targets have changed in quantity and type of material over a period of time. As to quantity, the original goal was to have a supply of critical materials sufficient to meet essential needs for five years. This was reduced to three years and later to one year and then was raised back to three years.

There are several problems with stockpiles. One is that there are changes in the type of material required by the users. For example, it is reported that some of the cobalt on the stockpile is not up to specifications for use in making the critical alloys required for jet engine blades. It would have to be reprocessed and thus is not readily available in an emergency. Much of the manganese and chrome in the stockpiles have also been reported to be “off” specification. Stockpile managers, like generals, tend to fight the last war instead of accumulating materials that will be required for the next one.

Another problem is that stockpiles get used for political purposes. A good example of this occurred during the Vietnam era, when the Johnson administration suddenly declared as excess certain minerals and released these from the stockpile to reduce commodity prices and contain inflation.

Perhaps the worst problem is that stockpiles are expensive investments that bring no return to the owner.
Conservation:

Conservation is a viable technique to reduce mineral import dependence and vulnerability. Learning to make parts with less of a given strategic mineral may be attractive both as a cost saving strategy and as a strategic minerals strategy. However, this is not as simple as it seems. For example, if the proposed conservation practice involves a change in the alloys specified for a given part, there may be long lead times required to "qualify" the new alloys for the particular use. Under these circumstances conservation may be neither practical nor important.

Conservation also can take the form of recycling. However, the cost and efficiency of recycling are critical. Further, recycled materials may not meet required specifications and may require extensive reprocessing or may not be able to be reprocessed for use in high specification alloys. In the case of some commodities, such as that of manganese required in steel making, reprocessing may not be feasible at all.

Substitution:

It may be possible to substitute a new material for a critical one. For example, ceramics may be substituted for cobalt or chrome alloys in certain applications. Again, however, the problem is one of qualifying the substitute material for a particular use. This is often a very time-consuming process that may take five to ten years. Further if the substitute material is not readily available from domestic sources, we may have moved from the frying pan into the fire.

Diversifying Foreign Supplies:

The important known sources of many important mineral raw materials are located in a relatively few countries. By diversifying, by encouraging development of new sources of supply in other countries, we can reduce vulnerability imposed by dependence on a few sources. This can be done by encouraging exploration and development of these mineral raw materials in many countries. Such a strategy frequently has the added benefit of aiding less developed nations. There remains, however, the risk that these sources will become unavailable because of adverse political changes, war or because our competitors acquire control of these supplies.

In fact the strategy of diversifying foreign supplies raises the issue of who controls these supplies. In the last analysis, it is who controls foreign supplies of strategic minerals that is the key issue. For example, the case of chrome, the important producers are South Africa, Zimbabwe, Russia and Turkey. Given this case of characters, control of chrome production can be an obvious problem for the Western block. Because we are dependent on southern and central Africa for so many of our strategic mineral supplies, e.g. chrome, cobalt, platinum, and manganese, the increasing political upheavals in South Africa should give us all concern.

Less obvious than the political control is the more subtle control of supplies of many important commodities by our competitors and sometimes allies through financial and market mechanisms. In many cases, this subtle form of control has been exercised by agencies of these governments or by quasi-government companies through their ownership, management and control of supply by contracts with producers and producer countries.

From the age of discovery in the 16th century onwards, the "have not" industrial and mercantile powers have tried to acquire sources of raw materials supplies in the less developed world. Though initially this took the form of overt colonialism, since World War II it has been in the form of a more subtle neo-colonialism. As opposed to many of the industrial powers, the U.S., formally largely self sufficient through domestic sources production, probably has not proportionally acquired control as large off shore holdings as have the British, French, Japanese and other countries. In fact we are Johnny-come-latelys to the neo-colonial game and much less expert at it than many of our competitors. Because we are less expert, we may find ourselves squeezed out of these critical raw material supplies by none other than our "allies".

Diversifying foreign supplies also raises questions of geography and access in time of emergency. Manganese is an example of a bulk commodity which must be shipped great distances by vessel to U.S. ports. The transportation of manganese is highly vulnerable to interruption by military actions, but the commodity is absolutely essential for the production of basic steel. Bauxite, another bulk commodity, represents a similar problem. Supplies of either would be affected by a long-term emergency in which ocean shipping was interrupted. On the other hand users of cobalt or platinum require much smaller quantities. These commodities are also relatively high in price, permitting air transport. Thus, supplies of these metals, would not necessarily be interrupted for long by an event such as a World War I and II style submarine blockade.

Increasing domestic supply:

A viable active private-sector minerals industry, constantly adapting the quality and quantity of its produce to the marketplace, constitutes a "living", self-managing inventory of mineral raw materials. The existence of such an industry obviates the temptation to use the stockpile for short-term political considerations as opposed to national defense needs. It reduces dependence on foreign supplies. It eliminates the long lead times required by substitution and some conservation strategies.

Strategies for increasing domestic supply need to focus on several ideas. These include
1. making land available for exploration and development;
2. improving the environmental and regulatory climate;
3. removing financial disincentives or improving financial incentives for exploration and development;
4. fostering research in the areas of mineral exploration and mineral extraction.
   a. Land Availability.

It can be said that the single most important factor for successful exploration leading to the discovery of new conventional or unconventional sources of supply, is access to land on which to explore. The federal government owns one-third of the nation's land; the states and large corporations own additional large areas. Clearly, policies that restrict access to these large tracts reduce the chances of discovery of additional or
new supplies. Current federal policies have withdrawn from 40 to 60 percent of federal lands from exploration.

If it is the national policy that a domestic materials industry is important, then many of these lands should be reopened for exploration and kept open. Why keep such lands open for repeated exploration? Isn’t one round of exploration enough? The answer is no, it is not enough. Geology and mineral exploration are evolving sciences. New theories and concepts as well as new exploration tools allow our profession to look again and again at areas that have already been explored, perhaps several times, and to make significant new discoveries. That this has occurred when the geologic theory, the financial means, and the land are available can be readily demonstrated. To name just a few examples:

New geologic concepts led to the discovery of the New Lead Belt in Missouri in the mid 1950s. By the late 1960s, these discoveries ended the substantial post-World War II U.S. dependence on lead imports.

Geologic concepts and diligent exploration led to the discovery in 1967 of significant and economic deposits of platinum-group metals in the Stillwater Complex in Montana. This discovery is expected to reduce the almost total U.S. dependence on imports for these critical metals by six to 10 percent.

Improved exploration methodology and changing geologic concepts have led to the discovery of one major and several small copper-zinc deposits in Wisconsin. If these deposits are developed and domestic smelting capacity is rebuilt, this production could substantially reduce U.S. dependence on imported zinc metal supplies.

Changing concepts and technology have led to recent interest on the part of industry and possibility of domestic diamond production. No commercial deposits have yet been found, but hitherto unexplored areas are being searched and conditions favorable for diamond occurrence are being identified.

b. Improving the Environmental and Regulatory Climate.

In the last twenty-five years we have seen a vast increase in environmental laws and regulations. Many of these were urgently needed. Others are based on unfounded or unwarranted concerns or are a guise for blocking economic activity and development. Unnecessary regulation and unnecessary delays result in making U.S. domestic minerals producers less competitive. It is timely to re-examine these rules, laws and processes so as to assure that only the necessary ones are imposed and to streamline the process of permitting and monitoring.

c. Fostering Research

The domestic minerals industry is greatly assisted by a strong research program aimed at understanding the geology of mineral deposits, improving exploration technology, increasing efficiency of mineral extraction and mitigating environmental effects. This can be done through cooperation between government, academia, and industry.

d. Financial Incentives and Disincentives.

An urgent need is to find new ways to meet the financial needs of domestic industry, especially the small companies who by their nature are more inventive, ambitious and risk-oriented - all qualities required to be successful in mineral exploration. This is especially true in the strategic minerals arena where many of the commodities occur as relatively small deposits that are unattractive to large companies.

The Position of the American Institute of Professional Geologists.

From an analysis of all these factors, the institute is developing its own policy with respect to the issue of strategic minerals. I suggest that the AIPG position should be as follows:

With respect to scarcity of mineral materials, the quality of being designated “strategic” or “critical” in nature can commonly be attributed more to political and economic circumstances than geological circumstances.

A vital, stable domestic mineral industry is the most effective guard against dependence on imports for basic supplies of strategic and critical mineral commodities. In my mind this should be encouraged by a realistic lands policy, an improved regulatory climate, by developing financial incentives and by research.

The location, assessment, and evaluation of known and potential domestic sources of strategic and critical mineral must be prime targets for scientific endeavors funded by public and private sectors.

New and alternative minerals and materials technology must be encouraged.

Research to mitigate existing technological constraints associated with minerals resource development must be supported both in the public and private sectors. Particularly important are technologies which would support mineral resource development under environmentally-sensitive circumstances.

A talk delivered by Ernest K. Lehmann at the AIPG Western Forum, April 15, 1988 and at the AIPG Governmental Affairs Conference in Washington, D.C.

The Role of Energy in the Reindustrialization of America

By Michel T. Halbouty, CPG 10

Chairman of the Board and Chief Executive Officer

Michel T. Halbouty Energy Co.

(Excerpts from a speech delivered June 9, 1988 at Cornell University. The complete text can be found in GSA News & Information, October 1988)

In a world with a growing population, declining nonrenewable resources, rising social and economic problems and expectations, science and technology are the ultimate beneficial resources which preclude stagnation. In the decades immediately following the war, the United States was the foremost international technological leader. Today our lead has rapidly shrunk. It is more appropriate to say that we have lost many of our industrial competitive advantages. As a result, our
exports have decreased and our imports have increased. There is grave concern that jobs which could have been created here have instead been created in foreign countries, leaving hundreds of thousands of American workers unemployed or in underpaid employment.

Our economic vitality has been weakened by a complex set of interconnected problems - a combination of persistent economic instability, counterproductive and burdensome tax and regulatory policies, excessive government expenditures, inadequate technological growth and innovation, and neglect in fully developing our vast domestic energy and mineral supplies and potential. Of all of these, I am confident that counterproductive and burdensome tax and regulatory policies imposed on the entire industrial complex have been the most perplexing and destructive forces in our productivity growth.

It is evident, and I want to stress, that the appropriate and compulsory role of the federal government in our quest for energy security is to create an atmosphere and an energy policy which will encourage the private sector to seek, produce, and develop all of our energy sources without undue interference. Yet, these requisites have been sorely lacking. There is no shortage in our energy potential. The only shortage we have had has been the desperate shortage of wisdom in the processes by which federal energy and environmental policies were created and enforced. The United States, unlike other major world powers, has never had a comprehensive national energy policy that worked. James R. Schlesinger, former Secretary of Defense and of Energy, put the energy policy dilemma in the proper perspective when he recently characterized U.S. energy policy, or the lack of it, as “the equivalent of unilateral disarmament.” So it is indeed an enigma why the Congress and the Administration do not put aside special interests and look only toward providing a viable and comprehensive energy policy, a working core piece of legislation through which we can rationally evaluate our energy-resource options. It must transcend all political parties and all power structures. This would guarantee that no matter what party controls the executive branch or the legislative branch that the United States has a commitment to energy security that cannot be easily overruled or changed at will. It must be a bipartisan energy policy formulated solely for the protection and the best interests of the national welfare. It must be viewed as a means of survival for this country. It must be a policy which reflects a fixed national purpose. Such a policy would encourage the exploration of our remaining frontier areas.

In the U.S. we have been prevented from inventory exploration for energy and minerals on some of our own lands because of federal restraint placed on millions of acres of public lands. Nowhere has the threat of excessive environmentalism to the nation’s energy and mineral development been felt more keenly than in the area of access to and inventory of these lands. For example, there is common agreement that the Coastal Plain of the Arctic National Wildlife Refuge (ANWR) is the most promising onshore petroleum frontier in the United States. This fact assumes special significance because the nation’s proved reserves and its production of oil are declining, with the result that U.S. reliance on foreign petroleum imports is on the rise.

Some of ANWR’s probable reserve estimates are much higher than the 10 billion barrels estimated to be recoverable from Prudhoe Bay. As much as 30 billion barrels of oil may lie beneath the 18 million-acre refuge. The Administration has pushed for Congressional approval to lease the lands for exploration and development for years, but prolonged debate on environmental issues has prevented such action. Environmental concerns and energy needs can be balanced in the ANWR area - Prudhoe Bay proved that. Although ANWR will not completely solve the nation’s energy problems, it will go a long way to decrease the dollars spent on imported oil, significantly enhance our reserves and economic stability, and reduce the nation’s vulnerability to an oil-supply disruption.

---

Congressional Testimony

By Michel T. Halbouty, CPG 10

At the National Energy Strategy Public Hearing
Washington, D.C., August 1, 1989

(This is part of the text of Michael T. Halbouty’s testimony at the public hearings on National Energy Strategy on August 1, 1989, in Washington, D.C. The contents relate directly to the oil industry, and to public attitudes toward the petroleum business)

I would like to begin my remarks by commending our Secretary of Energy, Admiral James Watkins, for having a hearing such as this regarding the United States critical need for an energy policy strategy. The United States, unlike other major world powers, has never had a comprehensive national energy policy that worked. Each presidential administration that has tried to put together a plan of action to provide greater energy security has failed.

All too often, if the executive branch suggested a policy of action, the legislative branch refused it and did not offer a substitute that was acceptable to the executive branch. Likewise, congressional suggestions have often been ignored by the executive branch. They have see-sawed back and forth and up and down, and have accomplished nothing. I should not say nothing, because they have placed this nation’s economic and strategic securities in jeopardy, and that is something very serious.

It is long overdue for the Congress and the administration to put aside special interests and look only toward providing a comprehensive energy policy, a workable plan, that will lead to constructive and meaningful legislation. Such action must begin at the top of our federal government. Even though we have the knowledge, the technological advances, and the expertise to collate and produce our domestic energy supplies, it cannot be accomplished without proper federal management to set the guidelines. Calls for a firm national energy policy have intensified amid increased public attention to prospects for a renewed oil squeeze, made likely by falling U.S. production, rising consumption, and rising imports.

---

APPENDIX 9—SELECTED SPEECHES AND PAPERS BY CPGs

Halbouty
APPENDIX 9—SELECTED SPEECHES AND PAPERS BY CPGs

Halbouty

All of our vast domestic energy resources petroleum, coal, nuclear, solar, hydropower, wind, and biomass (to name only a few) should be continuously researched for improved usage. However, our key resources petroleum, coal, and nuclear energy are not being produced in quantities or in manners adequate to meet our energy demands. I want to speak briefly on the importance of each of these resources.

Our petroleum resource base has a special place in the hierarchy of domestic energy sources. Crude oil and natural gas today supply about 66 percent of our entire fuel mix. Yet, unfortunately, our domestic crude oil production is declining at a precipitous rate, and our supplies of natural gas in most cases cannot immediately be substituted for oil usage. As a result, our crude oil and product imports are dramatically rising almost daily.

I will now reveal some frightening statistics. I know that the Department of Energy has all that I will cite. but it is proper and appropriate that they be emphasized and stated in this public hearing.

The impact of increased imports is demonstrated by the fact that our domestic production has dropped from 8.9 million barrels a day in 1985 to our current production of 7.5 million barrels a day, a drop of 1.4 million barrels a day. Of our production, some 1.9 million barrels a day comes from Alaska. Therefore, we are producing less than six million barrels a day in the conterminous U.S., and the drop is accelerating. We are now producing 500,000 barrels a day less than we did in 1988. Our imports have risen from an average of 5.1 million barrels a day in 1985 to today's average of 7.9 million barrels a day. This is a negative turnaround of an astounding 4.2 million barrels a day in just four years!

Currently, our demand is 17.2 million barrels per day. We are producing 7.5 million barrels per day and we are now importing 7.9 million barrels per day — a combined total of 15.4 million barrels a day. Our imports represent 46 percent of our demand. We now have a 1.8 million barrel per day deficit which must be made up from our existing crude oil stocks and our natural gas liquids production. It is possible that we could be importing close to nine million barrels per day before the end of this year! Furthermore, it is estimated that, in the lower 48 states, production has been dropping at the rate of 40,000 barrels per day each month. In a year or so, a decline will finally set in on the North Slope, which will further accentuate the import dependence. And it is estimated that by the end of 1990 the United States will be importing from nine million to 10 million barrels per day. This is indeed frightening! This could approximate 60 percent of our total daily consumption.

We cannot continue just to produce our remaining reserves without trying to replace them through more exploration. It is most evident that when imports increase, exploration decreases, which in turn reduces the strength of our petroleum industry and thus jeopardizes our economic and national security.

Let me cite a few more statistics: in 1981 we drilled 91,600 wells. Last year we drilled 25,186. For the first quarter of 1989, the total was 5529, and there are estimates of only about 20,000 wells drilled for the year. Today there are fewer than 800 rigs running. Because of this very low rate of exploration, the independent segment of the industry has not been just decimated, but virtually wiped out.

I should here remind you that throughout the history of the petroleum industry, independents have drilled 80 percent of the wells and discovered 75 percent of all the oil and gas in this country. Where there were once 60,000 independents actively drilling for oil and gas, there are now less than 1,000. Where there were once more than 40 major companies, there are now less than a dozen.

For more than 30 years, from one administration to another, the government has thrust one disincentive after another at the industry. These disincentives did not appear suddenly. Rather, it was a gradual process which caused a deterioration, particularly in the exploration and production segments. It is really baffling that a nation that is considered to have some of the most intelligent people on earth can permit this deterioration of the industry when they — the people — realize that in the long-run that whatever hurts the petroleum industry will eventually hurt them. Such thinking is irrational.

Yet there are those, many even in high places, who say “don’t drill,” “don’t explore anymore,” meaning, let the U.S. petroleum exploration and production segments of the industry die. They say just keep on increasing imports — the oil is cheaper. This concept is most dangerous in that it does not take into account where our dependency lies, and how it could affect our economic and strategic securities. Those who favor greater imports do not realize that we would be placing this nation’s destiny in the hands of others who hold their own interests above ours. But, unfortunately, this is exactly what is happening. We are gradually ceding some of our liberties to those who control and own the supplies of oil that are shipped to this country.

It is evident that the appropriate and obligatory role of the federal government in our quest for energy supplies is to create an atmosphere and an energy policy which will encourage the private sector to seek, produce and develop all of our energy sources without undue interference. The policy must provide core pieces of legislation through which we can rationally evaluate our energy-resource options. Such a policy should be truly bipartisan, formulated solely for the protection and best interests of the national welfare. It must be viewed as a means of survival for this country.

From geoscientific studies of our land and water areas, it is evident that there is the potential to find as much oil and gas as we have produced to date. Much of our petroleum potential lies in our federal lands and waters. Yet we have been prevented from exploring for energy and minerals on some of these lands because of federal restraints. For example, geoscientists from industry, academia and government are in common agreement that the Coastal Plain of the Arctic National Wildlife Refuge (ANWR) is the most promising onshore petroleum frontier in the United States. Yet federal restraints prevent drilling in this region.

Our growing energy needs indicate that nuclear energy and coal will progressively have to be substituted for petroleum in the post-petroleum era. The proper long-range development of these sources has been sorely neglected.
Nuclear-generated electricity has already saved America over three billion barrels of oil with billions more to be saved before the turn of the century. Our existing nuclear plants are preventing more man two million barrels of oil per day from being imported into the country. Public fear has prevented the construction of additional plants. I firmly believe reform of nuclear permitting regulations and standardization of design could revive the industry. If we were to establish one, and only one, design, we could rapidly build the 100 new plants we now need, which could save us another three million barrels per day and thus solidify our domestic energy base.

---

Congressional Testimony

By Donald Fife, CPG 4735

Chairman Governmental Affairs Committee,
American Institute of Professional Geologists before the U.S. Senate Subcommittee on Mineral Resource Production and Development, of the Committee on Energy and Natural Resources
Hon. Jeff Bingaman, Chairman
Review of the U.S. Mining Law and Proposed “Mining Law of 1989”

The 1872 Mining Law Is A National Asset

Mr. Fife is past president of the South Coast Geological Society, current chairman of the Mining Advisory Board for the National Inholders Association, and since 1981 has been the Secretary of Interior’s appointee for geology, energy and minerals on the Bureau of Land Management’s California Desert Multiple-Use Advisory Council.

The National Inholders Association represents those people owning private land and other interests within federal boundaries including all miners holding vested interests under the 1872 Mining Law. NIA has over 15,000 members in 50 states and 200 federal areas. There are an estimated 1.2 million inholders nationwide in addition to more than one million mining claim owners and explorationists.

A way of life for hundreds of thousands of citizens and a national asset for America would be severely impacted or destroyed by imprudent changes to or destruction of the present location system under the mining law of 1872.

The location system has worked well for more than a century, providing American consumers and society with important locatable mineral commodities. This system is functioning well and we see no need for changes. As has been said many times before: “If it ain’t broke, don’t fix it.”

Mineral inventory or assessment of large areas must consider not only the dynamics of geology and mineral economics, but to be meaningful to society, must consider all present and future mineral commodity demands for agriculture, manufacturing and national defense. Until such insight is possible, no final mineral inventory or assessments can be made. Therefore, it is rational and prudent for American society to leave open to mineral location as much area as possible. The 1872 Mining Law continues to serve this nation well for assessing locatable minerals on the public domain.

The independent small-miner/prospector/geologist/explorationist is not obsolete in the exploration/assessment process. In view of lack of federal, state and academic mineral resource studies and support during the last few decades, the majority of the recent discoveries would not have been made without the small miner and independent explorationist.

In effect, the 1872 Mining Law has produced an army of thousands of citizens in which the free enterprise system continually “explores and assesses” our open federal land.

Most successful major and many small mining operations were reviewed and explored by dozens of mining companies or private individuals over a period of years before someone made the commitment in dollars and cents to risk making a “mineral discovery” an operating mine. Without the incentive and potential for ownership under the 1872 mining law most of these efforts would never have taken place.

Right now we are having our nation’s mineral resources assessed and “inventoried” by small prospectors and geologists. Having the right to look and dream of striking it big provides the incentive for these people to continue exploring. Sometimes they make big discoveries but without the encouragement and incentive provided in the law, they wouldn’t do it. They couldn’t do it.

For example, Dick and Anna Singer, a mom-and-pop prospecting team (he is a disabled World War II veteran) worked a claim for 30 years that was thought to be marginal property. It was in the same general area where the Spaniards found gold in 1780 on their way to California. This same area was explored, and walked over by hundreds, perhaps thousands of prospectors, miners and geologists for the past 200 years. Dick and Anna Singer were barely eking out a living but believed in the site and sought some help to develop it.

After being turned down by numerous mining company geologists who felt the land was less than marginal, they found one major company to come in with them. The company came into the project despite a University of California Ph.D. thesis which indicated the land was less than marginal. The company went down 280 feet and blocked out a major world class gold discovery in excess of a billion dollars. Without the incentive provided in the law, this discovery would have never happened.

Without the 1872 mining law, accidental discoveries like the world class borate discovery at Boron, California, or the world class rare earth lanthanide deposit at Mountain Pass, California, would tend not to be reported let alone developed. The long-term effects of replacing the mining law would also be profoundly negative: it would seriously impact our ability to find and produce locatable critical and strategic mineral commodities. America could lose the small independent explorationist, his expertise, and knowledge of America’s mineral wealth.

In the Eastern California Desert is the rare earth deposit at Mountain Pass where, in 1949, most of the Western world rare earth lanthanides were discovered by three uranium prospectors, Herb Woodward, Jim Watkins, and “Pop” Simon.
This discovery is in a belt several thousand feet wide and several miles long and perhaps three thousand feet deep. The Sulfide Queen gold mine operated for years almost on top of the rare earth body without knowing it. Hundreds of prospectors, as well as dozens of company and government geologists had walked over it while millions of motorists drove over it on their way to California.

There was suddenly so much rare earth lanthanides, as well as no known way to process it, that the deposit would not be considered economic and therefore not a valid discovery under today’s mining laws and excessively strict rules of marketability. As in practically every mineral discovery, it took considerable capital (millions of dollars) to make the deposit economical. Without the 1872 Mining Law, the small prospectors would never have been out prospecting in the first place. It is also doubtful that the investment of millions of dollars in research to make an unknown mineral commodity economical would have been made without ownership guaranteed under the 1872 Mining Law.

In 1980 Warren Warhol, in the South Coast Geological Societies Geology and Mineral Wealth of the California Desert, notes “that many of the uses of rare earth lanthanides were developed only after their commercial availability was demonstrated on a scale which was only made possible by the discovery of the Mountain Pass ore body. The research and development that followed created the economic value of this unique ore body.”

It is easy to overlook the significance of this order of events: that is, the discovery value by small miners and its contribution to the technology of chemistry, metallurgy, glass, petroleum refining and electronics. The lesson to be learned: if this area had been closed to the 1872 Mining Law in the past, not only would the benefits from this resource have been postponed or lost, its value would still be unestablished.

This single discovery has made the United States the predominant world producer of rare earth lanthanides, such as europium, which activates crystals of yttrium to produce red color in television picture tubes; and samarium and neodymium which, when alloyed with other elements produce a super magnet so powerful that when used in the conventional electric motor, increases its efficiency by 25 to 50 percent. With the coming light-weight battery technology, these metals may be a significant factor in the development of a pollution-free automobile.

The rare earth lanthanides—lanthanum, cerium, neodymium, praseodymium, samarium, gadolinium, europium, and some ten others are in the forefront of elements promising a new age of superconductivity and super magnets which, according to the May 11th, 1987, issue of Time magazine, could bring a better environment and quality of life to America via clean fusion energy, vastly more efficient electrical power transmission and smokeless, quieter electric automobiles. The availability of these elements is also playing a role in the development of the Strategic Defense Initiative (SDI). This technology, and the only principal known reserve of this rare earth lanthanide in North America, we owe to the original discovery by “Pop” Simon, Herb Woodward, and Jim Watkins, exploring under the 1872 mining law.

---

### A Leasing System Is Not In the Best Interest of the Nation

It concerns us greatly that many of the same groups that would like to sack the 1872 mining law in favor of a leasing system are the same groups promoting vast closures of the federal lands to society’s access for minerals.

There appears to be an effort to influence public policy on mineral access with little understanding of the disastrous effect on America’s economy.

On California’s federal land (50 percent of the state) as well as other federal land states, little in-depth regional research has been undertaken by the government or academia since the 1960s. In Southern California the last comprehensive work on the geology of the region was in Geology of Southern California—Bulletin #170 of the California Division of Mines and Geology—1954. The last documentation of individual mineral resources or commodities in the region are usually found in the “California Journal of Mines and Geology” dating from the 1940s or 1950s. The last comprehensive statewide summary of mined resources was in Mineral Commodities of California—Bulletin #176 of the California Division of Mines and Geology—1957.

The mineral database upon which government and private industry are making their decisions today is commonly more than 30 years out of date.

Mineral exploration is the R & D of the mineral industry. Regional economic geology and mineral commodity studies are the foundation of mineral exploration. The lead-time to open new mine now commonly exceeds 20 years or more. Basic state of the art regional geologic and specific mineral commodity studies are necessary to keep the United States competitive with the rest of the world and to maintain our standard of living. Composing only about five percent of the world’s population, Americans consume about 20 percent of the world’s non-fuel-minerals. Each American requires on the order of 40,000 pounds of new mineral commodities each year just to maintain his or her standard of living.

Presently, as well as during the past three decades, prospectors, independent geologists, and private companies operating under the 1872 mining law, have been the major force in exploring and assessing locatable mineral resources on the federal lands.

Unlike oil or geothermal resources, locatable minerals cannot be produced from the same drill hole that was used to explore for energy resources. Locatable mineral commodities tend to require vastly more ingenuity and risk to find and develop. Many deposits are one of a geologic kind: for example, the Mountain Pass rare earth lanthanides deposit, the borate deposit at Boron, California, or the hectorite lithium-flouride clays near Barstow, California.

Discretionary leasing on such unique geologic occurrences or even more well-known geologic models in unique or complex geologic environments will tend to be given low priority or no priority for prospecting permits or leases because we professionals have been lead to believe through our training that a deposit “should not” be there. Many discoveries have been made under the 1872 Mining Law because the individual
prospector or explorationist was “too dumb” to know they shouldn’t be looking in that environment! The current rush to close and withdraw from mineral entry huge land areas for Wilderness, parks or other special designations has led to some irrational conclusions by government agencies on the mineral potential of the included federal lands.

One of the best examples of this is the misinformation placed in the Congressional Record of April 6, 1987, by Senator Alan Cranston supporting his California Desert Wilderness and park legislation S.11. He said: “The major mineral commodities now being produced in the California Desert are sand and gravel. The California Desert has been intensively prospected for 100 years. Most studies show that there is little remaining commercial developable mineralization in the California Desert.”

Obviously the senator has been misinformed. According to the public records of the California Division of Mines and Geology and the U.S. Bureau of Mines, the California Desert is a leading source of non-fuel mineral production for the State of California and for the nation: 1) Total non-fuel mineral production in California for 1986 was $2.3 billion of which $1.2 billion came from the California Desert; 2) Total sand and gravel production for California for 1986 was valued at $545 million of which less than five percent is produced in the California Desert. This amounts to about $27 million, or only two percent of the total mineral production of the California Desert; 3) 100 percent of the nation’s boron minerals are mined in the California Desert and in 1986 were valued at $430 million; 4) 97 percent of the nation’s rare earth mineral production comes from the Mountain Pass Mine in the California Desert. These rare earth lanthanides are used in several high technology applications, including super magnets, lasers, and the recent breakthrough in superconductivity which may hold the key to future advances in energy conservation: 5) more than 200,000 troy ounces of gold were mined in the California Desert in 1986.

In a 1978 report by the U.S. Bureau of Land Management geologists it was estimated that the California Desert contained only a little more than three million ounces of remaining gold according the U.S. BLM 1978-California Desert Plan, Mineral Appendix (XIV-Vol. G). As a result of small prospectors and private exploration efforts under the 1872 Mining Law there has been a dramatic increase in gold discoveries and production in the region. Production has increased from 5,000 ounces in 1981 to more than 200,000 ounces in 1986. New gold mines are being developed that would increase that to 255,000 ounces in 1987 and 305,000 ounces in 1988.

Contrary to Senator Cranston’s perception, there have been very few, if any, real in-depth regional studies for economic minerals other than those of individuals and companies working under the incentives of the 1872 mining laws.

Another recent example of the misperception by the public and Congress of mining and mining claims and their impact is reported by the General Accounting Office in their report, Mining on National Park Service Lands—What Is At Stake? Park Service officials testified before Congress that there were 50,000 mining claims in Death Valley National Monument and the “monument was in danger of being strip-mined away.” After Congress passed the Mining in the Parks Act in September, 1976, freezing mining in Death Valley National Monument, it was found that the 2.2 million acre monument only contained 863 mining claims under the 1872 law.

Unfortunately, out of approximately 500 small mining claimants, only two unpatented claim groups (Bullfrog and Skidoo-Del Norte) had the resources to defend themselves from what GAO labeled as a biased invalidation process by the Park Service. These valuable deposits undoubtedly would have been wiped out if they had been granted a lease under a leasing system, just as local cattleman Roy Hunter was wiped out on his grazing lease after his family had been in the Death Valley area for more than 100 years.

Parenthetically, the rancher was thrown out after maintaining the range in good condition for a century and the Park Service, with its policy of non-management, allowed the feral burro population to destroy the range, creating a huge dust bowl.

Another example of government planners and geologists’ ignorance of mineral resources is shown by the 1986 U.S. Forest Service 15-year plan for the San Bernardino National Forest in California. The plan stresses the $6.6 million per year benefit from wood products, tourism and recreation in the forest. Mining and mineral potential are practically ignored except that several areas of high-grade mineral potential are proposed for withdrawal from mineral entry. The reason usually cited for the mineral withdrawal is because of some alleged sensitive or rare or new plant sub-species.

As one whose major in college was paleontology, I make the observation that none of these new alleged sub-species has undergone the appropriate peer review to be listed as such or so as to be described as a new sub-species. However, the environmental smokescreen is being used to curtail the miners’ exploration and society’s access to the mineral resources on National Forest lands.

If a leasing system were used it would create an open season for undocumented subjective and politically motivated decisions based on so-called environmental grounds that would make most of the mineral discovery and development process uneconomical. Protections included in the 1872 Mining Law that keep the exploration process even marginal, in the face of incremental entry withdrawals plus constant harassment and pressure from the Forest Service and other land agencies, would be completely wiped out under a leasing system.

An astonishing oversight by Forest Service planners was the total omission of the fact that this National Forest contains the Lucerne Valley Limestone District, the largest high grade limestone district in the Western United States producing about 3.5 million tons per year, or about $200 million per year in limestone products. This district generates thousands of jobs and millions of dollars in federal, state and local taxes.

It is also interesting to note that the largest single owner of patented and unpatented mining claims in this district is the 6,000 co-beneficiaries of the local AFL-CIO Union Health Insurance and Pension Trust Fund (Cushenbury Trust). Conversion of their unpatented mining claims to leases would be a severe blow to these inholders and their ability to pay old age pensions and medical bills.
There is a tendency for the public and the bureaucracy to view society's need for resources in a one dimensional static framework such as Senator Cranston's statement that the land has been prospected for more than 100 years and the implication that everything has been found. His statement reminds us of the mindset in the U.S. Patent Office in the 1870s which thought the patent office should be closed because everything worthwhile had already been invented.

In reality, rapidly changing economics and technology continually change the kinds of minerals that are sought and the grades that are economic. According to Vincent McKelvey (1976), former director of the U.S. Geologic Survey (1972-1978): "Mineral reserves and resources are dynamic quantities and must constantly be appraised. As known deposits are exhausted, unknown deposits must be discovered, new extraction technologies, and new uses are developed and new geologic environments are favorable for mineral discoveries." We maintain the 1872 Mining Law is an important part of this assessment process.

There is a real danger that prospecting permits or leases for locatable minerals would tend not to be granted until the deposit is "proven." Of course, it may not be proven until an individual or company has a possessory interest that gives the incentive for risking large sums for exploration. This would tend to become a "catch 22" situation.

The leasing system on state lands for locatable minerals belonging to the State Teachers Pension Fund in California has been a total failure. Virtually all explorationists, large and small, have given up on locatable occurrences on these lands because of the lack of incentives and ownership of the mineral estate. It should also be noted that ownership of the land after mining is completed is one of the greatest incentives for reclaiming the land after mineral extraction. In California and other western states there are existing strict reclamation statutes.

The 1872 Mining Law Is America's Secret Weapon In Competition With The Soviet Union

In a 1940 speech, Olaf P. Jenkins, the chief geologist for the California Division of Mines, recognized the critical concept which was soon to be tested by the impending Second World War: "No nation on earth possesses all the various minerals needed. In time of peace, to overcome this deficiency, the necessary deficient minerals are imported. In time of war, however, restriction of importation may be so serious to certain industries of a nation as to cripple that nation both from a military standpoint and from the standpoint of internal development.

"Present day national defense should not and does not consider military defense alone, but is studying with great care that possibility (which may turn out to be much more serious) of economic warfare, should the balance of power become so unbalanced as to leave one power to dominate the earth. This could come about should one power possess all the various minerals needed in all of its industries.

"It behooves us all, therefore, who are in this work of studying minerals, their origin, development, and their sig-

nificance to the growth and existence of a nation, to look toward the strategic problems of national defense as in large part, the problems of the mineral industry."

These concepts are just as true today as they were in 1940, and they will be for the foreseeable future. However, the Soviet Union, with one sixth of the world's surface area, and the largest mineral resource base of any nation, is precariously close to possessing all of the various minerals needed to become independent of other nations.

As the Soviet Union, with its nearly three fold advantage in land to find mineral resources, expands into the vast expanse of Asia, it will likely reach total self sufficiency in strategic and critical mineral resources.

Even gold has become a strategic commodity. In time of international crisis or war, gold may be the only acceptable currency. Each commercial or military jet requires a significant fraction. The chrome-steel jet engines are welded together with gold-nickel alloy which is highly resistant to vibration and metal fatigue. A thin layer of gold is sandwiched in the aircraft windshield so low voltage current can be trickled through to de-ice the windshield.

An ordinary 747 requires about 150 ounces of gold for its construction. Gold is also in great demand for electronic components, space probes, the space shuttle and satellites.

But here we have people who want to remove our incentives and thus our exploration and development advantage which will make us increasingly dependent on foreign imports. Those people don't really understand the free enterprise system and the deeper philosophical statements made by the 1872 Mining Law. It is uniquely American.

When it comes to locatable minerals, the 1872 Mining Law is America's secret economic weapon in competing with the overwhelming Soviet advantage in mineral resources. It should be kept in mind that long term economic stability and military survival favors the society with the most diverse, accessible, productive, and secure mineral resource base.

The 1872 Mining Law has been serving this end for more than a century. The National Inholders Association sees no compelling reason to change the law.
Congressional Testimony
By Donald Fife, CPG 4735
Geologist, Non-Renewable Resource Consultant
National Inholders Association, and
Chairman, Governmental Affairs Committee, American Institute of Professional Geologists
Subcommittee on National Parks and Public Lands Committee on Interior and Insular Affairs
United States House of Representatives
Honorable Bruce F. Vento, Chairman
Hearing: California Desert Protection Act, H.R. 78
Thursday July 27, 1989

THE MYTH OF THE “FRAGILE” DESERT

It is widely perceived by the proponents of H.R. 780 that the California Desert is “fragile.” To most anyone who has lived and worked in the desert over a long period of time, this is a very debatable perception. Most long term residents of the desert know the vast majority of the desert surface is soft, erodable, alluvial soil, covering up to as much as 70 percent of the CDCA.

About 12,000 years ago, during the Pleistocene Ice Age of North America, the Pennsylvania-sized area known as the California Desert had forested mountain ranges and fertile grasslands teeming with antelope, bison, camels, and wooly mammoths.

The climate was wet compared with today; rainfall was 20-40 inches per year or more, instead of the 4-10 inches per year the area gets today. Rich soils existed, protected by a canopy of forest, dense chaparral, or grasses covered the mountains and valleys.

About 11,000 years ago, global warming (greenhouse effect) melted the North American ice sheet and the area dried out. As the climate changed, spectacular fires (dwarfing the 1988 fires at Yellowstone) swept across the region, stripping the mountains and valleys, exposing their “sensitive soils” to the erosive effects of intense rainfall.

Landslides, mudslides, debris flows and mudflows flushed these organic-rich soils into internally draining basins or down the Colorado River into the Gulf of California. Soils that didn’t end up in the Gulf of California now fill the dry lake basins of the California Desert. “Soils” with classical A, B, C, and D horizons, have not existed in most places in the California Desert for over 10,000 years! This has been confirmed by numerous studies of the area. Presently it is difficult or impossible to find more than a poorly developed “A” or “B” horizon, because the lack of vegetative cover does not protect the surface from intense rainfall. This is confirmed by Dickey, et al. (1973) A Study of California Desert Soils Subject to Recreational Vehicle Use in the CDCA (see appendix). This study was one of the few truly comprehensive scientific studies on the California Desert. The scientific team consisted of a professional geologist, soils engineer, and a soil scientist, studying 10 widely scattered sites in different terraines and micro climates of the CDCA.

The desert soil is frequently subject to flash floods, debris and mudflows, and rillwash. These factors generally prevent development of mature soils. Thus, the majority of the desert is subject to natural restoration of the surface by frequent reworking and burial (deposition) by cloudbursts and windstorms. Rainfall is the controlling geologic factor for the expected duration of most vehicle tracks and shallow surface disturbance in most areas. Proof of this is the natural restoration of the military impacts that covered the desert at the end of World War II. Millions of troops trained and rotated through almost every corner of the desert for 3.5 years. Only a small percentage of their enormous impact can still be seen on the ground in most areas where they formerly trained.

Fortunately, we cannot now see the millions of bomb craters, thousands of miles of vehicle tracks, and other military impacts that have been eroded or covered by the action of wind, rainfall, and flowing water. Frequently, the only way to observe relic tracks or bomb craters is through special high altitude photography. However, many misinformed visitors to the desert photograph the remnants of former impacts and display these photos as “proof” the desert never “heals” or restores itself.

For example, General Patton had more than 38,000 armored vehicles, their support equipment, and up to 190,000 troops at a time on continuous maneuvers in the eastern Mojave Desert for 3.5 years during the 1940’s. On isolated, upland surfaces some tracks remain, however, flash floods, blown sand and revegetation on dynamic alluvial fans have destroyed most of the original disturbance. The millions of bomb and shell impact craters were stripped of all scrap metal shortly after WW II.

Each impact made a hole in the desert, the wind deposited sand and seeds in these depressions which filled with water during the first cloudburst. Each impact became a “flowerpot.” In many places the wind deposited sand around the new clump of sagebrush...ultimately replacing the original depression with a small mound capped with sagebrush!

General Patton’s maneuver area extended from the city limits of Las Vegas, Nevada, to Indio, California eastward to the Arizona side of the Colorado River. However, most of the western Mojave Desert from 29 Palms to Antelope and Owens Valleys was also impacted by the military services.

Aside from the natural restoration of bomb craters, targets, and vehicle tracks, there is spectacular natural restoration of giant desiccation fissures on the desert dry lakes (playas) throughout the CDCA. Pumping of ground water or natural lowering of the water table beneath the dry lakes has allowed the clay deposits composing the dry lakes to dry out. This is very similar to the polygonal cracks that form when a mud puddle dries up after a rain, except that the dimensions are much greater on dry lakes where the polygonal cracks may be thousands of feet across and ten to hundreds of feet deep.

Erosion commonly creates giant caverns downward toward the water table. These features are far more spectacular than shallow vehicle tracks or bomb craters, yet periodic storms that fill the dry lakes after cloudbursts may completely restore an unblemished dry lake surface. The lake is restored without a trace of fissuring, perhaps for years before the cycle is repeated.

A small percentage of upland terraces or isolated surfaces may be slow to heal, but most of the desert is in fact subject to...
APPENDIX 9—SELECTED SPEECHES AND PAPERS BY CPGs

F. Fox

Consultants’ Column

By Fred L. Fox, CPG 1273
From December 1989 TPG

The booklet “Starting Your Own Consulting Business” is coming along. We’ve taken the classical journalistic approach, Who, What, Where, When, Why, and How, although their order is by no means clear. The W-words, of course, take up less space than the HOW of it, but obviously are no less important. The suggestion was made to bring these points into a monthly column format, which might be worth a try. It is with this in mind that we offer the following (coming under “who”).

Anyone can be a consultant. Just say you are, and you are. You might even make a go of it. Take this point of view and there’s nothing in your way. If you have a particular expertise, along with sufficient motivation and the will to succeed, it might be just that easy.

Certain types of people make good consultants. Others don’t. But both the game and the rules have changed over the past twenty years or so, meaning that the classical “consultant type” has undergone changes as well.

The word itself has taken on new meaning. Some professions (like ours) have mushroomed in recent years. Consultants now have large staffs of specialists who, because they work for a consultancy, call themselves consultants. Maybe.

Also, there’s more work available in more fields for more specialists. In the 1950s, geologists either went into mining, oil, or grad school. Hydrogeology didn’t even exist until about 1960. Now geologists specialize in virtually any branch of the science and are paid well for it. They may go even beyond their science; soils, limnology, rock mechanics and, engineering all are fair game, and hydrogeology has become virtually a separate discipline. Geologists find themselves in environmental disciplines because the physical environment really is the stuff of geology.

So the profession has opened up to the point where expertise in any number of subdisciplines has become a commercial item. Consultants proliferate under these conditions.

Specialists commonly become consultants as they gain experience, exposure, and expertise - it’s part of a natural progression. Now, however, it’s even common for a professional with limited experience to become a consultant. This works because the demand for consultants has increased tremendously. Another factor is that hard times in mining and oil have put many experienced geologists into the marketplace. And consulting has always appealed to those who want to be their own bosses.

But a consultant need not be a specialist. In this age of specialties, the generalist has become viable, if only for scarcity. This is particularly true in the environmental field, where the big picture assumes great importance.

So it’s possible for a person with marketable experience in almost any geologic subdiscipline to become a consultant. Experience, however, is not enough to make a commercial success of a consultancy. Although technical, professional, and working expertise are essential to offer a service, a consultancy is first and foremost a business enterprise and must be approached as such. And it’s equally (more?) important to possess a strong morality and ethical base and a basic understanding of people. Consulting’s not for everyone - everyone does not possess the necessary characteristics.

What, then, makes up the “ideal” consultant? How about you telling me?

And, getting basic, how about a definition of consulting (geology?) Here’s a start... Offering professional advice (geological advice, in our case) for compensation. Is it that simple?

And while you’re at it, how about some input on ENVIRONMENTAL GEOLOGY? In my mind this represents the greatest single opportunity for geologic consulting that’s ever come down the pike. If we can identify and define it, maybe we can capitalize on it before the planners, geographers, and engineers do us in.

Your influence counts, and your input’s IMPORTANT! Let’s hear from you!

“Certification of Ethics”

By Gerald V. Mendenhall, CPG 996
From November 1989 TPG

Changing circumstances require the American Institute of Professional Geologists and its members to modify their
written Code of Ethics. The Executive Committee has approved the revised Code of Ethics that appeared in the August TPG. This article is a discussion of the general philosophy of a code of ethics. A code is, for the most part, aspirational rather than compulsory. In the Canons and the Ethical Standards of the revised Code “shall” replaces “must” of the old Code; hence pathos (emotion) characterizes the Code rather than ethos (character). Further, “shall not” pervades in the Rules, the consequence of which is that definition of behavior is in the negative. So, take time to study the proposed Code and vote to adopt it.

Modification of the Code is necessary so it will conform to the revised Constitution and Bylaws. Parts of the old Code are likely unenforceable and, in fact, might not be compatible with current interpretation of the law. Obsolescence of a Code of Ethics seems inconceivable; however, the necessary changes, in part, have developed from civil rights cases where restrictive requirements in other organizations were cause for an individual being denied or removed from membership. The court determined that restrictive membership, in some cases, was restraint of trade because such membership facilitated business; and, conversely, lack of such membership hindered business opportunity.

The Code of Ethics is applicable to professionals who are applying for membership as well as those who maintain membership. In effect, the Code states that an applicant, to qualify for certification by the Institute, must not have a verifiable record of unethical behavior. Furthermore, the applicant agrees, as a member, to comply with and uphold the Code of Ethics of AIPG. If a member does not comply, then disciplinary action of various degrees may be taken against the violator for the benefit of the member’s community, the Institute.

In general, a code of ethics deals with an individual’s character which governs behavior affecting others. Ethics applies to individual behavior, whereas community behavior is “culture.” A person can be unethical and undesirable in a community, but remain legal. The community punishes those individuals who violate the code, often by shunning or exclusion from the community because they are detrimental to the welfare of the group and individuals in it. Therefore, the basic philosophy of a code of ethics, whether written or understood, is “acceptable” behavior of an individual toward others within the same group. Now, in this geologist’s opinion, the definition of “ethics” is the application of rules of conduct, including morality, that guide behavior of an individual toward others within a community. The community, whether family, tribe, state, nation, or institute, is an association of people united for common purpose. It establishes and regulates the ethics of the individual members. Enforcement is an effect of reward and punishment by the community for behavior of an individual being denied or removed from membership. The court determined that restrictive membership, in some cases, was restraint of trade because such membership facilitated business; and, conversely, lack of such membership hindered business opportunity.

Population pressure and its consequent necessities are basic in the determination of what becomes the ethics of individuals within a community. There is not much room for esthetics in ethics under the stresses of over-crowding. Ethics, revealed by intuitive responses, evolve as the accumulation of processes learned over generations through reward and punishment within a normal and accommodated.

Most modern ethics philosophers have plunged into the exceedingly tangled social issues of wealth distribution and civil rights, including the subjects of abortion, euthanasia, birth control, surrogate parentage, animal rights, and genetics. Pollution or other damage to the global environment is a new type of broad ethical consideration cutting across smaller communities. Many may think that final resolution of ethical conflicts is common. This is certainly not the case because of rapidly changing society and expanding interaction between cultures which make it a continuing process. We look for definable and static rights which may be enacted into law to provide or deny someone something. So, dictation by law replaces ethical judgment. The many special interest groups parade much trivia before the courts and legislative systems because of a perceived lack of ethical solution. The public is seeking resolution there rather than within themselves. Honorable parties to a disagreement should be able to resolve differences without benefit of lawsuit or federal solution. Arbitration is a fine example of ethical resolution between dissenting parties. Hopefully, professional ethics in a science such as geology will remain an ethical judgment and somewhat more objective (compatible with scientific reason). In the application of science we, by necessity, must cross over into economics, philosophy, welfare of the public, and the political arena. It is imperative that we demonstrate ethics by a “way of life” not just by what we have written in a code.

Certification by AIPG, in effect, says to the public, profession, and members of the Institute that this member has character and professional qualifications worthy of his peers’ testament. Should an applicant or member violate the adopt-
Basic Antitrust for Associations

By Alan B. Stover, Esq.
Legal Counsel to AIPG 1988-89

The Federal statutes of most importance in the field of antitrust law are the Sherman Act, the Federal Trade Commission (FTC) Act and the Clayton Act. The Sherman Act dates back to 1890. The FTC and Clayton Acts were passed in 1914. Over the years, the terms in these Acts have acquired specialized meanings as a result of court decisions and regulations adopted pursuant to the Acts.

It is important for association officers, directors and members to have a basic knowledge of what the antitrust laws provide. Violations of these laws can result in the exposure of an association and its members to imprisonment, civil penalties and fines, onerous consent decrees, treble damages in private civil suits, huge legal fees including the payment of private plaintiffs’ legal fees, and the serious disruption of association business.

Sherman Act

Section I of the Sherman Act is of greatest interest to associations. This section prohibits conspiracies and combinations in restraint of trade. Section two of the Act deals with monopolization and has much less impact on associations as a practical matter.

As a result of judicial decisions interpreting the antitrust laws, there are two classes of violations: the “per se” violations and the “rule of reason” violations. The classes differ in the obviousness of the injury to competition. Per se violations are obvious and “hard core” violations, about which there can be no question that there is an anticompetitive effect. Activities which courts have found to be per se violations include:

- Price fixing (including bid rigging and the promulgation of mandatory or “recommended” fee schedules)
- Group boycotts and refusals to deal
- Tying arrangements (where one has to buy one product or service in order to obtain another)
- Outright bans on all advertising
- Prohibitions on competitive bidding or on the submission of price proposals
- Allocations of customers or markets

Activities which fall into the per se category are extremely unlikely to have any other purpose than to gain an advantage over competitors. This is their very nature and the clear motivation of the participants in them. Rule of reason violations, on the other hand, involve activities for which the anticompetitive effects cannot be fairly implied. Whether a rule of reason violation has occurred depends on whether the practice actually has the effect of restricting economic competition to a greater extent than it promotes it. The focus of the antitrust Acts is solely on net economic effect. A group that has undertaken an activity that restricts competition will not be vindicated by showing that the practice produces a net benefit to society or that the motives for participating in the practice were pure.

While the rule of reason doctrine suggests that an antitrust violation which is not a per se violation cannot be proven without some credible evidence of a net reduction in competition, courts have blurred the distinction between the two classes of violations by characterizing a restraint “unreasonable on its face”. Even though these cases are decided under a “rule of reason” standard, these courts have found the practices in question to be violations without examining evidence or statistics as to pro or anticompetitive effects. Thus, there has been no practical distinction between cases which are “unreasonable” on their face and per se violations. Examples of practices which have found unreasonable on their face, and thus have been treated like per se violations, are:

- Ethical limitations on “supplanting” a fellow professional
- Restrictions on practicing in association with fellow professionals
- Advertising restrictions which go beyond forbidding false or deceptive advertising

A distinction is drawn between horizontal and vertical restraints. Horizontal restraints are conspiracies or combinations among competitors on the same tier of the manufacturing or distribution chain. For example an agreement among all members of a retailers association not to deal with a certain manufacturer would be a horizontal restraint. Vertical restraints are restraints which operate up and down a manufacturing or distribution chain. Resale price maintenance is an example of a vertical restraint. In recent years vertical restraints have received less enforcement attention than horizontal restraints, which the Justice Department believes have a greater potential for economic harm.

The Justice Department is the enforcement agency for the Sherman Act. The Act can also be invoked by private par-
ties in suits for their private damages. A private party can recover treble damages for a violation, plus its attorney's fees.

Federal Trade Commission Act

The FTC Act deals with unfair competition and unfair and deceptive trade practices, whether undertaken collectively or by an individual person or business. While the Sherman Act requires a “combination or conspiracy”, one person acting alone can commit an unfair trade practice or compete unfairly. Violations of the FTC Act include activities which would also be Sherman Act violations, as well as activities such as “bait and switch” tactics and deceptive use of a trade name.

Enforcement by the FTC is pursued through the issuance of cease and desist orders, through rules regulating broad industry practices (such as the proposed rule to regulate funeral directors), and through civil litigation before FTC administrative law judges. There are onerous penalties for failure to comply with an FTC order. In addition, private parties can invoke the Act and the treble damages provision applies to awards to private parties for violations.

Clayton Act

The Clayton Act addresses mergers, monopolization and exclusive dealing arrangements. It contains the treble damages provision which applies to all federal antitrust laws. It also includes the Robinson-Patman Act, passed in 1964 as an amendment to the Clayton Act, which prohibits discrimination in price between different purchasers of commodities of like grade or quality where the effect of such discrimination is to lessen competition or to create a monopoly.

Exempt Activities

There are anticompetitive activities which are immune from antitrust enforcement under the Federal Acts cited above. Certain activities or industries are specifically exempted by Federal statute. These include the banking and insurance industries, labor organizations, farm and horticultural cooperatives, mergers approved by other Federal agencies, and publication by periodicals of advertising material supplied by third parties.

Other exempt activities are encompassed by either the “Noerr-Pennington” doctrine or the “state action” exemption. These are judicially created exemptions.

Noerr-Pennington (named for two prominent cases which together established the doctrine) permits competitors to combine for the purpose of advocating a joint policy position before a government authority. This exemption preserves a constitutional right to petition legislative and executive agencies and preserves a constitutional right of access to the courts.

The state action exemption shields persons from antitrust liability when the activity in question is done at the command of a government authority. The state action exemption is not available for activities which are basically private and undertaken by private initiative, even though the activity may have been actually or tacitly approved by the government. For example, the action of a state professional licensing board to ban advertising will not automatically be exempt, although this action is an action of the state. In order to be exempt from challenges to its advertising regulation, the board will have to show that it was following a legislative mandate of the state as opposed to merely promoting an anticompetitive activity in the context of state proceedings.

Registration of Geologists

By Susan M. Landon, President AIPG
From Geotimes January 1990

The purpose of registering geologists is to protect the public's health, safety, and welfare. In theory, registration, also called licensing, protects the public from unqualified, incompetent, or unethical individuals. It gives victims a procedure for redress.

Geologists have a wide range of opinions on most topics, a reflection of their wide range of interests and occupations. Attitudes about registration are equally diverse. But, many geologists are uninformed or misinformed on legislative regulation of their profession, and this has resulted in needless controversy. Russ Slayback, newsletter editor for the Northeast Section of AIPG, recently asked geologists if professional geologic activity has any effect on the health or safety of the public. In a talk given to the DPA/AAPG he concluded, “By large, engineering geologists, hydrologists, and environmental geologists are emphatic in saying yes. Geologists who work with public drinking water, slope stability, residential housing development, seismic risk, landfills, hazardous waste, and leaky underground tanks do have significant impact on the public health, safety, and welfare. Generally, geologists in the so-called extractive industries—petroleum and mining—tend to believe that their activities do not affect the public, at least to a degree that warrants registration, deemed to be unneeded governmental interference in private enterprise.”

The fact that geology is practiced by many professionals who are not geologists is of concern due to the threat to public safety, and it also concerns geologists who compete with those professionals. Registration limits geologic practice in most cases to professionals with geologic training. “Lack of this legal provision,” Slayback commented, “is the open barn door through which licensed engineers and others engage in the practice of geology. Who practices geology today in our county? Among others, civil engineers, community planners, landscape architects, environmental engineers, surveyors, and architects, as well as geologists. Each of the other listed professionals is generally licensed by the state, and it is not uncommon for one or more of them to be specifically listed as required professionals in state legislation on such matters as landfill siting or remediation, and surface mine reclamation.”

More than half of the states have laws or proposed legislation regulating the geologic profession, and other states are expected to enact similar legislation in the near future. Twelve states have enacted registration statutes. The concept of registration is not unique; many professions have nationwide registration or licensing, including lawyers, doctors, and engineers.
Registration legislation has often come about because of a perceived need. Legislation that was a precursor of the Registration Act in California was the direct result of the failure in 1928 of the San Francisquito Dam. A vivid imagination is not needed to picture the possible additional loss of property and life in the recent Loma Prieta earthquake, if adequate controls on engineering geology had not been in place.

The lack of uniformity among state registration laws is a major concern of the geologic profession, because requirements vary greatly from state to state. Some of these differences may be arbitrary and resolvable, but in some cases the differences may result from legal, or even constitutional, differences. The academic requirement is usually 30 semester hours in geology, including 24 hours at the junior/senior level. Five to seven years of full-time geologic work experience is also required, with one to four years of credit for advanced degrees. An examination may be required for registration. Written exams range from two to eight hours, and some states also require an oral exam.

Most registration laws provide for exemption of geologists from registration requirements if they have been practicing geologists for a significant number of years, in recognition of their experience. This grandfather clause is necessary to prevent states from depriving some geologists of their livelihood.

University faculty are usually also exempt from registration. Federal employees are exempt in the performance of federal responsibilities according to the “supremacy clause” of the Constitution. Most states require that only one member of a geologic firm be licensed.

All states charge fees that support the administration of the registration board. Costs range from $20 to $50 for the exam and from $50 to $70 for the license, although in one state the total cost can be up to $300. Geologists who practice in more than one state find that registration fees add up quickly. Petroleum geologists may feel the cost of registration is especially onerous to them because they often practice in several states.

No registration board has a written reciprocity agreement with another board, although reciprocity is authorized in the laws of many states. But, reciprocity or comity is practiced. Eight states allow reciprocity without a written exam, and three require qualifications “at least as strict” as their own.

Some state laws give temporary permission to practice for geologists who have not registered. This privilege, which requires a fee, lasts from 30 to 90 days. Registration exams may be given only once or twice a year, and timing may be a problem if geologists moving into a state cannot extend their temporary status to the next exam date. The title given to registered geologists—qualified, professional, licensed, or certified—also varies among states.

State boards of registration usually have five to seven members, including one lay member. California has an eight-member board, including five lay members, two geologists, and one geophysicist; a quorum is five.

Few attempts have been made to standardize registration. A notable exception is the registration boards of seven southeastern states. They recently formed the Association of State Boards of Geology to develop uniform registration among their states.

The lack of nationwide uniformity in registration is a great concern to geologists. Five AGI member societies are reviewing this problem with the goal of writing model legislation that will be acceptable to the profession as a whole. The societies involved include the Division of Professional Affairs of the American Association of Petroleum Geologists (DPA/AAPG), the American Institute of Professional Geologists (AIPG), the Association of American State Geologists (AASG), the Association of Engineering Geologists (AEG), and the Society of Independent Professional Earth Scientist (SIPES).

On Nov. 11 in Dallas, these societies met and drafted for review by their members a model registration bill for geologists. The societies also released the following statement about the draft:

“The draft recognizes that the practice of certain branches of geology (such as engineering geology) ordinarily directly impacts the health and safety of the public, while practice in other branches (such as petroleum and mining geology) ordinarily does not directly impact the health and safety of the public.

“The proposed draft provides for registration of geologists practicing in the branches directly impacting the health and safety of the public and exempts other geologists but does not preclude their registration.

“There is a critical need for common registration language in order to facilitate reciprocity for our members.

“The process of perfection and approval of the draft is a high priority in light of pending legislation in several states which would mandate registration for all types of geologists.

“The committee will make every reasonable attempt to complete this draft effort expeditiously, so that a final document can be endorsed by our organizations at the earliest opportunity.”

The interaction among the geological organizations, which led to the Nov. 11 meeting on model legislation, was a reaction to the efforts of engineering geologists to legislate registration in Texas. Their efforts had earlier resulted in a document, the “Texas Geologist Practice Act,” for introduction in the Texas legislature. A modification of the Texas act was the basis for the model registration law drafted at the Nov. 11 meeting.

Efforts to register Texas geologists have attracted the attention of many Texas petroleum geologists and resulted in some conflict. However, the various groups have settled down to work together.

If engineers, who have professional registration, can put aside their diversity and unite to the benefit of their profession and the public, I am confident that geologists, with a similar diversity, can do as well.

I thank AASG and the AEG for information used to prepare this summary.
What the Students Tell Me
By William V. Knight, CPG 153
From 1990 TPG

Recently, I reported to you on what I tell the students when I speak on campuses. These discussions are usually two-way affairs. The students ask questions and frequently with their questions they tell me of their concerns. Most center around their futures and where the jobs are, how to find them, what is expected, etc.

Sometimes one or more will stay after the question-and-answer session, or contact me later. Something is bothering them, and they want to talk about it, but not with faculty present. Usually, they are graduate students. I listen, whenever possible, and what I hear frequently disturbs me. Their primary concern is faculty and administration ethics and shortcomings and how these impact the students. It is not new - such things were known when I was in college. But, it is particularly ironic that some of those who are the most critical of the ethics of others are, themselves, sometimes accused of “hazy” ethics. So often these are the youthful, bright, articulate, witty faculty members who attract and influence young students who, in their innocence, may view them as desirable role models. By the time that innocence is lost, serious damage may have been done.

I emphasize that most faculty members I have met are highly ethical and well qualified. Unfortunately, the rare exceptions taint their fellows.

The problems I will address can be classified into three basic categories, in no particular order of frequency.

1. **Intellectual dishonesty** usually takes one of two forms: misrepresentation or intolerance.

Advisors may insist on being listed as the principal author or, sometimes, the sole author of a paper to which they made very little contribution other than critical review. Sometimes, they use students to do research and prepare technical reports to clients for which the students may or may not be paid. (Term papers may turn up as reports to consulting clients, unbeknownst to either the student or the client.) The faculty member passes this off as his/her own work and collects a full fee. Related to this problem is the “publish or perish” syndrome. On some campuses, the teaching function is severely impacted to the detriment of the students, particularly undergraduates. Instances are reported of the listed instructor appearing infrequently, the class being taught by a teaching assistant whose command of spoken English is marginal. (This seems to be less common in geology than in other sciences.)

The other common form of intellectual dishonesty is most often manifested in the active advocacy of a particular cause or viewpoint, often controversial, and the refusal to tolerate contrary ideas. We see this most frequently on both sides of such things as economic and environmental issues. But, I recall hearing a fellow student belittled in 1950 for questioning the wholesale rejection of the theory of continental drift. I also remember two colleagues who were roundly criticized for daring to question the theory of plate tectonics when it came into vogue. This practice is common throughout society. But, should not those who demand tolerance from others be the most diligent in practicing it themselves? Are not college campuses supposed to be places of intellectual honesty and unending, unbiased examination of all sides of an issue? And, are not faculty members supposed to be seekers of truth? Or, are they supposed to be advocates of a particular point of view?

2. **Career planning and management** are of great concern to most students, but they seem to be getting little or erroneous guidance from some faculty members. This is thought to derive from a lack of industry experience and contacts. (As a student, I tried to find a faculty member who could tell me something about an oil company that had interviewed me on campus. None could, so I accepted the offer of another company that marketed in our area. I later learned that the unknown company was one of two regional divisions of a major oil company!) Additionally, on some campuses there seems to be a strong feeling of town versus gown, as well as an anti-industry bias. Thus, faculties are often cloistered and isolated, both socially and professionally, from their industry colleagues. This situation needs to be corrected and the responsibility for this is dual. Both the faculty and the practicing geologists need to reach out to each other. I have detected intellectual snobbery in both directions. This must be set aside, because it is damaging to both. Again, this has been a common phenomenon since time immemorial. Concurrent with this problem, perhaps to a degree because of it, is the problem of individual faculty members and departments recruiting and training students without regard to the future market for that training. As with any product, determination of future markets for geologists involves a lot of guesswork, but the guessing might be better informed and less self-serving. Also, we see some departments guiding students into specialization in a “hot” field too early in their academic training, at the expense of some of the core subjects that they will need in order to be well-trained geologists. The product, then, is too often a technician highly trained in some specialty, rather than a professional geologist. Our screening committees have seen this increasingly among applicants for certification.

3. **Faculty mobility** can cause difficulties for graduate students. When a faculty member moves to another campus, the graduate students he/she was advising may be left in limbo. They may have finished their classwork and be well along in their research and writing. Their advisor is gone; the department may have no satisfactory replacement. What is the student to do? Students tell me they have been given a few options. Typically, they are: Wait until the advisor is replaced (frequently more than a year). Change the research area to one that the remaining faculty can handle. Transfer to the advisor’s new campus (usually losing credits). Each of these results in a cost to the student of both time and money. Most students cannot afford to wait, to change research areas, or to move. It has been suggested that, when a faculty member leaves, some provision needs to be made to either (1) have the faculty member return to the campus periodically to advise the students left behind, (2) provide for an adjunct to advise these students, or (3) provide for moving expenses, full acceptance of transfer credits, and waiver of tuition differential for those who elect to move. A student
 comes to a school in good faith that the faculty and facilities will remain intact. When they do not, through some voluntary action of the faculty or the administration, should the student suffer?

I emphasize again that the great majority of faculty members and administration are highly ethical and well qualified. So, this is addressed to them only to encourage them and in the hope that they will work to overcome these problems.

Whether they realize it or not, most college departments market three products, each to a different clientele. Their research is marketed to the funders of grants. Their graduates (students) are marketed to industry, government, and academe. Their instruction is marketed to students. Without students, they cease to be colleges. Therefore, the students are the most important. The college which can honestly assure its prospective students that it constantly works to minimize the problems identified here will certainly have a marketing advantage over those colleges which cannot.

The Professional Geologist in Europe
By Richard A. Fox, President, European Federation of Geologists CPG 9571 and 1994 Honorary Member From 1990 TPG

This is a time of great change in Europe, and it is inevitable that the Professional Organizations are being affected. Some would say that we should keep our individual identities intact in each country, but the groundswell of opinion is that there is a need for mergers, and the movement for unification in geology in the U.K. is being similarly mirrored in the activities of some of the other countries in Europe.

It is common knowledge that the UK Institution of Geologists was one of the founders of the European Federation of Geologists (EFG) and at a meeting in London in 1978 the proposals to form a European Group to speak for professional geology was established.

At that meeting, Spain, Italy, and Ireland were represented together with France and the U.K. and it was agreed by the participants that the Federation should:

a. Represent the profession in European Community matters.
b. Promote the free movement of geologists throughout Europe (i.e. not only in the European Community), by mutual recognition of qualifications and harmonization of educational standards.
c. Promote regulation of degrees, diplomas, and titles of geologists.
d. Establish a common code of professional ethics.
e. Enhance long-term promotion of common policies concerning, for example, energy and mineral resources, ground water and the environment.

The representatives were particularly concerned to keep professional matters separate from educational and scientific matters. It was also agreed that it was important to make contact with persons and organizations in those countries where the professional geological institutions existed in anticipation that their experience would be invaluable.

By the beginning of 1979 a further meeting of the Group included the representatives from Belgium, Luxembourg, and Portugal, and at that meeting the title of “European Federation of Geologists” was agreed on. The constitution for the Federation was then finalized at a meeting in Madrid in November 1979, and the inauguration took place in 1980 in Paris at the 26th International Geological Congress.

Since 1980 the Paris office of the UFG has been the official office of the Federation Secretariat, and the membership has grown by the addition of the Federal Republic of Germany, the Republic of Ireland, and the Swedish and Finnish Groups.

The Federation currently represents some 40,000 geologists from the different countries of Europe, but not all those geologists are members of their national professional organization - a challenge for recruitment!

Contacts have been made with Austria, Denmark, Greece, Hungary, Iceland, Norway, and Switzerland and there is every indication that the groundswell in those countries is to either join up with one of the professional groups already in existence, or form their own separate body.

With the formation of the Institution of Geologists in the U.K. professionalism in this part of Europe was slower than some of the other countries on the Continent, like Italy, Spain, and France, which formed organizations in the middle 1960’s.

In Italy in particular, some 7,700 geologists are licensed by the Ordine Nazionale dei Geologi in Rome to practice as geologists, and they are the authorized government body to ensure that standards are maintained in that country.

Spain is the other country in Europe where a license must be granted by the Ilustre Colegio Oficial de Geologos (ICOG) in order that a geologist can then sign official reports. Membership of the ICOG stands at some 1400 and this is approximately 25 percent of the possible number of geologists working in that country.

In all the other EFG member-countries including the U.K., there is no constraint or licensing of geologists, and it would seem that with the Single Market in 1992 there is no intention by the European Community to insist on licensing.

However, each country will have a regulating body which will advise the national government on standards for geological migrants, which in Italy will be ONGI and in Spain it will be ICOG. However, in most of the other E. C. countries, it will depend on whether the national organizations meet with their governments’ criteria for regulation. Additional details on this are anticipated to be available during 1990-91.

For the U.K., the merged Geological Society and Institution is likely to be the regulatory body because of the existing Charter of the Geological Society (from 1825), and there is every possibility that the title “Chartered Geologist” will be granted to members of the Society which will give professional status for geologists in the U.K.

One of the main aims of the Federation when it was formed was to achieve “Mutual Recognition of Qualifications”
by obtaining a Special Directive approved by the European Community Council.

Enquiries in the early 1980s about the Directive procedures indicated that other professionals like the chemists had been trying for over 10 years without any success, and the geologists, without sufficient funding or administrative support, were not likely to be successful either.

However, in the run-up to the Single Market of 1992, the Council of Ministers endorsed a Directive on the Mutual Recognition of Qualifications for Professionals (No. 89/48/EEC, OJ Reference L119/16).

At a stroke this meant that all professionally qualified geologists in the E.C. would be free to take up employment in another country provided that their qualifications and training were accepted by the host country.

The discussions that took place prior to the passing of the “Directive” at the end of 1988 resulted in the other E.C. countries accepting that the regulatory bodies for the U.K. would be those that have a charter and which:

a. Award a diploma to its members.
b. Ensure that its members respect the rules of professional conduct which it prescribes.
c. Confer on them the right to use a title or designatory letters or
d. To benefit from a status corresponding to that diploma.

Thus, regulatory (or competent) authorities must be ready (after 1992) to receive applications for membership and for authority to practice or to use professional title or designatory letters and the granting of membership will be automatic if the migrant has:

a. A diploma in geology from a member-state which regulates it.
b. If no regulation exists in a member state, then:
   A 3-year qualification in post-secondary education at a university or establishment of higher education plus two years professional experience.

Thus the proposed Unified Geological Society and Institution of Geologists in the U.K. currently being formed under the existing Society Charter of 1825, but with new By-laws to satisfy the criteria of the B.C. Directive on the Mutual Recognition of Geologists, will be in a position to apply to the Department of Trade in the U.K. to become the official Regulatory Body for Geology in that country.

In the last two years the EFG has been attempting to achieve general acceptance of the title of “European Geologist” by the Community, because it was seen as a way of further endorsing the status of the professional geologist in Europe.

It is now commonly known that the engineers in Europe have established the acceptance of the title of European Engineer (Eur. Ing) through their European Federation of National Engineering Associations (FEANI). This latter organization represents some 1 million professional engineers in 20 European member-countries, which include all countries of the European Economic Community. Its main aims are “...to secure the recognition of the European engineering titles and to protect those titles; to facilitate the freedom of engineers to move and practice within and outside Europe; to safeguard and promote the professional interests of engineers.”

Thus, in a similar way, the EFG is setting out to look after the interests of all professional geologists and is trying to achieve appropriate goals as quickly as possible.

One of the problems that will arise after 1992 will be that those countries where geology is not regulated will be at a disadvantage compared with other nationals from countries where the profession is regulated in seeking to practice in other member-states.

Thus, the EFG Council is speedily moving forward to establish acceptance of the “Title,” and the proposals are:

The holder of a “valid” degree in geology granted in one of the European countries will enable that person to receive the title of European Geologist provided that he or she fulfills the general conditions of seven years of education and professional experience.

These seven years should be expressed as:

a. Have followed and completed with satisfaction an educational program at university level (or equivalent) for a minimum of 4 years.
b. Proof of completion of a minimum of three years of professional experience (or one year specialization and two years experience).

t. There is also a transitional agreement for countries (like the U.K.) where a degree is given after three years. In those cases a period of eight years of education and professional experience will apply.

The administration of the “Title of European Geologist” will be through the national associations, and like the engineers there will need to be a registration fee and annual subscription. This has not been finalized, but at the EFG Council meeting in June 1990, the basic format for the setting up of the title was tabled and currently is being considered by the national organizations.

The approaching Single Market has certainly crystallized the aims of the European Federation of Geologists and, in some ways, united the membership in a common cause.

Inevitably, the environmental aspects and the role of the professional geologist will be prominent in the activities of EFG in the immediate future, and the common wish to increase communication between all European geologists is vital to the cause. The EFG Council sees the Single Market of 1992 and the increasing links with Eastern Block countries as the important issues for the future in strengthening the voice of geology and the profession in Europe.
APPENDIX 9—SELECTED SPEECHES AND PAPERS BY CPGs

American Institute of Professional Geologists

Long Range Planning Committee Report
(Appendices omitted) 1991

THE INSTITUTE IN EVOLUTION

By
Ernest K. Lehmann, Chairman
Susan M. Landon
Norman E. Olson
Charles J. Mankin
Richard J. Proctor

I. Executive Summary

Recognizing that AIPG is a service organization whose existence, effectiveness and growth are dependent on how well it meets the needs of its members and the public, the objective of the AIPG Long Range Planning Committee is to suggest how the Institute should manage for growth in a dynamically changing professional and societal environment.

To do this the Committee has first examined the mission of the Institute as stated in its Bylaws, both as viewed by its membership and as to the continuing relevance of that mission. We looked at trends in education, employment and hiring in the geologic profession; we studied the present and past demography of the Institute; we gathered the opinions of members; we reviewed prior planning efforts both within AIPG and by other organizations; we considered the views of the Executive Director; and lastly, we relied on the experience of individual Committee members.

Based on these studies, the Committee concludes and recommends:

A. The mission of AIPG is appropriately stated in Article 1.2 of the Bylaws. The statement meets the expectations of members and represents a realistic guide for the future operations of the Institute.

B. The great strength of the Institute is its geographic and professional diversity, representing all segments of the geologic profession in every state.

C. We recommend certain specific actions be taken by the Institute including:

1. Increasing Institute involvement in the political arena at the national level through adoption and pursuit of a well-defined legislative program.

2. Increasing emphasis on national affairs by holding the annual meeting in Washington at least every fourth year.

3. Encouraging state sections to adopt well defined state legislative programs.

4. Providing increased support to state sections by national headquarters.

5. Improving the image of the Institute through:
   (a) Improving the form and technical content of national meetings.
   (b) Broadening the scope of Institute publications.
   (c) Marketing those publications more effectively.
   (d) Facilitating participation of state sections in local public and educational affairs such as science fairs.
   (e) Involving the Institute and state sections in teacher training programs.
   (f) Increasing professionalism through requiring continuing education of members.
   (g) Strengthening the Institute's involvement in review and accreditation of curricula.

6. Increasing the emphasis on professional ethics through increased discussion of ethical issues both within and without the Institute and assuring that unethical conduct by members or nonmembers will not be condoned.

7. Clarifying the Institute position on registration of geologists generally and on specialty registration of geologists.
   (a) In this regard the Committee finds that regulation is a state and not a national issue.
   (b) The Committee recommends that the position of the Institute be that it desires to reflect the views of its members in the individual state.
   (c) Where legal registration is adopted by a state, we recommend that such registration be managed by boards on which professional geologists are well represented.
   (d) We further recommend that there should be the maximum degree of reciprocity between states.
   (e) Specialty certification by professional societies is most appropriate; however in states where legislatures adopt specialty registration, it should come only as a second step after general registration of geologists.

8. Improving the structure of the Institute through:
   (a) Improvements in headquarters organization and additional career development of staff members.
   (b) Re-examination of the mechanism of selecting the Advisory Board membership.

9. Strengthening the finances of the Institute to provide for a higher level of services to members.

10. Assuring that the Institute's programs and operations continually evolve to meet that needs of current and future members.

II. Introduction

This AIPG Long Range Planning Committee was appointed by President Haydn Murray in January 1991. The charge to the Committee by President Murray was to evaluate the long-term purpose and goals of the Institute.

Appointed by President Murray to the Committee were Susan Landon, CPG 4591; Charles Mankin, CPG 1415; Norman "Ole" Olson, CPG 1611; Richard Proctor, CPG 5091; and Ernest Lehmann, CPG 583. Lehmann was designated as Chairman.

III. Objectives of the Committee

We see an essential issue facing the Institute as managing for growth in a changing environment.

This challenge should not be one to daunt geologists, for the essence of geology is, after all, the study of change as evidenced by the physical and biological evolution of the earth.
As earth scientists, we interpret, record and predict change in a dynamic physical environment. As professionals and members of the Institute, we must study, interpret, plan and take advantage of changes in the social and economic environment within which we practice our profession. Like the physical and biological environments within which we practice our science, the social and economic environments within which we practice our profession are dynamic and not static ones.

The Committee further recognizes that AIPG is a service organization whose existence, effectiveness and growth are dependent on how well it meets the needs of its members and the public within these dynamic environments.

The Committee believes that the needs of its members are broadly articulated in the statement of purposes set forth in the Institute's Bylaws, to wit:

1. to advance the geological sciences and the profession of geology;
2. to establish qualifications for professional geologists;
3. to certify the qualifications of individual Member geologists to the public; and
4. to promote high standards of ethical conduct among its Members, affiliates and within the profession of geology.

These purposes of the Institute are synonymous with the "mission" of the Institute. The directions taken by the programs of the Institute designed to accomplish this mission constitute the Institute's strategy.

The Committee, in responding to its charge, has asked the following questions:

1. Is the mission as stated in the Bylaws the same as the mission perceived by its members?
2. Is the mission appropriate and realistic in terms of the dynamic changes affecting the geologic profession?
3. Is the mission appropriate, realistic and achievable in terms of the changing nature of the Institute's membership?
4. If the mission needs to be altered, how should it be altered?
5. Is the mission being carried out?
6. How can the mission be carried out more effectively?
7. What are appropriate strategies for carrying out the mission?
8. What are present or future impediments to carrying out the mission and how could they be overcome?

The Committee believes that an ad hoc Committee such as this can only suggest broad directions and strategies and not specific short-term tactics to achieve goals. These fall within the purview of officers, executive Committee and the staff.

IV. Methodology

To examine the issues facing the Institute, the Committee relied upon:

1. Trends in education, employment and hiring patterns within the geologic profession as determined by a number of surveys, especially those conducted in recent years by AGI.

3. A questionnaire (reproduced as Appendix A) sent to current and recent past members of the Executive Committee and current officers of state sections. Of the 40 questionnaires sent out, 32 were completed, an exceptionally high response rate of 80 percent.
5. Comments of the Executive Director.
6. Review of long range planning efforts by other organizations such as AAPG.
7. The experience of the members of the Committee itself.

All of these inputs were analyzed and form the background of this report.

V. The Current Situation

In order to consider the issues facing the Institute it is first necessary to examine the situation facing the geologic profession, the Institute and its members.

1. The external environment - that will shape the future of the geologic profession:

   There are numerous developments in the larger context of world and national affairs that will exert strong pressures on the role of geology and geologists in the coming decade and beyond. Some of these are:

   A. An expanding requirement for natural resources to sustain and improve the quality of life of the world's rapidly increasing population.

   Perhaps the single most important element in allowing individual societies to develop and improve their material quality of life has been the development of low-cost, readily available sources of energy from fossil fuels, nuclear energy and hydropower.

   Rising standards of living in the developing world will require more, not less, energy, fuels, metals and minerals and reliable, clean, water supplies. At the same time, the developed societies require a continuing high level of supply of these same materials to sustain existing high living standards. However, countering this trend is the perceived decreased importance of natural resources as viewed by members of increasingly urbanized societies who fail to make the connection between their own rising affluence and the natural resource foundations of that affluence.

   B. Meeting the increasing needs for natural resources will require more, not less, energy, fuels, metals and minerals and reliable, clean, water supplies. At the same time, the developed societies require a continuing high level of supply of these same materials to sustain existing high living standards. However, countering this trend is the perceived decreased importance of natural resources as viewed by members of increasingly urbanized societies who fail to make the connection between their own rising affluence and the natural resource foundations of that affluence.

   C. The increasing internationalization and interdependence of the world, in terms of trade, communications, raw material interdependence and investment.

   D. The cessation of the "cold war", decreasing needs of Western governments to consider the "strategic" role of natural resources.

   E. An increasing concern by the general public, worldwide, of "quality of life" issues and an increasing concern with real or perceived "environmental" issues
APPENDIX 9—SELECTED SPEECHES AND PAPERS BY CPGs

Lehmann, et al.

and conflicts regarding land use in a shrinking world.

F. An increase in government regulation to protect the public health and welfare.

In spite of the collapse of the centrally planned economies and the increasing recognition that market forces must be allowed to govern, governmental regulation related to natural resource development, land use and professional practice can be expected to increase markedly in response to the concerns with quality-of-life issues. This will result in the increased surveillance by government at all levels of all professions practicing in these areas. It will result in increased exposure to legal liability of professionals. This will increase the pressure for licensing or registration of professionals.

G. Further proliferation of “information” in a high tech, news media-dominated environment.

Information, correct or incorrect, will be widely disseminated at a rapid rate. The sheer volume and detail of information will expand at a geometric rate. This will make it more difficult to sort the wheat from the chaff and more imperative to promptly correct misinformation.

H. Science will be able to measure smaller and smaller amounts of almost anything, more and more accurately, but the ability to determine the relevance of information thus gained will decrease.

I. The public will seek more and more “protection” from real or perceived hazards.

This search for protection should result in an increased need for solidly based geologic judgements to protect the public, but will also result in more and more non-geologists practicing geology, especially in environmental and water related projects.

2 The Situation Within the Geologic Profession

In the face of these pressures, what is the current status of the profession?

AGI (1989) estimates that there are 71,100 earth scientists in the United States. The employment of these is broken down as follows:

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil and Gas</td>
<td>36,000</td>
</tr>
<tr>
<td>Mining and Minerals</td>
<td>6,000</td>
</tr>
<tr>
<td>State &amp; Federal Agencies</td>
<td>8,500</td>
</tr>
<tr>
<td>Research &amp; DOE Labs</td>
<td>2,800</td>
</tr>
<tr>
<td>Consulting Companies</td>
<td>8,000</td>
</tr>
<tr>
<td>Academia</td>
<td>9,800</td>
</tr>
<tr>
<td>Total</td>
<td>71,100</td>
</tr>
</tbody>
</table>

It should be noted that the bulk of the geologists employed by “consulting companies” are in the environmental, water and engineering (“EWE”) fields. This is the fastest growing area of the profession.

Selected tables from the AGI study “Geoscience Employment and Hiring Survey 1990” are included as Appendix B to this report.

As is apparent from the above figures, the oil and gas industry continues to be the largest employer of earth scientists, and within that industry, exploration is the largest single activity. However, new hires in 1989 were almost as large in the consulting sector as in the oil and gas business. This indicates that on the horizon there is a significant shift in employment toward the EWE aspects of geology.

In the Committee’s view it is this growing group in the EWE consulting sector who have the most concern with issues relating to certification, licensing and registration.

As to the other major employment groups, from the information available, it appears that mineral exploration is the primary activity of those in the mineral industry, while research, in various guises, is the primary activity of the geologists employed by state and federal agencies and research laboratories.

Over the past ten years, the oil and gas and mining and minerals sections have experienced large-scale lay-offs of geological and other personnel. As a result, some of these people have sought employment, with or without retraining in other sections of the profession, while many others have left the profession entirely taking with them years of experience and valuable skills.

Most of those currently employed as earth scientists classify themselves as “geologists”. However, the consulting sector would like to hire people who are specifically hydrologists or hydrogeologists in preference to geologists.

Hiring practices as documented by AGI also indicate that there is a trend among employers to upgrade educational backgrounds of their staff by giving a preference in hiring to persons with at least a Master’s degree.

Other data suggest that women make up an increasing proportion of the student population and thus of new hires. They will therefore make up a larger and larger proportion of the profession in coming years. On the other hand, racial minorities make up only a miniscule part of the potential employment pool.

3. The Situation Within the Institute

To examine the situation within the Institute, we sent out the questionnaire previously described and we analyzed the demographic data available from Institute files.

A. The demography of the Institute.

Data derived from various Institute files are attached as Appendix C and are discussed briefly as follows:

Geologists first join the Institute when they are between the ages of 30 and 45. This is particularly true of new members entering since 1978. From this we conclude that the Institute must structure its programs to attract members during the early years of their career because this is the age when membership first matters to them as they become aware of their roles as professionals and as they are actively building their careers.

There is a strong bimodal age distribution of current members with one group in the 54-to-70 age bracket and the other in the 33-to-45-year old age bracket. This creates a possible disparity of interests and could suggest potential difficulties in developing a cohesive viewpoint as to Institute and professional priorities.

An analysis of specialty designations indicates an increasing trend of specialization of younger members in the EWE areas of geology, and away from the minerals sector. (When we speak of “minerals” in this discussion we mean
both oil and gas and “hard” minerals unless otherwise indicated.)

The type of specialization also results in shifts in the geographic balance of members. The preponderance of minerals geologists in the membership and especially the preponderance of oil and gas specialists and thus of older members is in the western Gulf Coast and Rocky Mountain areas. Though these areas still attract the most new members, they do so at a decreasing rate, with new memberships shifting increasingly to the northeast and midwest.

Most members report that they are “corporate employees” but with increasing age, the proportion of “independents” becomes more prominent. These older, independent geologists are most frequently in the minerals area. Younger members and those members who are state and federal employees are increasingly in the EWE geologic specialties.

Since the Institute membership, as well as geological employment as a whole, is increasingly in the non-mineral, EWE area, it follows that in order to serve the needs of its current and future members, the Institute must address the needs of the younger, growing group of geologists who constitute both the new blood within the Institute and the reservoir of potential new members.

B. Response to the Questionnaire

The responses to the questionnaire basically echo the mission statement of the Institute. The most frequent purposes of the Institute are perceived to be:

Providing ethical standards
Providing public information
Certification and registration
Information for members
Providing supporting services for geologists
Promoting the geological profession and geologists

VI. Conclusions and Recommendations of the Committee

1. The mission of AIPG

A. We conclude that the mission of AIPG, as set forth in Article 1.2 of the Bylaws, reflects an appropriate guide for future directions of the Institute.

B. We believe that Article 1.2 of the Bylaws accurately reflects, in broad terms, the expectations of the membership as to the purposes of the institute.

C. We further believe that this mission statement, if implemented by specific policies, provides a realistic guide for AIPG operate in a changing world, one that is changing both within and without the geologic profession.

2. Strengths of AIPG

We believe that one of the great strengths of the Institute is its broad geographic reach, with members in every state, and its broad interdisciplinary reach into all corners of the profession. No other geologic society encompasses the diversity and breadth of membership that AIPG does.

3. Actions to be taken

We believe that there are actions that can be taken by the Institute over the next years to more adequately meet the needs of the public, the profession, and AIPG members. Taking these actions will strengthen the Institute and produce growth in membership. These include:

A. Increasing membership participation in all facets of Institute affairs:

Active membership participation is currently limited to a narrow group of members. Participation must be broadened on the national and state level and in the Committee structures. In order to increase participation we recommend:

(1) On the national level, increased leadership and emphasis in organizing and supporting state sections.

(2) On the national level, the Institute should act as an articulate public spokesman for the profession through an increased focus on important selected political issues. This will heighten member, professional and public awareness of the role the Institute plays. It will give members a sense of having a public spokesman in the political arena. Examples of current possible issues are:

- The 1872 Mining law
- The geologic mapping program
- Solid waste rules
- Clean water legislation
- Wetlands issues

The Institute should develop, adopt, publicize and advocate a responsible position on each of a selected group of national issues.

We believe developing reasonable positions on issues of the day will place the Institute in the forefront of the profession and give members value for their money.

(3) Because of the importance and unifying effects of a coherent national policy the Institute should consider holding its annual meeting in Washington at regular intervals, perhaps at four-year intervals early in the first year of each incoming presidential administration.

B. Increasing Participation in State Section Affairs.

We believe that increased national leadership is required to generate active interest in state sections. Setting an example of national political actions as discussed above can set an example for state sections. Encouraging state sections to adopt responsible legislative programs and instructing them how to do so is the surest way to give meaning and purpose to the state sections.

The Institute should look at ways in which the national headquarters can assist state sections in developing their legislative programs.

C. Improving the Image of the Institute.

(1) Improving National meetings.

In addition to having the annual meeting in Washington each fourth year, the form, content and timing of annual meetings should be reexamined. When national meetings are held in Washington, the headquarters staff should play the central role in planning and organizing the meeting.

The substantive professional content of annual meetings should be increased through more extensive technical papers
on issues of the day and on short courses so that members can justify the cost of attendance.

(2) Broadening the scope of publications and more effectively marketing publications.

The Institute should seek authors who can produce books on geologic topics that will appeal both to the professional market and the general public and then develop a marketing strategy for such books (for example, the proposed new publication on geologic hazards). Effective marketing can become an important public relations tool for AIPG. Authorship by committee is not an effective mechanism.

(3) The state sections should be encouraged to participate in public activities such as state science fairs.

Headquarters staff should provide state sections with information on such activities and actively promote section participation.

(4) Teacher training.

State and national organizations should actively promote teacher training in the geological sciences. Activities that can be undertaken include:

(a) Awards for excellence to science teachers.
(b) Field trips.
(c) Training courses and seminars.

A regular column on teacher training activities could be a feature in TPG to increase interest in this important activity among the membership. Coordination with the American Geological Institute and its other membership organizations involved in earth science education activities is vital.

(5) Improving the AIPG’s image within the profession.

AIPG should attempt to have a regular column published in Geotimes and if possible in the GSA and AAPG newsletters written by the AIPG Executive Director, discussing professional affairs.

D. Increasing professionalism.

(1) The Institute should promptly adopt a strong position on Continuing Education.

Participation in a program of continuing education should be a requirement for continuing active membership and should be instituted as soon as possible. However, such a program should accommodate a wide variety of interests reflecting the divergent interests and career paths of members. Members at all times should understand that an initial college degree is a starting point on a professional career and not an ending point, and that continued increase in knowledge is part and parcel of professional life.

(2) The Institute should renew and expand its role in the review and accreditation of curricula.

In order to assist geology departments in their intramural situation and in order to be better able to evaluate incoming members as well as increasing protection of the public, the Institute should develop and improve its program of suggested curriculum content. It should continue and expand its efforts to assist institutions in evaluating their effectiveness in responding to societal needs for well-trained earth scientists.

E. Ethics.

Ethical conduct is an essential ingredient of professionalism. Because of the importance of this issue we discuss it separately from other professional issues.

(1) The Institute needs to improve its program to identify, discuss and provide guidelines for practical applications of fundamental ethical principles by its members.

One method of doing this is through seminars or case studies at national meetings and state section meetings, perhaps as part of a program of continuing education.

(2) The process of dealing with ethical issues and ethical violations needs to be made more visible through increased discussions of ethical issues in TPG and through guideline papers for incoming members or student affiliates.

(3) At all times the requirement for ethical conduct must be given high prominence.

Unethical conduct on the part of members or non-members cannot be condoned.

(4) Individual members and the Institute as a whole should speak out on ethical issues in all forums in which they participate.

F. Certification/Registration/Licensing.

(1) The Institute should reiterate that registration, certification and licensing are state and not national legal issues, though they are national concerns.

(2) The Institute needs to make it clear that it is not against registration; rather that it desires to reflect the needs and desires of its members in each particular state.

The Institute supports its members and other professional geologists in those states where the state section favors registration. In these states, legal registration is the preferred route supported by the Institute.

(3) We recommend that the enabling acts for registration in the several states should be broad and flexible and that detailed requirements should be worked out by citizen boards on which the professional geologists are well represented.

(4) We strongly recommend that the Institute adopt a policy addressing specialty registration.

The Institute should reiterate its position that strict adherence to the code of ethics of the Institute or to those of most professional societies will preclude members or other professionals from practice outside of their individual specialties and areas of competence.

In states where registration or certification of geologists is required by statute, the Institute should go on record as favoring the fundamental registration of those geologists. AIPG should also iterate a position that favors specialty certification by those professional societies most closely aligned to that particular specialty. In so doing, AIPG will be in step with most state boards of geology, ASBOG in particular.
However, if the geologic profession within a state wishes to pursue the implementation of specialty registration, this should come as a secondary step, after initial registration of professionals as geologists in the broad sense.

(5) The Institute should be concerned with assuring the maximum possible reciprocity, so that registration certification does not become a barrier to trade and practice. To this end, the Institute should maintain its participation, through the Executive Director on the activities of the Association of State Boards of Geology (ASBOG).

G. Structure of the Institute.

Bringing together the collective experience of the Committee in the management of the Institute, the Committee makes the following observations.

(1) The current organizational framework should be clarified to clearly delineate the position of the Executive Director who is, and should continue to be, a professional geologist, and a separate office manager or assistant to the Executive Director who supervises office and service functions of the staff.

(2) We commend the Executive Director for his dedication and efforts to contact and build state sections. This should be continued and if anything, increased.

(3) We recommend that continuing efforts be made to provide for the career development of the headquarters staff, much as the counterpart of the continuing education for members.

(4) We recommend that the Executive Committee reexamine the manner in which its members from the Advisory Boards are chosen.

The small attendance at annual meetings makes the present process unsatisfactory.

H. Finances of the Institute.

The finances of the Institute need to be addressed promptly.

(1) The present financial condition of the Institute is such that funds are inadequate to carry out required programs. Additional sources of funds need to be found.

(2) Based on responses to our survey, we do not believe that dues are currently too high when compared to the dues of comparable organizations in other professions.

(3) Dues for retirees should be reexamined.

At a minimum, the dues for retirees should be at least sufficient to cover costs of providing services to these persons. They do not do so now.

(4) An active all-out effort should be made to build a substantial endowment in the Foundation.

Such endowment increase can eventually defray a substantial share of the costs of several programs such as publications, speakers for meetings, teacher education and the like.

I. Living with Evolution

The Committee believes that this report and our conclusions are about our profession and our members living and practicing in an evolving world. Living with evolution should not be foreign to geologists.

In order to continue to flourish in harmony with this evolution, to serve existing members and to draw new members, the Institute needs to respond to the needs of members and younger professionals who we wish to encourage to become members with us.

To this end, the Institute should monitor changing demographic trends within and without the profession and continually seek to accommodate change in a responsible manner. Specifically:

(1) TPG should consider running regular columns or articles on environmental issues such as waste disposal, resource development, and ground-water contamination.

(2) The Institute should seek to define environmental geology and other new subdisciplines, reassessing educational and experience requirements if needed, to reflect changing demands on the profession.

(3) As part of its public affairs programs, the Institute should regularly respond to technical and regulatory issues of interest to its members and to the public.

(4) The Institute should seek to serve the needs of individual members by increased member services such as providing group liability, life, medical and casualty insurance.

America the Beautiful
By James R. Dunn, CPG 1347
Past-President of AIPG,
Chairman of Dunn Geoscience Corp., Albany, NY
From the National Review, July 6, 1992

Through most of recorded history, human beings have had a negative impact on their environment. Starting about 4,000 B.C. for example, the Sumerians and their contemporaries adjacent to Mesopotamia stripped the forests of the Zagros Mountains of Iran and the Taurus Mountains of Turkey, enormously accelerating the development of the delta of the Tigris and Euphrates Rivers. On the Tigris, Baghdad, once on the Persian Gulf, is now 320 miles away; Ur on the Euphrates was also a port city, and its ruins are now 150 miles from the Gulf. These ancient environmental problems still exist in the poor nations of the world, where the rate of environmental deterioration is the greatest in history.

Only the world’s wealthy industrial democracies, of all civilizations in history, have ever improved their environments in any significant way. Development has changed the face of North America - by making it green.

Before the European immigrants settled the region from the Appalachians to the Rockies, the area was a vast grazing land for buffalo herds. The Indians maintained this grassland by burning — a practice of primitive peoples everywhere.
throughout history. Thus much of the prairies and the vast buffalo herds were artifacts of the Indian culture. When the Europeans settled the area in the mid-1800s, they were surprised to see woods appear in many areas where they did not till the land. Large sections of America's Midwest reverted to natural forest cover. One of the largest areas of new woods in the world is some 75 million acres of mesquite in Texas and contiguous states. Along with natural revegetation, trees were introduced by settlers. At nearly every farmhouse, in every town, and along many field boundaries trees were planted.

However, in the East, starting with the arrival of Europeans and then in the West in the late 1800's, other trees were being cut for firewood and for lumber, and much land was cleared of forest for agricultural purposes. By the first decade of this century, tree harvesting in the eastern and western thirds of the country had reached a point where a series of articles in the New York Times predicted total deforestation of the United States.

One article even suggested outlawing Christmas trees. But even as the deforestation alarm was raised, changes had begun to occur. First, alternatives to wood as an energy source became available. And we moved energy more efficiently, so that the costs of energy sources besides wood burning became reasonable. Of equal importance, the productive efficiency of our new industries created wealth for the general public so the population could buy those new forms of energy. This was the first phase of taking pressure off our woods.

Meanwhile, progress in other areas contributed to recovery of our forests. Modern agricultural technology, thanks largely to industrial chemicals, became far more efficient, enormously increasing productivity per acre. Since we needed less land to produce food, inefficient farms, often on excessively steep and erodible slopes, were abandoned, and their land reverted to forest and the wood we used for lumber lasted longer; thanks to the greater use of wood preservatives.

In the United States today we grow more wood than we cut, and have been doing so for decades. According to the U.S. Department of Agriculture (USDA), each year we grow from 20 to 150 percent more than is cut, depending on the species. In the Eastern states more than 50 million acres of new forest have sprung up since about 1920, with over 12 million acres of that growth in the most populous Eastern state, New York. Though this is larger than the result of natural reforestation of abandoned farmland, many trees are planted by land owners: since the state nursery at Saratoga opened about 1900, New Yorkers have purchased nearly two billion new trees from that nursery alone.

Soil conservation is another American success story. Drive through the farmlands of the Midwest and you will see contour plowing, fields cut by grassed waterways, and steep slopes left untilled - all effective anti-erosion methods. And trees surrounding the fields minimize wind erosion (a surveying party observed a major dust storm in northern Kansas in 1830, before whites settled there). According to the USDA, we have reduced erosion of farmland by one-fifth just since 1985.

Another major American success is water conservation. There is good reason to worry - we are still "mining" the water of some major aquifers, removing water that may never be replaced - but we have taken many impressive strides. From 25 to 30 per cent of the stored water in the U.S. is in manmade ponds and reservoirs taking up less than 50,000 acre feet; in addition to conserving water, the ponds are used by water-fowl and other wildlife, and most are stocked with fish. Our forests retard water runoff, increasing our ground water resource and reducing erosion. In 1960 the sewage waste of only 20 per cent of the U.S. population was treated; by 2000, it will be 95 per cent. The cost of water clean-up, largely sewage treatment, has been over $300 billion, but it is mostly money well spent. Drinking water is a major problem for most of the world's people; the high quality of our drinking water has almost eliminated problems like cholera, dysentery, and typhoid.

Wildlife is also prospering. In my home state, New York, which many imagine to be covered with asphalt, white-tailed deer were once restricted to two small herds, one in the Adirondacks and one in the Catskills; now they are abundant throughout the state. The official deer harvest of about 200,000 per year in recent years is many times larger than New York's total deer population in the 1920s. (The populations of coyotes and opossums in New York are also increasing. Even moose are returning — New York's first moose - car accident was recorded in 1990.)

According to a recent survey by the USDA, turkeys are up over 250 percent in the past 15 years in 18 Eastern states. A 1991 survey of wintering waterfowl by the New York State Department of Environmental Conservation found an increase of nine percent from the average of the past decade. Canadian geese are up a striking 2.600 percent since they were first surveyed in the 1940s. In the Western U.S., the population of prong-horned antelope and elk has also increased dramatically in the past 15 years. In the Midwest birds and animals that require trees for their habitats are far more abundant than before the arrival of whites.

These environmental changes occurred even though the human population of the U.S. has more than tripled since 1900: our population's expansion did not come at the expense of our natural environment.

This is obscured by talk, so common in the context of the Rio summit, about the "world environment" The fact is, there are two world environments, that of the wealthy industrial democracies, and that of the poor, non-industrial nations. In the wealthy nations, environmental threats are largely thought of in terms of industrial chemicals. Often the problems are measured in parts per million (or per billion), and are measured on a scientifically controversial concept that one particle or molecule could kill you. The time frame for health problems from such substances is usually some indefinite future date. Meanwhile, we continue to live longer.

Environmental problems in the poor nations are measured in terms of worn-out or lost soil, decreased agricultural productivity, depleted forests, threatened habitats for virtually every species of wildlife, decreasing water resources, rampant disease, and starvation. Their environmental problems are immediate and likely to be related to the next meal. And they are likely to persist unless economic development lifts their people out of poverty.

Indeed, by seeing technology, industry, and free enterprise as the causes of environmental problems, we make
these problems worse. Maurice Strong, secretary general of the Earth Summit, actually claims “we may get to the point where the only way of saving the world will be for industrial civilization to collapse.” This is not environmentalism, it is Luddism. Is it any wonder that Dr. Mostafa K. Tolba, executive director of the UN’s Environmental Program, hears “loud complaints from a number of developing countries that the rich are more interested in making the Third World into a natural-history museum than they are in filling the bellies of its people”?

The Geologist and the Engineer

By James Hadley Williams, CPG 0374,
Director, and Brian J. Swenty, Chief Engineer,
Missouri Division of Geology and Land Survey,
Missouri Department of Natural Resources,
Rolla, Missouri—From 1992 TPG

Several years ago, along the flooded Rhone River between Switzerland and France, the only bridge safe for the river crossing was a Roman structure built some two thousand years earlier. One of the more costly mistakes made by individuals, professions, and civilizations is the failure to retain or to use the knowledge and insight of those who have gone before us. Perhaps some excuses are acceptable. One that is not, however, began in earnest more than 100 years ago: the separations of the geologist and the engineer. The matter becomes even more deplorable when one sees an attitude, now abandoned by most labor unions, still exists in parts of the United States where job descriptions are guarded with extreme jealousy. That jealousy puts one profession down as a technician and the other profession as one of wooden-soldier performance. The result diminishes the value of both professions and does the public great harm. Fortunately, that attitude historically has not been widespread in Missouri.

Let’s go back to the Rhone River for a moment. Why was the old Roman bridge usable and the “modern” bridges either washed out or not accessible? Likely, a number of circumstances contributed to this. The Romans realized that bridges and other transportation routes had to be sturdily built and had to rest on firm foundations. Writings still remain that show the Romans incorporated such concepts including comments on geologic matters. As recently, as the early 1800’s, William Smith, one of the founders of geology, made a successful and productive mix of geology and engineering. Whose fault is it that these two professions worked closely together 2000 years ago, but the same is not true today? All indications are that both the engineer and the geologist have an equal share of the blame.

The separation of engineering and geology begins at the university level. Young people are introduced to geology and earth sciences in grade school, but few understand the meaning of the term “engineering”. Most university geology departments are located in the School of Arts and Sciences while engineering departments can be found in Schools of Mines and Metallurgy and Schools of Engineering. A common argument in academic circles today is whether engineering students receive enough training in liberal arts and sciences. Perhaps society has constructed a wall between the geology and engineering professions by requiring too much specialization in universities at the bachelors’ degree level.

Few would argue that geology is the most diverse of all the sciences. Some facets of the profession require a geologist who is capable of observation and experimentation in the greatest of detail and record keeping with meticulous descriptions. Many geologic answers cannot be obtained in the laboratory by measuring the properties of natural materials. Many geological reports, prepared carefully and recorded in extensive language and calculations, still do not conclude with an absolute answer. That can be frustrating to the engineer, who must use the information to make sound design decisions for construction. Geologic mapping, sampling, measuring, and other work that is required to determine earth properties are sometimes misconstrued as technician-level activities when viewed from a distant office. This contributes to a misunderstanding of the two professions.

With regard to professional engineers, the litigious society in which we live demands that engineers take precautions in the design and analysis of facilities used by the public. It is the opinion of many professional engineers that this has led to a decline in innovative practices. A close look at the insurance industry indicates that liability insurance rates for design professionals have continued to skyrocket over the past several years. The American Society of Civil Engineers (ASCE) recently published a booklet concerning the quality of constructed projects. It was an attempt to describe the responsibilities of the engineer, owner, and contractor in project design, management, and construction. This effort was prompted by recent building failures such as the Hyatt Regency Hotel collapse in Kansas City. Although the report was criticized by some, it was lauded by many as an attempt to define responsibility while promoting cooperation. This leads to the question, “Should the engineering and geological professions also publish a technical paper on the responsibilities of the engineer and geologist?”

Many times the scope of work of the two professions overlap. For instance, the design and construction of earth and concrete dams requires knowledge of the underlying geologic strata, the stress strain behavior of the rock. The permeability of the rock, the characteristics of the valley alluvium and colluvium material, the location of ground water, and the estimated distribution of seepage through the foundation after the reservoir is complete. The owner of the project is best served by a team of engineers and geologists who cooperate and collaborate on the field data and design of the foundation. In many cases, grouting is required, and the success of the grouting program dictates the design. Simply drawing a line between the bedrock and the base of the core trench doesn’t differentiate the responsibilities of the two professions. Yet many owners want a professional to be responsible for the engineering and construction of the project as well as the geologic aspects of the design. This is one of the many reasons why geologists are now registered in fourteen states and certified in three others. If problems develop after construction is complete, the refined art of “finger-pointing” begins. Is it
any wonder why many professionals cannot agree when they are forced to analyze data under the shadow of lawsuits?

How are these two professions, once in harmony and now split as if by continental drift, going to be knitted back together as a cohesive force in the interest of public welfare and safety? To a considerable extent, that is happening today. It has happened at Missouri’s Division of Geology and Land Survey (DGLS) for the past fifty years. The DGLS staff represents a mix of professions today, but that was not the case fifty years ago. At that time, the staff consisted primarily of geologists, and their work included determining proper casing and sealing depths for engineers designing public water supplies, examining dam sites with engineers, and evaluating quarry sites. The State Geologist was an ex-officio member of the State Highway Department and provided advice and recommendations relative to highway planning and construction. Geologists were equal in the professional world in that department until that position was considered unnecessary. A few years later, the highway geologists were officially named technicians. This diminished role of the highway geologist may soon change due to the increasing emphasis on environmental impacts.

Perhaps one of the finest examples of blending the two professions for one goal was the work of Karl Terzaghi, the father of soil mechanics. The principles of investigation and analyses that he developed find their origin in both geology and engineering. Soil mechanics is a classic example of a discipline that is concerned with both the processes of formation of materials and the properties of those materials as related to construction. It is recognized as a link between geology and engineering. It is the greatest of good fortune for both the engineer and the geologist that Terzaghi was able to place engineering principals into the world of the geologist while recognizing that geologic concepts must also prevail. It is for this very reason that geologists and engineers must carry on this tradition of cooperation.

Many consulting firms and federal agencies use matrix management techniques with their technical personnel. They develop multi-discipline teams of engineers, geologists, geophysicists, biologists, and other scientists for site selection and evaluation, feasibility studies, and preliminary analysis. The present economic climate in this country mandates a high degree of care in the analysis and design of projects. Public funds are dwindling and the demand for those funds is highly competitive. It is certainly time to set aside any pre-conceived notions or jealousies between geologists and engineers. The standard of care used by attorneys and judges to evaluate the performance spirit of cooperation between the professions that both can continue to serve the public in a competent manner.
The causes of these misfortunes, all based on actual cases, are geologic hazards—geologic phenomena that present common risks to life or property. They resulted when individuals or whole communities made plans based on insufficient consideration of the geological characteristics of the area. Ignorance is the primary catalyst that gives geologic hazards special power to injure. Citizens who acquire an education in geology are not as prone to experience loss of life and property from geologic hazards, nor are they as likely to purchase land that is actually unsuited for the uses for which it is intended.

Too often, available geological expertise and knowledge are not considered in policy decisions that, if affect water quality, land use, waste disposal, and domestic and industrial hygiene standards. This may be the result of too few Americans obtaining enough education in geology to enable them to appreciate the importance of that science in environmental applications.

An example of the benefits that arise from an educated public can be found in the field of health. Longevity and well-being have not resulted simply from medical breakthroughs and knowledge held by a few experts. Widespread benefits came possible only after an educated populace understood the causes of illness and took action themselves by practicing hygiene, mandating vaccination, and consulting experts directly regarding medication. Education fails most severely when knowledge pertinent to public welfare is not effectively delivered from experts to the public at large. The years 1990-2000 have been designated as the International Decade of Hazards Reductions. As we approach the 21st Century, we find that education in the earth sciences has not reached the American public to any degree comparable with that of life or health sciences. Geological illiteracy is compounded wherever earth science courses that are available are poorly taught. Some schools, even colleges, have presumed that “Anyone can teach earth science.” W. Phillips (Geotimes, v. 36 n. 2, February 1991, pp. 56-57) noted that 50 percent of teachers now providing “earth science” courses have themselves taken only two courses or less in earth science. This leads to standards not tolerated in the science disciplines of mathematics, biology, chemistry and physics—namely teachers without degrees or significant training in a specific science assuming the responsibility for teaching it.

One reason that many geological processes pose as hazards is that the understanding and ordering of events in terms of geologic time or deep time (immense spans of time that encompass natural events that are seen to recur every few centuries, every few thousand years or even through tens of millions of years) is not taught to many citizens. When one understands the way these processes act through time, then one really understands the degree of risk, without being drawn into either the complacency produced by ignorance or the worry produced by wild speculation and exaggeration.

This book is a very practical kind of science book because it is designed to allow the reader to use the interesting information, evaluate whether the hazards threaten one’s own property and then obtain help in making detailed assessment, planning remediation and even in obtaining insurance protection. Sources of help are primarily in Appendices A and B. Preliminary drafts of this book have been used in college courses for civil engineering students as their first introduction to the science of geology in its applied aspects.

The text is augmented by many color illustrations, and a person without geological training can quickly comprehend the content. Because geologic hazards are not covered in many introductory earth science or geology courses, this book is a useful supplement in these courses. Lists of additional references follow the discussions, and these should satisfy the extended curiosity of even the college professor of geology. In accord with the common availability of video-cassette players in homes and schools, we have also compiled lists of videotapes available on the topics of geologic hazards. Educators will find the listing of videotapes particularly useful.

Water pollution, waste disposal, and probably global warming and ozone depletion are technological hazards that require thorough knowledge of geology in order to understand and deal with them. These broad areas are also inter-disciplinary with biology, engineering, chemistry and environmental science. Here, we focus primarily on those natural hazards that lie well within the area of geology.

Each chapter in this book was reviewed by a specialist, and the statements given in these chapters are based on the best resources that were available at the time of writing. Some topics such as asbestos and radon are controversial, and we have attempted to present the conflicting arguments in the most balanced manner possible. The statements made herein reflect the authors’ best representation of current knowledge, but do not represent any official policy or endorsement of the American Institute of Professional Geologists.

Geological phenomena are fascinating, and the attraction to learn more about them sends geologists into the field, sometimes scurrying up active volcanoes, or into the laboratories where even late at night it becomes difficult to tear one’s attention away from the thrill of discovery and learning. Geologic hazards make fascinating science, as you, the reader, will soon discover. You will enter the subsequent pages for a guided tour of a dynamic planet as it affects the sites where we live and work, and you’ll emerge from these pages seeing local homes, hill slopes, highways, dams, rivers and seashores in ways that you never saw them before. Welcome to a wonderful and useful learning adventure!


“The minimum qualifications for membership in the Institute are: Membership in a scientific society.”

This provision was once a part of AIPG’s Bylaws. It is no longer, much to the displeasure of a number of our Members.
It was progressively modified, then abandoned several years ago, reportedly to reduce the costs of membership. Many believe that it also reduced professional responsibility.

The founders of AIPG understood the distinction between a professional society and a scientific (or "technical") society. Unfortunately, that understanding seems to have become blurred in the minds of many geologists...and others.

As distinguished by AIPG, a "professional" society is concerned primarily with the legal and public standing of a particular occupation and with the quality of the services which its practitioners offer to the public; whereas a "scientific" society is concerned primarily with scientific inquiry.

It is important for "professionals" to be interested, and to participate, in the science which they practice. Thus, they were (and are) expected to be active in the scientific organizations appropriate to their line of endeavor. A "professional" is an active member of a scientific society for the purposes of encouraging scientific inquiry and of sharing, and learning, the results of that inquiry in order to foster constant improvement in the quality of the professional services offered to the public.

The scientific society concentrates on promoting scientific investigations and publishing their results. Communication consists primarily of sharing scientific information with the investigator's peers and secondarily in sharing it with the public. Attention paid to relations between the scientist and the public is subordinated to that between scientific colleagues and peers. Thus, most of the society's publications are aimed at disseminating scientific information among that particular science's practitioners.

The professional society, by contrast, generally leaves scientific inquiry to the scientific societies and concentrates on delivering to the public usable services derived from that inquiry. Communication usually consists of (1) providing to the public a method of assuring quality of professional services, e.g., "certification"; (2) educating the public to the value of those services, i.e., "lobbying" both the general public and the government; and (3) promoting the professional and civic development of its practitioners. The hoped-for ultimate result is expanded employment opportunities for its members.

In order to do this properly, it is necessary for the professional society's members to be scientifically competent, to conduct themselves ethically and to meld competence and ethics together in integrity, i.e., soundness. One may be competent and one may be ethical, but unless one is both and brings them together effectively, one is not necessarily sound.

AIPG is the only organization in the United States, serving all geologists, whose primary purpose is "professional". All of the others are primarily "scientific", or "technical", or otherwise limited in their scope.

As the society serving the profession (as contrasted with the science) of geology, AIPG is in the forefront of efforts to (1) provide standards by which geologists can be measured and to identify to the public those geologists who are scientifically competent, and ethically and professionally sound; (2) inform the public and government; and (3) keep geologists aware of scientific, business and political developments in their field.

To accomplish this, AIPG's principal activities are in (1) professional certification, (2) public affairs and (3) the education of geologists in professional, business and public affairs (as contrasted with purely scientific education). This is a unique role in our profession. No other geological society serving the whole profession has these activities as its principal focus. Yet, these activities are important, indeed essential, to the future of geology as a viable occupation. For, without them, we could conceivably become merely an intellectual curiosity. Most of the services which we provide to society would then be provided (probably less competently) by others who would combine minimum geologic knowledge with other skills. We could cease to be an "applied" science and become solely a "pure" science, with progressively fewer practitioners. And, the public would then be poorly served. (If tempted to regard this as an exaggeration, consider the statement of one prominent engineer in addressing an AIPG meeting. He declared that geologists have, by default, given away more work than they will ever have. If geologists had not been so self-limiting and surrendered the fields, such professions as reservoir engineering, geotechnical engineering, mining engineering and soil science would not now be doing so much of the work that is naturally geologists'.)

Scientific societies frequently have difficulty communicating with the public. On the other hand, professional societies, such as AIPG, are designed with that as their primary purpose. When the functions of both are combined in one society, often the result is either (1) neither function is performed well, or (2) one function is performed well, while the other suffers neglect. In the case of (2), the function emphasis tends to change as the composition of the governing body changes, bringing the overall result back to (1). It is an old truth that two masters cannot concurrently be served effectively. One of them will always demand preference. Thus, both professional and scientific societies are needed.

All professional geologists should support both a scientific society and a professional society. They likely will participate more in one than in the other. And, the focus of their participation will change from time to time, as their circumstances change. While the functions which the two societies are designed to serve in a professional's life are distinctly different, both are essential.

Now That I Am A Registered Geologist, Do I Need To Keep My AIPG Membership? YES!

By Ronald A. Baugh, CPG 4607, President, National Association of State Boards of Geology (ASBOG). From 1995 TPG

This question can be answered by examining two items:

1. The differences in the functions and services provided by state registration boards and by AIPG.
2. The two entities relationships with the geologist.
Registration boards are set up fundamentally for the protection of the public. The primary function of a board is to make sure that the public is receiving sound geologic advice from practicing, registered professional geologists.

Registering as a professional geologist creates a relationship between the state and the individual geologist. The registration board establishes that the individual has met or exceeded the statutorily set levels of education, experience and knowledge prior to being registered as a professional geologist. For a geologist, this approval of registration by the board enables him or her to publicly advertise as a “Geologist” or “Professional Geologist,” and grants the geologist the right to “sign off” on (assume responsibility for) one’s own professional work.

A board of registration is (normally) charged with protecting the health, safety, and well-being of the public. The board exercises its responsibility by detecting and halting the practice of geology by unqualified or unlicensed individuals. The board also identifies and disciplines licensed geologists who are negligent or incompetent, or who practice their profession fraudulently. It is the board’s responsibility and authority under state statute to identify and admonish anyone practicing geology, who would mislead or endanger the public. The boards available sanctions for negligent, incompetent, or fraudulent practices include a formal reprimand, suspension or loss of license, fines, and even imprisonment. These sanctions are administered and enforced by the state.

Registration boards have a responsibility to provide lists of qualified geologists to other state agencies and to that portion of the general public which may require the services of professional geologists. Many segments of state government and the public are becoming aware of the services, skills, and knowledge which professional geologic training offers, and they are demanding registered practitioners for all types of geologic applications.

State registration boards also strive to help their registrants become licensed in other states by establishing agreements between states for reciprocity and comity. To do this, boards are attempting to institute uniform registration requirements from state to state. These uniform requirements normally require a board to petition its legislature for changes to existing state statutes. Or a board may propagate new rules if there already exists statutory authority to identify and admonish anyone practicing geology, who would mislead or endanger the public. The boards available sanctions for negligent, incompetent, or fraudulent practices include a formal reprimand, suspension or loss of license, fines, and even imprisonment. These sanctions are administered and enforced by the state.

AIPG is a professional organization that provides certification for members based on competency, integrity, and ethics. This certification process requires, in most cases, the same kinds of information necessary to become registered by the state boards; that is, official transcripts, work histories, and professional references. The minimum requirements for certification, however, are set by the geologic profession itself, rather than through a legislatively process with opportunities for public comment. The primary purpose of AIPG is to recognize professional geologists and to provide services to the practicing professional.

AIPG provides a broad spectrum of services to its members, including a monthly magazine (TPG), the annual directory, and a variety of other specialized publications. AIPG closely monitors the political activities of state and national governments regarding pending legislation that may affect its members. Other services offered to the professional geologist include a job bank with an employment referral services, and continuing education through publications, seminars, short courses and field trips. State sections provide geological activities (field trips), work on local political issues, and provide a forum for professional interaction.

In addition, AIPG offers practical services to its members, such as group-rate insurance, including liability, accident, health, and life.

One of the potentially most meaningful membership services of AIPG is that of ombudsman. Because many states now require registration to practice geology before the public, state boards can have a great impact on an individual’s ability to make a living. Many individuals are highly uncomfortable or totally intimidated by the mere thought of even appearing before a state registration board, for whatever reason. In such cases, the state section of AIPG, or even the national office (depending on the circumstances), can intervene on behalf of an AIPG member and help present his or her case to the board. The individuals know that there is support in numbers, and it is reassuring that they are not alone while presenting their case. This can be extremely important in building the individual geologist's confidence and providing for the best possible presentation of his or her case. In the end, this may be the difference between practicing geology and selling shoes.

In summary, state boards provide registration to geologists by state statute. Boards are state regulatory agencies representing the public first, and the interests of the registrants second. On the other hand, AIPG is a professional organization that provides certification of its members. AIPG represents its members first, and provides general geologic information to the public secondarily. The two entities are similar in that both deal with professional geologists, but they have little other true overlap in purpose, intent, function, or control.

The answer to the question, “Do I need AIPG membership now that I am registered,” is a resounding, YES.

AIPG of the Future
By William J. Siok, CPG 4773
From 1997 TPG

What type of an organization will the AIPG be as we head into the next century? Are we destined to be a five-thousand-member organization with limited professional and political clout? Or can the AIPG represent a much larger number of like-minded and professionally united geologists with the wherewithal, collectively, to promote society’s and our own self-interest? If we do not more-effectively address the professional and career concerns of most US geologists, we cannot survive into the future as anything more than a respected, but non-influential, professional group.

Revised AIPG Bylaws are close to being a reality. The revisions will allow, among other things, participation in the AIPG as a full-fledged Member by any qualified geologist.
The revised Bylaws were difficult to fashion because they recognize the rather painful reality that our chosen profession, geology, no longer offers to its adherents and proponents the career opportunities which once existed.

We geologists are in serious trouble from a career standpoint. Young students of the science are not advised that they will, in all probability, not be able to find work practicing geology. In the future, aspiring geologists may be forced to accept geologic training as one component in a series of skills (i.e., engineering and law) which will be necessary to secure professional jobs. Experienced geologists are finding that a once cyclic marketplace is probably at a permanent standstill, and that if one becomes a casualty of downsizing, the path to the next paycheck may be in appliance sales. If one is fortunate, maybe the geologic skills can be used in high school teaching.

The AIPG was founded a full decade before the onset of all the Federal environmental statutes which gave rise to new and different professional career opportunities for geologists. We geologists may now have experienced the final boom cycle in the petroleum industry. We certainly have seen the end of growth of opportunity in the environmental arena. If there are no futures in these two major arenas, what kind of future can possibly exist for academia? If careers and jobs do not exist in the commercial sector, why would a need continue to exist for stand-alone academic training, except perhaps as a purely intellectual pursuit? I'm of the opinion that we geologists are not particularly indispensable as a professional class.

We must take action to assure the AIPG has a continuing and increasing role in the professional, commercial, social, and political institutions in the USA which affect our profession. I would like to propose that we place increased emphasis on simultaneous growth of the AIPG and upon focused lobbying efforts to recognize the contribution/role of geology in today's society. Prospective members must be persuaded that AIPG membership is beneficial.

Under the previous bylaws, membership was essentially restricted to geologists practicing in the field and capable of meeting the requirements for certification. Within the context of the revised bylaws, prospective Members are found not only among geologists currently practicing, but also within the ranks of geologically trained academicians, including those at the elementary, secondary, and university levels. “The challenge is to develop a reason for such individuals to lend their financial support and contribute some of their time to the AIPG.

Part of the possible allure to prospective members may lie in the ability of the AIPG to offer a clearinghouse for information relating to the professional marketplace for members who are forced to deal with the diminishing job market for qualified geologists.

In regard to the issue of greater recognition within the public domain, I am of the opinion that we should consider the possibility of some level of association with one of our larger sister organizations like the American Association of Petroleum Geologists (AAPG) or Association of Engineering Geologists and that we could perhaps emulate some of the representational practices of the eminently successful National Society of Professional Engineers (NSPE). With regard to the former, I believe we should explore, within the context of the less restrictive membership guidelines contained in the new Bylaws, a co-operative effort with a sister organization to create a broad-based lobbying effort supported by both organizations.

Perhaps one of the first activities of a mutual effort would be the definition of geologically related public health and safety issues which are common to all or most areas of the USA. (For example, water supply: both from the perspective of quantity/accessibility and quality/protection. This extremely critical issue is now almost the sole domain of professional engineers, although I know geologists are involved.)

The objective of this effort would be the establishment of a fundamental set of professional public health and safety related “responsibilities” for geologists, with the ultimate objective being the establishment of a national licensing/oversight program for the practice of these responsibilities, similar to the regulatory program now utilized for Professional Engineers. (I know there are significant philosophical differences of opinion among AIPG members regarding geological registration. However, registration is a reality and appears to be increasingly common. I believe we should take advantage of registration's potential for providing a platform to nationally unify professional geologists.)

Whatever one's point of view regarding the future role of the AIPG, we should be capable, as professional geologists, of pulling in the same direction in order to assure a future for the organization, for the young geologists currently in training, and for ourselves.

How would membership react to establishment of an AIPG clearinghouse, available to members, for exchanging information about business/job opportunities? Perhaps this could be a way of providing an immediate and tangible incentive for membership. Could this be a first step towards the establishment of a larger, more representative, and more influential AIPG?

---

**Junk Science, Geologists and the Judicial Process**

*By Robert J. Weimer, CPG 98 with Kathy Shirley*

“Junk science” has become a major area of concern in America's courtrooms in recent years—so much so that the term is now a legitimate term in the legal profession.

But while questionable science is a problem judges and juries are grappling with nationwide, it is also an issue scientists in all fields should be examining within their own ranks.

Junk science is a frequently debated subject in relation to court testimony, and is defined as material introduced that can be demonstrated by peer review to be incorrect.

However, until 1975 junk science was not a major issue. Prior to 1975 the vast majority of courts adhered to the "Frye Rule," which originated in 1923 and stated that a court
should exclude expert scientific evidence based on a theory or method not generally accepted in the scientific community.

But in 1975 newly established Federal Rules of Evidence changed all that. Federal Rule 702 said scientific evidence is admissible if the proffered expert qualifies as such and his testimony “will assist the trier of fact to understand the evidence or to determine a fact in issue.”

Under the Frye Rules general acceptance test the determination of what is appropriate scientific evidence for legal purposes was primarily in the hands of mainstream science.

However, the Federal Rules of Evidence also gave judges more freedom to determine if questionable scientific testimony would be helpful and thus admissible.

It appears rationality may be returning to the courtroom—in some instances.

For example, in 1993, in a case called Daubert vs. Merrell Dow Pharmaceuticals, the U.S. Supreme Court ruled that judges should be “gatekeepers” and screen out testimony that relies on faulty science.

The Supreme Court sent the case back to the ninth Circuit Court of Appeals and in January 1995 the case was dismissed. A three-judge panel ruled in an unanimous opinion that the science offered up by the plaintiffs’ experts was inadequate. The court pointed out that none of these experts’ findings had been published in scientific journals or offered up for peer review.

Another example came late last year, when a judge in a silicone breast implant case in Oregon took his role as “gatekeeper” seriously—and may have set a precedent for future court cases relying extensively on scientific testimony.

The federal judge impaneled a group of experts to sift through the scientific evidence prior to a trial. After the panel had studied the materials, the judge held a hearing where the scientists heard lawyers and the expert witnesses discuss the evidence. Each panelist submitted separate reports to the judge, and based on those reports he ruled that evidence linking silicone breast implants to autoimmune disorders in about 70 women was too weak to be presented to a jury.

Many believe that the procedure the judge used in this case to exclude the evidence may provide a model for other high-profile cases where scientific evidence is in dispute.

Junk Geology?

So, what about geology? Do geologists contribute to courtroom “junk science”?

Absolutely! Here’s an example of a trial to determine the fair market value of mineral rights condemned under the Denver International Airport.

I was hired by Union Pacific Resources, owner of the condemned mineral rights, to testify to the area’s petroleum geology and to coordinate his studies with petroleum engineers and geophysicists.

Much of the expert testimony by the city of Denver witnesses was “junk science” that could not withstand a peer review like that used in the Oregon case. Misleading statements included:

The Muddy (J) sandstone, a petroleum productive sandstone within and surrounding the airport, was called a deep water marine sandstone deposited by sediment gravity flows. Peer-reviewed publications describe root zones and paleosols indicating that the interpretation was incorrect.

Undeveloped land within the airport was classified as wildcat acreage, even though no drillable tract was greater than two miles from production and some tracts offset production.

Two plugged wells were interpreted as water-bearing based on low resistivity log measurements, despite the fact that the airport is known to be part of the basin center petroleum occurrences with no water legs identified in fields or pools.

Attorneys for the city of Denver built their case of a low market value by discrediting geology and geophysics as predictive tools and asserting that geology was not an exact and predictive science. They attempted to prove this by using three different geologists, working independently, who disagreed with each other on many points.

Their efforts were successful in establishing a lower value for the mineral rights by designating acreage as high risk wildcat, rather than as development acreage.

In a case like this where there are few case histories to establish precedence in setting fair market value of mineral rights, the court’s ruling in favor of “junk science” can establish a precedence for future cases—bad geology makes bad law.

Professional geological societies need to be addressing the problem of “junk science” in our court system. All of our professional reputations are at stake to some extent. As professionals we need to do a better job of policing ourselves.

*Excerpted from the April 1997 AAPG Explorer. Kathy Shirley is the Explorer correspondent.

What Are Professional Practices And How Do They Relate To Professional Ethics?

By David M. Abbott, Jr., CPG 4570


Professional practices involve the specific ways particular professional activities, sampling for example, are conducted. Particular practices are not normally regarded as having the moral character of professional ethical provisions. Yet there can be an ethical aspect to sample collection. For what purpose am I taking this sample? Is the sample I’m collecting representative of what I’m sampling? Have I selected and executed the appropriate sampling method? Can the samples collected three years ago for one purpose be appropriately used for another?
The licensing of geologists provides a different example. Whether licensing of geologists should or should not occur in a particular jurisdiction is not an ethical question per se, although ethical considerations may be part of the debate. However, once licensing is established, then since ethical practice includes practicing in compliance with all applicable laws and regulations (Standard 2.1), compliance with licensing becomes an ethical issue.

Recognizing the overlap between professional ethics questions and professional practice questions, in launching the PE&P column I wrote, ‘I’ve titled this column ‘Professional Ethics & Practices’ because although different, professional ethics and practices tend to be closely related subjects. Good professional practices can be employed to avoid ethical problems. Consideration of ethical issues often prompts suggestions for good professional practices.

For example, while employed by the U.S. Securities & Exchange Commission I read a lot of geologic reports, some professionally done, some not so. I’m surprised at the number that are undated. Even more reports omit a description of the scope of work performed. Reports lacking such basics are more frequently the subject of inquiries into professional competence and are more easily misused by the unscrupulous. The suggested professional practices, namely dating your reports and including a scope of work, are obvious results of such report reviews.

Professional practices include procedures, policies, guidelines, and standards. Some of these have been formally adopted by a group such as AIPG or the American Society for Testing and Materials (ASTM), some have been published, some are informal, and some are the ‘rules of thumb’ known to practitioners in a particular field or district. Procedures, policies, guidelines, and standards are different things.

Procedures specify the way something should be done, such as AIPG’s Disciplinary Procedures (included in this book). Policies specify approaches to a particular task. AIPG’s Policy on Environmental Investigations and Audits and Policy on Appraisals of Mineral and Related Interests are in this category. AIPG’s Policies and Procedures are subdivided into those relating to the professional activities of geologists generally and those relating to the administration of AIPG’s internal functioning.

Professional guidelines and standards are often more formally proposed and adopted. The ASTM, the American Petroleum Institute (API), and the International Standards Organization (ISO) are among the best known organizations in North America promulgating guidelines and standards affecting geoscience practice. But other organizations publish guidelines and standards affecting particular aspects of geoscience practice. Government laws, rules, and regulations can contain guidelines and standards as well. As with many ethical issues, debates over the need for and specifics of various guidelines and standards can be vigorous and last a long time. For over ten years now, I’ve been involved in debates over the definition of mineral resources and reserves and requirements for determining that resources and reserves exist at generally understood levels of assurance.

APPENDIX 9—SELECTED SPEECHES AND PAPERS BY CPGs

Are Ethics Being or Doing
By Fred L. Fox, CPG 1273
From January 1999 TPG

For years I’ve sought to define ethics in a way that not only makes sense, but applies in all cases. Nobody’s pulled this off yet, so why should I try? Well, why not?

Initially, let me provoke your ire by stating my belief that our Code of Ethics is both ponderous and backwards, and that the word should ought to be replaced by the word must. My past suggestions about this having been ignored, you may consider the issue dead. But my point here is valid. If we don’t get ethics right in the first place, the rest of it will not follow. And it hasn’t.

Why? Because we’ve gone at the problem from the position of behavior, trying to apply ethics to behavior. It won’t work. What works better is defining what is meant by ethical.

Being ethical should mean the same thing no matter where it is applied. This takes it out of the realm of values, because values (and even morals) depend on the society defining them. It takes it out of the realm of law for the same reason. As they say, ‘you could look it up.’ And if being ethical under one set of conditions is different from being ethical under another set, then it’s no wonder why we can’t agree on what’s meant by it, or a definition of ethics itself.

The problem is easier approached from the other side—what’s meant by being unethical. Like pornography, it’s tough to define but we know it when we see it, and we see it from a global point of view as well—what’s unethical here also is unethical there. Now, what does that mean?

Being unethical provides a clue—it’s a state of being rather than a state of doing (behavior). Being unethical doesn’t require doing, and therefore being ethical doesn’t, either. Being ethical is a principle, not a product. If this isn’t easy to appreciate, it at least gives new meaning to the word ethics (which is what we’re trying to define, right?). It’s principle. Ethics (and morality and moral) are not values and morals. They’re not ideas or matters of opinion, but principle itself.

An unethical person will be seen as such, no matter which society looks at it. So, the same must hold true for the obverse—the ethical person. The only way to achieve this condition is by defining ethics from a standpoint where all parties concur, which reduces the definition to absolutes or givens—what applies in all circumstances for all or any part of mankind. And there are absolutes—or at least things (?) that are absolute enough—like the laws of thermodynamics and gravity—that we can count on totally. These are truths, and the absolute with respect to ethics turns out to be exactly that—truth. Try it. It works every time.

Another absolute is perfection (just because you can’t achieve it doesn’t mean it’s not there). And so we come up against the inevitable wall. Truth and perfection being what they are (absolute), we can’t expect to achieve it/them, certainly not every time. That probably means we can’t be ethical all the time which, in our human circumstance, prompts us to reject the definition I’ve given here. If we can’t be ethical, then there must be something wrong with this idea of it. Not so. An ideal is a good thing to have, even if we can’t get to
it. (We can’t explain gravity, but we know it’s there.) Besides, there’s an out. If there are times when you must be unethical (according to the definition given here), like lying to the knife-wielding thug asking if you know the whereabouts of the bleeding victim you’ve just hidden to protect her, so be it. Face it: if you lie or mislead, you’re being unethical. But there’s a moral way out: if you must be unethical, be honest about it—illustrating my earlier claim that we’ve got our Code of Ethics backwards. Honest to whom? First to ourselves, and so on down the line to last, the public. The fact that we’re part of the whole (humanity) saves us when we must choose to be unethical or not and, if we keep it in this perspective, we will make the moral (right) choice every time.

The right thing to do in any case is to honestly operate in the full light of truth. Laws, rules, appearances and opinion (even polls) have nothing to do with it. Being ethical means being honest, first with yourself and finally to humanity. It doesn’t rely on circumstance. You have to work with principles that work every time, and truth works every time. If you’re truthful you’ll be ethical, and if you’re honest with yourself and mankind you’ll be moral.

---

**Ten Commandments for Presenters**

*By Hugh Hay-Roe, CPG 3291*

*From 1999 TPG*

Anyone who has attended even a few earth science society conferences has noticed the range in quality of the presentations. Some papers are a joy to sit through; others can leave you confused, frustrated, or fast asleep. Presentations may fail because the speakers prepare the script as if they were writing a paper for publication. They forget that a paper given orally differs from a published paper in three crucial ways:

**A live audience is like a group taking a guided tour**—unless they have reviewed the subject in advance, they are totally dependent on the speaker to orient them before they set off. If the speaker fails to do so properly at the outset, the group will soon be lost.

Unlike readers, listeners cannot pause to re-read what they didn’t understand. They cannot jump past the dull stuff to get to what interests them, nor go back to find an important point they missed.

Most people take in information better by eye than by ear, so visual aids are crucial. The more complex the subject, the more important it is to have clear visuals.

With those distinctions in mind, here are 10 guidelines for better oral presentations.

Define clearly what you want to accomplish with your presentation. In most instances, your purpose is to inform, but sometimes your primary goal is to persuade. Or you may wish to entertain. Some talks are a combination of these purposes.

Write down in concrete, specific terms what you offer to your readers (if it’s information) or what you want from them (if you are trying to persuade). For example, don’t write, “I want to tell them about the Yippahoozy Quadrangle.” Write, “I want to tell them that the Yippahoozy Quadrangle is almost certainly the site of a significant meteorite impact during the Early Miocene.”

Having defined your key ideas, present them at the beginning and—unless the presentation is very short—again at the end.

Organize your supporting information in the sequence in which listeners will most likely want it. To do that effectively, you have to know your audience—their technical backgrounds, main interests, and limitations. In the example above, you might present your evidence for the meteorite, offer questions and doubts, describe your field and lab methods, and finally discuss the implications of your findings.

Use visual aids that are attractive and highly readable. Never use a visual aid that you have to apologize for. A digital image projector (fed from a laptop or notebook computer and controlled by a “remote mouse”) is the most effective projection device.

Hold onto your reading material until your talk is finished. The only good handout at the beginning of a presentation is a simple outline, which space between the headings for listeners to take notes.

Unless you are speaking in a very large auditorium, eye contact with the audience is important. But even in a vast hall, don’t read from a detailed script. If you do, your voice will tend to drop to a monotone, losing its “vocal variety.” Use cue cards (or cue yourself from your visuals). And practice! Get feedback from a “guinea pig” audience during dry runs beforehand.

Anticipate questions and decide how you’ll handle them. Are you going to present anything that is controversial or extremely complex? Some listeners might ask about aspects you did not cover in your talk.

If possible, check out the logistics ahead of time—room arrangement, lights and dimmer switches, sound system, visual equipment, and other aids. Find out what assistance will be available, if any. If there is a speakers’ breakfast, don’t play hooky.

If you are the only speaker or if there is no printed program, make sure the emcee knows how you want to be introduced, and has just the information needed to do a good job (including the title of your presentation, if it’s a formal talk). A good introduction will establish your credibility with the audience.
The Hazard of Geologic Hazards to Geology

The Public’s Changing Perception of Geology and Geologists (or how to offend your professional colleagues by telling them (some anyway) what they don’t want to hear)

By Roy J. Shlemon, CPG 1766

From 1999 TPG

It was probably not much more than about 30 years ago when most of the non-academic community (namely, the vast majority of taxpayers who collectively support scientific research) generally perceived the geologist to be a rather interesting “good guy.” The geologist studied dinosaurs, he found hydrocarbons and minerals, and he analyzed the origin and impacts of earthquakes, volcanoes, landslides, floods, and glaciers. In this regard, much geological work focused on “processes,” the way geological phenomena occur in nature, and how society can use or modify these processes for the benefit of mankind. Though this layman’s perception was no doubt too simplistic, it generally boded well for the profession: geologists were employed; they provided the “natural process” background for engineers, soil scientists, and the then-budding environmental movement. Further, the general image of the geologist was often heightened by his ability to speak well before local government groups and agencies, pointing out how nature and mitigation works and whether that was good or bad for the immediate area. The typical layman’s response may have been: “You’re a geologist? Wow, that’s neat!”

Alas, it now appears that the somewhat naive “good guy” perception of the geologist and his profession is changing, and perhaps not for the better. In fact, in our society, the geologist may now well be viewed negatively, often as a spokesperson for environmental extremism (with the negative connotations of that term), or as one who unabashedly criticizes construction of new roads, homes, dams, power plants, and general urban development. Unfortunately, too, the geologist is often perceived as a purveyor of doom, for almost every sort of geological process is being deemed a “geologic hazard.” This perception is not unique to geology. Indeed, it is ubiquitous in the form of “natural hazards,” which the general population usually regards as pertaining to hurricanes, to “El Nino events,” to drought cycles, and now, thanks to popular movie culture, to impending bolide impact.

Certainly volcanoes erupt, slopes suddenly fail, earthquakes cause great damage, floods destroy crops and homes, and expansive soils damage houses and infrastructure. But not too many years ago these phenomena were generally regarded wholly as “natural processes,” often accelerated by man, that could be described, measured, and better understood by the geologist. Now, however, whether good or bad and whether intentional or not, a whole new industry of “geologic hazards” has arisen, much to the economic delight of many in the profession. This is particularly evident by even a casual perusal of the Internet that shows a proliferation of agencies now engaged in geologic hazard research, ranging from the well-known and highly respected “Geologic Hazard Team” at the US Geological Survey (a reconstitution of the Engineering Geology Branch), to academic institutions and various state and local governments announcing a multitude of “geologic hazards” that exist in their respective jurisdictions. Unfortunately, to some, the notion of a geologic hazards team conjures up images of geologists walking through urban-earthquake rubble immediately following a sizable seismic event, probing the ruins to determine how additional funds may be sought (this is not limited to government agencies, for geological consulting groups have done this for years). Of course, we need to learn more from any high magnitude natural event. However, to many, this may be akin to the American lawyer, often perceived as an ambulance chaser, one who may represent a profession of low esteem—in the view of many scientists—but one who, nevertheless, is often envied because of usually high remuneration, ubiquity of presence, and ability to influence public policy.

It is indeed easy to criticize use of a term such as “geologic hazards,” but in the short run the term may benefit our profession. On the one hand, for example, prolific use of the “hazard” term has worked remarkably well: grants, applied research funds, and a host of other public-source moneys are available as perhaps never before. This is good, for certainly we need to understand better the social and economic impact of such geological phenomena, major components in the nebulous field of risk assessment. Additionally beneficial is the fact that geologists are increasingly in the public eye. Many qualified geologists, as fitting, are routinely called upon by news media, particularly television, to discuss the impact of a newly discovered fault, or the causation of massive slope failure. But too often the geologist, unintentionally to be sure, raises more fears, by pointing out that such “hazards” will strike again and that, accordingly, additional studies (read: money) are needed. These “hazard” predictions are true, of course, but, on the other hand, may well detract from the geologist as being a practical and objective scientist. By way of example: southern California is a land developer’s nirvana. Huge population increases since World War II and the “American Dream” have led to construction of literally hundreds of thousands of tract homes and related infrastructure, and thousands of miles of highways, local roads, canals, and pipelines. Perhaps this has been excessive, for much prime agricultural land and natural habitat have been destroyed. But the urbanization process continues, albeit at much higher cost owing to environmental and geological constraints. However, with the selling of “geologic hazards,” the geologist is often no longer perceived as representative of a helpful or even a desirable profession. Too often one can hear a local developer (increasingly regarded with the same disdain as a lawyer) say that what is really needed are good practical engineers, people who by training can provide solutions to a problem. Geologists, unfortunately,
are now increasingly perceived as “bad guys,” and geology itself is therefore being viewed in a negative way: “You can’t build there,” “you must avoid that slope.” In contrast, the engineer, perhaps by training, by disposition or by common sense, says: “You can build here if. “or “yes, that is technically feasible, but the cost will be. “In other words, the land owner/developer gets the same message, but in a more palatable manner. We all know that it is unsafe, usually impractical, and probably illegal, to build directly over an active fault. And that message should be conveyed directly and forcefully to our client, whether that be an individual, a corporation or a government agency. But rather than expressing our findings and advising him about the several geologic constraints that may affect his property or jurisdiction. Perhaps we should go so far as to point out areas that are relatively free of constraints, a suggestion that will undoubtedly fall on deaf ears, owing to the potential for litigation should some unforeseen fissure, fault, ancient landslide, or other phenomenon appear during grading and construction.

The geologic hazards profession is now further expanding, owing to the proliferation of “geologic hazard maps.” Ostensibly to be used by the planner, by the insurance carrier, and perhaps even by the individual homeowner, some hazard maps are being essentially totally ignored. Why? Because they are frequently construed as being impractical. A typical case in point: many new hazard maps in California, based on excellent research and good intentions, depict multiple hazard zones; fault rupture, high ground shaking, seismically induced liquefaction, slope instability, tsunami runup, and expansive soils. These maps are essentially all “red.” Thousands of homes may already exist in these zones. What does the map user or homeowner do? Often, unfortunately, the tendency is to ignore or to disparage the message of the maps, which is, essentially, “every place is subject to one or more geologic hazards.” It would indeed be very helpful, as some of my colleagues have pointed out, to see a map that shows or specifically depicts “non-geologic hazard areas.” I don’t think this will happen.

Is there a solution to the negative perception that excessive use of “geologic hazards” may be bringing to the field of geology? Perhaps other terminology may be less inflammatory in the public mind: we already have such nomenclature as risk elements, specific risk, vulnerability, catastrophe, disaster, and fragility, all well defined in elementary environmental and engineering geology textbooks and often expressed in the form of cause-and-effect equations. Also, the term “fault precaution zone” is used by at least one southern California city concerned with seismically induced ground rupture. Indeed, acceptable until a few years ago was “susceptibility,” typically ranked as “high,” “moderate,” or “low,” when referring to the local potential for landslides, debris flows, or fault surface rupture. But that term, as pointed out by professional colleagues, does not really grab the attention of the planner, the legislator, or the chief of the local geological agency or academic institution. After all, despite our protestations to the contrary, practical geologists are really political animals as well as scientists: we want the best for our profession and for our livelihood.

I therefore can offer no solutions for the “geologic hazards” problem. Rather, I hope that this discourse might be the basis for discussion about the apparent changing public perception of geology as a scientific discipline, and of geologists as objective professionals. Truly, geology is a great profession, and geologists are inherently good people. However, a negative public perception about the proliferation of geologic hazards may ultimately prove to be a major hazard to the acceptance of geologists, to their geological advice, and to the prestige of geology itself. Only time and our actions (or lack thereof) will tell. [Ed: And a letter to TPG Editor on Roy J. Shlemon’s article:]

I read with interest Shlemon’s article in the April TPG. What a difference a generation makes!

Contrary to Shlemon’s suggestion, thirty-some years ago the geologist was not necessarily generally perceived to be “the good guy.” Far from it. Due, at least in part, to the relatively large number of ill-qualified “geologists” around the fringes of the oil and mining industries, the public’s experience with our profession was often unsatisfactory from the point of both competence and ethics. Indeed, on the screen and in print the geologist was, with embarrassing regularity, portrayed as the “heavy” or at best a scheming co-conspirator.

It was precisely because of this that in the Sixties the Illinois Geological Society began its “QPG” (Qualified Professional Geologist) program and that, soon thereafter, the AIPG was founded, both with the intention of identifying to the public the “good guys,” those whose competence and performance could be relied upon. It was also largely this that lead Martin Van Couvering to organize the Geologic Hazards Committee within the AIPG, to focus the public’s attention not only on geologic hazards themselves but also on the beneficial role of geology in the public interest.

Times do change and, while I am now too far removed from the scene to judge for myself, I have no reason to question Shlemon’s basic conclusions. But I do want to set the historical record straight since it has so much to do with the Institute’s raison d’etre.

Neilson Rudd, CPG-00131, AIPG President 1973.
The following has been excerpted from the European Federation of Geologists A Pictorial History of the European Federation of Geologists, which is still in draft form as of time of publication of the AIPG History. The A Pictorial History of the European Federation of Geologists will be available in its entirety on the EFG website <www.eurogeologists.de/>.
A BRIEF HISTORY

The European Federation of Geologists (EFG) is the professional representative body for geologists in Europe. The concept arose in the late 1970s and it was crystallised when Gerald Clement proposed the formation of a representative body. Following preliminary discussions, representatives from Britain, France, Italy and Spain met in London in July 1978 to draw up plans for its formation and to outline the Statutes. The final text was drafted during meetings that took place in Paris in March 1979 and Madrid in November 1979, when Belgian and Irish geologists were also present.

The EFG officially came into existence in Paris 8-11 July 1980 during the 26th International Congress of Geology; and was composed of the Professional Associations of Spain (AGE, ICOG), Italy (ANGI, ONG), Portugal (APG), United Kingdom (IG, now GS), France (UFG), Belgium & Luxembourg (UBLG), whilst Germany, Ireland and the Netherlands were observers. In July of the same year the Statutes were presented to the European Economic Community in Brussels. The EFG currently represents about 75,000 geologists from 19 countries. The American association (AIPG) is an Associate Member.

The German association (BDG) became a member of the EFG in 1985, Ireland (IAEG, now IGI) in 1988, Finland (YKL) and Sweden (SN) in 1989, The Netherlands (KNGMG) in 1993, Hungary (MFT), Poland (PGS) and Slovakia (SAIG) in 1997, Slovenia(SGD) and Switzerland (CHGEOL) in 1999, Iceland (GSI) & the Czech Republic (CAEG) in 2001. Greece (AGG), Denmark (DGF) and Austria (ÖGG) were members for limited periods and there are observer associations from Austria, Bulgaria, Norway, Romania, Turkey and Canada.

APPENDIX 10 - EUROPEAN FEDERATION OF GEOLOGISTS (EFG)

Objectives

Objectives were agreed which include:

To represent the geological profession in Europe.

To safeguard and promote the present and future interests of the geological profession in Europe, including:

- To guarantee the free movement of geologists in Europe, with the mutual recognition of their academic and professional qualifications by the adoption of the European Geologists Bill.
- To promote the harmonisation of education and training. To define and protect the title of geologist and related professional titles.
- To promote the code of professional ethics of the E.F.G.
- To provide advice and assistance to constituent member National Associations.

To promote an European geological policy with regard to the responsible use of the Earth's natural resources and in particular:

- Energy resources.
- Mineral and construction material resources.
- Water resources and environmental pollution.
- Geological problems in land development, as well as environmental protection and the exploitation of primary raw materials.
Members and Observers of the EFG. Inset John Shanklin (AIPG Honorary Member) the First President.

Country abbreviations used throughout:
AL Albania, AU Austria, BE Belgium, BG Bulgaria, CD Canada, CH Switzerland, CS Czechoslovakia, CZ Czech Republic, DE Germany, DK Denmark, ES Spain, FR France, GR Greece, IT Italy, IR Ireland, IS Iceland, HU Hungary, NL Netherlands, NO Norway, PL Poland, PT Portugal, RO Romania, SE Sweden, SF Finland, SK Slovakia, SM Serbia & Montenegro, SO Slovenia, TK Turkey, UK United Kingdom, US United States of America.
MILESTONES

1977 The concept, proposed by Gérald Clement
1978 European Communities Geology Committee discussed new body
1980 EUROPEAN FEDERATION OF GEOLOGISTS formed
1983 Code of Ethics adopted
1984 Code of Ethics presented - International Geological Congress Moscow
First dossier Energy in Europe presented to European Parliament
1985 The Strategic Minerals Dossier
1986 First European Representative, André Chabot, appointed
1987 Education / Qualifications dossier submitted to European Parliament
1988 First Assistant Secretary, Louis le Tourneau, appointed
1989 EuroGeoPages Newsletter
1992 Groundwater Pollution dossier presented to European Parliament
1993 European Geologist (EurGeol) Professional title awarded
1995 European Geologist magazine
First resolution of problem of cross-border acceptance of a geologist
1998 Reciprocal Associate Membership with American Institute of Professional Geologists
1999 World Geologists NGO (for disaster response) formed
European Parliament supports the title
20 member countries with >75,000 geologists across Europe
2000 1st International Professional Geology Conference
Contributions to EU Directives on Sludge disposal
Brussels Agency Chief Appointed
2001 Brussels Office established Reporting Code for
Reserves & Resources adopted
2002 EurGeol title relaunched, 79% increase in applicants
Mutual recognition agreement signed with Canada
2004 2nd International Professional Geology Conference
Delegates are welcomed to Sweden by the Lord Mayor.

Delegates from the four new member countries: Rudolf Ondrasik Slovakia, Istvan Berczi Hungary, Poul Due and Marianne Vasard Nielsen Denmark, André Slaczka, and Zbigniew Wilk Poland.
At the Council Meeting delegates Antoine Bouvier FR, Johannes van Stuivenberg CH, Carlo Enrico Bravi IT, Marianne Vasard Nielsen DK, and Pietr Stienstra NL.

Observer Aydin Aras, TK, delegate John Clifford IR, observers Magdalena Stoia RO and Maria Albeanu RO, Associate delegates Robert Font, CPG-3953 US, Bill Siok, CPG-4773 US, and Tom Fails, CPG-3174 US.

Tom Fails, CPG-3174 US presents Manuel Reguiero with AIPG Presidential Certificate of Merit, with Bill Siok, CPG-4773 US, observer Inger Strass NO, and Franz Schenke CH.
Cracow, Poland — 41st, June 2001


Council in session in the Polish Geological Survey theatre. AIPG represented by 1999 President Tom Fails (left photo: top row), 2001 President Robert Fakundiny (photo below: top row on left), 2000 Treasurer Kel Buchanan (photo below: second row from bottom on right), and Executive Director Bill Siok (photo below: top row on right).
Changing Times!!
Gareth Ll. Jones President of EFG
1999-2002

The 1999 Council Meeting increased the Board from three to five members, by splitting the Secretary-Treasurer’s position into a Secretary General and a Treasurer and the formalisation of the position of the EU Delegate.

The first and most difficult task of the new Board was to sort out the Federation finances. We were fortunate that Treasurer Carlo Bravi made sense of these, paid off our debts and established transparent procedures.

The next thing was to transfer our base from Paris to Brussels so that we could have easy access to the European Commission. In Paris we had been extremely fortunate to be hosted in their office by the Union Française des Géologues. After much searching by the Board, Eric Groessens negotiated with the Union Belgo-Luxembourgeoise des Géologues who had an office in the Belgian Geological Survey. With the permission of the Director, Peter Laga, the EFG was able to use this office in exchange for UBLG’s membership dues. Thus we acquired a good office, in the heart of the geological community, within walking distance of the European Commission.

On the national membership front, Austria and Denmark left for different reasons, whilst Greece faded away. The basic reason was that we were not making the professional case strongly enough. However the Czech Republic and Iceland were elected to full membership, whilst Norway indicated that they would apply for membership in the near future.

Internationally, we strengthened our ties with our Associate Member, the American Institute of Professional Geologists and signed a Co-operation Agreement with the Canadian Council of Professional Geoscientists. Together with these organisations the EFG co-organised the first International Professional Geology Conference in July 2000 which was hosted by the Ilustre Colegio Oficial de Geólogos de España in Alicante, Spain. This major step forward will be followed by the second IPGC to be hosted by the Geological Society of London in June, 2004.

Gareth Ll. Jones, MEM-219, at the EFG stand in St. Louis, Missouri with Bob Levich, CPG-6477.
EFG PRESIDENTS

John Shanklin 1980-1983
AIPG Honorary Member

Renzo Zia 1983-1986

Gerald Clement 1986-1990

Richard Fox 1990-1993
AIPG Honorary Member

Gunnar Hultquist 1993-1996

Manuel Regueiro 1996-1999
AIPG 1991 Presidential
Certificate of Merit

Gareth Jones 1990-2002
MEM-219

Christer Akerman 2002-2005
AIPG 38th • AEG 44th Annual Meeting
“Geology: Central to Society’s Needs”
ST. LOUIS, MISSOURI
September 30 - October 7, 2001

AIPG 2001 Executive Committee and guests.
FIRST INTERNATIONAL PROFESSIONAL GEOLOGY CONFERENCE
Alicante, Spain — July 2000

Manuel Regueiro ES chairs the session, whilst Chip Groat, CPG-2774 US, delivers the keynote speech.

Hugh Miller, Chair Canadian Council of Professional Geoscientists and Christine Miller - Canada.

David Abbott, CPG-4570 US and Gordon Riddler, Chair UK Working Group on Reserves and Resources.

In 2000, the Canadian Council of Professional Geoscientists (CCPG) and AIPG sought to cement existing ties based upon common objectives for advancing the profession domestically in our respective homelands and internationally between our organizations. The CCPG and AIPG Cooperation Agreement here is a fully executed agreement between our respective organizations. It is anticipated that CCPG and AIPG will continue to seek ways to cooperate and enhance career opportunities and the status of all geoscience practitioners.

COOPERATION AGREEMENT BETWEEN
the
CANADIAN COUNCIL OF PROFESSIONAL GEOSCIENTISTS
and
AMERICAN INSTITUTE OF PROFESSIONAL GEOLOGISTS

The Canadian Council of Professional Geoscientists (CCPG) is the national organization in Canada for provincial and territorial associations having the legislative authority to register geoscientists and the American Institute of Professional Geologists (AIPG) is a national professional organization in the United States of America which certifies professional geologists.

CCPG and AIPG recognize that their objectives with respect to the professional practice of the geological sciences are similar and further recognize the importance of cooperation as the practice of the geological sciences transcends national borders.

In recognition of these common interests, CCPG and AIPG enter into this Cooperation Agreement.

Under this Agreement, CCPG and AIPG agree to:

1. Recognize one another and each organization's status with respect to the geoscience professions in their respective countries.
2. Extend to one another a standing invitation for a representative of the other organization to attend all meetings, including those of any committees or subcommittees, at no registration cost.
3. Cooperate in developing a mechanism for the mutual recognition of standards across the Canada - United States border.
4. Cooperate in developing mechanisms for the mutual recognition of standards as well as the development and maintenance of beneficial liaisons with equivalent organizations beyond North America.
5. Cooperate in establishing contacts with other national and international groups involved in the registration of professional geoscientists and the regulation of the practice of geoscience.
6. This Agreement does not prohibit either organization from pursuing other cooperative agreements with other geoscience organizations.

CANADIAN COUNCIL OF PROFESSIONAL GEOSCIENTISTS (CCPG)

By: [Signature]
Title: [Title]
Date: [Date]

AMERICAN INSTITUTE OF PROFESSIONAL GEOLOGISTS (AIPG)

By: [Signature]
Title: [Title]
Date: [Date]
INDEX by Year, WHO’S WHO and WHO WAS WHO in AIPG


Atwater, Gordon: Member AIPG Legislative Coordinating Council 1964; past-President AGI.


Banfield, Armine F.: Advisory Board Representative 1972.

Barron, Bruce: Annual Meeting Chairman, Pasadena 1982.

Barton, Jackson M.: Secretary-Treasurer 1984-85.


Becker, Robert M.: Member Steering Committee and host of AIPG organizational meeting in Oklahoma City, September 13, 1963, member first AIPG committee 1964.


Bebee, B. Warren: Chairman of AGI Committees on Reorganization and Professional Standards, who encouraged formation of AIPG in 1963, wrote Model Registration Law 1964, Chairman AIPG Legislative Coordinating Council 1964; past-President AGI.

Bell, Gordon L.: Member first AIPG committee 1964.


INDEX, WHO'S WHO and WHO WAS WHO in AIPG

Berg, Thomas M.: Vice President 2000, Galey Award 2002; Ohio State Geologist

Bernhagen, Ralph J.: Honorary Member 1995; former Ohio State Geologist.

Beveridge, Thomas R.: Member of first Executive Committee 1963-65, member Steering Committee for AIPG organizational meeting September 1963, speaker at Founding Convention November 1963, co-drafted Constitution and Bylaws 1963; former Missouri State Geologist.


Birman, Joseph: Luncheon Speaker at Annual Meeting 1990; President of Geothermal Systems, Inc.

Blackstone, Donald L.: Parker Medal 1995; former Wyoming State Geologist.


Boyd, James: Vice President 1966, Parker Medal 1973; past-President AIME, former Director of U.S. Bureau of Mines.


Campbell, Ian: Parker Medal 1970, as AGI President encouraged formation of AIPG 1962-63, Annual Meeting Welcome Address 1968, paper on registration in Appendix 9 for 1975; former California State Geologist, past-President AGI and GSA, AGI’s Ian Campbell Medal named in his honor. See text 1978 for Memorial.


Carpenter, Peggy L.: Advisory Board Representative 1998.


Charter Members 1-743: See Appendix 8.


Childs, Orlo: President of Colorado School of Mines, invited AIPG to have Founding Convention and first Headquarters office at campus 1963; past-President AAPG.


Coleman, W. Kevin: Advisory Board Representative 1998.

Colle, Jack O.: Advisory Board Representative 1976.

College Geology Department Survey: See Appendix 9 for 1981


Congressional testimony by 17 CPGs: See Appendix 9 for years 1975-89.


Cook, Earl: Chairman of CORDEC Committee Report (see App. 9) 1972; former Dean at Texas A&M University.


Cowart, Vicki: Galey Award 2003; former Colorado State Geologist.

CPG Certification by Year: See Appendix 7.

Crandall, Kenneth H.: Gave congressional testimony on Outer Continental Shelf 1975.


Crowell, John C.: Member of Jahns Committee to assist Los Angeles, see text and App. 9 for 1966.

Cummings, Kenneth F.: Co-author of Legal Action Committee report (see App. 9) 1978.

Curtis, Doris M.: First AGI Representative to AIPG Executive Committee 1981, President-Elect candidate 1986, Honorary Member 1987; past-President AGI.


Dailey, J. Scott: Advisory Board Representative 1996.


Dapples, Edward C.: Honorary Member 1986, Advisory Board Representative 1979 and 1982; past-President SEPM.

Dare, Deborah: Executive Secretary, ran Headquarters office during search for Executive Director 1979-81.

Darling, Bruce K. Vice President 2003.


Davis, George H.: Presidential Certificate of Merit 1982, co-author AIPG’s “Ground Water” 1985; former Assistant Director USGS.
Davis, James F.: Chairman Geologic Hazards Committee 1983; California State Geologist, former New York State Geologist.


Deuth, Martin J.: Member Headquarters Advisory Committee 1967.


Dott, Robert H., Jr.: Parker Medal 1992; S. A. Tyler Distinguished Professor University of Wisconsin.


Dumontelle, Paul B.: Co-author of AIPG publication 1984; former Illinois State Geologist.


Dutcher, Linda: Secretary-Treasurer 1983.


Earll, Fred N.: Member first Executive Committee 1963-65, designer of AIPG application form 1964.


Environmental Geology Center concept: See text for 1968.


Fife, Don: Gave congressional testimony in 1988 (see text 1970) and 1989 (see App. 9).


First Committee: Public Information 1964.

First Executive Committee - 1963-65 (see photo herein):

- Martin Van Couvering, CPG 1 (California)
- Allen Tester, CPG 2 (Iowa)
- Tom Beveridge, CPG 3 (Missouri)
- Frank Conselman, CPG 4 (Texas)
- Ben Parker, CPG 5 (Colorado)
- Fred Earll, CPG 6 (Montana)
- Adolf Honkala, CPG 7 (Virginia)
- William Newton, CPG 8 (Colorado)
- Howard Rothrock, CPG 9 (Texas)

First Executive Director: Arthur F. Brunton 1964-79; Note: Ed “Bud” Rue was unsalaried acting Executive Director 1963-64, see text.

First Governmental Affairs Conference (annual Spring "Washington Fly-in") 1980.


First Honorary Member: Grover E. Murray 1984.


First organizational meeting: Oklahoma City, September 13, 1963; Steering Committee:

- Robert Becker (Host)
- Ben Parker (elected meeting Chairman)
- Edward “Bud” Rue (elected meeting Secretary)
- Allen Tester
- Tom Beveridge
- Frank Conselman
- Rollie Rogers
- Bruno Hanson
- Ad Honkala
- William Mallory
- Martin Van Couvering;

Others in attendance from the Oklahoma Geological Society were:

- Robert Hancock
- J. D. McDavid
- Jerry Newby
- John Taylor


First Parker Medal Award: Martin Van Couvering 1969.

First publications for sale: “Organization and Content of a
Typical Geological Report” and “The Professional Geologist as Expert Witness” June 1974
First Public Service Award (later John T. Galey, Sr. Memorial Award): Arthur O. Spaulding 1983.
First Presidential Certificate of Merit: 1982 (twelve recipients)
First TPG newsletter: November 1964, Frank Conselman, Editor.
First Martin Van Couvering Award: Larry Woodfork 1979.
First year President-Elect a member of Executive Committee: 1981.
First year Secretary-Treasurer separated into two offices: 1986.
Flawn, Peter T.: Parker Medal 1989; former Texas State Geologist, past-President University of Texas, AGI and GSA.
Foose, Richard M.: Secretary-Treasurer 1968, panel member of AIPG College Evaluation publication 1975, wrote on Professionalism in TPG (see App. 9) 1984.
Founding Convention Minutes: See text for 1963.
Fox, Richard A.: Second non-U.S. member to be awarded Honorary Member 1994, article “TPG in Europe” reproduced herein (see App. 9) 1990; past-President European Federation of Geologists.
Frye, John C.: Advisory Board Representative 1969, panel member of AIPG College Evaluation publication 1975; former Illinois State Geologist, past-President AGI, GSA Environmental Geology Award in his name.
Gore, George H.: Advisory Board Representative 1990.
Graf, Lynn: Co-author of AIPG publication 1996.
Grafton, Dean: President 1984, Vice President 1982, member APGS Policy Board 1977.
Groat, Charles: Outstanding Achievement Award 2003, co-author of AIPG publication 1991; Director of USGS, past-President AGI, former Louisiana State Geologist.
INDEX, WHO’S WHO and WHO WAS WHO in AIPG

Halbouty, Michel T.: Member of Executive Committee 1966, Parker Medal 1988, Honorary Member 2002, as AGI Finance Chairman gave $10,000 loan to fledgling AIPG in 1963, co-founder Texas Section 1964, Keynote Speaker at Annual Meeting 1965, two articles in TPG (see App. 9) 1968, 1988, gave congressional testimony (see App. 9) 1989; endowed Chair at Texas A&M University, Hoover Medal recipient, Pecora Award of NASA, City of Hope Honoree, AAPG Human Needs Award in his name, past-President AAPG.
Hall, Daniel W.: Presidential Certificate of Merit 1989
Hallinger, Donald E.: Secretary-Treasurer 1975, participant Legislative Program 1977.
Hammersley, James U.: Member Steering Committee for AIPG organizational meeting September 1963 and Founding Convention November 1963.
Hansen, Howard: Gave congressional testimony on Outer Continental Shelf 1976.
Hanson, Bernold “Bruno”: Member Steering Committee for AIPG organizational meeting September 1963, attended Founding Convention November 1963.
Harding, Richard W.: Member first AIPG committee 1964.
Harrison, Frank W., Jr.: Parker Medal 1994, speaker at Registration Workshop 1977, speaker at Annual Meeting Short Course 1998, Advisory Board Representative 1997; past-President AGI.
Hayles, William C., Jr.: Vice President 1971, Annual Meeting Chairman, St. Louis 1969; former Missouri State Geologist.
Hedberg, Hollis: AGI President encouraged formation of AIPG in 1963.
Henley, Aubrey “Pete”: First Advertising Coordinator 1989; past-President AEG.
Hershey, Robert E.: Editor 1971-72, attended Founding Convention 1963.
Hill, Mason L.: Honorary Member 1990, encouraged formation of AIPG 1963; former Chief Geologist ARCO, past-President AAPG.
Hilman, Paul L.: Advisory Board Representative 1971, participating AIPG-sponsored Penrose Conference (see App. 9) 1987.
Hook, Donald L.: Consultant’s Column contributor to TPG, Advisory Board Representative 1987.
Howard, James F.: Advisory Board Representative 1982.
Hoyt, William H.: Advisory Board Representative 2000
Hughes, Stuart P.: Executive Director 1980.
Irwin, James I.: Advisory Board Representative 1987.
Ivey, John B.: Secretary-Treasurer 1971; past-President AEG.
Jackson, Julia A.: Recipient of Outstanding Achievement Award 1999; former Editor AGI.
Jacobeen, Frank H., Jr.: Advisory Board Representative 1977.
Jahns, Richard H.: Formerly Dean at Stanford (and also at Caltech and Penn State), asked by President Van

–384–
INDEX, WHO’S WHO and WHO WAS WHO in AIPG

Couvering to assist Mayor Yorty of Los Angeles by preparing report on mitigating geologic hazards (see text and App. 9) 1966, member APGS Policy Board 1977; past-President GSA, first AGI Ian Campbell Medalist 1981, GSA/AEG Distinguished Lectureship in his name. See text 1983 for Memorial.

Jengo, John W.: Contributor of four papers in Reprint Series publication.


Kane, John Kent, II: Annual Meeting Chairman, Williamsburg, VA 1981.

Kantner, F. Lynn: Secretary 2002-03, Advisory Board Representative 1999.


Kilkenny, John E.: Encouraged formation of AIPG 1963, attended Founding Convention 1963, member Jahns Committee to assist Los Angeles, see text and App. 9 for 1966; former Chief Geologist Uncal.


Kloska, Margaret: Presidential Certificate of Merit 1996.

Kottlowski, Frank E.: Public Service Award 1986; former New Mexico State Geologist.


Krauskopf, Konrad B.: Honorary Member 1991, as AGI Vice President encouraged formation of AIPG in 1963, co-author of AIPG publication 1985; past-President AGI and GSA.


Kuhn, Truman H.: Secretary-Treasurer 1970.


Lawless, Michael D.: Secretary 2000-01, President-Elect candidate 2002.


Leighton, Morris W. “Brud”: Galey Award 1994; former Illinois State Geologist and past-President AGI.


Levandowski, Donald W.: Chairman of AIPG’s committee for publication of “Program of Cooperative Evaluation of Geology Departments” 1985.


Luce, Gary: Co-Chair Annual Meeting 2002.


Mallory, William W.: Co-founder of AIPG, member Steering Committee for organizational meeting September 1963, Chairman of Founding Convention November 1963, suggested AIPG name with Bud Rue 1963, founder of Colorado Section 1964, then became inactive.

Mankin, Charles J.: President 1987, Van Couvering Award 1988, Honorary Member 1996, Parker Medal 1999, one of 25 Founders of AIPG Foundation 1981, co-convenor of AIPG/GSA Penrose Conference (see App. 9) 1987, co-author of Long-Range Planning Report (see App. 9) 1991; Oklahoma State Geologist, past-President AGI.

Mann, John F., Jr.: Presenter of Annual Meeting Short Course address at Annual Meeting 1986, co-author of Long-Range Planning Committee Report (see App. 9) 1987, co-convener of AIPG/GSA Penrose Conference (see App. 9) 1987.
INDEX, WHO’S WHO and WHO WAS WHO in AIPG


McDavid, J. D.: Attended AIPG organizational meeting, Oklahoma City September 13, 1963.


McKee, Edith: Gave congressional testimony on Coastal Zone Management 1975


McMurtry, Wilber E.: Secretary-Treasurer 1974.

McPhee, John: Recipient of Outstanding Achievement Award 1997.


Mellen, Frederic F.: Advisory Board Representative 1968; former Mississippi State Geologist.


Milling, Marcus E.: Parker Medal 1997; AGI Executive Director.

Minutes of AAPG-AIPG-SIPES meeting on registration, see text 1966.

Minutes of First Annual Meeting, see text 1964.

Minutes of Organizational Meeting and Founding Convention, see text 1963.


Murphy, T. D.: Vice President 1968, attended Founding Convention 1963.


Murray, Grover E.: President 1978, first Honorary Member 1984, Parker Medal 1990, Advisory Board Chairman 1977, as 1963 AAPG President, encouraged formation of AIPG and attended Founding Convention 1963, one of 25 Founders of AIPG Foundation 1981; past-President of Texas Tech College, AAPG, AGI and SEPM.

Murray, Haydn H.: President 1991, co-author of AIPG publication 1991; past-President SME.


National Academy of Sciences sent representative (L.L. Sloss) to AIPG Executive Committee meeting 1979.


O’Brien, Jerome J.: Member of Jahns Committee to assist Los Angeles, see text and Appendix 9 for 1966; former Director of Oil & Gas Division U. S. Department of the Interior.
Organizational Meeting Minutes: See text for 1963.
Ostrom, Meridith “Buzz”: Public Service Award 1991; former Wisconsin State Geologist.
Parker, Ben H.: President 1966, Chairman Steering Committee at organizational meeting September 1963, speaker at Founding Convention November 1963, member first Executive Committee 1963-65; past-President AAPG and Colorado School of Mines.
Peck, Dallas: Banquet Speaker at Annual Meeting, Pasadena 1982; former Director USGS.
POF Committee: See text for 1977.
Presidential Messages: See year of each president and Appendix 9.
PUPO Committee: See text for 1974.
Qualified Professional Geologist (QPG) changed to Certified Professional Geologist (CPG) 1963.
Rader, Miles T.: Co-author of report “Industrial Employment of Geologists” (see text and App. 9) 1972.
Rector, Mike R.: Advisory Board Representative 1976.
Redfern, Ron: Recipient of Outstanding Achievement Award 1995.
Regueiro, Manuel: Presidential Certificate of Merit 1999; past-President European Federation of Geologists.
Rogers, Rollie: Member Steering Committee for AIPG organizational meeting September 1963, and Nominating Committee for Founding Convention November 1963.
Rose, Peter R.: Parker Medal 1998, Presidential Certificate of
INDEX, WHO’S WHO and WHO WAS WHO in AIPG

Merit 1993; former Les Bowling Visiting Professor University of Texas.

Roster of 94 attendees of Founding Convention, see Appendix 9 for 1963.


Russell, R. Dana: President 1969, Parker Medal 1976; past-President AGI.

Sadoff, Dave A.: Advisory Board Representative 2001-02.


Selected speeches and papers by CPGs: See Appendix 9.

Shanklin, John: First non-U.S. member to be awarded Honorary Member 1993; past-President Institution of Geology, United Kingdom.


Shelton, Roy J.: Honorary Member 2002, Contributor to TPG (see App. 9) 1999; endowed GSA Engineering Geology Scholarship, Chair at University of California Davis.


Skehan, James W.: Gave congressional testimony on Hazards of Earthquakes (see App. 9) 1977, co-wrote Public Affairs Report, see text 1977; Director of Boston College Weston Observatory.


Sloss, Laurence L.: Honorary Member 1985, National Academy of Sciences representative to AIPG Executive Committee 1979; former Wm. Deering Professor Northwestern University, past-President AGI and GSA, GSA Sedimentary Geology Award in his name.


Stead, Frederick L.: Vice President 1979, Chairman APGS Policy Board 1978-79, gave congressional testimony (see App. 9) 1976, Chairman and co-author of Legal Action Committee Report (see App. 9) 1978.

Stephenson, David A.: Co-author of AIPG publication 1985, co-convenor of AIPG/GSA Penrose Conference (see App. 9) 1987; past President AGI.

Stevenson, Robert C.: AGI Executive Director encouraged formation of AIPG in 1963.


INDEX, WHO’S WHO and WHO WAS WHO in AIPG

Swor, Terrence E.: Advisory Board Representative 1986.
Tagliacozzo, Angelo: Advisory Board Representative 1982-83, NE Section created Memorial Scholarship in his name, see text 1986.
The Professional Scientist (TPS): Short-lived name change of TPG newsletter 1976-79.
Thompson, Thomas L.: Advisory Board Representative 1975.
Truxel, Bennie W.: Member of Jahn’s Committee to assist Los Angeles (see text and App. 9) 1966, panel member of AIPG College Evaluation publication 1975.
Tucker, Emmett E., Jr.: AGI attorney asked to review AIPG’s Model Registration Law (see App. 9) 1964, and the AAPG/AIPG agreement in 1975.
Turner, Edd R.: AGI Representative to AIPG Executive Committee 1984; past-President AAPG and AGI.
Turner, M. O.: President 1982, Parker Medal 1985, Member of APGS Policy Board 1979, speaker at Registration Workshop 1977, one of 25 Founders of AIPG Foundation 1981, gave congressional testimony (see text) 1982; past-President AGI.
Underwood, Joan E.: Speaker at Annual Meeting Short Course 1997.
Unkelsbay, A. G. “Unk”: As Executive Director of AGI encouraged growth of AIPG.
Van Couvering, Martin: First President 1963-65, first Parker Medal 1969, member Steering Committee for AIPG organizational meeting September 1963, elected President at Foundation Convention November 1963 (CPG 1).
Waggoner, Eugene B.: Gave congressional testimony on dam safety 1978; former president Woodward-Clyde Consultants.
Waggoner, Gail: Chairman AIPG Insurance Committee that developed Liability Insurance for members 1991 (see text), Presidential Certificate of Merit 1991.
Wahlstrom, Ernest E.: Member first AIPG committee 1964.
Weimer, Robert J., Jr.: Parker Medal 1986, attended Founding Convention 1963, paper reproduced in Appendix 9 for 1997; emeritus Getty Professor Colorado School of Mines, former President of AAPG.
Wengard, Sherman A.: Editor 1966; past-President AAPG.
Wheeler, James A.: Vice president 1990, Van Couvering Award 1987; emeritus Getty Professor Colorado School of Mines, former President of AAPG.
Williams, John W.: Co-presenter of Ethics workshop at Annual Meeting 2002; past President AEG.
Winterer, Edward L.: Banquet Speaker at Second Annual Meeting Denver 1965; oceanographer at Scripps Institute of Oceanography.

Wolfe, John E.: Speaker at Registration Workshop 1977


Worrell, Charles J.: Advisory Board Representative 1982-83.

Worthington, Lisa Curci: Advisory Board Representative 1983-94.

Wright, Thomas L.: Advisory Board Representative 1969.

Yorty, Sam: Mayor of Los Angeles asked AIPG for assistance in 1965 (see Jahns).


Zellers, Michael E.: Advisory Board Representative 1977.

These are the sign-in sheets from a journal dated November 14 - 15, 1968.

AIPG Founding Convention

William Mallow
W. R. Crutchfield
E. P. Earle
R. H. Hunt
R. P. Ross
J. A. Martin
Henry Collins
John H. Maxson
Charles L. Cherry
J. B. Campbell
R. D. Follett
Richard W. Lemke
J. C. MacKie
Robert M. Spindel
James W. McMillan
Robert M. Weidman
Donald I. Foster
W. D. Chawner
Robert E. Hershey

U. S. Geologica
Montana School of Mines
Mont. Bureau of Mines & Coal
Mississippi Geol. Society
Rocky Mountain A.S.
Aerial Exploration Co.
Consultant
Shell Oil Co.
U. S. Geol. Survey
""
U. S. Geol. Survey
Independent
U. S. Geol. Survey
Photo-Geology Info.
Montana State University
Consultant
Ambassador Oil
Humphrey Oil Co.
Tennessee Division of Geology
Charles Childs  Golden, Colo  
William W. King  Prof. Geology, Univ. of St.
D. W. Trexler  Dep. Geol.
P. J. Fritts  Colo. School of Mines
J. E. Coleman  U. of Colorado
Edward E. Beulke  Consultant
Bob Hancock  Consultant
R. D. Barger  Colo. Interstate
Keith M. Helverson  Independent
M. A. Long  Inter-Oil Co
Charles L. Severn  Benedict Interests
Max R. Mitte  RMA6 consultant
Max Krey  Consulting Geologist
Raymond M. Thompson  "  "
Charles R. Wilcox  "  "
Allen Halford  "  "
Thos. R. Beveridge  State Geologist
Thomas F. Cawson  Arrowhead Exploration
Elton H. Curney  "  "
Arthur Brumton  Consultant
Ken Nickerson  "  "
S. W. Lohman  U.S.G.S.
J. A. McCaffery  U.S.G.S.