A GLANCE TO THE PAST...

The first AIPG members at an organizational meeting in 1963. This photo is from headquarters archives.
A VIEW OF THE PRESENT...

President Sam Evans, (left) receives appreciation award on behalf of AIPG from President-Elect Richard Proctor

1988 Under Evans - A Year of Achievements

President Sam Evans received a thunderous ovation from members at the Silver Anniversary Awards Banquet with good reason. During 1988, Evan’s leadership pulled AIPG through a year without an Executive Director and laid the foundation for an AIPG for the 90’s. Accomplishments during the year include a reorganized headquarters that is now very responsive to members’ requests. A Headquarters Committee was re-instituted to oversee and to aid the headquarters staff. A revision of the AIPG Articles of Incorporation occurred and groundwork for revision of the Constitution and Bylaws that will protect the institute from catastrophic litigation was laid out. Liability insurance was procured to protect national and section officers and committee members, from catastrophic litigation losses. The year saw a new Washington Representative and a very successful Governmental Affairs Conference. A detailed survey of the nature of the present AIPG membership was conducted, as well as a survey by the State Affairs and Registration Committee. A tightening up of accounting procedures and improvements in the quality of institute publications occurred. A study was made on the future of AIPG that will result in policies that will better accommodate the needs of a broad spectrum of geologists. AIPG has now opened discussions with representatives of AAPG’s DPA, SIPES, and the AEG with respect to registration and how geologists can best cooperate in promoting their profession and taking an active role in the formulation of any regulation that may affect geologists and their right to practice geology. This year was a success for the Executive Committee, the headquarters’ staff and for many contributors some of whom are recognized on the following pages of this issue. The smiles on the faces of Evans and Proctor are well-merited.
These officers can be greatly supported by you. Valuable support includes making your availability known for serving on committees, providing your time for projects, aiding in development of continuing education and providing your input to your newsletter, *The Professional Geologist*. Phone or write one of these officers before their term begins at the end of this year. Make your concerns and your willingness to help known. By aiding your officers’ efforts to serve you, you can certainly expect great things to result in 1989.

**Silver Anniversary Meeting Characterized by Quality; Annual Business Meeting by Action**

The Oklahoma Section proved themselves entirely worthy of serving as the hosts for the 25th year Silver Anniversary Meeting. Jim O’Brien *et al.* obviously put a lot of work into this one. The program, in brief, was first-rate. The theme of the meeting "Where we have been, where we are, and where we are going" provides a good theme to this October issue of *TPG*. More details of the meeting will appear in the November *TPG*.

**Members In the News**

Jane M. Willard, CPG 6979, President, and Deborah Carroll, Chief Financial Officer, announce the formation of their consulting firm EnPro Assessment Corp. EnPro specializes in environmental profiles for property transfer and business acquisition. EnPro's offices are located in downtown St. Paul. Ms. Willard is President-Elect of the Minnesota Section of the American Institute of Professional Geologists.
AND A LOOK TO THE FUTURE

PRACTICING GEOLOGY ON THE EARTH, MOON, AND MARS

by Harrison H. Schmitt

This is a transcript of the address given by Dr. Schmitt at the Annual Meeting of the American Institute of Professional Geologists on September 29, 1988 in Tulsa, Oklahoma, prior to his illustrated talk titled "A Geological Field Investigation on the Moon."

It is a great privilege for me to be with the AIPG once again. I'll always remember your wild time in New Orleans and two or three other places.

The membership of the AIPG comprises an extraordinary sample of the talent and spirit that made American mining the envy of the world. One finds that breadth of vision is a common denominator among professional geologists. It must result from something we breathe close to or inside the Earth.

MINING THE EARTH

Breadth of vision, unfortunately, has not been common to those responsible for the decline of so much of the American energy, mineral, and mineral processing industry in recent decades. From politicians to bureaucrats to well meaning but shortsighted interest groups, these industries have ceased to be considered strategic industries vital to the long term survival of our nation. The reality of course, is just the opposite.

For example, as the Third Millennium approaches, we do not have anything better than a de facto strategic materials policy -- a de facto policy that is failing almost without exception to provide for assured national security. Our present course is to ignore absolute import dependencies (such as for chromium), to avoid eliminating import dependencies we could do something about (such as for cobalt), to accelerate the decline of strategic industries we could preserve (such as for basic steel, aluminum, copper, and potash), and to avoid taking necessary action to properly stock and manage the development and implementation of strategies for the assessment, mitigation, or elimination of specific vulnerabilities.

If we persist in this path of the "know-nothings", who appear in the Congress and the White House no matter who is President, we will see a steady and, if unchanged, an ultimately catastrophic erosion in our ability to conduct a rational foreign policy or to withstand a sustained military threat to our lines of foreign supply of strategic energy and materials.

The situation created by apartheid and AIDS in southern and central Africa, sources of many extremely critical materials, is just one of many examples where we see our foreign policy options limited by free world dependency on imports of raw, processed, or manufactured materials from other nations. It is easy to impose economic sanctions against a country from which we import copper, for example, because domestic production of copper could be increased over a relatively short period of time. It is quite another issue to impose such sanctions against a country which controls our imports of essential chromium, ferrochrome, manganese, ferrosilicon, platinum and platinum group metals, cobalt, gold, and diamonds. We cannot supply our essential needs for these materials from domestic sources, and our only alternative source of supply for many is the Soviet Union.

An urgent policy goal for the turn of the Third Millennium is to have adequate and secure supplies of strategic materials. It is imperative that such supplies be at levels sufficient to minimize their significance in the consideration of major foreign policy or defense options.

To achieve this goal, we must consider the following materials policy objectives;

1. Federal encouragement of the private sector's development of new sources of offshore minerals production or of new technological alternatives for those strategic materials for which there are no near-term or mid-term sources of domestic supply;

2. Federal support of a standby industrial base for possible emergency production of those strategic materials for which there are obvious, but currently uneconomic domestic supply options:

3. Federal policies which will arrest the decline of existing strategic industries that are under economic siege by both fair and unfair foreign trade practices;

4. Government, academia, and industry cooperation in realistic annual vulnerability studies and commensurate policy revisions for each strategic material; and

5. Stockpile goals and purchases through a Federal Reserve Board-style stockpile management system that objectively reflects specific materials vulnerabilities and the opportunities and constraints of the marketplace.

With regard to direct policy initiatives, we should establish and fund a combined industry, conservationist, and government commission to undertake the rapid and non-destructive location and preliminary assessment of the energy and mineral resource base directly accessible to the United States. Unless this is done
soon, our vulnerability to foreign threats will increase, and the vulnerability of the environment to crises-stimulated exploration and production will remain extreme.

We should establish and fund university-based research and technology development centers and an associated extension service that can improve and disseminate technology and practices related to the ever more efficient extraction, end use, and conservation of energy and materials. Similar and historically successful efforts to stimulate applied research in agriculture and aeronautics should be our models.

We should assist the educational system in providing continuing education for and dialogue with the media and the public that will increase their understanding of news events related to energy and materials. The news coverage and public attitudes related to the situations in Central America and southern Africa show how serious are the present gaps in energy and materials communications.

We should rapidly expand and modernize our maritime and naval fleets and our rapid deployment forces so that our vulnerability to threats of supply interdiction is reduced to the point that no adversary will test us.

To insure that these policy objectives are implemented, Presidents should establish within the White House a continuing mechanism for strategic policy analysis for each material considered to be of a critical nature to our national security and economy.

This last action relates to the principal difficulty policy makers face with respect to strategic energy, minerals, and materials issues, that is, the extreme number of complex variables that must be considered before the critical decision path for any given material is clear. The intimidating nature of this problem for politicians without experience in these matters has, in fact, prevented the formulation of a coherent and integrated national policy for energy and strategic materials supply.

MINING MARS

As the Millennium turns in space, our inheritance from the professional men and women of geology is beginning to be applied in ways you would find intriguing, but I doubt if any of you would find them surprising. In contrast to some of the organizations you may have worked for, most geologists have always kept a weather eye to the new opportunity, the new idea, or the new frontier. However, the scourge of progress in geology, that is, inappropriate conservatism, is at the helm of the nation’s space policy today.

The end of the Apollo Program found humankind, and the United states in particular, on the verge of the establishment of bases on the moon, research and commercial stations in earth-orbit, and the statement of a realistic goal of a permanent foothold on Mars by the end of the century. In the motto of the last Apollo mission to the moon, this could have been "The End of the Beginning."

This opportunity was not grasped. Consequently, it falls to the current generation to re-ignite John F. Kennedy’s torch for space. The emotional and economic energy for that torch could be supplied by helium-3, an isotope of helium rare on Earth, but discovered and sampled by the Apollo astronauts and scientists in the soils of the moon. Helium-3 and several other potentially valuable by-products of its production are slowly but continuously implanted in the lunar soils by the solar wind.

Inherently safe and potentially low-cost fusion reactors fueled by lunar helium-3 might become the basis for producing large quantities of continuously available electrical power in space, for high-yield efficient space propulsion to and from Mars, and for life giving by-products that insure the self-sufficiency of settlements on the moon. Indeed, fusion power plants fueled by helium-3 from the moon could supply the electrical energy human civilization will require to maintain and expand its quality of life as we move through the 21st Century with 10 billion or more inhabitants and as we move civilization toward the stars.

A preliminary estimate of the commercial price of lunar helium-3 delivered to the Earth in the first quarter of the 21st Century is about $1 billion per metric tonne in today’s dollars. This is roughly equivalent in energy to $7 per barrel oil at today’s prices. Its energy value today is about $2 billion per tonne if matched against the cost of fuels currently used to produce electricity. The foregoing estimates also do not take into account the value of by-products (hydrogen, oxygen, nitrogen, and carbon) from lunar helium-3 production that will be needed in space or the value of the spin-off of related technologies.

MINING MARS

Rather than the moon, however, many dreamers and young people have their eyes on Mars. They are the ones who will go to Mars as would many of you here today if given the chance. They are the ones, like many of their ancestors before them, who will never be satisfied with either the comforts or the restrictions of home and Earth. These are the parents of the first Martians.

In spite of this immediate interest in Mars, the fortuitous existence of the moon and its resources so near the Earth may give us a significant opportunity to accelerate the timetable for Mars’ settlement. Establishment of a permanent settlement on the moon, based on the mining and production of helium-3, fully supports with technology and needed resources the desire to live on Mars as soon as possible. Ultimately, the membership of the AIPG will include the geologists of both Mars and the moon.

So, my friends, the frontiers of human endeavor move on. We must be willing to bring our lives and our talents to those frontiers. The physical, psychological, and family risks are high, but the rewards for our progeny are beyond measure. As the Pueblo Indians tell of their ancestors, "We walk on the earth, but we live in the sky."
From Washington...

By Guerry Newton, AIPG Washington Representative

The Environment is "IN" on Campaign Trail
The Republicans and the Democrats are both polishing their environmentalist image for the forthcoming election. Each party's candidate has appointed an advisor with strong environmentalist credentials to help with the issues. Bush, in major speech in May, evoked the memory of Theodore Roosevelt as a fellow conservationist and recalled that Richard Nixon created the EPA. Indirect, but strong references were made to a commitment for uniform enforcement of federal regulations on a number of serious pollution problems such as toxic waste and acid rain.

So far, Dukakis has not made "The Environmental Speech" and has been less direct in courting the environmental community. However, his views on several key energy issues are already well known.

Although the environmental community is quite pleased at the prospect of environmental issues being part of the campaign debates, these likely nominees haven't received high marks in the past from that constituency. Both are viewed by environmental politicos as lacking commitment but saying the right things at the appropriate times.

Wallop Proposes Changes Mineral Leasing Act
Senator Wallop has introduced legislation (S.2325) to partly delete the diligence requirement for coal leasing. The bill would extend the initial term of a coal lease from 10 to 20 years and replace the diligence provisions with a system of optional payments in lieu of production. The bill, however, does not address section 3 of the Mineral Leasing Act, which pertains to leases issued prior to 1976, and bars leaseholders who were not producing in commercial quantities within 10 years from obtaining other federal leases.

The legislation also eliminates the requirement that all lands in a logical mining unit (LMU) be contiguous. The bill further deletes the requirement that all reserves in an LMU be mined within 40 years and it restricts federal acreage in an LMU to 2500 acres. There is no limit on non-federal acreage. The bill is supported by the Administration and is not considered to be controversial by DOI.

Superfund or Supermess?
The implementation of the 1986 superfund law by EPA has come under sharp criticism from several sources. The Office of Technology Assessment has released a report asserting that toxic waste cleanup is "largely ineffective and inefficient" and that EPA selected cleanup methods that were biased toward impermanent, less expensive technologies. OTA recommended more experience-based standards and more effective HQ oversight and control over regional activities.

Witnesses at a recent House Energy & Commerce subcommittee on Oversight and Investigations offered testimony on EPA's alleged failure to follow the letter and spirit of the 1986 superfund law. This testimony was supported by an analysis of 75 cleanup decisions made by EPA in 1987, made by 7 environmental groups.

EPA considers that the OTA report did not reflect the enormity of the task nor the difficulty of the program's management. EPA, however, has acknowledged that critical changes are needed for the superfund program to be effective.

Engineers Move to Boondocks
The U.S. Army Engineer School has been officially transferred from Fort Belvoir, Virginia, its home for 70 years, to Fort Leonard Wood, Missouri. The move consolidates all Army engineer training at one location for the first time since 1941 and allows for training of all members of the Corps at one location, regardless of rank. Previously officers were trained at Fort Belvoir and enlisted men at Fort Leonard Wood.

Major General William H. Reno, commandant of the engineer school and Commander of Fort Belvoir, noted the important historical role played by the Corps of Engineers in developing U.S. transportation routes and constructing inland waterways and dams. At the closing ceremonies in June, General Ross said that it was therefore fitting that the school be moved to the "heartland of America." (The rumor that a geologist made the decision to move the school is incorrect.)

Minerals Information Office
The U.S. Geological Survey and the U.S. Bureau of Mines have opened a Mineral Information Office in the Department of Interior Building in Washington. The new facility is co-located with the Earth Science Information Center in the 2600 corridor at the E Street entrance and is open to the public from 8:15 to 3:45 daily. The Mineral Information Office telephone is (202) 343-5512. The Earth Science Information Center telephone is (202) 343-8073.

The new facility will provide public assistance and access to the largest single centralized source of geologic, geophysical, hydrologic, and cartographic information in Washington, D.C.

Earthquake Money
PL-100-252 which authorizes appropriations for activities under the Earthquake Hazards Reduction Act of 1977, for FY 1988-88 was signed recently.

Continental Drilling Program Authorization
HR. 2737 which authorizes the continental scientific drilling program has been approved. The companion bill S-52 was passed in 1987. These bills will allow for a coordinated effort among the several scientific agencies involved.

Waste Reduction Legislation
HR. 2800 provides for the establishment of an office in EPG to promote "source-reduction" techniques to decrease the hazardous waste generated by businesses. It defines source reduction as any practice that reduces the amount of a hazardous substance

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prior to recycling, treatment, or disposal, thus diminishing hazards to public health and the environment.

Mineral Revenues for Wildlife Programs
HR 4181 provides for 50% of federal leasing revenues from Acquired Lands to be distributed to qualifying states to expand state fish and wildlife management programs. Each state would be required to file an annual spending report with DOI.

Cosmos Goes Coed
The Cosmos Club, a famous Washington private club for scientific and literary notables, has voted to admit to membership scientific and literary notables who happen to be women.

Enlightenment came to the male-only club, founded in 1878, with an able assist from reality: the club has 350 vacancies and has trouble filling them; an increasing number of males are reluctant to join a group that excludes female peers or whose membership could prove to be embarrassing or politically deadly at a future time. The club was also threatened by the prospect of losing its liquor license. Sic transit gloria mundi?

New Onshore Oil & Gas Leasing Rules
The BLM has issued its final rules to implement the Federal Onshore Oil & Gas Leasing Reform Act of 1987. The new rules require that all onshore parcels are offered at an oral auction at a $2/acre minimum bid. Royalties are set at 12.5%, and rental rates are set at $1.50/acre for the first five years and $2/acre thereafter. The lease term is five years for a competitive lease and 10 years for non-competitive. Leases of existing leases who have not complied with reclamation requirements are barred from obtaining further leases.

The Forest Service will address appeals of FS consents or leasing denials or environmental stipulations set by either agency.

Offshore Leasing Plan Lawsuit--Updates
DOI and industry intervenors have filed their briefs, arguing in them that the petitioners case should be dismissed. The reply briefs from the states and environmentalists were due July 1. The case, Natural Resources Defense Council, Inc., et al v. Donald P. Hodel, et al (87-1432) was set for oral argument in the U.S. Court of Appeals for the District of Columbia circuit in September. The outcome of the case will probably have a bearing on how future leases plans are implemented, and will indicate how influential third party opinions are in offshore minerals management.

DOE

Corps of Engineers
Intent to prepare draft EIS and draft Feasibility Report--Lower Monongahela River Navigation System, near Pittsburgh, PA--study to be completed by October, 1989. For information contact James A. Purdy, (412) 044-6844. 53 FR 24774.

EPA
Hazardous waste treatment, storage and disposal facilities; Surface Impoundment Retrofitting Requirements; Closure Requirements. Further Information call (800) 424-9346 or (202) 382-3000. 52 FR 24717.

NRC
Final Generic EIS-General Requirements for Decommissioning Nuclear Facilities--10CFR Parts 30, 40, 50 51, 70 and 72. For information contact Carl Feldman, (301) 492-3883. 53 FR 24679.

BLM

BLM
Public review period for USGS/USBM "Mineral Survey Reports," Wilderness Study Areas--New Mexico. For further information contact: Powell King, (505) 988-6186. 53 FR 23158.

OSMRE
Proposed Rule--30 CFR Parts 772, 815, and 942 Requirements for Coal Exploration. Contact: Dr. Fred Block, (202) 343-4553. 53 FR 23532.

BLM
Intent to prepare Bishop Resource Management Plan; Bakersfield District California. Contact: James Morrison, Area Manager, (619) 872-4881. 53 FR 24153.

NRC

Corps of Engineers/BLM

Bureau of Reclamation
Intent to prepare EIS, Lake Berryessa, California. Contact: Ron Brockman, (916) 987-5313. 53 FR 24370.

OSMRE
Final Rule--Abandoned sites 30 CFR Parts 840, 842, 843--effective August 1, 1988. For information contact: Art Abb's, (202) 343-5531. 53 FR 24872.

MMS

NPS

IN MEMORIAM

Wilbur H. Smith, CPG 2274, of Salt Lake City, Utah, passed away September 5, 1988.

I am pleased and honored that my good friend, Michel T. Halbouty, chose me to be his citationist at this occasion. I have known Mike for 55 years and I know the depth of feeling that he has for his chosen profession of geology. Unfortunately, Mike could not be here because he is presenting papers in France on the 27th, in Tokyo on the 28th and in Tsukuba on the day of this award. On October 6, he will go to Beijing, China, on an extended lecture tour throughout China.

Michel Halbouty is recognized as one of the world’s outstanding geologists and petroleum engineers. He is considered as an authority on the geological and engineering problems of North America, a top expert on the geology of Gulf Coast salt domes, and is internationally renowned for his abilities as a scientist in the field of petroleum exploration.

From his earliest years at Texas A&M University, where he received his B.S. (1930) and M.S. (1931), until today, Mike’s life has been filled with a love of learning. Testimony of this was shown when, twenty-five years after receiving his master’s degree, he returned to Texas A&M and received the Professional Degree in Geological Engineering.

He has been a member of numerous scientific and technical societies and has served as an officer in many of them, including a term as president of the American Association of Petroleum Geologists (AAPG) in 1966-67. He has published more than 290 articles, mostly on petroleum geology, has authored several books, has edited many technical publications, and has lectured worldwide to professional and public audiences alike. His list of affiliations with civic, educational and scientific organizations is too long to mention here — but take my word that the list is as long as my arm.

He has been an ardent and long-term supporter of his alma mater, Texas A&M University. For over 40 years Mike has endowed scholarships which provided funding for more than 120 graduate students in petroleum geology and petroleum engineering. His students are scattered all over the world and contact him regularly. In 1982, he endowed the Michel T. Halbouty Chair in Geology, the largest individually endowed chair at Texas A&M University, with an endowment of $1.1 million dollars. That same year, at the request of the university, he contributed his speeches and publications to the Archives Department of the Texas A&M Library.

In May of 1968, Texas A&M presented Mike with the Distinguished Alumni Award and in November of 1977, the university honored him by naming its geoscience building the Michel T. Halbouty Geosciences Building. An additional academic recognition of note occurred in 1966 when the degree of Doctor of Engineering, Honoris Causa, was conferred upon him by the Montana College of Mineral Science and Technology.

In 1972, he founded the Circum-Pacific Council for Energy and Mineral Resources, an organization composed of scientists from the Pacific Basin countries and dedicated to research, education and dissemination of information relating to the energy and mineral potential and resources of this vast region. Most notable is the council’s map project, the single largest undertaking of its kind in the world, which has produced maps of the geological, geodynamic, tectonic and mineral resource aspects of the Pacific Basin. Michel Halbouty continues to serve as the council’s first and only chairman and president.

Mike was instrumental in the formation of AIPG and was a founding member in 1963. He organized the Texas Section and served as its first president. He also served on the national Executive Committee in 1965 as an Advisory Board representative, was a member of the AIPG Committee on the Ocean in 1968 and was first chairman of the Texas Section’s Advisory Committee on Geologic Environments in that same year.

Despite the fact that he has enjoyed the satisfaction of many accomplishments in geology and petroleum engineering, his drive and energy in the pursuit of scientific advancement have not diminished over the years and he continues to study, teach, and support the geological sciences. Like the list of his affiliations in professional societies, Mike’s list of honors and awards is too long to recite; he has received top awards in both of his professions. In my opinion, AIPG also honors itself by honoring this outstanding geoscientist.

Michel T. Halbouty, through the sharing of his knowledge and experience in his writings and lectures, world wide, has advanced both the science and profession of geology. His devotion to scientific discipline, his concern for the constant advancement of knowledge, his commitment to the highest standards of professionalism, and his personal support of education in the geological sciences has served as a stellar example and have led many others to also dedicate their careers to the pursuit of excellence in their chosen fields of geoscience.

John D. Moody, who was president of AAPG, when presenting Mike with AAPG’s highest honor, The Sidney Powers Medal, stated, “When these times are history, the name of Michel T. Halbouty will stand among those of the great geologists of all times.” I could not have ended my citation any better than by agreeing with John Moody’s observation, which so aptly portrays Michel T. Halbouty’s international eminence.

MERRILL HAAS
September 29, 1988
THE PROFESSIONAL GEOLOGIST
Citation for

CHARLES J. MANKIN, CPG 1415
1988 Recipient of the
Martin Van Couverying Memorial Award

AIPG’s Martin Van Couverying Memorial Award was established in 1979 in posthumous honor of the first president of the institute. This prestigious award is bestowed on those individuals who have made outstanding contributions of time and service to the institute, its committees and special projects. The Martin Van Couverying Memorial Award for 1988 is presented to Charlie Mankin for his long and continuing support and service to the institute.

Charles J. Mankin is a native of west Texas. He received his B.S. degree in geology in 1954, an M.A. in 1955, and the Ph.D. in geology in 1958, all from the University of Texas. He then spent one year at the California Institute of Technology as a postdoctoral fellow.

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.

1987 President Mankin (right) receives the Van Couverying Award from 1988 President Evans.

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 Midcontinent 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 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 – Charles J. Mankin, recipient of the Martin Van Couverying Memorial Award for 1988.

ROBERT A. NORTHCUITT
CPG 2704
Since 1974, Bob has supervised 56 graduate theses and since 1952 has published 84 technical papers, over fifty 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 reknown from other organizations. 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.

To summarize, Bob’s influence on his peers, his gifts for inspiring and teaching students, his leadership in professional societies, in education and in petroleum exploration, make him a geologist of distinction.

JOHN M. PARKER  
CPG 230
THE PROFESSIONAL GEOLOGIST
Citation for
WALLACE B. HOWE, CPG 163
1988 Recipient of the Award of
Honorary Membership

Honorary Membership is awarded by AIPG to its most outstanding and illustrious members for an exemplary record of distinguished service to the geologic profession and to the institute.

Including this year's honorees, only seven recipients have been awarded this very great honor. It is fitting tonight that one of these "magnificent seven" is an individual whom many of us know and all of us feel deserves to be so recognized -- Wallace B. Howe.

It is a great personal honor for me to be asked to present this citation. I remember with fondness the many contacts with Wally and his wife, Lola, over the years. First, in the mid fifties, when he was a young geologist with the Missouri Geological Survey and I was an even younger neophyte with Bear Creek Mining Company. I valued our professional contact and personal companionship. I am not certain that he was able to teach me how to find lead deposits, but at least he taught me how to play canasta. Since that time, our professional contacts have continued throughout Wally's long career in Missouri and throughout his extensive service to AIPG.

His interest in professionalism and particularly the profession of geology has been exemplified by both his career and his service. Wally Howe has been an integrant part of the formation and growth of AIPG. It is exceptionally fitting that he should be honored in our twenty-fifth anniversary year. A charter member, he has served in numerous offices in the Missouri Section, including that of president. He has served on the National Executive Committee and on the National Committee on Professional and Scientific Standards. He has been a strong voice for the institute and has played an important role in having the State of Missouri adopt a legal definition of "geology" and "geologists".

Wally received his B.A. (1947) and M.A. (1948) in geology from the University of Missouri and began his career with the Missouri Survey on a permanent basis in 1951. He was awarded his Ph.D. from the University of Kansas in 1954. His work as a geologist for the Missouri Survey includes the disciplines of areal geology, coal geology, groundwater, Pleistocene geology, and stratigraphy of the Pennsylvanian and Cambrian periods.

In 1965 he became Assistant State Geologist and in 1971 advanced to the position of State Geologist and Director of the Missouri State Geological Survey. In this capacity, he upheld the tradition of one of the premier state surveys of the nation. He remained at this post until 1986 when he became Associate Director. More recently, in 1987, he assumed the role of Adjunct Professor of Geology and Geophysics at the University of Missouri at Rolla, and thereby was able to resume work in his interests of Pennsylvanian stratigraphy and coordination of activities between the educational community and the state survey.

In addition to his involvement with AIPG, Wally has been active in the Association of State Geologists, GSA, AAPG, AAAS, Sigma Xi and also civic groups.

As a friend, a warm and thoughtful human being, a real teacher, and as a scholar, scientist and leader in the professional aspects of geology, I can think of no one more deserving to be recognized by AIPG as an honorary member than Wallace B. Howe.

ERNEST K. LEHMANN
CPG 583

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.

Past Recipients of
AIPG HONORARY MEMBERSHIP

Grover E. Murray 1984
L. L. Sloss 1985
Ross L. Shipman 1986
Edward C. Dapples 1986
Doris M. Curtis 1987

OCTOBER 1988
Citation for
RUSSELL G. WAYLAND, CPG 597
1988 Recipient of the
Public Service Award

R.G. Wayland, right, receives Public Service Award from President Evans.

Representation, information and education represent three of the four major activities performed by the American Institute of Professional Geologists. The Statement of Purpose of AIPG contains the words "...the institute...shall monitor governmental and other activities affecting the geological sciences and shall communicate with the public." Embodied within the Statement of Purpose is a charge to every member of this institute to serve the public good.

Some members have proven themselves extraordinarily capable of accepting this charge, and the Public Service Award was established in 1983 to honor just one individual member, among thousands, whose performance of public service is characterized by excellence. That single individual we honor in 1988 is Russell G. Wayland. There is scarcely an individual in this room who doesn’t already know of Russ’s achievements in public service. Each month through most of the 1980’s we all read “Federal Legislative and Regulatory Issues Reviewed”, the longest running and most regular column in AIPG’s monthly publication, The Professional Geologist. That column provided thousands of readers, both inside and outside the institute, with the only ready compilation of information about governmental activities that affect geologists and the geological resources upon which our nation depends. All of us here know that the production of that column alone would bring Russ to the forefront of candidates for the Public Service Award. However, as citationist for Russ, I got to look beyond the author of the column in TPG. and realize that few of us really know how awesome the qualifications of this recipient of the Public Service Award actually are.

The rather soft-spoken and unassuming “Russ” we know is also “Doctor Russell G. Wayland” with a Ph.D. in economic geology from the University of Minnesota, an M.A. from Harvard in geology, another master’s in mineralogy from the University of Minnesota and a baccalaureate in mining engineering from the University of Washington. He is also “Colonel Wayland”, now retired, from the U.S. Army Reserve, who was honored with the U.S. Army Commendation Medal in 1945. The commendation resulted from performance in 1942-45 when Russ used his impressive education and experience to serve the public in the area of strategic minerals by aiding in the procurement and production of mineral commodities for the War Production Board and the Army-Navy Munitions Board.

After 1945, Russ served on the staff of the U.S. Military Governor in the U.S. Zone of Germany. There he worked to selectively restore nonmetallic mining including potash, coal and the ceramic industries. Then, in 1948, he concentrated on coal resources within the Ruhr district of Germany and rose from staff engineer to U.S. Chairman of the Combined Coal Control Group, a body composed of representatives from the U.S., Britain, and France, to rehabilitate the West German coal industry. In 1952, he joined the Office of the Director of the U.S. Geological Survey, where he contributed expertise in mining engineering until 1958. In 1958, Russ became Regional Geologist for the U.S. Geological Survey’s Conservation Division of the Pacific Region, where he was heavily involved through 1966 in the classification of federal lands in California, Oregon, Nevada and Alaska for their leasable mineral and hydropower potential. His exceptional performance led to promotion in 1968 to Chief of the Conservation Division, a position he retained through 1978 and during which he received the Department of Interior’s Distinguished Service Award.

In 1978, Russ again rejoined the Office of the Director of the U.S.G.S., this time as a research scientist, and remained there until his retirement in 1980, when he became an Energy Minerals Consultant and concurrently, in 1982, also took over the position of Washington Representative of AIPG, a position from which he recently retired this year.

In every line of this impressive summary one sees “service to the public” accomplished in a consistently outstanding manner for over fifty years, a type of service that embodies the very essence of a major part of AIPG’s Statement of Purpose. The Silver Anniversary Year, 1988, is a very special year for the institute. We have celebrated it continuously the entire year and commemorated it in every institute publication. It is indeed a fitting and joyous occasion that in this special year we are able to honor Russ Wayland as recipient of the Silver Anniversary Year Public Service Award.

Russ, I thank you for the honor afforded me in providing your citation and thank you again on behalf of the institute and the public whom you have served in such a splendid manner.

EDWARD B. NUHFER,
CPG 2808

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THE PROFESSIONAL GEOLOGIST
CONGRATULATIONS!!
Recipients of Presidential Certificates of Merit for 1988

Smiles on the faces of these recipients result from a job well done! Front row 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 Nuhfer.

1988 Recipients of the
PRESIDENTIAL CERTIFICATE OF MERIT

(Presented by SAM R. EVANS, CPG 3349
1988 President of the American Institute of Professional Geologists)

JOHN H. DAYVAULT - CPG 4815
For the continuing education of geologists through organizing and participating in the Hydrogeology Training Course. The course was designed to retrain capable unemployed geologists for alternative geological careers in hydrology.

R. STEVEN FRIBERG - CPG 6502
For leadership as president of the Nevada Section and the service and dedication that has resulted in growth of that section.

JOHN T. GALEY, Jr. - CPG 2622
For outstanding service as treasurer in 1987-1988 and for meritorious service as chairman of the Headquarters Committee during a critical transition period.

LEROY GATLIN - CPG 566
For continuing education of geologists through organizing and participating in the Hydrogeology Training Course. The course was designed to retrain capable unemployed geologists for alternate geological careers in hydrology.
National Energy Policy
Gerald V. Mendenhall
Texas Section President

There is a prevailing thought that "Our Government" does not have a National Energy Policy. It is particularly so among the independent petroleum geologists because of the observed lack of available investment capital to finance viable exploration. I was recently given to understand that there is a National Energy Policy. Our Washington Representative, Elisabeth G. Newton, who is familiar with the ins and outs of government circles, informed the National Executive Committee that the Executive Branch of the government does have a policy. I wish to add that not all of the Executive Committee are from the petroleum world and are not necessarily as aware of the consequences as others. Mind you, no one at the meeting related the policy, so it seems to me that there is no "perceived energy policy". On the other hand, perhaps, we are not willing to recognize it. Our questionnaire of the Texas Section indicated that a coherent energy policy was the foremost need on the minds of our membership. This came mostly from petroleum geologists who are most affected by the business consequences of a critical and floundering petroleum industry.

I seem to recall that at one time the government had decided that we would emphasize nuclear energy. There is doubt about the implementation of that policy by the government in the face of protests against nuclear power, the consequent shutdown, and extension of construction delays due to redesign of safeguards. There hasn't been much of a stand by the government to continue this policy. This year, more than any other, we were reminded that our energy sources are not like "free air". With the drop in water volume in TVA, electrical generation was made up by nuclear and conventional generation. It is prudent to be careful when working with new technology, but should our energy policy fluctuate with whims?

A sound governmental policy toward energy was largely lost with the advent of politically motivated tax reform. How many have paid less tax with the new law? Well, one serious blow to the petroleum industry and other industries requiring new investment was the change in the top tax bracket. There is little incentive for anyone to put 70-cent dollars into high risk ventures. As a consequence of this and other factors, even the larger companies are investing in maximizing discovered reserves rather than adding to the overall national reserves. This is done by acquiring reserves at $6-7/bbl. through purchase, merger, secondary and tertiary recovery and infill drilling. It is, no doubt, good business; but it is not a good national energy policy for the long range.

On the surface, it seems that our national petroleum policy is to avoid recognizing the contribution of oil companies, particularly the independent, to the nation's welfare. There may be little possibility of the United States becoming self-sufficient in petroleum, but there is little reason to write-off the industry and allow a collapse such as we have seen. There is, also, little reason to maintain a Department of Energy that has virtually disappeared from the scene.

An apology is due the geologists who are not petroleum oriented. But don't think for a moment that you are exempt from the effects of a "wimpy" natural resources policy. Those in public service in Texas are very much financed by taxes derived from petroleum. Geologists in hydrology are employed to a great extent for or because of the petroleum industry. Minerals geologists, particularly those in uranium, are suffering the consequence of a fickle public in energy and strategic minerals policy.
AIPG National and Section Officers and Committees now covered by Liability Insurance; Articles of Incorporation Amended by Unanimous Vote

Two very important steps taken at the national meeting in Tulsa included the procurement of corporate liability insurance for the institute and its officers and the passage of amendments to the Articles of Incorporation.

National officers, section officers and members of national committees are now indemnified against liability which may result in the course of performance of duties for the institute. In the recent social environment characterized by litigation, officers and committee members have served the institute at some peril to themselves. The insurance now protects these individuals as well as the institute.

The amendments to the Articles of Incorporation of AIPG in the State of Colorado were approved by unanimous vote at the Annual Business Meeting of AIPG on September 30. The approval will allow AIPG to take advantage of Colorado law which permits limiting the liability of officers of non-profit corporations.

Progress Made on Revised Constitution and Bylaws

Since April, a large part of the Executive Committee's time, particularly that of Richard Proctor (president-elect, 1988), has been spent on a retooling of the Constitution and Bylaws to ensure that they will conform with current laws and policies and still permit the institute to refuse admission to unqualified applicants. The Executive Committee as well as several AIPG section officers met for a very full afternoon on Tuesday, September 27, with attorney and registered architect Alan Stower.

A new Bylaws, which essentially merges and revises the present Constitution and Bylaws, was presented to the Executive Committee in Arvada in July. The committee studied the document and furnished written comments during July and August. A revised document was then presented on September 27 and discussed at length. An additional document, a Code of Ethics, was introduced at the September meeting and this is undergoing further review by members of the Executive Committee. When a final draft is completed, these documents will appear in a special issue of TPG and all members can then study these in anticipation of a vote on adoption.

Increase in the size of the institute since 1963, new laws passed, and court decisions rendered with respect to associations, all indicate that major changes should be made in documents that served us well 25 years ago. The long hours and extensive efforts now being expended by the Executive Committee will result in an AIPG that is ready to enter effectively into its second twenty-five years.

Congratulations, Al Broughton!

Al Broughton, Emeritus Professor, addresses gathering at the Twentieth Annual Wisconsin University Field Conference.

W. A. (Al) Broughton, CPG 1845, was recently honored by geology departments throughout Wisconsin when the Twentieth Annual Wisconsin University Geological Field Conference was dedicated to him. The 1988 dedication to Al, the first of its kind in this conference, was decided at the meeting held in fall of 1987. A 62 page field guide was prepared by students and alumni of UW-Platteville for a 200 mile field trip. A dedication banquet with guest speaker Dr. Jeff Post, mineralogist with Smithsonian and alumni of UW-Platteville immediately followed the trip.

Al graduated with honors from the University of Wisconsin with a B.A. in geology. He pursued further graduate studies at Wisconsin and at Yale. Al served subsequently as head of the geology department at University of Wisconsin at Platteville and was active in both the geology and mining engineering programs. During Broughton's tenure at the university, lead-zinc mining in the Upper Mississippi Valley was a major part of that area's economy. Broughton worked with such notables as Alan Heyl, Allen F. Agnew (CPG 240), Walter West, Jack Hague (CPG 2131) and became a noted authority on the geology of the Upper Mississippi Valley.

Over 100 registrants attended the field trip and banquet dedication. Included within the registrants were over twenty alumni who returned from as far away as Nevada and New York for the event. Al received a plaque of appreciation from the students and alumni of UW-Platteville and a congratulatory letter on behalf of AIPG from President Sam Evans.
Correction on State Affairs and Registration Report in August TPG

Edward B. Nuhfer, CPG 2808

The August issue of *The Professional Geologist* on page 15 noted the following.

"On the basis of information compiled from responses to questionnaires and by individual contacts with appropriate state agencies, it appears that the following states have provisions for mandatory registration: ME, RI, IN, NC, SC, GA, FL, AR, AZ, CA, OR and ID." *Note* that Rhode Island (RI) should not have been included in that list. Rhode Island has no registration for geologists nor any plans to create registration. Instead, Delaware (DE) should have been included in that list. The error did not result from the State Affairs and Registration Committee but resulted when I, your editor, transferred information incorrectly from a map (which was not of publishable quality) to a verbal statement. A corrected statement follows.

On the basis of information compiled from responses to questionnaires and by individual contacts with appropriate state agencies, it appears that the following states have provisions for mandatory registration: ME, DE, IN, NC, SC, GA, FL, AR, AZ, CA, OR and ID.

Further corrections or updates on the status of registration are appreciated. The status of registration in specific states is an inquiry frequently addressed to the headquarters staff of AIPG. The report by the State Affairs and Registration Committee is the most current address to those inquiries. The summary of this status will be updated from time to time in *TPG*.

A miscommunication between printer and editor caused several unedited columns to be printed in the August *TPG* and resulted in publication with an abnormal number of typographical errors. Both John Murphy, our printer, and I, your editor, do lose sleep when slip-ups like this occur, and we are very concerned about the quality of *TPG*. We are now starting to typeset *TPG* using a modern publishing system at headquarters with a computerized spelling checker. Parts of the September *TPG* were typeset with this system and an even greater percentage of this issue has been produced in this manner. By November, we should have phased out completely the older style typeset.