The Role of Energy in the Reindustrialization of America

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.

Kentucky Engineers Respond

The attempt to register geologists in Kentucky and the concerns expressed by engineers in that state have been described in previous issues of TPG. The following letter is the response of the Kentucky State Board of Registration for Professional Engineers and Land Surveyors to John C. Philley, CPG 4322.

Mr. John C. Philley, President
Kentucky Section of AIPG

Dear Mr. Philley:

As you know, the State Board has been looking into issues you raised regarding a position paper that the Kentucky Society of Professional Engineers and the Consulting Engineers Council of Kentucky published for its membership during the last session of the Kentucky General Assembly.

The Board discussed this matter at several meetings and had the benefit of input from your correspondence and Mr. Mark Hostetter representing the American Institute of Professional Geologist, Kentucky Section, as well as representatives of KSPE/CEC. Our investigation into this matter was concluded at the October 1988 meeting of the Board. It was the decision of our Board that based on a response from KSPE/CEC, this issue was not a public statement but an in-house position paper made by a group and not an individual and that this Board has no jurisdiction. While we appreciate your concern, we feel we must conclude our investigation and close our file at this time.

Sincerely,
Larry S. Perkins
Executive Director

Larry Woodfork Named as Director of West Virginia Geological and Economic Survey

Morgantown resident Larry D. Woodfork, currently the Acting Director of the West Virginia Geological and Economic Survey, will assume the responsibilities of Director in the new administration. Woodfork, whose appointment is effective immediately, has 25 years of experience in geologic field work, research, and exploration.

Woodfork is a Certified Professional Geologist in the American Institute of Professional Geologists which he served as president in 1983. He is also a member of the Appalachian Geological Society, the Pittsburgh Geological Society, and the Geological Society of Washington, D.C. Additionally, Woodfork has been active in the American Association of Petroleum Geologists at the local, regional and national levels for many years. The AAPG recognized his leadership and involvement with two Distinguished Service Awards: one from the eastern region in 1984 and one from the national association in 1987.

The author of numerous abstracts, maps, and journal articles, Woodfork holds an appointment as adjunct Professor of Petroleum Engineering in the College of Energy and Mineral Resources at West Virginia University. He joined the West Virginia Geological Survey in 1968 and has acted as Assistant State Geologist since 1970. Woodfork became Acting Director in 1988.

Regarding the appointment, Governor Caperton notes that "continuing Mr. Woodfork's directorship of the agency is not merely a practical move. It's an attempt to retain high quality people in positions of leadership in West Virginia."
Summary of the Geological Society of America Forum on "Fibrous Minerals, Mining and Disease"

(Invited Paper)
H. Catherine W. Skinner, Yale University and Malcolm Ross, USGS

Asbestos strikes fear into the minds of millions of Americans due to the adverse publicity this substance has gained as a human carcinogen. Parents fear for the lives of their children when asbestos is found in their schools. This fear will become even more pronounced if the EPA proposed asbestos regulations to remove or encapsulate asbestos are applied to all public and commercial buildings as well as private homes. The costs of asbestos abatement could be so great that many businesses, school systems, churches, home owners, cities, and towns could go bankrupt.

On November 1, 1988, at the 100th anniversary meeting of the Geological Society of America, a Public Policy Forum, titled "FIBROUS MINERALS, MINING AND DISEASE," was convened to review the medical, regulatory, geological, and economic aspects of this emotionally charged topic. An audience of over 500 people, including local school board members, lawyers, concerned citizens, as well as attendees of the annual GSA meeting, listened to the four invited speakers who described:


2. The mineralogy of asbestos (Ann Wylie, Professor of Geology, University of Maryland).

3. The medical and biological aspects of the diseases attributed to asbestos (Hans Weill, Professor of Medicine and Chief of Pulmonary Disease Section, Tulane Medical Center).

4. The epidemiologic data that have contributed to the regulations and the questions of relative risks (Graham Gibbs, Managing Director, Occupational Health and Safety, Province of Alberta, Canada).

In addition, Robert Pigg, Director of the Asbestos Information Association, summarized the views of the asbestos industries on the proposed asbestos ban by the EPA, and Martin Rutstein, Professor of Geology, SUNY, New Paltz, commented on the present and future economic affects of the Asbestos Hazards Emergency Response Act in regard to asbestos abatement in New York schools.

We learned that the definitions and assumptions on which the proposed banning and phase out of asbestos by the EPA are based have been questioned by knowledgeable geologists, epidemiologists, and physicians. And further, that the costs to reduce or eradicate asbestos from our environment are completely out of line with the number of lives, if any, that might be saved. Asbestos includes several naturally occurring minerals that are commonly found in many parts of the world. It will prove to be impossible to completely remove asbestos and other "suspect" fibrous materials (such as fiberglass) from our environment and from use in our modern technological civilization. To regulate asbestos out of existence defies common sense. However, it was pointed out to the audience by Mr. Stahl that the "Public" were the ultimate responsible parties for the rulemaking - the EPA merely carried out the laws.

With such unequivocal statements from the speakers it became clear during the question and answer period that many in the audience felt that it was imperative that the entire issue of asbestos and health, including the misconceptions of risk, be brought directly and immediately to the public and to the responsible government organizations. The extreme fear of asbestos which is leading to the unnecessary expenditure of many billion of dollars must be modulated and put into perspective, using all available scientific information. Asbestos regulations must reflect: the true risks of exposure to the various asbestos minerals, the risks of removing versus encapsulating asbestos in buildings, the risks entailed through the substitution of asbestos products by other less efficient materials or materials that also present possible health hazards, and the economic costs of the various regulatory options.

Some of the important points made during the Forum are:

1. "Asbestos" is a commercial term encompassing six distinct minerals, which require optical, chemical, and diffraction analysis for accurate identification. These six asbestos minerals are, in order of amounts in use, (1) the serpentine mineral CHRYSTOTILE, and the following five amphibole minerals, (2) AMOSITE (trade name equivalent to grunerite asbestos), (3) CROCIDOLITE (varietal name equivalent to reibekite asbestos), (4) ANTHOPHYLLITE asbestos, (5) TREMOLITE asbestos, and (6) ACTINOLITE asbestos. Asbestos regulations (OSHA, 1987) apply to all these minerals, regardless of whether the mineral fragments do or do not possess an asbestiform shape. The ubiquitous nonasbestiform tremolite, actinolite, anthophyllite, and grunerite, where ever they occur, are becoming regulated substances. Consequently, these regulations could impact a large segment of the U.S. mining industry.
2. Evidence was presented indicating that lung cancer is usually accompanied by asbestosis in heavily exposed asbestos workers. These diseases will decline and should disappear in the future as more stringent controls are applied to the work place. Even now several prominent medical clinicians report that asbestosis is a disappearing disease. Whereas the occurrence of asbestosis and lung cancer is related to the long-term exposure to the various types of asbestos minerals, it appears that mesothelioma (a cancer of the lining of the lung and intestinal tract) can occur in workers who have had a short-term, albeit heavy, exposure to crocidolite asbestos.

3. The actual mechanism for the induction of cancer by the solid fiber is unknown.

4. We will probably never be able to detect the effects on human health of the low level non-occupational type of exposures to the asbestos minerals.

5. Many epidemiologists employ the "linear extrapolation model" of mortality data to calculate the level of asbestos exposure that would be prudent in protecting the public health. Implicit in this model is the concept of zero risk and the assumption that there is no safe level of exposure to asbestos.

6. In spite of the wish to achieve zero risk from asbestos exposure we should put this risk in perspective by examining the relative risks of other human activities. The risk of death from cancer due to environmental exposure to asbestos dust is one per 100,000 lifetimes). Compare this mortality risk to the risk of death from smoking (21,900/100,000), from automobile travel (1600/100,000), from air travel (730/100,000), from skiing (220/100,000), from bicycling (75/100,000), from lightning (4/100,000), or from hurricanes (3/100,000). Note that the "acceptable" risk (World Health Organization) for drinking water is also (1/100,000,000); see Dr. G. T. Commins, Commins Associates of Great Britain, The Significance of Asbestos and other Mineral Fibers in Environmental Ambient Air, Scientific and Technical Report #2, June 1985, 85 p.

7. We know little about the utility or safety of the proposed substitutes for asbestos, most of which are also fibrous materials.

In summary, the facts and concepts provided by the Forum had an energizing effect on the participants. It remains to be seen whether the information imparted will galvanize some of the members of the audience into action as it has the co-conveners, H. Catherine W. Skinner (Yale University) and Malcolm Ross (U.S. Geological Survey). They, together with Clifford Frondel (Harvard University), have authored a book titled "Asbestos and Other Fibrous Materials," Oxford University Press (1988), on which this Forum was based.

Conference on Mineral Fibers to be Head in Baltimore

A conference titled "fibers, fibers, fibers" is being co-sponsored by the Society of Mining Engineers and the National Stone Association at the Sheraton Inner Harbor Hotel, Baltimore, Maryland on April 7, 1989. According to the announcement, the purpose of the meeting is to bring together representative from industry, the government, and the medical profession to discuss mineral fibers, their environmental regulation, identification, health effects, risk assessment, and future concerns of the minerals industry. Additional information is available from Meetings Dept., Society of Mining Engineers, P.O. Box 625002, Littleton, CO 80182.

Registration Act Introduced in Massachusetts

The following report about a registration bill introduced in the Massachusetts Legislature was prepared by Patricia Billingsley, CPG 6654.

The board would consist of Registered Professional Geologists with ten years experience appointed by the Governor. One member would be from government, one from academia, and three from the private/corporate sector, with the State Geologist acting in an advisory role. All geologists who work in the State or perform "professional services in connection with the description, location and extraction of, and the natural processes acting on earth materials and fluids" including oil and gas and ground water must either be registered or work under a Registered Professional Geologist. The determination of "simple geologic conditions, and their use in geotechnical and hydraulic computations" by registered civil engineers is allowed but is not "equivalent to any of the services" done by professional geologists. Soil scientists are not affected or prevented from practicing by this act, but neither are they to be granted RPG status.

To become a Massachussets Registered Professional Geologist, a person would have to:

(1) be of good moral character;

(2) have a baccalaureate or higher degree in geology, geophysics, engineering geology, or a related field; and

(3) have at least seven years experience, with undergraduate study counting as 1/2 years experience/year (up to 2 years maximum) and each year of graduate study and/or research counting as one years experience (up to 2 years maximum). The teaching of geology, consisting of at least 6 units/semester at the junior/senior or graduate level, counts year for year as experience; or
(4) have at least nine years of experience and equivalent education in geology acceptable to the board if a non-graduate; and

(5) pass the examination prescribed by the board.

The examination approved by the board is supposed to "emphasize practical knowledge, and include questions from all areas of geology." The examination fee is set at $40.00, with $15/year to maintain registration (note last week the Governor proposed raising all State fees; because other professional registration fees were raised, some to $100/year, this fee is unlikely to stay this low). Limited permits for up to sixty days could be granted to out of state residents, and temporary permits for up to one year to those who are similarly legally qualified to practice in their home state who "submit evidence satisfactory to the board" on general qualifications. Persons applying for registration who are already Professional Geologists with a license or certificate "issued to him by a legally constituted board of examiners" to practice in their home state, or who are established authorities in their field of geologic practice, may be exempt from examination. For one year after enactment of this Act persons who meet all other requirements of the law may be registered without examination.

Upon the preference of fraud, deceit, gross negligence, incompetency, or misconduct charges (including "the affixing of his signature to plans, drawings, specifications, or other instruments of service which have not been prepared by him or in his office, or under his immediate and responsible direction") against and registrant the board would hold a hearing within ninety days. The board would have the power to subpoena witnesses, require the production of documents, and administer oaths. Registrants could be reprimanded, suspended, or have their registration revoked as a result of the hearing.

COMMENTS

This bill was discussed at the DEQE Geologists meeting on January 20, 1989, by Boyd Allen (DEQE) and Joseph Sinnott (Massachusetts State Geologist). The geologists present appeared to support registration, putting us on an equal profession/legal footing with Registered Professional Engineers and Surveyors. Suggestions for alternative methods to administer registration, including the involvement or administration of registration by non-governmental professional geological associations such as the AIPG (AIPG specifically mentioned) were made. Joe Sinnott stated that some people in the Massachusetts government would prefer not to set up another governmental board/agency, and would instead consider having registration done by geologists themselves through a professional association, provided that certain standards including oversight of professional activities was included.

OPINION

This would be an excellent opportunity for representatives of the AIPG to become involved in presenting our definitions of geologist and professional geologist to the state for adoption (the definitions in the proposed act are a bit fuzzy), as was done in Washington (see the August, 1988 TPG), and perhaps assisting fellow CPG's to be accepted as registered geologists. Because, the act proposed including all geological work, including geological work relating to oil, gas, and minerals exploration and production, requirements that could limit geological work presented in the state to Massachusetts Professional Geologists and their equivalents could have an effect on geologists and companies presenting investment opportunities from outside the state. The AIPG should seek to have representation in any registration discussion, and on the board of registrars; it could even seek to become the method by which registration is done, provided that the organization is also willing to enforce professional standards as well as certifying professional competence.

Boyd Allen, Massachusetts Department of Environmental Quality Engineering, 1 Winter Street, Boston, 02108, (617) 292-5677 and Joe Sinnott, (CPG 1997), State Geologist, Executive Office of Environmental Affairs, 100 Cambridge Street, Boston, 02202, (617) 727-9800 would appreciate any comments on this proposed act.

New Recommendations Issued by ASFE

Twenty-two organizations have endorsed the recently published "Recommended Practice for Design Professionals Engaged as Experts in the Resolution of Construction Industry Disputes" issued by ASFE/The Association of Engineering Firms Practicing in the Geosciences. According to the press release, some of the 13 recommendations were created specifically to counter widespread abuse by "hired guns," that is, experts who advocate a client's position instead of relating factual information that a trier of fact needs to help reach a verdict. Other issues covered by the recommendations include reliance on assumptions, qualifications to accept and engagement, conflicts of interest, integrity of tests, illustrative devices, custody and control of materials, confidentiality, demeanor, fee, and scope of investigation.

Copies may be obtained from: ASFE/The Association of Engineering Firms Practicing in the Geosciences, 8811 Colesville Road, Suite G106, Silver Spring, MD 20910. Remittance of $5 per copy must accompany each order.
First Meeting of 1989 Executive Committee

AIPG's 1989 Executive Committee met for the first time on January 21-22, 1989 at the Pasadena Hilton Hotel, Pasadena, California. This informal summary prepared from notes provided by Secretary Gonzales is provided with the intention of keeping AIPG's members advised of the matters being considered by their officers. The minutes of the meeting are being prepared in accordance with normal procedures.

The meeting was hosted by President Proctor and attended by Susan M. Landon, President-Elect; Robert A. Northcutt, Vice President; Serge Gonzales, Secretary; Norman K. Olson, Treasurer, Robert R. Jordan, Editor; and Advisory Board representatives Lawrence M. Austin, Ronald A. Baugh, and Larry R. Rhodes. Also present were Administrative Manager Carol A. Beckett, Washington Representative Elisabeth G. Newton, Past President Sam Evans, and Oklahoma Section Member William Knight.

The report of Secretary Gonzales showed that as of December 31, 1988, AIPG membership totaled 4,561, including 3,774 Active, 700 Retired, and 87 Associate members. In 1988, 171 applications (146 for Active membership and 25 for Associate) were reviewed by the Reviewing Officers. All together, 217 applications were received in 1988; currently, 193 were on hand in various stages of development.

Treasurer Olson's report contained a detailed breakdown of the estimated final 1988 expenses of the Institute and a proposed 1989 budget approaching $400,000. Forecast of a slight deficit in projected 1989 income compared with the proposed budget was discussed. An interim operating budget was adopted pending final resolution when actual expenses are finalized and 1989 income is more precisely known.

The Editor's report acknowledged the efforts of Edward Nuhefer and discussed the incoming Editor's concept of TPG as presented to the members in the February issue. Revised mechanical and contractual arrangements for AIPG's publications as consequences of new logistics and the need for some cost savings were presented and discussed.

Guerry Newton's report as our Washington Representative provided a detailed accounting of her activities since the September 1988 meeting of the Executive Committee. Particular attention was focused on her recommendations to consider (1) the single designation for "geologist" as employed by the federal Office of Personnel Management and the need for AIPG to work toward a more diversified classification of geoscientists and (2) geological cross training of government agency personnel, especially those in the Bureau of Land Management and Forest Service, with industry leaders in seminars and related training meetings. President-Elect Landon plans to appoint ad hoc committees to address these points.

Carol Beckett focused on the status of AIPG's Headquarters Office, noting that (1) most activities undertaken over the past few months to more effectively organize the office have been successfully enacted; (2) added software and training has enabled Wendy Davidson to assume greater responsibility, especially in the preparation of TPG; (3) the FAX line (303-431-1332) has been placed into operation; and (4) the regular telephone line (303-431-0831) will have an answering machine added to receive calls outside normal office hours.

Past President Sam Evans shared advice and comment on (1) his concern for the long-term future of AIPG; (2) the need to change directions and provide more services to members and offer new means of attracting greater numbers of new members; (3) the massive effort and progress on revision of the Bylaws, Constitution, and Code of Ethics; (4) the potential merit in new officers assuming their responsibilities at the time of the Annual Meeting; (5) need for the National Screening Board; (6) discussions with AAPG about the possibility of extending coverage to AIPG members under the AAPG Group Insurance Plan; (7) encouraging discussions between AIPG, AEG, and AAPG's DPA about united efforts in the general area of registration and certification; and (8) emphasis on a meaningful program of continuing education.

President Proctor discussed with the Executive Committee many of the topics reported to the membership in his article and statement of goals that appeared in the February TPG. He announced his proposed appointments to the standing and ad hoc committees of the Institute including Annual Meetings, Constitution and Bylaws, Study Committee for National Screening Board, Continuing Education, Ethics, External Appointments, Governmental Affairs, Awards and Honors, Membership Services, and Nominations. Because all response letters had not been received at the time of the Executive Committee meeting, the final appointments will be announced at a later date.

Reports were received from the Advisory Board representatives and from several additional committees. President Proctor led discussions of the reports of Ronald Baugh (Government Affairs), Richard Proctor (Awards and Honors), Larry Rhodes (Member Services and State Affairs and Registration), Sam Evans (Nominating), and Lawrence Austin (Continuing Education). The 1989 Annual Meeting, sponsored by the Virginia and Capitol sections at Crystal City, Virginia was discussed in some detail with special emphasis on its program, field trip, and short course. The 1990 Annual Meeting will be at Long Beach, California and the invitation of the Tennessee Section to host the 1991 meeting at Gatlinburg, Tennessee was accepted. Reno, Nevada is being considered for 1992.
Forest Service Proposes Leasing Rules

The U.S. Forest Service has proposed guidelines for regulating oil and gas production in national forests. The new rules would give the Forest Service an enhanced role in oil and gas leasing in national forests. The rules would govern the 156 national forests where 17 million acres are under lease for oil and gas development. Annual production from national forest lands is about 19 million barrels of oil and 8 BCF of gas.

DOE Requests Authority to Use WIPP Site in New Mexico

The Interior Department has been requested by DOE to withdraw from public use more than 10,000 acres of federal land near Carlsbad, New Mexico. The area is to be the site of an underground repository for low-level and transuranic radioactive defense wastes. New Mexico officials would prefer a legislative land withdrawal, but such efforts have been unsuccessful to date.

Military Bases Evaluated for Earthquake Hazards

A recent study has assessed the vulnerability of U.S. military bases to earthquake damage. The report points out that 17 major military facilities are located in California as well as several major defense contractors. Information on the DOD's preparedness to accommodate major earthquake damage is not available.

New and Pending Regulatory Issues

EPA


EPA


Federal Highway Administration


Bureau of Prisons


Small Business Administration


MMS


MMS


MMS

Call for Information and Nominations; Intent to prepare EIS - Chukchi Sea; Lease Sale 126 (May 1991). Contact: Alaska OCS Region, (907) 261-4621. 54 FR 1634.

MMS


MMS


DOT

National Earthquake Prediction Evaluation Council; Re-establishment. 54 FR 2232.

Forest Service


EPA

U.S. Bureau of Mines Names Brown as Associate Director

U.S. Bureau of Mines Director T S Ary announced the career appointment of David S. Brown as head of the agency's information and policy analysis program.

Brown, previously the Executive Director of the National Critical Materials Council and the Bureau's Deputy Director, will lead a 550-member staff of economists, engineers, geologists, and commodity and country specialists, which collects, evaluates, and publishes worldwide minerals information. The program also analyzes the effect of legislation, regulation, and policy alternative on all phases of minerals development and conducts studies on how potential economic, technologic, and legal developments will affect resource availability.

Brown started his government career in 1969 as Legislative Assistant to U.S. Representative Clarence Miller of Ohio. In 1973 he became the Congressman’s Staff Director.

In 1979 he became Senior Public Policy Analyst for the Gulf Oil Corporation in Houston, Texas.

In 1981 he joined the U.S. Department of the Interior as Deputy Director of Congressional and Legislative Affairs. From 1983 to 1985 Brown was Assistant to the Secretary and Director of the Office of Congressional and Legislative Affairs.

He became Deputy Director of the U.S. Bureau of Mines in 1983 and served as Acting Director from 1987 to 1988.

Since last year, Brown has been Executive Director of the National Critical Materials Council in the Executive Office of the President.

Earthquake Conference to be held in Hawaii

"Earthquake: An International Conference on Insuring and Managing the Inevitable" sponsored by The Society of Chartered Property and Casualty Underwriters (CPCU) will take place in Honolulu, Hawaii, May 14-17, 1989. According to CPCU, there will be a comprehensive program led by respected experts who will present the latest geophysical information, engineering technology, and financial, insurance, and economic concerns connected with earthquakes. For additional information contact: Debra Lee, Public Relations Coordinator, The Society of CPCU, Kahler Hall, 720 Providence Road, CB No. 9, Malvern, PA 19355-0709.

From AGI's Geospectrum
Changing Careers

Robert B. Rieser, CPG 6760, Groundwater Technology, Inc.

From the Houston Geological Society Bulletin by permission of Editor John Sauri. Recommended by Past President Sam Evans.

I am a geologist with 12 years experience in the petroleum industry who recently gained employment in the environmental area. Although I had absolutely no direct environmental experience or education, I received no less than six job offers. The following is a personal perspective of my job search efforts, and my impression of what it takes to become employed in the environmental industry.

During my 12 years as a petroleum geologist, I worked for a major oil company, two large independents, a consulting firm, and a service company. After losing my job for the fourth time in five years, I figured I could take a hint. It was time to look elsewhere for more secure employment, for a situation where my talents would be appreciated and needed. I considered teaching, but my opportunities were limited without a teaching certificate, and the long term financial growth potential was too limiting to be considered a primary career. The environmental industry, on the other hand, offered greater opportunities.

With the continuing decline of the oil industry, more and more geologists are looking to the environmental industry for employment. It is a rapidly expanding industry not subject to supply and demand, nor dominated by a foreign entity. Rather it is regulation driven. Regulations have transformed a low profile industry into a burgeoning high profile industry in need of professionals of all backgrounds and experience levels. This need will not go away, because regulations, unlike supply and demand, do not fluctuate. Rather, they seem to increase with every legislative session.

The environmental industry is a hot field right now. Employment opportunities abound for the right individuals, but not everyone will, can, or should make the transition from energy to environment. Not everyone is suited for the work due to experience, financial requirements, personality, attitude, and age. Each of these items are discussed in the following paragraphs.

Experience comes in two forms: academic and employment. Many employers, especially from out-of-state, asked if I had taken environmental courses in college, or had even a little work related experience regardless of how long ago. Obviously, the more recent and thorough the experience the better, but the lack of experience was not an insurmountable obstacle. In the future, however, as the number of geologists graduating with a master’s degree in hydrogeology and engineering geology increases, so will the competition. For that reason, if you have any environmental experience, academic or job related, make note of it on your resume even if it was 15 years ago. Many employers believe that if you have learned it once, it won’t be difficult to learn it again. If you have no academic experience, enroll in continuing education courses. You may want to consider a correspondence course. Wright State University (IRIS Program, 260 Grehm Lab, Dayton, Ohio 45401-9950, ATTN: Cathy Shoop) has a reputable program. Or, if you can afford the money and time and don’t already have a master’s degree, you may want to return to school full time to earn one. If you lack the money (even the IRIS Program is expensive), or you are between semesters, begin a self study program. Employers like prospective employees to take the initiative, to be actively involved, to be serious about their new goal.

It is understandable that employers prefer someone with adequate academic or job related background to fill better paying positions. Entry level and “near” entry level positions, however, are a different matter. Most employers will consider transferable skills and general adaptability for these positions. You don’t need a second master’s degree to be qualified.

Some transferable skills include:

• Familiarity with a drilling rig,
• Familiarity with well construction,
• Ability to describe core/cuttings accurately,
• Knowledgeable of geophysical techniques and interpretation for shallow depths of investigation,
• Ability to relate to clients,
(Some managers believe that clients relate better to the older, more mature personality. I found this attitude to be more prevalent in Michigan.)
• Proven project management skills,
(Often it is necessary to work many contracts simultaneously.)
• Ability to finish jobs on schedule and on/under budget,
• Supervisory skills,
• Writing skills,
(Expect to write a lot of reports. Also, be prepared to show an example of your writing skills during the interview.
• Oral communication skills,
• Computer skills
(Helpful but not necessary.)
• Well log analysis,
(Two California companies specifically asked if I knew how to work logs.)
• Enjoy outdoor work,
  (Expect a lot of it, especially at first.)

• Ability to relocate,
  (Shows flexibility.)

• Energetic and a self starter.

Just because you have not worked in the environmental industry doesn't mean you have nothing to contribute. You must be persistent and patient, assertive but not aggressive. If you are able to relocate out of Houston, and especially out-of-state, your chances of finding employment are greater. To emphasize the point, I had five job offers in the Los Angeles-San Diego area, but only one in Houston. The salaries were comparable after taking into account the difference in cost of living.

You should take note that management attitudes and philosophies vary markedly between companies, as well as among individual offices of the same company. Just because you don't qualify for a position in ABC Co. in Houston, doesn't mean you don't qualify for the same position in, say, Los Angeles or Detroit.

Belonging to the correct professional organizations helps. The National Water Well Association is a must, and active involvement in the HGS Environmental Committee doesn't hurt either. Being an AIPG certified geologist helps your credibility even in California where registration is preferred. I say "preferred" because not every practicing geologist in California is registered. It is a lot easier, however, to obtain employment with a firm if you carry that State's registration. The salary benefits are better, too.

Resume format is very important when switching careers. A chronological resume is useless. A well written functional resume emphasizing your accomplishments using transferable skills is worth a thousand pictures. The resume should be easily readable. It is impossible to cram one's entire professional career into one page, so don't try. Take the time to write an effective resume. I found a dramatic difference in employer response between my chronological resume and my well written functional resume. The TEC Dislocated Workers Program (DLWP) helped me tremendously to write a good resume. I recommend the program to everyone. The DLWP will also help pay the cost of out-of-town interviews.

Perhaps it is needless to say, but I was told during every interview that the environmental industry does not pay as well as the oil industry. My salary now is only slightly more than when I began in the oil industry 14 years ago even with all my transferable skills. Just like 14 years ago, I am starting from the beginning in a new industry. One cannot expect to jump into the middle without the education or direct experience. Unfortunately, my financial responsibilities were not reduced commensurate with my salary. Two questions to ask yourself: "Can I afford not to start over?" and axiomatically, "Is a low paying job in a new career with good upside potential better than being an oil consultant/independent on being underemployed/unemployed?"

Closely linked to financial responsibility is the issue of age. Generally, as one gets older, one gathers more financial responsibility. The average age of the professional staff of the companies I interviewed was late twenties, maybe early thirties, with a range from early twenties to early forties. These numbers came from personal observations made during interviews and company tours. It is definitely not a scientific survey. The industry is relatively young and so are the employees. Although employers are not suppose to ask about age, they sometimes do "off the record." The legitimate question in their minds is whether someone over 35 years of age can take orders from a 25-year old manager. My response to that is, "If he's not a jerk, yes." Well, I didn't express it exactly that way. If he/she is a knowledgeable manager and a good teacher, then I would jump at the chance to work with him/her. Age has nothing to do with ability, but it has a lot to do with office politics, subtle prejudices, and personality interactions.

I found it very difficult to get interviews in Houston. It was much easier to get interviews out-of-state. Part of the difficulty, although certainly not all of it, revolved around the bad experiences some companies had with petroleum geologists who were not really committed to changing careers. They were using their environmental employment as a day station until something better came along in the oil patch. These individuals abused the system, and apparently didn't realize, or didn't care, how their actions affected the employment opportunities for the next ex-oil geologist. I saw at least one ad which explicitly stated that "oil geologists need not apply." If you accept a position in the environmental industry, you must be committed to it. Don't think your actions have no repercussion. Not only do you look bad, but you cast a shadow over the integrity of every petroleum geologist who follows you.

Another reason why interviews are difficult to obtain in Houston is the abundance of geologists in this city. Potential employers have literally been swamped by phone calls and mailed resumes. Consequently, secretaries are well trained to screen calls, and your resume ends up in a stack with 200 others. How does one stand out from the crowd? Networking. If often boils down to who you know, not what you know. Of course, who you know can't get you the job, only the interview. But the contacts you make today may result in a job referral or interview six months from now.

In changing from the oil patch to the environmental industry you are not simply changing jobs, your are changing careers. This change will be smoother for those who decide to go back to school or who already have some appropriate educational background. As was evident in may case, one does not need another master's degree or direct experience. Transferable skills, a willingness to begin at the beginning, a desire to learn, enthusiasm, an energetic presentation during the interview, and above all, commitment and persistence are the basic assets required for employment in the environmental industry. You are a sales agent. You must be able to sell yourself.
California
The 1989 officers are:

President: Mike Mulhurn
President-Elect: Keith Green
Secretary-Treasurer: John Parrish
Newsletter Editor: Stephen Testa

The California Section of AIPG will co-sponsor the Association of Bay Area Governments, (ABAG) HAZ-MACON '89 Conference to be held on April 18-20, 1989 in Santa Clara, California. As this is the West Coast's largest hazardous materials exposition, AIPG will be holding a symposium to provide a forum for geologists to interact with the environmental and hazardous waste community. For further information, please contact the program co-chairpersons John Cromwell (818) 340-2610 or Stephen Testa (213) 518-4597. AIPG members who plan to attend and may wish to man the AIPG booth please contact Stephen Testa.

Colorado
The American Institute of Professional Geologists announces officers and board members of the Colorado Section for 1989:

President - Ted Mullin, Geologist, U.S. Forest Service; Vice-President - Stephen A. Krajewski, Chief Geologist, Minesoft, Ltd; Treasurer - Frederick W. Obernolte, Jr., Geologist, Marathon Oil; Secretary - Ron W. Pritchett, Consulting Geologist; President Elect - Stephen A. Sonnenberg, Exploration Geologist, Bass Enterprises Production Company, Advisory Board - P. A. (Art) Meyer, Consulting Geological Engineer; Gail Waggoner, Geologist, Gustavson Associates; D. Keith Murray, Consulting Geologist; William G. Weist, Jr., Senior Project Manager, Office of Surface Mining, Reclamation, and Enforcement.

Kentucky
Larry R. Rhodes, CPG 2250, assumed the presidency of the Kentucky Section of AIPG January 1 and has established the following goals for 1989:

1) Increase membership to 100. Presently we have about 80 members.
2) Prepare for the 1990 General Assembly session. The section needs to re-evaluate its position on registration.
3) Update the directory for the Kentucky Section.
4) Re-establish the publication of the Newsletter on a quarterly basis.
5) Continue joint programming with the Geological Society of Kentucky, particularly the Spring Conference and Banquet.
6) Continue the Summer Geology Field Camp Scholarship program.
7) Develop a public-service project, perhaps the placement of "historical-type" trail markers in our state parks.

Michigan
During 1989, the Michigan Section of AIPG is going to try to increase its visibility by promoting resolution of communication conflicts between MDNR and Michigan consultants. MDNR, as the regulatory agency of the State, has the responsibility to permit, monitor, and enforce the collection, interpretation and use of geological data. Many, if not most, of the consulting geologists within Michigan are involved in projects related to these regulatory activities.

In a real sense, consultants act as middlemen assisting Michigan industry to be in compliance with regulatory requirements. This can best be accomplished as the consultants are not only aware of the regulations, but also aware of how these regulations are interpreted. There appears to be a consensus among consultants that they are not as fully aware of MDNR staff interpretations as they would like to be. On the opposite side, MDNR staff have voiced disappointment regarding the quality of consultants' work. The conflict here is principally one of communication. Information, positions, policies, and reasons are not being exchanged readily. The resulting conflicts lead to wasted effort and time on both sides.

The Michigan Section of AIPG offers a professional organization for resolving this kind of conflict. Our membership includes a large fraction of MDNR staff and consultants. We have the ability to investigate this issue and to develop solutions. For this purpose, the Michigan Section of AIPG is hereby creating a study committee entitled: Advisory Committee on MDNR/Consultants Communications, or ACM/CC. This committee will meet four times during the first half of 1989 to study, define, and offer solutions to the communication conflicts that exists. We want seven to twelve members to serve on this committee who are willing to see this through to the end. Hopefully, the membership will be evenly split between MDNR staff and consultants.

Virginia
1989 election results were announced at the annual section meeting, held at the Virginia Institute of Marine Science (VIMS), Gloucester Point, Virginia. Officers for 1989 are: President, Donald Foss; Vice President, Kenneth Kormendy; Secretary/Treasurer, Bruce Goodwin.

A technical session presented studies of heavy minerals on the continental shelf of Virginia by C. R. Berquist, Virginia Department of Mineral Resources and W. Hobbs, VIMS. A tour of the Institute's facilities followed. The evening's activities were capped by a social hour and dinner.

The Virginia section is very pleased to announce that we sponsored two awards for geologic research by high school students. Twelve papers were submitted. Awards were: 1st - Brian Mays - "The Physics of Sand Dune Formation and Migration" ($125.00 Award); 2nd - Katherine Stinley - "Changes in Scallop Size Over Geologic Time" ($75.00 Award). In an effort to encourage continued interest and research in geology below the college level, the membership approved three student awards for 1989 ($200, $100, $50). Don Foss will oversee the research evaluation.

The Virginia section is co-hosting, along with the Capitol section, AIPG's 1989 National Convention. The convention will take place in Washington, D.C. during October. Stan Johnson (Virginia section) is co-chairman of the executive planning committee for this function.
Louisiana

The Louisiana Section of AIPG is alive! Below are the results of a poll taken to assess members' views on registration, and the general health of the section. I had hoped for a 30% response, but was gratified to receive an overall 55% response. The number of members and number of responses from New Orleans and Lafayette were about the same, although the results varied slightly. Baton Rouge and Shreveport responses were also above the anticipated 30%, and also varied from the totals.

Louisiana Section Questionnaire - 66 Responses out of 120 solicited = 55%

Please check the column you believe is most correct:

1. The DPA position on registration, as outlined in the May, 1988 AAPG Explorer reflects my views.

2. The AIPG position on registration, as outlined by President Evans in the May TPG reflects my views.

3. Professional geological societies need to work together to solve the registration dilemma.

4. Mineral/fossil fuel geologists should not be required to be state licensed.

5. Environmental applications geologists should be allowed to be state-licensed.

Overall, the membership leans by a slim margin more in favor of the DPA position on state licensing, which is somewhat more defensive in its opposition. There were also more individuals in opposition to the AIPG position vis-a-vis the DPA position. Locally, Shreveport and New Orleans strongly supported the DPA position, while Baton Rouge and Lafayette provided more support to the AIPG position.

The membership nearly unanimously supported the concept of working with other societies in solving the registration dilemma.

Questions 4 and 5 provided the greatest revelations of the survey. As expected, nearly 70% of all responses opposed mandatory licensing of petroleum geologists, but a significant minority, including 3 out of 4 Baton Rouge respondents, would actually prefer mandatory state licensing. These people probably represented those geologists being financially burned by registered engineers. Because they make up such a significant minority of our membership, we need to be sure their views are adequately represented in our state registration position.

I was surprised at the number of respondents who seemed to (reluctantly) agree (compared to the strong sentiment against state licensing in question 4) that environmental-type geologists should be allowed to be state licensed if they so desire. Perhaps this item generated the most comments on survey page, covering the entire gamut of licensing extremism, including: "We founded AIPG to stop state licensing," all the way to "Registration is inevitable, so let's get it over with."

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>19</td>
<td>14</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>17</td>
<td>17</td>
<td>12</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>43</td>
<td>19</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>34</td>
<td>10</td>
<td>6</td>
<td>13</td>
<td>1</td>
</tr>
<tr>
<td>11</td>
<td>37</td>
<td>10</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

Based upon the data, I am making the following recommendations:

1. The Louisiana AIPG section position on state licensing should be in opposition to mandatory registration of mineral/fossil fuel geologists. However, it is the duty of the section to support voluntary registration on behalf of those geologists who could economically benefit by being better able to compete with state licensed engineers.

2. We should make our position known to the various geological societies around the State of Louisiana, perhaps even a national level, and offer our services to those societies in supporting our mutual registration positions. Furthermore, if legislation comes about in the State of Louisiana, we should become aware of and involved in its formulation to the betterment of our members, relative to our position.

3. We should proceed with holding the next section meeting in New Orleans, and charge a nominal fee to insure RSVP's are not no-shows. We should request a national AIPG board Member to be our guest speaker at that meeting, and offer to subsidize his or her expenses.

From information prepared by Michael H. Fein, CPG 6962
Dear Editor:

Elsewhere in TPG there is a notice regarding the 1989 National Meeting. This meeting will have much to offer, and we expect an excellent turn-out. This is the "good-news - bad-news"... we have a limited number of rooms reserved, and those members who wait too long to reserve a room may have to commute to the meeting.

The rooms are reserved at $95; normally rooms in the area average about $120.

There is another convention at the Hyatt Regency, at the same time as the AIPG meeting. This will make it extremely difficult for late registrants. I urge all who plan to be there to reserve their room as soon as possible.

Donald W. Foss, President
Virginia Section

Dear Editor:

As a participant in the July 1987 Penrose Conference, I feel the need to make a few comments that may be construed by some to be those of an old curmudgeon, which is, of course, correct.

To a few, the remarkable thing about the Steamboat Penrose meeting was the articulated naiveté of about 65% of the participants and the silence of the other 35%.

Let me just cite two examples:

(1) Ethics. Many of the participants apparently discovered ethics at the meeting though most had careers spanning 20 to 30 or more years of teaching or practicing geology. The discussion of ethics might have been facilitated had participants been furnished a copy of the twenty-five-year-old AIPG Code of Ethics in advance of the meeting. For all of us in AIPG and for many other professional geologists, ethics is and should be a matter of daily concern, not a new discovery.

(2) Political Reality. Most of the discussions at the conference about politics and image of the geological sciences are old hat to AIPG members. These are some of the reasons AIPG was founded over 25 years ago. This is what AIPG members have been practicing and preaching for many years. Have our brethren in the scientific societies at last begun to peek out of the window at the real world?

The three conveners were all AIPG members and there were a sprinkling more in the group. Much of the ground covered has been and is being addressed by AIPG. In spite of this, AIPG was never mentioned as a source of direction or a medium for action for the geological community.

Sincerely yours,
Ernest K. Lehmann, CPG 583

Dear Editor:

As a matter of introduction, I've been a member of AIPG for some 25 years (CPG 819), a President, Vice-president, and Director of one of the biggest Sections (Louisiana), and a member of the Advisory Council. In addition, I served on the Professional Standards and the Academic Liaison committees in the past. Outside the Institute, I've headed one of the world's largest and most active local geological societies, and chaired a region's AAPG representatives.

Having said that, I now find myself at a crossroads regarding continued AIPG membership. When I joined the Institute, the California engineering geologists had begun their campaign for state registration. It was hoped that a national/international entity analogous to the CPA's organization could certify geologists - and not specialties - thus preventing fractionation of the profession while affording the reasonable public a means of determining minimal competency. The vast majority of degreed geologists at that time deplored state-by-state registration and the feidoms it creates: I believe they are still opposed.

Despite this, a few geologists in various parts of the country pressed for registration. I remember a particular scary situation during 1966 in Louisiana where less than ten geologists out of some 3500 were able to get serious consideration of a licensing law introduced into the Legislature by springing the California bill verbatim without any warning or discussion. The State Representative sponsoring the nascent bill subsequently was indicted - even in a state where politics is a broad-minded activity. In the above case, AIPG did nothing to fight the bad law, which was obliterated by a storm of letters from industry and the membership of all three geological societies.

So through the ensuing years, while the National AIPG espoused a "neutral" position on registration, the realities were a distinct de facto bias in favor of licensing as borne out by the material printed in The Professional Geologist and other publications. Each time there was a different state in which registration was contemplated, AIPG only offered some form of model law. Never did it seek to determine even if the vast majority of geologists wanted such a thing, much less organize a fight against it.

In contrast, the AAPG and SIPES organizations, which collectively outnumber AIPG, have staunchly opposed registration. They largely have been successful in states where most earth scientists reside/practice. What now is evolving is what I call "creeping registration," whereby small numbers of geologists living in places where few geologists reside, have begun to spatter the U.S. map with registration laws. A straight jacket thus slowly is being forced on the free remainder. It is ironic that California, the place where it all started, now is phasing out the California Board of Geologists through use of the "sunset laws." For those who aren't aware, a sunset law is a means to force regulatory (and other) bodies to prove the necessity of their continued existence, or they are done away with automatically.
One must question why there is any movement at all for state-by-state registration. In some states, a declaration by the governor says that testimony from geologists qualified by degrees and experience will be accepted by the appropriate boards and bodies. The real answers lie in the old guild-union goals of MONEY and POWER, despite all the hiding behind "protection of the public." Those individual geologists promoting registration want to:

(a) keep out practice in their state by geologists living elsewhere.

(b) make more money for the act of signing reports, official paper, etc.

(c) protect their jobs and enhance their status by restricting new people.

What a paradox it is that states where most geologists live, where the oil/mineral business is hardest hit, and where the most earth scientists are unemployed - or underemployed - are the very places where opposition to registration is highest.

Which brings us to the present as regards the AIPG Debating Society (for that is what it has become). It has a stated policy of neutrality, of not favoring registration, but does nothing disciplinary when some of its smaller state bodies ignore it and push registration anyway. At the very least, the National Headquarters is not exercising much executive authority. It does not seem to comprehend that as state-by-state registration proliferates, the original purpose of AIPG to offer national profession-wide certification becomes moot and impotent.

It has never come close to its original hope of having a membership large enough to speak authoritatively for earth scientists as a whole profession. What, pray tell, is its raison d'être, particularly in the face of some half-million dollars yearly dues?

All this is somewhat painful to me, as it must be to others who had such high hopes twenty-five years ago. I am staring at another annual dues notice for $100.00, wondering what useful is going to be done with it, as opposed to similar investments through SIPES and DPA of Aapg. These latter groups, by actively opposing registration, at least are going the directions the majority of geologists in the U.S. want to go. So I am sending you this letter. Your printing of it and any subsequent response from Headquarters (who need to perpetuate their jobs/titles) or other members may give us all guidance. Perhaps we should look at the example of the "sunset laws."

Respectfully submitted,
William H. Hintze, CPG 819

MEMBERS IN THE NEWS

Timothy S. Stone, CPG 7282, has joined Balsam Environmental Consultants, Inc., in Salem, New Hampshire as senior project manager. The firm specializes in environmental engineering, industrial hygiene, and environmental sciences. His responsibilities will include the management of hydrogeologic and remedial investigations throughout the New England region.

Elwin M. Peacock, CPG 2944, received the SEG Life Membership Award at the Fifty-Eighth Annual International SEG Meeting and Exposition.

Gustavson Associates, Inc., a Colorado-based international petroleum consulting firm, announced the appointment of Gary Bell, CPG 2211, to Senior Vice President. He will have general corporate responsibility, but will concentrate in the beginning on the firm's international business. Mr. Bell joins the firm from his recent position as Vice President of the Western Region for CSX Oil and Gas. Mr. Bell's earlier experience includes worldwide consulting under contract to the United Nations and as vice president of an international petroleum company.

Frederic F. Mellen, CPG 149, Emeritus Member of the Institute from Clinton, Mississippi, has been named Alumnus of the Year by the Mississippi State University Alumni Association at the annual awards banquet on campus. The award was made on the unanimous nomination by the faculty of the Department of Geology & Geography and was a surprise presentation by L. Clay McWilliams III, National Alumni President, on January 27, 1989.

For the past 50 years, Mellen, a 1934 graduate of Mississippi A & M College, now Mississippi State University, has been a leader in geology. Much of his work has had important economic implications for the State. His discovery of the Tinsley Dome in 1939 resulted in the first commercial oil production in Mississippi. He has played significant roles in development of other mineral resources and in the encouragement of geological research and education. His financial assistance has supported 44 scholarship awards to "worthy students" of geology at his alma mater, and he has assisted in other funding for the library and for the Dunn-Seiler Geology Museum.

Mellen is currently encouraging an international "Symposium on Chalk" to which the University can make a principal contribution. "A great deal can be done to stimulate and contribute vastly to further economic development of Mississippi through its mineral resources, and the University can support that effort through research."
Applications Received

Applicants for certification must meet AIPG's standards as set forth in its Constitution on education, experience and competence and personal integrity. If any member has any factual information as to any applicant's qualifications in regard to these standards, whether that information might be positive or negative, please mail that information to Headquarters within thirty (30) days. This information will be circulated only so far as necessary to process and make decisions on the applications.

ACCAME, Guillermo, 15538 Owens Glen Terrace, Gaithersburg, MD 20878. Sponsors: Sandra Mues, Douglas Nauman, Courtland Lee, Jeff Sgambat, Antonio Segovia.

BEARDEN, Bennett L., River Road Condominium, 1745 River Road, No. D2, Tuscaloosa, AL 35401. Sponsors: Paul Moser, William C. Hooper, Markel R. Wyatt, Ernest A. Mancini, Don C. Fish.


FREDERICK, Kevin D., P.O. Box 174, Casper, WY 82602. Sponsors: Dan Miller, Ron Baugh, Jim Goolsby, Bob Sawin, Bob Kozarek.


MARCH, Randall S., 11163 West Fremont Place, Littleton, CO 80127. Sponsors: Alan Krause, Kenneth Rippere, Michael Stewart, Ron Versaw, Jerry Rowe.

MCBETH Jr., Paul E., 2960 N.W. Bryant, Corvallis, OR 97330. Sponsors: Dave Haddock, Mike Warfel, Charlie Sloan, Roland French, Dave Livesay.


ST. GERMAIN, Daniel J., One Old Town Farm Road, New Milford, CT 06776. Sponsors: Mike McEachern, Mike Wolfert, Sid Fox, Robert Lamonica, Frank Getchel.

IN MEMORIAM

Henry C. Meyer, CPG 1123, September: 23, 1988

William N. Gilliland, CPG 1883, Asheville, NC, June 11, 1988

New Book on History of Nation's State Geological Surveys


The chapters record the diversity and similarities of the surveys. The book contains a wealth of interesting information and photographs reflecting how the surveys see themselves from the early 19th century to the present.

The book is available for $20 from Dr. Ernest A. Mancini, Alabama Geological Survey, P.O. Drawer O, University Station, Tuscaloosa, Alabama 35486.
1989 EXECUTIVE COMMITTEE

PRESIDENT
Richard J. Proctor
327 Fairview Avenue
Arcadia, CA 91006
(818) 578-0817

VICE PRESIDENT
Robert A. Northcutt
11422 Red Rock Road
Oklahoma City, OK 73120
(405) 755-1163

SECRETARY
Serge Gonzales
Earth Resource Associates Inc.
Suite 105 History Village
295 East Dougherty
Athens, GA 30601
(404) 353-2165

TREASURER
Norman K. Olson
352 Harrow Drive
Columbia, SC 29210
(803) 737-9440

EDITOR
Robert R. Jordan
Delaware Geological Survey
University of Delaware
Newark, DE 19716
(302) 451-2833
(302) 451-8000 FAX

ADVISORY BOARD REPRESENTATIVES

Lawrence M. Austin
2021 Valatine, NE
Grand Rapids, MI 49505
(616) 784-4019

Ronald A. Baugh
128 W. Midwest Avenue
Casper, WY 82601
(307) 265-8151

Frederick N. Murray
3734 East 81st Place
Tulsa, OK 74136
(918) 494-0160

Larry R. Rhodes
Rhodes & Associates
P.O. Box 24080
Lexington, KY 40524
(606) 887-5700

Larry R. Rhodes
Rhodes & Associates
P.O. Box 24080
Lexington, KY 40524
(606) 887-5700

ADMINISTRATIVE MANAGER
Carol A. Beckett
American Institute of Professional Geologists
7828 Vance Drive
Suite 103
Arvada, CO 80003
(303) 431-0831
(303) 431-1332 FAX

WASHINGTON REPRESENTATIVE
Guerry Newton
P.O. Box 6594
Washington, DC 20035-5694
(703) 827-9597

Kansas Geological Survey Has Two Scientist Positions Open

Geophysicist, Petroleum Research Section, Kansas Geological Survey. Full-time appointment to University of Kansas staff at Assistant or Associate Scientist faculty-equivalent rank. Requires Ph.D. (geophysics or related field); expertise in high-resolution reflection seismology and modeling; and demonstrated research and publication record. Prefer familiarity with concepts and application of sequence and seismic stratigraphy, Midcontinent geology, and geophysical equipment and processing techniques; experience in processing and interpreting potential fields geophysical data and management and supervision of geophysical research projects. Salary negotiable, depending on qualifications. Position available July 1, 1989.

Chief, Geohydrology Section, Kansas Geological Survey. Full-time appointment to University of Kansas staff at Associate or Senior Scientist faculty-equivalent rank. Requires Ph.D. and 5 years professional research and/or graduate level teaching experience in a relevant field; extensive research and publication record in geohydrology; demonstrated management and/or leadership ability; and effective communication skills, orally and in writing. Prefer 3-5 years experience in management position; leadership in professional organizations; success in competing for grants and contracts; broad research background in more than one specialty of hydrogeology; demonstrated experience in successful interaction with private and public sector. Salary competitive and negotiable, depending on qualifications. Position available July 1, 1989.

Send letter of application, vita, and names, addresses, and telephone numbers of three references to Lila Watkins, Personnel Manager, Kansas Geological Survey, 1930 Constant Avenue, The University of Kansas, Lawrence, Kansas 66046-2598. Phone: (913) 864-3965. Complete announcement available on request. Full consideration to applications received on or before March 31, 1989; subsequent reviews conducted monthly thereafter until position is filled. EO/AA Employer.

The purpose of AIPG is to strengthen the geological sciences as a profession with all reasonable actions, to establish professional qualifications, to certify those qualifications to the public, and to evaluate continuously the ethical conduct of its members. Further, the Institute establishes ethical standards to protect the public and geological sciences from nonprofessional practices, monitors governmental and other activities affecting the geological sciences, and communicates with the public.