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PARTICIPATE IN THE AIPG WASHINGTON D.C. FLY-IN!
Mitigating Environmental Discharges of Petroleum Crude Oil in Western Kentucky
EXECUTIVE DIRECTOR’S COLUMN—More Perspective on Registration

BALLOT
The June issue of The Professional Geologist (TPG) will include the AIPG Candidate Articles, Biographicals, and the Ballot to elect AIPG National Officers.
Only AIPG Members that have the right to vote will receive a ballot in their issue.
PLEASE REMEMBER TO VOTE!
AIPG President Elected to the Status of AAAS Fellow

Participate in the AIPG Fly-In!

PEER REVIEWED ARTICLE

Mitigating Environmental Discharges of Petroleum Crude Oil in Western Kentucky

Donald T. Bussey, CPG-08847, Greg Powell, CPG-09174, Terry Stilman, and P. Greg Welsh

Students As Professionals

Robert H. Fakundiny, CPG-04977

New Hampshire PG Bill Passed

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E-Mail as a Means of Keeping Section Members Up To Date On Timely Information

Douglas C. Peters, CPG-08274

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Proposed AIPG Position Statements

AIPG National Scholarship Program

New Draft Mission and Vision Statement

FRONT COVER—Bodega Head, California, where a sequence of metamorphic, plutonic igneous and sedimentary rocks along with marine terraces are exposed by uplifting and wave erosion. Continental granites and granodiorite provide clues to the geologic history of this area west of the San Andreas Fault. Photograph by Douglas T. Kuzmiak, 712 W. Timonium Rd., Timonium, MD 21093.

BACK COVER—Photography is provided courtesy of the St. Louis Convention & Visitors Commission.

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EDITOR

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You may have noticed that the President's columns in the past couple of issues of The Professional Geologist were progress reports on the activities of the Executive Committee and the Headquarters staff. This month's column continues that reporting on the urgent activities of membership development and the Washington, D.C. Fly-in. These internal efforts are proceeding concomitant with several external liaison actions, the most immediate of which are the Geological Society of America's (GSA) Associated Societies Meeting, the GSA Professional Development Committee, the American Association of Petroleum Geologist (AAPG) Leadership Meeting, and the American Geological Institute (AGI) Affiliated Societies Conference.

Membership Development

In January the Executive Committee meeting began the process of developing a long-range action and business plan. The details of our deliberations are given in the March issue of The Professional Geologist. Membership development is one of the most critical items for immediate attention. Tom Berg, Chair of the Membership Development Committee, has been working with the Executive Committee to devise an incentive package to prompt the membership into actively recruiting new applicants. To inspire all of you to become recruiters, we have established some awards for sponsorship of new applications: (1) 1 year's membership dues will be waived for each CPG who is the principal sponsor of at least four new applications; (2) 1 free airline ticket and registration fee to the annual meeting to the CPG who sponsors the most new applications; (3) 1 free airline ticket and registration fee for the 2002 Annual Meeting to the section that submits the highest percentage of applications with respect to their current number of dues-paid membership above the first 20 applications; and (4) Presidential Citations to all CPGs who are principal sponsors of more than 10 applications. Item 3 may need more explanation. First, the Section Executive Committee can designate any member of their section to attend the Annual Meeting. I would suggest that the member who sponsored the most applications be the designee. Second, the reason for having a base of 20 applications before the percentage kicks in is to prevent an unfair advantage to the smaller sections if a percentage alone was used. For instance, a section with only 20 active members could sponsor 20 applications and have a 100 percent tally, while a section with 500 members would have to submit 501 applications to surpass the smaller section's 100 percent. Instead, once both have submitted 20 applications the smaller section would have to sponsor only 3 more to beat the larger section, which would need 50 more. This gives incentive to the smaller sections. Even so, a section with 500 members would have to sponsor only 14 applications per active member to win, whereas the smaller section of 20 would have to sponsor 1.15 applications per member to win. We are hoping these incentives will kick-start our membership drive and build the smaller sections.

Washington D.C. Fly-In

John Talley, Chair of the National Affairs Committee, is working with President-Elect Larry Cerrillo and Headquarters to make the arrangements for the Washington D.C. Fly-In, which will take place on May 6-9. Headquarters is combing the District for the best hotel prices within close working distance of downtown. We expect 15 to 20 AIPG members to participate. Given that, and considering that the best we can do is for each group (probably of 4 or less) is 2 meetings each in the morning and afternoon of Monday and Tuesday, we could manage 25 to 30 meetings. We probably will not schedule that many, because many of us will want to visit our own legislative delegations and may not be able to schedule them for Wednesday. Wednesday, May 9, would be the usual time to do individual business in the Capital. We invite as many as can participate to do so, and also to attend the Executive Committee meeting, which will be held on Sunday. We also wish to continue the long-range planning process at that time. Please let us know as soon as you can whether you are interested in attending the Fly-In so that we can schedule and structure the visits. Details will be given in next month's issue.

Liaison Activities with other Societies

The Executive Committee feels that AIPG must make a stronger bid to be among the leaders who direct our profession. One way to accomplish this is to become involved in the activities of the other major professional and academic societies. Some other societies that are attempting to influence the direction of our profession in legal matters, ethics, and
distribution of governmental resources are the AGI, the AAPG, the GSA, and the Association of Engineering Geologists; we must join in their activities if we are to affect the directions they take to influence government and the private sector. We must be diligent in steering them down the paths that are best for the professional geologist. Our liaison activities over the first quarter of the year include participation in the GSA’s Associated Societies Meeting in Boulder, Col., on February 23, where discussions addressed the idea of establishing an advisory board that would consider issues before the geological community, especially GSA members. This is an activity that we must watch and advise on. A second similar meeting was the Annual Leadership Conference held by AAPG the following day in Tulsa, Oklahoma, where our representative, former Executive Director William Knight, brought up the issues of cooperative efforts to enhance the value of certification, professional advocacy, and joint publications. Bill is also monitoring the developments of the United Nations Economic Commission of Europe’s Committee on Sustainable Energy. The Committee will be meeting in Geneva, Switzerland, in June to deliberate on international statistics for coal, oil and gas, and uranium resources. In the third full week of March, 2001, the Association of American State Geologists Liaison Committee met in Washington D.C. with government agency officials, Congressional representatives, and industry advocacy groups among others, similar to the AIPG Washington D.C. Fly-In. Among the State Geologists are AIPG members who advocated for the positions that were presented in the last issue of The Professional Geologist. Later that week, the AGI Affiliated Societies Conference was held in Denver, Col., and was co-sponsored by AIPG and GSA. Here leaders from industry, academia, and government considered “Evaluating the Value of Field Experience in Geoscience Training and Education.” I hope that reports from all of these deliberations will be presented in future issues. One last activity in which I was involved in was serving on the GSA Committee on Professional Development, in which we reviewed and accepted a several proposals for short courses on new research techniques and professional deportment to be presented at the Annual Meeting of GSA in Boston, Massachusetts, in November. I am happy to report that AIPG members submitted proposals, and that at least one might be given. This, of course, is in keeping with the work that the Professional Development Committee of AIPG has been doing. Possibly, we may be able to incorporate some of the GSA short courses into our Annual Meeting and use them in our own professional development program.

Participation in all of these activities helps AIPG to become an advocate for professional geology and provides a means of cooperating with other societies to benefit our members.

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**AIPG President Elected to the Status of AAAS Fellow**

Dr. Fakundiny has been elected to the status of Fellow by the American Association for the Advancement of Science (AAAS) Council. These members are recognized for their dedicated commitment to furthering the scientific enterprise. The tradition of AAAS Fellows began in 1874. Since that time, AAAS has recognized the distinguished efforts of 15,888 of its members by electing them to the status of Fellow.

This year 251 new fellows are being inducted. Each fellow receives a certificate and Rosette. The Rosette symbolizes the honor bestowed by AAAS on those of its members who are elected to the status of Fellow.

The presentation took place on Saturday, February 17, at the AAAS Annual Meeting.

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**AIPG FLY-IN!**

The annual AIPG Washington D.C. Fly-In is scheduled for May 7-9, 2001. AIPG encourages the participation of members who are interested and able to contribute some time to this important political activity. If you are interested in participating this year, please send an e-mail to AIPG Headquarters <aipg@aipg.org> and you will be placed on an e-mail list to receive all Fly-In information. This is an opportunity for self promotion at its best. Please give serious consideration to participating in this advocacy effort on behalf of yourself and the entire profession.

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**BALLOT IN JUNE ISSUE**

The June issue of The Professional Geologist (TPG) will include the AIPG Candidate Articles, Biographicals, and the Ballot to elect AIPG National Officers.

Only AIPG Members that have the right to vote will receive a ballot in their issue. Please remember to vote!
From 1997 to date several hundred oil wells, which had not been properly abandoned have been plugged (sealed) in western Kentucky by the United States Environmental Protection Agency (EPA), administering United States Coast Guard (USCG) funds and employing EPA contractors. These wells, completed between the late 1920s through the late 1970s, were determined to be leaking into ground water aquifers and at the ground surface near surface water bodies. Once leaking wells were identified, the physical construction of the wells and the stratigraphy at the well locations were determined utilizing downhole geophysical techniques. Based upon evaluation of the geophysical logs, leaking wells were cleared of well production equipment that were proving a hindrance to plugging efforts. The wells were then properly abandoned with cement seals to insure no petroleum migration vertically upward through the borehole from production zones.

The majority of the leaking oil wells plugged by EPA were completed within the Taffy oil field (Taffy), located in western Kentucky in northeastern Ohio County. The field is in the southern portion of the Illinois Basin Region. The Taffy oil field trends southeast to northwest, and is approximately six miles in length and three to four miles in width. The northwestern portion of the field is situated just north of the Rough River Fault. The primary production zone is the Tar Springs Sand of the Mississippian age Chester Group. Drilling activities began in the late 1920s with the first reported well being drilled in 1926. A majority of the wells were drilled and completed by the end of the 1930s. Due to a decrease in production a water-flood system was installed in 1952 to enhance production of existing wells. The last known drilled well was completed in the late 1970s, at which time some of the older wells began to be plugged and abandoned. It is estimated that approximately 2,500 wells were completed in the Tar Springs Sand within Taffy. Taffy has produced oil for approximately 70 years with peak production of approximately 5,000 barrels per day around 1939. Presently the field produces less than 50 barrels per day. During World War II steel casings from many of the wells were removed for the war effort. In many instances where surface casing was removed, petroleum has migrated vertically upward from the producing zone to impact fresh water bearing zones near the surface. Ground water contamination also occurred when production fluids migrated outside of surface and production casing where little or no cement was present. As a result, significant impacts to drinking water aquifers have been documented. Today, many residents report petroleum sheens associated with their well water, and many have been forced to bring in bulk potable water to cook and bath with because a public water supply is unavailable.

Beginning in 1966, under definition KRS 353.590, Kentucky state law requires that any person or entity drilling or operating oil wells within the state bond each well or group of wells to assure proper abandonment. The Kentucky Division of Oil & Gas (KDOG) oversees oil production and oil well abandonment. While abandonment, either through the operator or through KDOG using bond money, may be guaranteed, no bonding requirements existed for the thousands of wells drilled prior to 1966. Kentucky has thousands of oil wells that have not been properly abandoned. Many of these oil wells are now leaking, impacting surface water bodies and drinking water aquifers. This is the case at Taffy.

With passage of the Oil Pollution Act of 1990 (OPA), the EPA and the USCG were given the authority and the funds to respond to oil discharges. The USCG was also given the responsibility of administering these OPA funds. In the case of Taffy, the USCG determined that to utilize OPA funds, oil from an oil well must actively be impacting surface water. EPA and the KDOG met early in 1996 to discuss the present status of the oil wells and to review the USCG’s requirements. At that meeting it was decided that KDOG would identify leaking oil wells for EPA and then provide technical assistance. EPA would utilize OPA funds to plug the iden-
tified leaking wells. Based on the discovery in 1997 of many leaking oil wells impacting streams within Taffy, EPA and the USCG commenced oil well plugging activities. These activities have continued to date at Taffy.

**Well Plugging**

Wells plugged within Taffy are approximately 550 ft to 675 ft in depth. Well casing, usually five inches to eight inches in diameter, may or may not be present within a particular well bore. If present, well casing usually extends from the ground surface to depths ranging from just below top of bedrock to just above the producing zone. Additionally, well casing usually was cemented to the borehole wall from just above the producing zone with the cement column thickness ranging from 100-plus ft to near the ground surface. Within the well casing two-inch production tubing usually was installed. This tubing extended from the ground surface to near the production zone. Near the production zone the annular space between the tubing and the casing was usually sealed with either a rag packer (usually cloth material between the tubing and casing) or a mechanical packer (installed with the tubing and designed to seal once the selected completion depth was attained). It was often the case that cement was not installed above the packer assembly.

Geophysical well logging techniques were utilized to assess the physical characteristics of the wells, as described above. Gamma ray logs were prepared for each well and revealed the stratigraphic units penetrated by the well bore. These units included the Tar Springs Sand producing zone, in addition to the vertical positions of Vienna and Kincade limestone units, and shallow water aquifers (limestone units and fresh water aquifers are preferred targets during casing perforating, discussed below). Magnetic logs (Casing Collar Locator logs) were used to assess the integrity of the steel tubing and/or casing, in addition to evaluating the vertical positions of casing collars (where sections of tubing or casing are connected). The collar locations were important considerations when shooting tubing or perforating casing. Sonic logs (Cement Bond logs) were obtained within the tubing or casing to assess the presence or absence of cement outside of the tubing or casing.

The first step in preparing the well for plugging is to remove the two-inch production tubing. The plugging contractor first attempts to pull the tubing from the well. This is possible only in those instances where a rag packer was utilized without cement, or a mechanical packer was utilized without cement and it could be disengaged. If the production tubing had been cemented in place, or if the packer could not be freed, the vertical placement of any cement between the tubing and the casing is determined based upon review of sonic logs and magnetic logs run in the production tubing. Subsequent to this determination the production tubing is shot off (utilizing a small explosive charge) at the vertical position of the deepest tubing collar above the cemented zone and the packer. Experience indicates the best position for shooting production tubing or well casing is at collars, where the best break is possible. Once the tubing has been shot, it is pulled from the well and abandonment procedures continue.

After pulling the two-inch tubing from the well a bottom cement plug usually is installed prior to well casing perforation. Once the bottom plug sets, well casings are perforated as necessary.

The well casing is geophysically logged after production tubing is removed and the bottom plug is set. The logging allows for the evaluation of subsurface lithology (gamma ray log), to assess the integrity of the well casing and to pick well casing collar locations (magnetic log), and to determine the extent to which the well casing may have been previously cemented (acoustic log). To insure the proper circulation of cement within and outside the well casing, the well casing is perforated employing small directional explosive charges set at selected vertical positions. Perforation shots are located at the base of the well casing (or just above the location where cement may be between the well casing and the borehole wall), at significant zones of sandstone or limestone (where perforations are necessary to protect aquifers or for good cement adhesion), and at other locations as may be required by the Commonwealth of Kentucky. A review of the integrity of the well casing (magnetic log) may allow for a reduction of the number of perforations necessary. Care is maintained to insure that perforations are not placed at casing collar locations, where well casing is weakest and may break. After the well casing is perforated the Taffy wells are cemented from the production zone to ground level, insuring circulation between the well casing and the borehole wall using a neat cement slurry that weighs at least 14 pounds per gallon.

**Video Tape**

The EPA Environmental Response Team Center has prepared a video documentary of the Taffy Oil Field plugging activities which is available to the public free of charge by contacting their web page at www.ert.org and progressing through the pages to the Product section.

**Summary**

Efforts by the EPA and Commonwealth of Kentucky continue in addressing abandoned wells in the Taffy field. Abandoned wells continue to discharge crude oil and pose a threat to surface water and to ground water aquifers. These plugging activities are not unique to the Taffy field. Plugging of abandoned wells is occurring in oil producing areas of the United States by various state and federal agencies.

Difficulties encountered during plugging activities are unique for each well. Each well has to be evaluated on a case by case basis. Scavenging by producers for tubing, rag and mechanical packers, steel down hole, etc. necessitate individual well evaluation by qualified field geologists and geophysical well loggers. These individual evaluations determine perforation locations and mechanics of the well.

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PRITING ERROR

The March issue, page 7, of TPG is missing the following two paragraphs due to a printing error. The paragraphs are the final paragraphs to Robert Colpitts' article entitled “Certification After Registration—Is It Necessary?

Why is this so? Again, we must go back to the Federal Constitution. Under Article I, Section 10, States are prohibited from making treaties with foreign Powers or Governments without the consent of Congress. Therefore, unless the State Board that regulates the practice of Geology in a particular State has negotiated an agreement or treaty with another Nation (which they are prohibited from doing), your credentials will not be recognized except as an aside. This is where AIPG National stands out. Most are now aware that we (AIPG) have comity with the European Federation of Geologists and the Geological Society of London (now known simply as The Geological Society). We need to take this a step further. Why shouldn’t we be recognized by our own Federal Government? What would be required to accomplish this (besides time, money and plenty of help from knowledgeable individuals)?

A step in the right direction is Tom Fails’ recent proposal to strengthen our certification through a certification maintenance program. Although not terribly palatable to some, it is a step in the right direction for AIPG. We can no longer sit on the sidelines and watch, waiting for the lions to pounce and gobble us up. AIPG has an excellent record of being politically proactive. It is appropriately positioned to fight back and should do so with every means at its disposal. Without AIPG and its certification, I doubt that we would have much of a profession left to practice. Certification after registration? For me it is very important. Who cares if the State recognizes you, if your fellow professionals do not? Membership in AIPG? I believe it is critical.

U.S. Geological Survey Mendenhall Postdoctoral Research Fellowship Program

The U.S. Geological Survey (USGS) invites applications for the Mendenhall Postdoctoral Research Fellowship Program for Fiscal Year 2002. The Mendenhall Program is envisioned to bring current expertise in the earth sciences to assist in the implementation of the strategic plan of the USGS and the science strategy of its programs. It is also intended to provide postdoctoral fellows a research experience that enhances their personal scientific stature and credentials. Fiscal Year 2002 begins in October 2001.

Opportunities for research are available in a wider range of areas including: coastal erosion processes and modeling coastal change; interdisciplinary application of remote sensing; noble gas geochemistry; microbes and geologic substrates in estuaries; climate change, geologic processes, land use and land-surface feedbacks; estimating future strong ground motions; high-resolution imaging of earthquake rupture processes and fault structure; controls on magma ascent, stagnation and eruption; economic modeling of geologic energy resources; and environmental biogeochemistry.

The postdoctoral fellowships are 2-year USGS appointments with full benefits and salaries. Applications are being accepted through May 18, 2001, with appointments starting between October 1, 2001 and April 1, 2002, depending on availability of funds. A complete description of the program, research opportunities, and the application process are available via the WWW at http://geology.usgs.gov/postdoc. Applicants must be U.S. citizens. The U.S. Geological Survey is an equal opportunity employer.
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I have received some negative response to the advertisement on page 25 of the January-February issue of The Professional Geologist regarding the concept of geology majors in colleges and universities as professional geologists. This idea had part of its origin in a letter that I sent to all of the Presidents of the active chapters of Sigma Gamma Epsilon, a national honor society for geology majors. If I have offended anyone with my ideas, please forgive me. My rationale can be given by recounting here parts of that letter, parts of my reply to a letter from Robert Larson, CPG 08113, and parts of his response. Robert Larson has a sincere, deep, and valid concern for the concepts of professionalism and has allowed me to share his concerns with the membership.

My letter, dated June, 1998, (and slightly edited for this presentation) stated in part:

"As majors in the geosciences, you are already professionals, albeit apprentices. Your professional charge is to (1) get educated, (2) get a job, (3) become successful in your career, (4) act ethically and professionally, (5) serve your profession, (6) continue your education and hone your skills, and (7) mentor those coming up behind you. Your school can provide the first, but help for the others must come from other sources. AIPG is the only professional society that serves its members across all of the other six areas. Getting a job, acting ethically and professionally, and serving your profession are all activities you should be thinking about even before you graduate to the professional world. Programs are in place or are being developed in AIPG to aid you in doing so..."

"...Our attempts to influence practicing geologists to be ethical and professional are made easier if we can bring our programs to them as early as possible in their careers, and we can be most successful if these professional philosophies are presented while students are still in an organized educational setting. We also need the perspective and intelligence of younger geologists if we are to forge a series of programs that have value to all of our members. We need your enthusiasm, your energy, and your state-of-the-art geological knowledge if we are to remain vibrant...In short you need AIPG and AIPG needs you..."

In response to the advertisement in the January/February, 2001 issue of TPG Robert Larson wrote to me:

"I am writing to you concerning the ad on page 25 of the January/February 2001 issue of The Professional Geologist. The ad states “Students (sic) if you are a geology major you are a professional”. I believe this statement to be incorrect and misleading. Students are not professionals just because they are student geology majors. If being a student is all it takes to be a professional, we are in serious trouble. The very foundation of AIPG is undermined.

“While I realize that a professional returning to graduate school to study geology may, indeed, be a professional, this is most often not representative of student geology majors. Please change the ad and do not use this language again.”

My response, in part and somewhat modified, was:

"...In reply to your well-reasoned concern, I would like to relate a little story that got me thinking on this many years ago.

I was a geology lab instructor as a graduate student at the University of Texas at Austin, in the early 60's and had many of the football players who later won a national championship. One interesting characteristic of this group of 250-pound guys who couldn't sit in a classroom chair was that they were working extremely hard to get passing grades in my lab. They were constantly asking me to help them after class, during office hours, and they even hired tutors. I mentioned one day to one of them that they were not behaving like stereotypical football players or even usual students, and wondered why they were taking this lab so seriously. He replied that the Coach told them in their first meeting that because they had declared themselves to be UT football players, they were to consider themselves as professionals at the early stage of their careers. (Of course they all had ambitions of going on to the professional leagues.) He also told them that one of their professional responsibilities was to maintain passing grades in all of their classes and that this was just as important as attending practice on time, and added that he would not tolerate their skipping classes, nor acting in any way other than as professionals and gentlemen. Their coach, Darrel Royal, had each teacher of each player fill out a report every Friday on grades, attendance, and deportment. If that report did not pass his review, that player was put on probation and possibly not permitted to suit up on Saturday. This changed..."
my whole thinking about professionalism and about what I was doing. I think that is also one reason why Coach Royal had so many good teams. I want to see all serious geology majors work as hard as those football players to become professional geologists. And I believe that AIPG has a duty and an important role in helping them to do so. I would like to see a mentoring program in AIPG that is as dedicated and effective as Darrel Royal’s.

I hope this gives you a bit of my perspective. At the time I did not think of those football players as professionals, although some were good enough, even at that stage of their development. I believe that geology majors, once they have declared their intention to be professional geologists must, like those players under Coach Royal, deport themselves like professionals with all the seriousness, dedication, and effort that professionalism requires."

Robert Larson replied, in part:

"Thank you for your great story. I certainly appreciate the need to get students to start acting like (or, as you say, as) professionals. I fully support the idea that they need to adopt a professional demeanor, and that they should be mentored. One of the greatest concerns that I, and many of my colleagues have, is the real (or at least perceived) decline in professionalism.

"One of the problems that I have run into is that young geologists do not believe that they need to be mentored, much less trained. Yet without proper training and mentoring, their likelihood of becoming good geologists is greatly diminished or eliminated. And the lack of education in school on what a professional is, is in my opinion, a major reason why membership in professional organizations is declining. Young geologists do not perceive the need for joining and participating..."

What do you readers of The Professional Geologist think?

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**BYLAWS AMENDED**

In an attempt to encourage lapsed CPG’s to rejoin AIPG, the Executive Committee has modified the Bylaws. Please note the changes as shown below.

2.6.7 Reinstatement of Resigned or Terminated Members or Adjuncts

Any person who has ceased to be a Member or Adjunct by resignation or termination "without prejudice" shall be eligible for reinstatement within five years upon written request by updating his or her professional experience and other Member or Adjunct records and paying current year Institute and Section dues. The Executive Committee may condition such reinstatement on the payment of a reasonable reinstatement fee. Former Members or Adjuncts who have resigned or have been terminated for more than five calendar years may be readmitted by reapplication, or at the discretion of the Executive Committee. Any Member or Adjunct who has been terminated "with prejudice" may be readmitted only by reapplication.

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**Affordable**

Money in the bank. It may seem like just a dream. A little price shopping can help make it a reality.

Insurance coverage offered through your AIPG membership features competitive group rates negotiated especially for members like you.

Take advantage or one of your best membership benefits. Affordable coverage. Reliable providers. Portable benefits. Call 800-429-9653 to speak to a customer service representative. Because quality insurance coverage doesn’t have to empty your wallet.

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**GROUP INSURANCE FOR AIPG MEMBERS**

Cancer Expense • Catastrophe Major Medical • Comprehensive HealthCare • Disability Income Protection • High Limit Accident Medicare Supplement • Member Assistance • Term Life

This program is administered by Johnsey & Smith, an MHC Company. Some plans may not be available in all states.

The comprehensive healthcare insurance plan is underwritten by the New York Life Insurance Company, 51 Madison Avenue, New York, NY 10010.

The disability income, catastrophic, and term life insurance plans are underwritten by United of Omaha Life Insurance Company, Omaha, NE 68175.

The cancer expense and Medicare supplement programs are underwritten by the Monumental Life Insurance Company, Baltimore, MD 21201.

The catastrophic major medical and high limit accident plans are underwritten by The Equitable Life Insurance Company, in the City of New York, 860 Broadway, New York, NY 10003.

The term life insurance is underwritten by Connecticut General Life Insurance Company, a CIGNA Company, Hartford, CT 06152.
PART 1 – THE PREPARATORY STEPS

Even though New Hampshire's licensing effort took about two-and-a-half years from start to finish, that time frame is relatively fast compared to the time required in other states. The lessons learned in New Hampshire might be of some use to geologists in other states considering efforts to establish similar licensing.

Four key elements helped the New Hampshire PG licensing effort:

1. The effort was focused and well organized from the start. A local grass-roots organization evolved out of an ad hoc committee of the state-wide New Hampshire Geological Society (NHGS). The ad hoc committee formed in January 1998 after the state's environmental agency, NH Department of Environmental Services (NHDES), indicated that it might begin enforcing rules that could be interpreted to require a PE stamp on certain reports submitted to the agency that are commonly prepared by professional geologists. The NHDES noted that geologists were in an unregulated profession with no legal accountability. A previous attempt to pass a PG bill in New Hampshire had occurred in the late 1980's but was not successful. The ad hoc committee revisited the 1980's effort to analyze why it had failed and considered whether a new effort would have a greater chance at success. The ad hoc committee concluded that a lot had changed since the 1980's, both in New Hampshire and across the country, and that the time had come to launch a new PG licensing effort.

In order not to jeopardize the tax exempt status of the NHGS by openly engaging in political activities, a separate organization was established in October 1998. The new organization, the New Hampshire Council of Professional Geologists (NHCPG), was modeled after similar groups in other states, such as the New York State Council of Professional Geologists. The NHCPG organizers knew that substantial funds would be needed to hire a lobbyist and to conduct other political activities. Thus, NHCPG was established as a not-for-profit but taxable corporation with the primary mission of passing a geologist licensing bill.

2. An enormous early component of NHCPG’s effort was consensus building and outreach. This included not only the geologic community across the state and the region, but also the related professions in the state. Outreach to the geologic community included trying to contact every known geologist in the state. The purpose was to make sure that no one felt left out or disenfranchised as well as to add to the membership roll. The last thing NHCPG wanted was opposition from within the geologic community. Eventually, membership rose to about 170. Opposition from the related professions was avoided early in the process by setting up a joint working group with representatives from NHCPG, NHGS, the major engineering societies in the state, and high level geological and engineering representatives from the NHDES. The presence of the NHDES representatives provided the engineering groups the impetus to ‘come to the table.’ The agency clearly wanted regulation of the geologic profession to improve the quality of environmental site characterization reports for the benefit of public health and safety, and the engineers saw the writing on the wall. The joint working group met several times between March and September 1999 to work out issues related to the bill, including acknowledgment and crucial understanding of possible overlap between the professions. Yes, the discussions were heated at times, but consensus about the bill was finally reached, and a Memorandum of Understanding was signed and issued to the relevant organizations. A copy of the Memorandum of Understanding is available on the NHCPG website (www.nhcpg.org). The process was very rewarding because it led to greater understanding and communication between the geologic and engineering communities. More importantly, it led to cooperation rather than opposition during the legislative process from a protective and powerful profession with a well-funded lobbyist.

3. NHCPG made corporate fund-raising a central goal from the beginning. The purposes of the fund-raising were twofold: a) to get the corporate community to ‘buy in’ and become visible supporters of the legislation, and b) to
raise money to help pay the costs of a lobbyist. Smaller geological, hydrogeological, and environmental firms naturally contributed what they could; but large multi-disciplinary firms and firms known primarily as engineering firms were major targets of the fund-raising effort. NHCPG felt it was very important to get those firms to show their support for their geological professionals, on whose work they rely. All corporate sponsors were acknowledged in every newsletter and were provided freelinks on the NHCPG website. Eventually, more than 30 corporate sponsors contributed between $250 and $2000 apiece, providing the majority of the funds to cover the costs of passing the legislation.

4. **AIPG** played a critical role in the process by providing support from National, the Northeast Section, and the local level. Before he became AIPG Executive Director in 1999, **Bill Siok** lived in New Hampshire, was an ardent supporter of the PG licensing effort, and was a member of NHCPG’s Board of Advisors. Also a member of AIPG’s 1998 National Executive Committee, Bill Siok arranged for then-AIPG Executive Director **Bill Knight** to come to New Hampshire in late October 1998 to speak about the steps necessary to promote such legislation. Bill Knight’s talk was a turning point because it galvanized the New Hampshire geologists to pursue a full professional license rather than a lower level of regulation which had been under consideration, such as voluntary certification.

On the section level, the Northeast Section of AIPG provided continuous and vigorous support in many ways. The NE/AIPG Executive Committee was a font of advice and sounding board for ideas as the effort moved forward. NE/AIPG helped publicize NH’s licensing effort across the eight states in the Northeast Section through its Newsletter, and it provided some financial support as well. The NE/AIPG Section presidents during that time frame, **Curt Kraemer** and **Lenny Rexrode**, and the NE/AIPG Newsletter editors, **Shane McDonald** and **Bob Stewart**, were very helpful. Even though he lives in Connecticut, Bob Stewart proved to be especially helpful because his mother-in-law happens to be an influential New Hampshire state representative!

At the local level, several New Hampshire AIPG members played visible roles in the effort. Dorothy was President of NHCPG for two years. Tim was Chair of its Legislative Committee and is the 2001 NHCPG President. **Gretchen Richwas** Treasurer for more than two years. **Jim Griswold**, **Ken Milender**, and **Ken Richards** were members of the NHCPG Board of Directors, and **Brian Fowler** was on the Board of Advisors. **Steve Shope** was Chair of the Membership Committee. Dorothy, Tim, Jim, and **Tony Giunta** were members of the joint working group that met with the engineering societies. Tony, in addition, is very active in local and state Republican politics, and his connections and insight proved to be invaluable during the legislative process. **Dick Lane** obtained the support of the NH Department of Transportation. **Jim Zeppieri** was among the many individual financial sponsors of the NHCPG.

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**PART 2 – THE LEGISLATIVE EXPERIENCE**

A Morality Tale of a Hermit Crab, or How a Few Innocent Geologists Learned About Politics in New Hampshire

NHCPG’s legislative experience is a story in itself. In order to follow the story, one should understand a little about the structure of the New Hampshire legislature. The Senate has only 24 members, and is a small, collegial body. In contrast, the House of Representatives is the third largest parliamentary body in the western world! The House has 400 members, many of whom are ‘colorful’ individuals, making it much more fractious and unpredictable than the Senate.

**The Easy Part – The Senate**

Friendly sponsors had been found: two senators – a liberal Democrat and a conservative Republican, and one representative – a conservative Republican. The bill, officially known as “SB181, an act relative to licensing geologists,” was introduced in the New Hampshire Senate in February 1999. It was introduced in the Senate first because the primary sponsor, the liberal Democrat, was chairman of the committee that would hear it.

The Senate committee assigned the bill held a hearing in March 1999. Tim Stone testified for the geologists. Because the joint working group of geologists and engineers were still ironing out their differences regarding the bill, the Senate committee re-referred (i.e., tabled) the bill until the fall of 1999, to allow time for the joint working group to complete its work. In October 1999, another hearing was held, and the Senate committee heard the testimony of the geologists, again represented by Tim Stone, and the engineers that all differences had been worked out. The committee was provided a proposed amendment to the bill based on the joint working group efforts, and it voted unanimously to recommend the bill to the full Senate as “ought to pass, as amended.” The full Senate reconvened in January 2000, and the Senate unanimously voted to pass SB181 as amended on February 3, 2000, sending the bill to the House. Smooth sailing so far.

**The Hard Part – The House**

The House of Representatives assigned SB181 to the Executive Departments and Administration Committee (ED&A). We had our first hearing before ED&A on March 8, 2000 and were not prepared for what happened that day. NHCPG had lined up several distinguished supporters, including the primary Senate sponsor (and Chairman of the corresponding Senate ED&A Committee) and a very high level representative from the NHDES, to testify on behalf of the bill. No one testified against the bill. The distinguished supporters were surprised and disturbed by the intense grilling they received from some committee members. Tim Stone and a representative of the engineering societies also testified in favor of the bill, but the committee did not seem even to listen to them. Then we were unexpectedly handed a detailed 62-item ‘sunrise questionnaire’ to justify the bill, with a short deadline for completion. Responding to the ‘sunrise questionnaire’ required considerable effort from a rapidly assembled group of geologists. The sunrise questionnaire...
and our response can also be found on the NHCPG website (www.nhcg.org).

Soon after the first hearing on March 8, we also learned that our main walk-the-hallways-and-hug-the-reps lobbyist was leaving for another firm. Those events set the tone for the rest of our time in the House – surprises, obstacles, mini-crisis, and maxi-crisis.

SB181 was assigned to a six-member subcommittee on licensing which held several work sessions in early April 2000. Our remaining, staid lawyer-lobbyist assured us that the subcommittee would never get to the PG bill at the first scheduled work session. Dorothy Richter went anyway just in case, and of course, the PG bill was the first bill addressed. Panic. No lobbyist, no other geologists, left the cell phone in the car, and only enough change to make one phone call. Fortunately, Tony Giunta and two others responded to a frantic call and quickly dashed over to provide moral support. The subsequent work sessions went much more smoothly, and, beginning to realize just how much the work of professional geologists directly impacts public health and safety, most subcommittee members began to warm up quite nicely to the PG bill.

The subcommittee on licensing voted 5-0 on April 6 to recommend to the full ED&A committee that the bill “ought to pass as amended.” The missing sixth member did not show up for the vote, but opposed the bill, saying she did not like that the grandfather clause required five years of professional experience, which she thought was four or five years too many. More than once, she tried to remove any experience requirement from the grandfather clause. As time went by, her position hardened into kill-the-bill-at-all-costs. We never understood why, and we were completely unsuccessful at communicating with her. Although a Democrat, she allied with some crafty ultraconservative elements that oppose all licenses. The tenacity of the opposition was troubling since NHCPG had not identified any opposition to the bill outside of these few members of the House.

The full ED&A committee accepted the licensing sub-committee’s recommendation to support SB181 and sent it to the House floor for a vote on April 20. Threats from the opposition caused our supporters to pull the bill off the floor at the last minute, however, to make sure that the opposition had received every opportunity to try to amend it. Pulling the PG bill on April 20 required that a second committee (Finance) waive its right to review it, or else the bill would have died then. Fortunately, the Finance Committee chairman was collared in the corridor outside the chamber, granted the waiver, and the PG bill survived. Whew! SB181 went back to the ED&A committee and, after heated exchanges and internal delays, returned essentially unchanged to the floor of the House on May 18, 2000.

May 18 was a busy day in the House, but everyone assured us that all the groundwork had been laid, and SB181 would pass without a problem. Tim Stone, Dorothy Richter, and Tony Giunta arrived at the start of the session to watch from the gallery. The House Judiciary Committee was holding closed hearings about a scandal in the NH Supreme Court, and for each roll call vote, someone had to run to the next building to get the Judiciary Committee members, making roll call votes somewhat unpopular. Bills related to campaign finance reform, handgun safety, and other sensitive issues led to long debates. Representatives wandered in and out of the chamber. It was hot, and the open windows of the historic hall didn’t help.

SB181 finally came up at about 4:30 pm. ED&A Committee members, who by then had evolved into strong advocates for the PG bill, spoke about the important public health benefits for licensing professional geologists. The opposition mis-characterized the bill and claimed that geologists would be setting up a cartel to require the public to get PG stamps on all sorts of documents. A non-roll call vote was taken, and the electronic voting board read 174 in favor, 91 opposed. Hooray, it passed by a wide margin, we thought! The Speaker paused, and then announced that SB181 had failed! We sat slack-jawed, stunned. Before we understood what had happened, a woman suddenly appeared at the podium and succeeded in getting a voice vote to put SB181 into “interim study,” which essentially killed it for the 2000 session. Another member of the opposition raced to the Speaker’s desk to request reconsideration of SB181 at the end of the day. We later learned that the swift move prevented our supporters from getting immediate reconsideration with a roll call vote. It all happened so fast!

Someone finally explained to us that SB181 had failed for lack of a quorum and lack of a 2/3 majority to override the lack of quorum. 174 + 91 = 265, and 266 votes are necessary for a quorum in New Hampshire’s 400-member House. Further, although there were 174 votes in favor, 176 votes were necessary for the 2/3 majority. One person, or 1/266th short a quorum, two votes, or 2/265ths short of a 2/3 majority. Heartbreak and disbelief. Reconsideration of the bill did not occur until about 7 pm, and it failed after the opposition threatened to have nine speakers filibuster until after midnight before voting. By then, there was torrential rain, and it was a long, sad, soggy walk back to the car. The PG bill appeared to have been killed by freakish circumstance and the opposition’s cunning reaction to it.

The Really Hard Part – A Daring Rescue

What happened next will restore the most cynical observer’s belief in politicians. On their own initiative, and even trying to keep it a secret from us, the ED&A supporters and original sponsors decided to save the PG bill. Their daring rescue required intrigue, quick footwork, careful attention to protocol, and quiet bipartisan blessings from high leadership in both the House and Senate because such maneuvers are rarely permitted. It was obvious to everyone, however, that the PG bill simply ought to have passed.

Our supporters found a dead bill, HB1510, that had passed the House but had been killed in the Senate. The original HB1510 had something to do with medical savings accounts for state employees. The entire contents of the original bill were removed and, with literally only 30 minutes left in the 2000 session to do it, our primary Senate sponsor explained the situation to the full Senate and asked it to vote HB1510 with only the text of the PG bill tucked inside. HB1510 passed the Senate unanimously on May 23, 2000 and was sent back to the House again. The PG bill now occupied the dead shell of HB1510 like a hermit crab! A bit sneaky perhaps, but oh, a thing of beauty. A joint House-Senate conference committee, conveniently stacked with supporters, was quickly formed and approved the resurrected bill on May 26. HB1510 made it to the House floor for a vote on May 31, the...
very last day of the 2000 session. The opposition reacted ferociously, and there was a fierce debate on the floor of the House. The final vote was roll-called with 204 yeas and 122 nays. The PG bill passed.

A happy ending after all. Repeating the beginning, New Hampshire Governor J enne Shaheen signed HB1510, an act relative to licensing geologists, on June 21, 2000. The bill took effect 60 days later.

EPILOGUE

There are two main results of the bill’s passage. One is the practical implementation of the PG law. The other is the political fallout from the topsy-turvy legislative experience.

As for the practical implementation, in the fall of 2000, Governor J enne Shaheen appointed four geologists, including Dorothy Richter, to serve on the New Board of Professional Geologists. A fifth, public member was appointed in early 2001. The PG Board is in the process of writing its administrative rules. That process will likely take several months. A 12-month grandfathering period, during which the examination requirement is waived, will begin when the administrative rules are approved and adopted.

To be placed on a mailing list to obtain a New Hampshire PG application package when one becomes available, contact:

New Hampshire Joint Board of Licensure and Certification
57 Regional Drive
Concord, NH 03301-8518
Tel: 603-271-2219
Fax: 603-271-7928
Web: www.state.nh.us/jtboard/home.htm
email: dlobdell@nhsa.state.nh.us

As for the political fallout, clearly some feathers had been ruffled during the latter part of the spring. The last words heard from the opposition in the spring were “we’ll be back.” As it turns out, the woman who led the opposition to the PG bill lost her seat in the fall election, but the rest were re-elected. NHCPG plans to remain vigilant for attacks on the PG law and has retained a lobbyist for the current legislative session to monitor legislation that could compromise the PG law.

NHCPG continues its very close association with NE/AIPG by regularly reporting to the NE/AIPG Executive Committee, writing articles for the NE/AIPG Newsletter, and encouraging its membership to join AIPG. Together with AIPG, NHCPG believes that geologists need to become more visible advocates for the profession and to be recognized as a resource by the legislative and business communities when input on geologic or related issues is required.

Dorothy Richter, CPG-07033, is President of Hager Richter Geoscience, Inc. in Salem, New Hampshire, and is a member of the New Hampshire Board of Professional Geologists. Tim Stone, CPG-07282, is Vice President of Stone Hill Environmental, Inc. in Portsmouth, New Hampshire, and is President of the New Hampshire Council of Professional Geologists.

KRAUSKOPF RECEIVES LEGENDARY GEOSCIENTIST AWARD

RENO, NV - Konrad Krauskopf, CPG-00229, former president of the American Geological Institute (AGI), received AGI’s Legendary Geoscientist Award during the annual meeting of the Geological Society of America. His research and teaching career provided scientists with the original defining texts in geochemistry and physical geology, says Gary Ernst, Benjamin Professor, Geological and Environmental Sciences, and former Dean of the School of Earth Sciences at Stanford University. The awards ceremony took place during the AGI Past Presidents Dinner on Sunday, Nov. 12, 2000 in the Crystal Room of the Reno Hilton Hotel.

It was at Stanford that Krauskopf’s research and teaching career was centered. After earning a Ph.D. in chemistry from the University of California, Berkeley, he accepted a position as an undergraduate physical science instructor at Stanford while working toward a second doctorate in geology, completed in 1939. As a pioneer in the new field of geochemistry, Krauskopf literally wrote the book-or books-on applying the principles of physics and chemistry to studies of Earth, and provided scientists with the original defining texts in geochemistry and physical geology, still in use after more than five decades. The third edition of his textbook, Introduction to Geochemistry, was published in 1994.

“When Konrad Krauskopf first began his teaching career, the term, ‘geochemistry,’ was just coming into use,” recalls AGI Executive Director Marcus E. Milling, CPG-04518. “Throughout his career, he has conducted investigations of international quality ranging across the breadth of hard-rock geology, petrology, and geochemistry. He is an outstanding researcher and educator.”

Krauskopf’s seminal contributions to the emerging field of geochemistry included research on the controls of trace-element concentrations in seawater, the solubility of silica, and the transport of metals in ore-forming solutions. Detailed studies illuminated the parageneses of granitoids and basement terranes in the Pacific Northwest, the volcanic eruptions of Paricutin, Transmexican Volcanic belt, and the regional petrologic evolution of coastal Norway. He generated both mineral deposit maps and general geologic maps for the California Division of Mines and the U.S. Geological Survey, chiefly in the Sierra Nevada and the White-Inyo Range.

In recognition of his achievements, Krauskopf has been the recipient of many professional awards and honors, including the Day Medal of GSA in 1961, the Goldschmidt Medal of the Geochemical Society in 1982, the Ian Campbell Medal of the American Geological Institute in 1984, and the Mineralogical Society of America’s Distinguished Public Service Medal in 1995. In addition to serving as President of the American Geological Institute in 1964, Krauskopf was President of the Geological Society of America in 1967 and the Geochemical Society in 1970. He is a member of the National Academy of Sciences.

AGI created the Legendary Geoscientist Award in 1999 to recognize lifetime achievements in the geosciences. This award will be presented annually to a distinguished geoscientist whose achievements have lasting historic value in the earth sciences.
E-Mail as a Means of Keeping Section Members Up To Date On Timely Information

Douglas C. Peters, CPG-08274

It was suggested to me by one of our distinguished members that I relate via TPG (The Professional Geologist) the experience the Colorado Section has had with using e-mail to keep our members up to date on timely events. Our section has found this an efficient and well-accepted means of keeping in touch with our members across the state! We presently include approximately 50% of our section members, all national officers, and most section presidents (or other senior official) in our e-mail list.

By timely events, I mean section meetings, conferences, short courses, legislative happenings, and any other items that we find out about on too short a time frame to allow us to notify all members through our quarterly newsletter. Without e-mail, these sorts of events would either have to be passed on verbally to those members who could be reached via phone in a short time, or special mailings would have to be sent to members in addition to the newsletter. Both possibilities require considerable expense of time and/or money that would drain section resources (i.e., volunteers and funds). There also is the inevitable time delay involved in mailings reaching members throughout the section.

Use of an e-mail list, on the other hand, allows us to keep members up to date cheaply and very quickly, if members have e-mail and tell us their address, of course. The Colorado Section’s initial e-mail list was compiled from the AIPG membership directory. Part of the trick and effectiveness in the e-mail messaging method lies in how the e-mailing is done.

There basically are three methods of sending e-mails to a large group such as the membership of a section. The first is to simply have a long string of addresses in the “To:” line of the e-mail message. We started out with this method for the Colorado Section because of the limitations of the old e-mail software I was using at the time. We started out with approximately 150 addresses in our list, a VERY long string at the start of each message! This seemed to work okay in terms of not running afoul of “anti-spam” (i.e., anti-junk e-mail) rules at my Internet Service Provider (ISP) or our members’ ISPs. At least I am not aware of any of our members not receiving messages due to this particular cause. However, I did find a couple of recipients for another organization, for which I started a similar e-mail list, whose companies rejected any e-mail with more than 50 addresses in the header. So, that is something you will need to beware of if you want to start a similar “long-string” e-mail list. For the smaller AIPG sections, this may be a viable option at least as a starting point.

Sending messages using a long-string list can raise the ire of recipients! The longer the string, the further down the e-mail page the recipient has to go to get to the message. If the recipient prints the message directly from the e-mail software, then part of a page to multiple pages can be taken up with just the e-mail list itself at the beginning of the message. As a result of some complaints from section members about this problem, I ended up moving to a bulk e-mailing software package, which I will discuss later in this note.

Note that I initially arranged the member addresses in our long-string list geographically rather than alphabetically by member name. The advantage of this sorting method was that I could cut and paste addresses en masse, rather than individually, into new messages if I needed to target them by area of Colorado (such as the Denver Metro area). Many if not most e-mail addresses have only partial obvious connection to an alphabetical-by-name system for members, so there was no advantage to me to arrange addresses that way. The negative aspect of entering addresses by city was that I then had to cross-reference with the AIPG directory to know where to insert new addresses or delete old ones.

The second method, and that used by most individuals for short- to medium-length lists, is to set up an address list within the particular e-mail software package you use. Both Eudora and...
I recommend the bulk e-mailer method of broadcasting e-mails for the larger membership AIPG sections if they wish to institute such a system. It probably would be the best means for the mid-size sections as well. For the smaller sections, you will need to assess the issue of cost versus the amount of use you may expect to give the software, compared to just setting up an address list in regular e-mail software or using the long-string method.

Regardless of which method you use, I think you will find, as the Colorado Section has, that use of an e-mail notification method will help all your members feel more connected to what is going on in the section and among related groups on a timely basis. Keeping our members apprised of events of importance to them, especially section events and legislative affairs, is a key function of AIPG in general. I encourage you to institute an e-mail list for section members if you have not already done so.

KEEP US UPDATED
AIPG Members: please be sure to notify AIPG headquarters when you change your address, including your e-mail address. Check your address as posted in the annual directory or on the AIPG website <www.aipg.org>, National as well as the Sections rely on this information to keep you updated on current events. The AIPG National headquarters supplies the Sections with labels and e-mail listings, so contact AIPG headquarters with your changes at (303) 412-6205 or e-mail: <aipg@aipg.org>.
Neal Kedzie, State Representative 43rd Assembly District, Chairman, Assembly Committee on Environment

Wisconsin State Representative Neal Kedzie will discuss the role and responsibility of state legislators regarding urban growth, land use planning, and outline programs that have utilized consensus building and promoted partnerships to find solutions and establish long range land use planning goals for the state of Wisconsin.

With a strong economy and outstanding communities, Wisconsin is becoming more and more attractive to new businesses and homeowners. The effort to preserve Wisconsin’s land resource and promote development within the state has become an issue that has divided landowners and environmentalists, developers and open-space proponents. As legislators, we need to ensure that the right decisions are made today to maintain and protect the Wisconsin of tomorrow.

The problem that legislators face is that so many diverse interests, e.g., farmers, realtors, developers, conservancy groups, environmental groups, sportsmen and the like have different interpretations of how land use plans should be developed. Local land use controls have long been the norm in Wisconsin, but economic and environmental concerns have led some states to require broader oversight of land use decisions.

These issues tend to be raised in states that face high growth rates and noticeable urban sprawl. Lately, pressures have been mounting for more state control in Wisconsin, as well. Whether or not Wisconsin opts for a greater state role in land use policy will depend on whether the existing laws, which emphasize local control, can meet the challenges faced by local property owners, municipal governments, and the state as a whole.

As Chair of the Assembly Committee on Environment, Vice-Chair of the Assembly Committee on Conservation and Land Use, and a member of the Assembly Natural Resources Committee, Representative Kedzie is committed to creating partnerships of state, county and local officials to ensure proper land use management.

Dennis Martin, Minnesota Department of Natural Resources

The Minnesota legislature created in 1998 an Aggregate Resources Task Force, composed of 12 members, to examine the current statewide issues related to sand, gravel, and crushed rock. The task force submitted a final report to the legislature on February 1, 2000. This presentation provides an overview of the 14 recommendations in the final report, and the subsequent significant events. The recommendations are controversial, and are apt to be legislative issues during the upcoming session.

The task force recommendations cover six key areas:

- Technical assistance to assist local government in managing aggregate resources under their jurisdiction;
- Means to identify and protect aggregate resources for future use;
- Compensation for local governments that host mining operations;
- Expanded use of recycled materials;
- Support for continued use of multi-modal transportation of aggregates;
- Education to highlight the consequences should conservation be ignored.

The need for the task force was created by the dramatic increase in statewide annual demand of aggregate resources, estimated to be more than 70 million short tons for 1999. Public projects are estimated to consume 50% of the total. With demand increasing, the supply and demand balance is critical. Aggregate resources are a finite natural resource, and locally available reserves of high quality material are dwindling in many areas of the state. The critical issues for the state are to maintain local availability of construction aggregates at reasonable costs; to protect these resources for future use; to provide consistent environmental guidelines for local permitting of mining; and to deliver resources to the market without undue impact to the citizens.
Geological and Societal Controls on the Availability of Stone Resources in Northeastern Illinois and Southeastern Wisconsin

Donald G. Mikulic, Illinois State Geological Survey, Champaign, IL 61820, mikulic@sgs.uiuc.edu, and Joanne Kluessendorf, Department of Geology, University of Illinois, Urbana, IL 61801

The Chicago-Milwaukee region has been both a major producer and consumer of stone construction materials since pioneer settlement began in the 1830s. Historically, local sources have met nearly all of the area’s primary stone needs. However, most of the stone reserves in the region have now been lost to either urban expansion or short-sighted resource utilization. Moreover, changes in the type of stone products desired and increasingly stringent quality standards both have reduced stone availability. As a result, future needs are likely to be met only by more costly transportation from ever more distant sources or by underground mining of deeply-buried local reserves.

As in most areas, the fundamental controls on the availability of stone resources in the Chicago-Milwaukee region are basically geological. The most important of these are the composition of strata at the bedrock surface and their proximity to the ground surface. Throughout this region high-quality Silurian age dolomite occurs at the bedrock surface; however, thick Quaternary sediments blanket most of the area, significantly limiting the number and distribution of sites where stone can be quarried economically.

The societal overprint on these geological factors is varied. Prior to the development of a good transportation system nearly all shallow bedrock sites were quarried to supply local needs, regardless of quality. With the development of canals, railroads, and paved highways, the industry became more concentrated at locations with good reserves of high-quality stone. Many of the best locations from a geological standpoint also turned out to be the same places that were important during early settlement. At first, the lack of a transportation system made this co-occurrence a convenient situation. Urban growth, however, rapidly caused the abandonment of most these quarry sites long before their reserves had been depleted. Periodic economic problems for producers also led to the premature closure of many sites that were then developed for other uses.

As a result of these societal factors, the number of quarries has decreased dramatically. For example, in northeastern Illinois more than 250 abandoned quarry sites are known; only about 25 are still in operation. In southeastern Wisconsin, around 150 abandoned sites are known, whereas about 20 quarries still produce stone. Unfortunately, reserves for open-pit quarrying at most of the currently-active quarry sites are limited. In the next few decades there will be a significant decline in the ability of most local pits to meet local demand. The availability of few geologically-suitable sites for future development, coupled with significant public opposition to the establishment of new quarries, make meeting future demands problematic throughout the region.
(5) More and innovative outreach and partnering have been instituted by mining companies with neighbors, communities, and regulators during the pre-zoning/permitting, zoning/permitting, and operating life of a mine.

(6) There is greater activism and involvement within industry trade associations at the local, state, and national levels regarding issues affecting the aggregate industry.

(7) Many have instituted quality control, quality management, and customer service programs in order to add value, create market differentiation, and add service life to end products.

(8) Innovative R & D, particularly in the use of industrial by-products and development of artificial aggregates to extend natural aggregate reserves, are in the works and on the horizon.

Geologists must be more proactive in advising and operating aggregate mining companies and educating the public and regulators as to the importance and stewardship involved in its future.

Aggregate Resource Mapping by the Minnesota Department of Natural Resources: Goals, Methods, and Digital Products

Jonathan B. Ellingson, Minnesota Department of Natural Resources

The aggregate industry is one of the largest industries in the nation; aggregate is produced in all 50 states and within all 87 counties of Minnesota. The total aggregate production in Minnesota in 1999 was approximately 74 million tons valued at over 300 million dollars. Aggregate is a high-bulk, low-value commodity, thus transportation accounts for a considerable amount of the delivered price. That is why it is important to find and develop aggregate resources close to the market place. However, due to land-use conflicts (urban sprawl), it is becoming increasingly difficult to develop these resources.

In 1984, the Minnesota Legislature passed a statute entitled “Aggregate Planning and Protection”, which mandates the Minnesota Department of Natural Resources (MN/DNR) to identify and classify potentially valuable aggregate bearing lands around urban areas. The purposes of the statute are to protect aggregate resources, to promote orderly and environmentally sound development, to spread the burden of development, and to introduce aggregate resource protection into local comprehensive planning and land-use controls. The MN/DNR’s (Division of Lands and Minerals) County Aggregate Mapping Program was developed as a result of this legislation.

Potentially significant aggregate resources are identified through traditional geological mapping techniques along with computer modeling and data analysis. All information is digital at the MN/DNR, including: topographic maps, aerial photographs, digital elevation models, soils, hydrology, geomorphology, land-use, vegetation, and all subsurface data (approximately 300,000 well logs). Databases from the Minnesota Department of Transportation (pits, drill holes, and bridge borings) also are utilized. ArcView, ARCINFO, Spacial Analyst, and other computer modeling programs are used to access, summarize, and analyze this data. Computer analysis is used along with stereoscopic, color infrared aerial photographs to produce 1:24,000 scale field maps. The maps are field checked; approximately 1000 data points are collected per county. The final aggregate potential units are based on the thickness of the resource, overburden thickness, deposit size (acres), probability/certainty, textural characteristics (gradation), quality (soundness and durability), sediment type, geological feature, etc.

Four map plates are constructed for each county, which include aggregate potential, surficial geology, methodology, and the data sources. All data also are available in a digital format; many local government units, including county planners and zoning departments, highway departments, and townships are using ArcView or similar programs for planning and organizing their data. We deliver a digital product that can be used directly with their existing data, including all MN/DNR coverages described above, all field observations, gravel pit locations, geological and aggregate resource coverages, and drill hole descriptions. The information is presented to the county boards, county planners, highway departments, land owners, industry representatives, and other interested parties. The information may then be used in planning and zoning decisions by county and local governments, as they control the permitting authority in Minnesota.

An Overview of Aggregate Resources and the Aggregate Industry in Wisconsin

Bruce A. Brown, Wisconsin Geological and Natural History Survey, 3817 Mineral Point Road, Madison, WI 53705

Wisconsin has potential resources of quality aggregate more than sufficient to meet state needs. The Precambrian terrane of northern Wisconsin contains a variety of granitic, metavolcanic (traprock), and metasedimentary (quartzite) rocks that have seen only limited exploitation in the past. Increasing demand for railroad ballast, aggregates with superior wear performance, and riprap has increased interest in hardrock aggregates in spite of distance to markets. The Ordovician and Silurian carbonates of the Prairie du Chien, Sinnipee, and Niagara Groups have provided the bulk of Wisconsin’s crushed stone production for many years, but still contain vast potential resources. The Quaternary glacial deposits of northern and eastern Wisconsin contain abundant sand and gravel, much of which has not been systematically evaluated.

Crushed stone and sand and gravel account for the biggest share in terms of tonnage and value of the more than $350 million nonmetallic mineral industry of Wisconsin. Quality materials and increasing demand have helped to build a strong industry and make Wisconsin a net exporter of aggre-
Environmental issues create additional pressure on the extractive industries. The listing of salmon as ‘Endangered Species’ is causing a ripple of impacts to all users of land near rivers and streams. Some of the poorer agricultural soils are hydric and the state is claiming jurisdiction over the land under the wetlands rules, which also impacts the ability for aggregate industry to operate.

The state rules in Oregon provide mechanisms for some of those land-use balancing decisions. Industry professionals must be extremely versatile to navigate the complex rules, and the companies must continuously promote a responsible image.

The Benefits of Long Skinny Resource Maps

Nelson R. Schaffer and Denver Harper, Indiana Geological Survey, 611 Walnut Grove, Bloomington, IN, 47405, Phone: 812-855-2687, Fax: 812-855-2862, E-mail: schaffer@indiana.edu.

Aggregate producers face the conundrum of increasing demand for their products coupled with increasing resistance to the opening of new quarries, especially in urban areas. Existing mines make optimum use of resources through coproduction or sequential production: for example, many mines produce gravel from deposits that overlie carbonate rocks that provide crushed stone. Some producers have modified mining strategies to include deep benches, mining through shale, or by opening underground operations. Near Indianapolis, for example, four crushed stone mines now operate underground. The use of recycled materials and mixing inferior stone with high-quality stone can also extend the life of a mine. Even these efforts, however, have failed to meet growing demand for aggregates and companies are forced to seek stone from increasingly distant sources. Because transportation costs are a crucial consideration, resources near highways, railways, or rivers are especially attractive. Most new commercial development in Indiana occurs within 10 miles of a major road, making roadways the loci of activity extremely important to aggregate production or use.

Long skinny resource maps oriented along existing (or proposed) transportation routes are important in highlighting potential aggregate resources. For example, the integration of existing geologic data into a GIS system made possible the rapid generation of long skinny maps as part of a demonstration project along U.S. Highway 41 in southwestern Indiana. Indiana Geological Survey staff were able to complete the work in only a few weeks. Geologic details 10 miles on either side of U.S. Highway 41 were mapped with emphasis on available resources and on potential geologic hazards. Cultural, demographic, and land-use data can be added from census track data, and soils information is readily available from the U.S. Department of Agriculture.

Balancing Land-Use Decisions - Fate of Aggregate Mining in Oregon

Tim Marshall, Morse Bros., Inc., 32260 Old Highway 34, Tangent OR 97389, Telephone: 541-928-6491, Fax: 928-6494, E-mail: tmarshall@morsebros.com or tmarshall@continet.com

Land-use decisions are often emotional and lengthy procedures. This is especially true for many natural resource uses or “extractive” industries such as aggregate mining, where there is considerable effort to consider the balance between the proposed use and other potential uses. Suburban growth provides considerable pressure on these industries, even though that growth is fueling the demand for the products. In addition, the other users are pushing back – agriculture and environmental restrictions squeeze the industries from all sides.

Oregon has experienced considerable growth over the last decade. This has resulted in annexation of previously rural isolated areas where quarries and gravel pits had previously operated. In many cases, the result is to shut down the operations before fully utilizing the resources. In some cases the land has been reclaimed and incorporated into the suburban development plans.

The agriculture industry in western Oregon has battled the development pressures and consumption of productive agricultural soils for other uses for years. This battle includes the use of farmland for aggregate extraction. The floodplains contain abundant gravel deposits that coincide with the agricultural soils in many cases. The aggregate industry is faced with escalating battles with the agricultural industry, which are costly and time-consuming for both parties.
The Applications of Electric Resistivity for Sand and Gravel Exploration and Evaluations

Jonathan B. Ellingson, Heather Anderson, and Todd Petersen, Minnesota Department of Natural Resources

The application of electric resistivity was evaluated for sand and gravel exploration by comparing the results of a surface resistivity study to the detailed geological logs of rotosonic drill cores. An electric resistivity survey was conducted to acquire subsurface data (cross-sections) to help delineate the horizontal and vertical extent of a thick (40 m; 130 ft) sand and gravel deposit at a site near Felton, Minnesota. A rotosonic drilling program followed the geophysical survey to test the application of electrical resistivity on such a deposit, to collect samples for textural and quality analysis, to determine the depth to ground water, and to help interpret the depositional environment of this resource (by analyzing the structures and sediment found in the core).

A STING R1 Memory Earth Resistivity Meter in conjunction with a SWIFT Automatic Multi-Electrode System was used to complete 12 geophysical profiles in a 500 acre area. Each of these profiles was 275 m (900 ft) long; 56 electrodes were used with 5 m (16 ft) spacings. The maximum depth imaged with these profiles was 57 m (185 ft). This study produced 12 two-dimensional resistivity profiles (cross-sections) with each profile containing approximately 700 data points. These profiles were plotted with a gradational color scale to help delineate the “sand and gravel” from the “clay and till”.

A rotosonic drill hole pattern was designed based on the results of the geophysical survey. Holes were placed on 10 of the 12 geophysical lines to test the accuracy and application of the electric resistivity survey on this type of deposit. The rotosonic drilling collected a continuous core for every hole; this core was later described, sampled, and the sand and gravel units were sieved in the laboratory. This information was then compared to the geophysical results.

Electrical resistivity worked very well for defining the horizontal and vertical extent of the deposit. The profiles showed the differences between gradational and sharp contacts between “sands and gravels” and “silt and clays”, however did not differentiate “sands” from “gravels”, unless they were extremes. Geophysics proved very inexpensive relative to rotosonic drilling (in thick sand and gravel deposits). It is a non-intrusive method that can be used in environmentally sensitive areas (prairies, wetlands, parks, etc.) without disturbing the surface. The cross-sections (geophysical profiles) were an important and valuable tool for planning the drilling pattern. This geophysical technique can reduce the amount of drilling required (thus decreasing costs) and add a much higher degree of confidence to the continuity of a resource. However, geophysics can not completely replace drilling; drilling is still necessary to obtain samples for quality and textural analysis, mine planning, and other geological and environmental interests.


Benson, M. A. and Calvin Alexander, 1999, 2-D Electric Resistivity Profiling in the Vicinity of the Felton Bicentennial Prairie, Clay County, Minnesota, Department of Geology and Geophysics, University of Minnesota.

Community Relations — The New Tool in the Trade

Susan M. Courter, P.G., Resource Education and Environmental Director, and Michels Materials—Division of Michels Pipeline Construction, Inc., Telephone: (920) 583-3132, E-mail: courter@dotnet.com

Negative perceptions of the mining industry have fostered the need for more education and community relations than ever before. Most of the concern—even hostility, stems from the lack of information and solicited misinformation about the extraction process. Controversy has been furthered by new and competing interests for land use.

Geologists carry the tools to cultivate a better understanding of the earth’s resources, hence the minerals industry overall. What is often times missing is the additional skill needed to share those ideas with people outside of the profession. This presentation will focus on simple strategies to educate decision makers about the importance of geology and mineral extraction, so that informed decisions can be made about the mining process.

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The following positions were adopted by the Executive Committee subject to publication in TPG for comment by the membership and possible further amendment before final adoption. They are subject to review by AIPG’s lawyer as well. Members are invited to address their comments, via mail, fax, or e-mail, to the Executive Committee, AIPG Headquarters, 8703 Yates Drive, Suite 200, Westminster, CO 80031 (Fax: 303-412-6219, e-mail: aipg@aipg.org). Comments must be received prior to April 16, 2001.

Proposed AIPG Position Statement on Wetlands—Draft 4 (October 10, 2000)

Wetlands are an important natural resource with geological, ecological and economic benefits. Wetlands improve water quality by filtering harmful pollutants from ground water and surface water; they are an important spawning and nursery habitat for fish and other wildlife; they provide recreational opportunities including hunting, fishing, bird watching, and nature photography; and they provide effective natural flood control.

The formation and location of wetlands are due to geologic factors including underlying soil type, topography, geomorphology, and hydrology. Throughout geologic time (measured in millions of years) wetlands have formed, migrated, and disappeared as a result of natural processes. In recent years, artificial wetlands have been constructed to treat water either from remediation systems used to clean up environmentally contaminated sites, or as a component of waste-water treatment systems, or to restore a hydrologic regime.

Geologic understanding is essential to the accurate assessment and evaluation of existing wetlands and to the effective design and construction of artificial wetlands. Therefore, the American Institute of Professional Geologists (AIPG) believes that qualified geologists with the appropriate training and experience must be included in an interdisciplinary approach to drafting legislation, regulations, or policies regarding the definition, conservation, or construction of wetlands, as well as the actual investigation, design, and construction of wetlands.

DRAFT AIPG Position on National Energy Policy (January 20, 2001)

AIPG encourages the U.S. Government to develop a comprehensive national energy policy and strategies to achieve that policy. The crux of the policy should be to maintain an adequate supply of affordable energy delivered in an environmentally responsible way. The U.S. economy relies on the availability of electricity, heat, and transportation fuels. Our standard of living requires vast quantities of energy resources needed to power our computers and light our buildings, to heat our homes, and to run our vehicles, trains, ships, and airplanes. Our current energy consumption requires significant quantities of domestic and foreign geological resources — oil and gas, coal, and uranium. Hydroelectric power from dams and geothermal, wind, and solar power are locally significant. All the options for energy production have associated environmental and economic concerns and tradeoffs that should be factored into a comprehensive national energy policy. Decreased consumption through conservation and increased efficiency are laudable goals, particularly with an increasing U.S. population, but energy availability will continue to be a major factor in U.S. environmental, economic, and military policies. Geologists contribute to exploration for energy resources; production; environmental protection of ground water and other resources during production; safety of facilities from earthquakes, floods, and other natural hazards; waste disposal; and reclamation of land disturbed during production. A comprehensive national energy policy should incorporate the knowledge of geologists about the domestic and international resource base, environmental concerns, and hazards.

DRAFT AIPG Position on Access to Public Lands (January 20, 2001)

AIPG supports access to public lands, both onshore and offshore, for the environmentally responsible development of energy and mineral resources. The vast extent of public lands, managed by federal and state agencies, contains discovered and undiscovered resources that are vital to maintaining and improving Americans' standard of living and economic security. Existing federal and state laws and regulations assure protection of water, air, biological, and cultural resources such that exploration for and development of energy and mineral resources can be undertaken with little or no long-term environmental impact. Lack of access to the extensive public lands severely restricts development of domestic energy and mineral resources. As well as having adverse effects on the domestic economy and employment, encouraging imports of oil, metals, and other resources has the irresponsible effect of exporting environmental impacts related to development of these resources. As a major consumer of energy and mineral resources, the U.S. should be a world leader in environmentally responsible development of its own resources.

DRAFT AIPG Position on Domestic Mineral Resources (January 20, 2001)

AIPG encourages the U.S. and state governments to facilitate the development of domestic mineral resources in environmentally responsible manners. The U.S. is a major consumer of metals, construction raw materials, fertilizers, industrial chemicals, and other mined materials. These commodities are essential to modern society and our quality of life. Existing state and federal laws protect the environment during exploration, development, and closure of mining operations. Other laws prohibit mineral-resource development on environmentally sensitive land. However, if these commodities are not mined domestically, U.S. demand will be met by mines in other countries. Many of these countries do not have environmental protection laws and regulatory programs that are as strong as those in the U.S.; unnecessary environmental degradation takes place in these countries. As global population increases and people throughout the world strive for higher standards of living, demand for mineral resources will increase. Recycling should accommodate some increased demand, but it will likely be able to supply only a small percentage of total needs for mined materials. Geologists contribute to exploration for and production of mineral resources, ground water and air-quality protection, reclamation, and long-term environmental monitoring after closure. State and federal regulators and land managers should use geological expertise to facilitate the permitting process for mineral-resource development.

DRAFT AIPG Position on Aggregate Resources and Land-Use Planning (January 20, 2001)

AIPG encourages all levels of government to consider the availability of aggregate resources in land-use planning. Aggregate resources (sand, gravel, and crushed rock needed for construction of buildings and roads) are mined in every state and in or near almost every community. Tradeoffs exist between the desire to have quarries out of sight and the economic, environmental, and safety costs of trucking rock long distances from quarries to construction sites. The development of new subdivisions typically eliminates the possibility of mining the underlying aggregate resources. Zoning that precludes quarries can force the mining of more distant and costly resources. Because approximately half of the aggregate mined is used for roads and other government construction projects, taxpayers pay considerably more than they would otherwise need to pay when aggregate resources need to be trucked long distances. Geologists have expertise that is relevant to land-use planning and the development of aggregate resources, including knowledge of where the best resources are, ground water protection, air-quality concerns, and reclamation after mining. AIPG encourages the use of this geological knowledge in land-use planning and land management.
AMERICAN INSTITUTE OF PROFESSIONAL GEOLOGISTS
NATIONAL SCHOLARSHIP PROGRAM

Purpose
To assist students with college education costs and to promote student participation in the American Institute of Professional Geologists (AIPG). Four scholarships will be awarded to declared undergraduate geological sciences majors who are at least sophomores. Details for applying for these scholarships are provided below.

Scholarship Awards
Scholarship awards in the amount of $1,000.00 each will be made to eligible students attending a college or university in the U.S. Scholarships are intended to be used to support tuition and/or room and board.

Eligibility Requirements
Any student who is majoring in geology (or earth science), is at least a sophomore, and is attending a four-year accredited college or university in the U.S. can apply. Also, the student must be either a student member of AIPG or must have applied for student membership at the time the application for the scholarship is submitted.

Each student who is awarded a scholarship agrees, by accepting the scholarship, to prepare a 600 to 800 word article for publication in TPG. The subject of the article must be related to a timely professional issue.

Application Process
Applicants must submit a letter of interest with name, address, and telephone number, proof of enrollment in an eligible geological sciences program, transcripts, and an original one-page essay on why she or he wants to become a geologist. The letter and essay should be submitted to the following individual:

American Institute of Professional Geologists
Attn: Education Committee Chr.
8703 Yates Drive, Suite 200
Westminster, CO 80031-3681

Questions regarding the application process can be directed to either William Siok or Cathy O’Keefe by telephone (303) 412-6205 or e-mail: <aipg@aipg.org>.

Application Deadline and Award Date
Applications must be received by August 15, 2001.

Basis of Awards
Awards will be based on the content and creativity of the essays as judged by the Education Committee. The decisions of the Education Committee are final.

Miscellaneous
Application requirements for student membership to AIPG are as follows:
1. Student must be currently enrolled in a geological science degree program (as defined by the American Geological Institute).
2. Sponsorship is required via one letter from a geological science faculty member.
3. The application fee is $5.00.
4. Annual dues are $15.00.

AIPG student membership applications can be obtained from the
American Institute of Professional Geologists
8703 Yates, Drive, Suite 200, Westminster, Colorado 80031-3681
(Application forms are also available on the AIPG website <www.aipg.org>.)

AIPG SCHOLARSHIPS AWARDED FOR 2000
The AIPG Executive Committee is pleased to announce the awardees of the first two AIPG student scholarships. They are Dawn A. Schippe, a junior majoring in Geological Engineering at the Colorado School of Mines in Golden, Colorado, and Alison Culver, a senior major in Geology at Centenary College of Louisiana in Shreveport, Louisiana. AIPG, through the Executive Committee, is proud to be able to assist aspiring geologists in pursuit of their degrees. We wish for their successful careers in an honorable and worthwhile profession.

2001 Executive Committee
EXECUTIVE DIRECTOR’S COLUMN

MORE PERSPECTIVE ON REGISTRATION

William J. Siok, CPG-04773

As of 2001, 38 states have statutes or regulations recognizing the practice of geology, with the most recent to join the growing list being Washington and New Hampshire. It’s interesting, at the very least, to note the evolution of credentialing for professional geologists. Ethics Committee Chairman David Abbott was researching the AAPG (American Association of Petroleum Geologists) archives recently and found the following record from the 1920 AAPG Annual Meeting:


“The following resolution was presented by E. G. Woodruff:

“Whereas, we, the American Association of Petroleum Geologists, believe that geologists occupy an important place in the petroleum industry, and are responsible to many investors who are unable to judge the qualifications of geologists;

“Whereas, we feel that regularly qualified geologists are not now sufficiently protected from unqualified and unscrupulous men practicing geology, therefore be it resolved that efforts be made in every state in which petroleum is produced to obtain laws requiring practicing geologists to be licensed; that a condition of such licensing be that the applicant be a graduate of a school of recognized standing; that he be required to have two years or its equivalent of field work under a licensed geologist; and that he satisfy a qualifying board of his qualifications and ability before such license is issued.”

This resolution was referred to a committee which recommended that “it is both unwise and impractical to secure a discriminatory classification of petroleum geologists and engineers by legislative means. It is also the view of the committee that the object can best be obtained by careful attention to standards of membership in this Association, and the enforcement of them, as well as the proper enforcement of discipline among its members.”

AAPG decided against pursuing a registration program because the leadership felt it (registration) was discriminatory. AAPG also decided that it (AAPG) would best be able to monitor the professional comportment of petroleum geologists through the application of its own membership standards.

It was 36 years later that Arizona became the first state to enact a registration statute for professional geologists. Now, 64 years after that, 26 states have a registration statute, and 12 more have some other non-registration form of legal recognition.

In spite of all this, some very thoughtful arguments continue to be made regarding the discriminatory nature of registration that some professionals view as a restraint of trade. For more about this aspect of registration, you may wish to refer to a publication entitled Restrictions in Trade in Professional Services (Nguyen-Hong, D. 2000, Productivity Commission Staff Research Paper, AusInfo, Canberra, August. ISBN 1 74073 010 4. <www.pc.gov.au>). Refer also to an article in December 2000 TPG (The Professional Geologist) entitled “International Challenges will Confront State Licensure” by CPG Trevor Ellis.

Please don’t interpret my inclusion of this particular reference as a negative statement regarding registration, it isn’t. But it is an excellent description of the bureaucratically intricate web being woven by domestic and international licensure requirements.

AIPG has long endorsed the concept of registration and certification as complimentary credentials. (Certification is peer recognition of an individual practitioner’s credentials as opposed to government issuance of privilege to an individual.) One of AIPG’s long-term objectives is to be active in promoting and facilitating the inter-state (and international) mobility of registered geologists. Those who currently hold a license in a given state may have experienced obstacles to practicing in other license-granting jurisdictions due to vague or weak reciprocity rules.

Plenty remains to be accomplished. It’s clear, looking back upon the last 80 years and forward, that many of the issues confronting us geologists will probably not be resolved anytime soon. Perhaps the glacial pace of many geologic processes is a fitting metaphor for what’s happening to us professionally.
LEGISLATIVE ACTIVITIES AFFECTING GEOLOGY

THE NEW LOOK OF LEADERSHIP IN THE NATION'S CAPITOL

Submitted by John J. Dragonetti, CPG-02779

As of this writing, the new Cabinet and congressional committee chairs have been selected, but most of the non-Cabinet level appointments are still to be made. Of significant interest to the geoscience community are the appointments of Secretary of the Interior Gail Norton, Secretary of Energy Spencer Abraham, and EPA Administrator Christine Todd Whitman. Although many important positions have not yet been filled including the Director of the White House Office of Science and Technology Policy (OSTP) who serves as the President's science advisor, and leadership of the National Oceanic and Atmospheric Administration (NOAA), Charles "Chip" Groat has been re-appointed as Director of the U.S. Geological Survey (USGS) as has Rita Colwell as Director of the National Science Foundation (NSF).

THE CABINET

Of the above-mentioned appointments, clearly the most controversial was that of Gale Norton. She had served during the Reagan Administration as an Associate Solicitor for the Interior Department and is considered to be a protégé of then-Secretary of the Interior James Watt. While Norton, who has been Attorney General of Colorado for the past eight years, was strongly supported by property rights groups; environmental groups opposed her with equal vigor. Her Senate confirmation by a vote of 74-25 reflected the strength of her opposition. In dramatic contrast, Christine Todd Whitman to lead the Environmental Protection Agency (EPA), and Spencer Abraham as Secretary of Energy (DOE) were both confirmed unanimously. Whitman, while Governor of New Jersey, was known for her efforts to balance economic interests with environmental protection. She favored voluntary compliance by industry as opposed to regulatory enforcement. Abraham, who lost his Senate seat in Michigan in the November election, is in the unique position of leading an agency that he attempted to legislatively abolish. As a Senator he supported legislation to boost domestic petroleum production, and to accelerate development of the Yucca Mountain nuclear waste disposal site. It should be interesting to observe his activities at the agency and with his former congressional colleagues who believe the agency is unnecessary and saddled with a poorly defined mission. Also confirmed by the Senate was J ohn Allbaugh as Director of the Federal Emergency Management Agency. The agency had been elevated to cabinet status during the Clinton Administration, but no word yet on its Cabinet status in the new administration. Allbaugh served most recently as President Bush's campaign manager.

HOUSE OF REPRESENTATIVES

One of the earliest actions of the Republicans in 1995 after they gained control of the House in the 104th Congress was to limit the term of committee chairs to six years. Now that those terms have come to an end, a few committee chairs were reluctant to relinquish their coveted roles and sought waivers to continue their leadership positions. House leadership rejected all such requests. As Representative James Sensenbrenner (R-WI) leaves his position as chairman of the House Science Committee to take over the Judiciary Committee, the chairmanship goes to moderate New York Republican Sherwood Boehlert. The Science Committee has jurisdiction over many important geoscience programs and agencies, including NSF, NASA, DOE research programs, the National Weather Service, The National Institute for Standards and Technology, the National Earthquake Hazard Reduction Program (NEHRP), and the U.S. Global Change Research Program (USGCRP). Boehlert has promised to strengthen the committee to elevate the profile of science in Congress. He is considered a moderate Republican with a record of environmental protection. When he chaired the House Water Resources and Environment Subcommittee he joined other moderate Republicans and Democrats on environmental policy, often to the dismay of western conservatives. Boehlert has scheduled a series of March hearings to focus on science education, energy policy, and the environment. The new subcommittee chairs include former research physicist Vern on Ehlers (R-MI) as head of the Subcommittee on Environment, Technology, and Standards; and physicist Roscoe Bartlett (R-MD) to lead the Subcommittee on Energy. Ehlers was the first research physicist elected to Congress. His expertise was instrumental when the 105th Congress rewrote the nation's science policy in the report entitled, "Unlocking Our Future: Toward a New National Science Policy." Bartlett was a research scientist, inventor, and professor who worked on the team that contributed to the successful moon landing.

SENATE

Since the Senate does not have specific term limits, most committees retained the leadership they had in the 106th Congress. But as a result of the 50-50 party split, Senate leaders developed a power-sharing deal so that committees will now have equal representation from both parties as well as equal staffing. Although there will be a Republican chair, the ranking Democrat will also have the authority to bring legislation to the floor for debate and vote, a right previously restricted only to the chair.
CONCLUSION

By the time this article is published most of the appointments throughout the federal sector should have been made. The Republican plan to limit government spending while shrinking the size and scope of government should also be taking shape. We also will know how successful the scientific agencies have been in restoring several programmed budget cuts. And we may know the fate of a highly volatile issue certain to surface in the 107th Congress: the possibility of opening Alaska’s Arctic National Wildlife Refuge to oil and gas drilling.

This column is a bimonthly feature written by John Dragonetti, CPG-02779, who is Senior Advisor to the American Geological Institute’s Government Affairs Program. This column was adapted from a Special Update put out by AGI’s Government Affairs Program.

AIPG Colorado Section News

The Executive Board of the Colorado Section of AIPG has awarded Thomas G. Fails, CPG-03174 and Susan M. Landon, CPG-04591 the Section’s highest honor, the Distinguished Service Award. The award is given in recognition of their long and dedicated service to the Section.

The award was recently instituted as a means to finally recognize, in a formal manner, the many activities over the years of dedicated volunteer Section members that contribute to the well being of the Section and sustain our varied efforts on behalf of professional geologists in Colorado. This second set of awards recognizes Tom Fails and Susan Landon.

Awards were presented at the Colorado Section Annual Meeting held December 19, 2000.

UPDATE

AIPG Web Site

The AIPG web site has a new look <www.aipg.org>. Check it out! The site now includes a new feature called “Geology In The News” which is changed daily and links to current news items. Also added are links to rental car agencies, travel arrangements, insurance, and maps. The new drop down menu has links to members web sites, member resumes, section web sites, 2001 Annual Meeting information, and more. If you have any comments or suggestions to improving the web site please contact the National Headquarters office at <aipg@aipg.org> or (303) 412-6205.

Expanding Career Options for Young Scientists

WASHINGTON — Graduate students and recent Ph.D.s in a wide range of sciences recently crowded into a large lecture room at the American Geophysical Union’s meeting in San Francisco to get some advice on a topic of increasing concern: what are my career options? The person they had come to hear was Peter S. Fiske, author of the just published Put Your Science to Work: The Take-Charge Career Guide for Scientists (2001 AGU).

“Career development remains a primary issue for young scientists,” says Fiske. “In one survey we conducted of young AGU members, we found that concern about the job market was the number one most cited reason why some students had considered leaving graduate school. It’s an important issue not only for young scientists, but for the health of the discipline as a whole.”

Fiske, a research scientist at the Lawrence Livermore National Laboratory, is something of a guru for young science graduates seeking interesting careers, thanks to a previous career guide, To Boldly Go (1996 AGU). He says the situation is vastly better than it was just five years ago, in that there are many other good options for scientists than conducting research in a university laboratory. But, he adds, “universities and Ph.D. programs are still not providing the sort of information and guidance newly-minted Ph.D.s need to hit the ground running.”

Science graduates are now in demand in a variety of fields, including business, industry, journalism, government, and Congressional staffs, Fiske notes in his new book. But many students believe that their advisors consider inquiries in such directions as tantamount to treason. The question arose at his Fall Meeting session.

“I respond that students need to understand that they are in charge of their training and their professional development,” says Fiske. “While an advisor can provide a stimulating and nurturing environment in which to do research, the student ultimately must chart his or her own direction. Most often, students are overly nervous about discussing career issues with their advisor. Just because advisors are unfamiliar with other career paths does not mean that they are hostile.”

In Fiske’s view, the best approach for a young scientist is to explore all career options by devoting a small portion of every work week to exploring new areas and by building an active professional network. That is what Put Your Science To Work is intended to facilitate. It provides advice from potential role models in a variety of scientific fields and professions, along with suggestions for learning about good job openings in unexpected places, writing winning resumes, successful interview techniques, and many other elements of the job search.

Further information about the book and an order form are available at http://www.agu.org/careerguide/AGU_Release_No. 01-3
JANUARY 2001

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- National Monument Designations, Public Land Actions Under Fire
- New House Science Committee Chairman Outlines Agenda
- Natural Hazards Caucus Holds Event, Releases Discussion Paper
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California Electricity Crisis Receives National Attention

Rising electricity bills and rolling blackouts have brought the California energy crunch into the spotlight, providing the new Administration and new Congress the chance to talk up a national energy policy. On January 31st, the Senate Committee on Energy and Natural Resources held a well-attended hearing to discuss the California situation and how its effects are creeping beyond the California border and into other western states. Testimony was heard from California utility representatives of both investor and privately owned firms, energy industry experts, and financial consultants. The panelists agreed that in the long term the California electricity market was going to have to be restructured — most recommending a completely deregulated market. Potential short-term solutions to the crisis were discussed in detail due to the threat of more severe shortages of power during the summer months. Senators and panelists both stressed the need for the public to understand that electricity is not generated by, as stated by Sen. Gordon Smith (R-OR), “flipping a light switch.” A complete summary of the hearing is available at http://www.agiweb.org/gap/legis107/ca_elec-hearing.html.

At the other end of Pennsylvania Avenue, President Bush announced on January 29th that Vice President Cheney will head a task force that will report back to the president on “how best to cope with high energy prices and how best to cope with reliance upon foreign oil; how best to encourage the development of pipelines and power-generating capacity in the country so that we can better help out fellow citizens.” The task force, to be called the Energy Policy Development Group, will include several senior members of the Cabinet. Most likely, there will be several hearings and meetings in the coming months on the California situation and establishing a national energy policy.

National Monument Designations, Public Land Actions Under Fire


In response to these and other 11-hour actions by the outgoing administration regarding public lands, President Bush instructed a 60-day stay on publishing new regulations in the Federal Register in order for the new administration to review “any new or pending regulations.” This order will not affect the newly designated national monuments, but will affect the proposed U.S. Forest Service Roadless Initiative (http://www.agiweb.org/gap/legis106/roadless.html) that would restrict road building and logging in 60 million acres of national forest around the country.

On Capitol Hill, new House Resources Committee Chairman James Hansen (R-UT) has announced that his committee will be carefully reviewing several of the Clinton Administration regulations and national monument designations. In a press release, Hansen stated: “Congress has the authority to review this and 60 legislative days to do so. I can promise you a thorough and vigorous review.” More information on public lands issues is available at http://www.agiweb.org/gap/legis.html#public.

New House Science Committee Chairman Outlines Agenda

Rep. Sherwood Boehlert (R-NY), the new Chairman of the House Science Committee, gave his first public speech in his new role on January 31st. Speaking to the Universities Research Association, he outlined his visions for the committee in the coming Congress: “I want to ensure that we have a healthy, sustainable, and productive R&D [research and development] establishment — one that educates students, increases human knowledge, strengthens U.S. competitiveness and contributes to the well-being of the nation and the world. With those goals in mind, I intend to concentrate initially on three priorities — science and math education, energy policy, and the environment — three areas in which the resources and expertise of the scientific enterprise must be brought to bear on issues of national significance.”

Boehlert hopes the committee will foster communication between scientists and different sectors in environmental science and policy. With respect to energy policy, Boehlert said...
he would focus “on ensuring that we concentrate sufficiently on alternative sources of energy — wind, solar, fuel cells, etc. — and on conservation and efficiency.” More excerpts from Boehlert’s speech are available from the American Institute of Physics Bulletin of Science Policy News at http://www.aip.org/enews/fyi/2001/011.html.

**Natural Hazards Caucus Holds Event, Releases Discussion Paper**

On January 22nd, the Congressional Natural Hazards Caucus kicked off its activities in the new 107th Congress with a roundtable event to consider the impacts of the recent earthquake in El Salvador and to discuss the broader natural hazards challenges facing the United States. In conjunction with the event, caucus co-chairs Sen. John Edwards (D-NC) and Sen. Ted Stevens (R-AK) released a discussion document prepared for the caucus, highlighting why the nation is becoming more vulnerable to natural disasters and what actions Congress can take to solve the problem. An AGI special update contains a description of the event and links to the discussion paper: http://www.agiweb.org/gap/legis107/natural-hazards_caucus0101.html.

**Bush Administration Retains USGS Director**

In a move that signals a return to tradition, the Bush Administration has asked Charles G. “Chip” Groat to continue as Director of the U.S. Geological Survey. For the first century of the survey’s existence, the director’s position did not change when a new political party took over the White House, reflecting the survey’s role as a source of objective scientific information to support policy decisions. According to sources in the new administration, the decision to retain Groat was made easier by strong external support. AGI and several of its member societies sent letters to the Bush-Cheney transition team and Interior Secretary Gale Norton endorsing Groat and the non-partisan nature of the position. Groat’s retention received strong support from numerous leading geoscientists in the private sector, including the trustees of the AGI Foundation. Support for the director was not limited to the geoscience community — biological societies and other USGS stakeholder groups also sent letters to the transition team and Norton. In another victory for non-partisan science leadership, National Science Foundation Director Rita Colwell appears likely to complete the final three years of her six-year term despite initial reports that the Bush administration might seek her resignation.

**IPCC Releases Climate Change Report**

The Intergovernmental Panel on Climate Change (IPCC) released its “Report Summary for Policymakers of Working Group I” this month, announcing dire predictions for future climate change. The highly publicized report asserts that atmospheric temperatures have increased in the last four decades, causing ice to melt, sea level to rise, increased precipitation, cloud cover, and frequency of El Niño/La Niña events. According to the report, there is strong evidence that human activity is the major cause of increased concentrations of greenhouse gases in the atmosphere. In contrast, it finds that natural factors have made only small contributions to the increases in temperature and greenhouse gas concentrations. The report explains the reasons for heightened confidence in recent climate models that predict continued rise in sea level and global average temperature in response to past, present, and future human activities.

Critics have been quick to point out the report’s heavy reliance on climate model results for its assertions of large temperature increases in the coming century. Some also question the report’s interpretation of existing temperature data. The purpose of the Working Group I report is to present the state of climate change science, although it also states the importance of continued research and monitoring. Two other working groups of the IPCC will release their reports separately, giving implications and recommendations to the United Nations Framework Convention on Climate Change (http://www.unfccc.de). An official report summary can be found on the IPCC website (http://www.ipcc.ch) or the U.S. Global Change Research Program website (http://usgcrp.gov/usgcrp/new.htm), which is updated every two weeks with new developments in global change issues.

**Alabama Revisits Science Standards and Evolution**

The Alabama Board on Education is expected to vote February 8th on state science standards, called Course of Study, which will replace standards approved five years ago that brought the state into the limelight of the evolution debate. The new standards include a greater focus on earth science, but also contain a preface that echoes language in the state's textbook disclaimers describing evolution as a “controversial theory.” The Geological Society of Alabama has posted a version of the proposed standards at http://www.westga.edu/~geology/ala_gs.html. An AGU alert provides more news regarding the standards and information on how Alabama geoscientists can send comments: http://www.agu.org/cgi-bin/asla/asla-list?read=2001-05.msg.

**AGI Co-Sponsors Transition Luncheon**

On January 22nd, AGI co-sponsored a Capitol Hill luncheon for congressional staff on the importance of having scientists in presidential appointee positions. Dr. Mary Good, former Under Secretary of Commerce for Technology, presented a report from the National Academy of Sciences that describes the importance of having scientists in the government, especially in presidential service (http://www.nationalacademies.org/presidentialappointments). Included in the report are the “50 Most Urgent Science and Technology Presidential Appointments.” The second speaker, Carole Plowfield, a researcher with the Brookings Institution, presented a report compiled from the results of a survey of potential and confirmed presidential appointees (http://www.-brookings.appointee.org). The report makes recommendations for changing the appointment process to make it less embarrassing and less confusing for potential appointees as well as suggests ways to bring the perception of public service into a more positive light. The third speaker, Abram Hutchings of the Cato Institute, challenged the notion that simply having a scientific background qualifies one for an appointee position. He stated that other skills in business, or social science might be necessary to be effective in an appointee position. Also, he pointed out that politics corrupts science and therefore it is better to keep scientists in objective, information-gathering positions.
Now that the Bush-Cheney Administration has been inaugurated, the political appointment process has shifted from the Transition Office to the White House Office of Presidential Personnel. Contact information and other material on the appointment process is available from AGI’s “Presidential Transition 2000: Geoscience Related Federal Appointments” at http://www.agiweb.org/gap/transition.html.

Welcome to AGI/AAPG Semester Intern

University of Nevada Reno geoscience major Mary Patterson has joined AGI’s Government Affairs Program for the spring semester as an AGI/AAPG Geoscience and Public Policy Intern. She will be spending four months with AGI attending congressional hearings, researching policy issues, and writing issue updates for the program’s website. We welcome Mary and gratefully acknowledge support for the internship provided by the American Association of Petroleum Geologists.

Schedule of Upcoming GAP Activities

- April 23, AAPG Energy Supply Conference, Washington, DC
- May 1-2, SET Congressional Visits Day, Washington, DC
- May 3-4, AAAS Colloquium, Washington, DC

New Material on Web Site

The following updates and reports were added to the Government Affairs portion of AGI’s website since the last monthly update:

- Senate Hearing on California Power Crisis (2-2-01)
- Special Update: Natural Hazards Caucus Holds Event, Releases Discussion Paper (1-26-01)
- Land Sovereignty and National Monument Acts Update (1-18-01)
- Challenges to the Teaching of Evolution (1-15-01)
- WIPP Repository Status (1-3-01)
- Geotimes Political Scene: Scientist as Policy-Maker (by AGI 2000-2001)
- Congressional Science Fellow Katy Makeig; (1/01)
- Fiscal Year 2001 Geoscience Appropriations Update (1-2-01)

Sources: American Geophysical Union, American Institute of Physics, American Physical Society, EENews, Greenwire, Intergovernmental Panel on Climate Change, U.S. Senate, White House.

USGS Study Shows Colorado Plateau Coal Plentiful

A new U.S. Geological Survey (USGS) assessment of the nation’s coal resources shows abundant high quality, low-sulfur coal on federal and private lands in the Colorado Plateau region of Arizona, Colorado, New Mexico and Utah. The area is also home to vast quantities of coal bed methane gas — natural gas contained in coal.

The new USGS assessment marks the first quantitative study ever of coal ownership and land ownership combined and integrated into Geographic Information System (GIS) layers that look at all coal parameters (location, thickness, depth, quality) on public and private lands. In the coming weeks, USGS researchers will be meeting with officials from other government agencies and elected leaders to demonstrate this new study.

“This is a very important study that will help the Administration’s energy policy team as we search for adequate supplies to support the country’s energy needs,” said Interior Secretary Gale Norton. “Our goal is to make the best decisions, using the best science available, utilizing the best technologies.”

Coal provides more than half the nation’s electrical energy needs. Although prices for oil and natural gas have climbed sharply over the past two years, coal prices have risen only slightly. Coal from the west is low in sulfur content making it relatively inexpensive to meet tougher new federal environmental standards when producing electricity. Almost 85 percent of the coal in the Colorado Plateau is used to generate electrical power. Coal bed methane — natural gas stored within coal — makes up about 7 percent of the nation’s natural gas usage annually.

“Information on affordable and reliable coal supplies is essential for the energy industry to meet the expected coal-based electric generation demands in the near future and in the long term,” said Dr. Charles Groat, director of the USGS. “Formulation of an effective national energy policy and development of energy resources requires that we understand the geology, distribution, quality, and size of the national energy endowment.”

The Colorado Plateau Report is the second of a multi-part, five-year nationwide assessment of coal resources of the conterminous United States. The USGS assessment contains the latest information on coal resources, coal geology, and coal quality, and discusses the environmental factors that eventually may control how and where coal is mined. That information is used by decision makers to make better energy and land choices. The new information also may help determine what preventative measures can be taken to ensure that coal is extracted cleanly and safely. The first analysis in this series, the coal resource assessment of the Northern Rocky Mountains and Great Plains, was released last year.

The USGS National Coal Resource Assessment is part of a larger USGS mission to quantify and analyze world energy resources including petroleum, coal, and natural gas. Coal assessments of other regions will be released this year.

All products from the “Geologic Assessment of Coal in the Colorado Plateau: Arizona, Colorado, New Mexico and Utah” are digital and available on CD-ROM as USGS Professional Paper 1625-B. Products from the first assessment: “1999 Resource Assessment of Selected Tertiary Coal Beds and Zones in the Northern Rocky Mountains and Great Plains Region” are digital and available on CD-ROM as USGS Professional Paper 1625-A. Both CDs are available from the USGS, Information Services, Box 25286, Federal Center, Denver, CO 80225-0286, or call 1-888-ASK-USGS.


As the nation’s largest water, earth, and biological science and civilian mapping agency the USGS works in cooperation with more than 2000 organizations across the country to provide reliable, impartial, scientific information to resource managers, planners, and other customers. This information is gathered in every state by USGS scientists to minimize the loss of life and property from natural disasters, contribute to sound economic and physical development of the nation’s natural resources, and enhance the quality of life by monitoring water, biological, energy, and mineral resources.
A member engaged in looking for a new position applied for and apparently was chosen to fill a couple of positions only to find out that the company that advertised the position and went through the interviewing and candidate selection process had not yet received corporate approval to fund and therefore fill the position. The member found this extremely frustrating, having thought that a real job offer was imminent.

From the corporate side these days, hiring windows are often brief, prompting managers to have candidates to fill vacant positions identified as soon as possible. Hiring managers to have candidates to fill vacant positions identified as soon as possible. Whether the manager informs job applicants of the lack of time of the conditional nature of the job opening will not entirely relieve the frustration faced by the job seeker, but at least the lack of a firm job offer will not come as a complete surprise.

Anyone having experiences in this area is encouraged to contribute them.

Accepting a Job and Then Quitting a Short Time Later

A member who manages the office of a consulting firm told me of his frustration regarding a recent geology graduate who quit about a month after coming to work. This new hire cost the firm $10,000 to $15,000 in salary and training expenses in excess of the minimal amount of work that could be billed to clients. The individual in this case decided that geology didn’t offer the compensation available from the computer industry. Another office of the same consulting firm had a new hire who quit shortly after completing the 40-hour OSHA health and safety training course at company expense.

These examples are similar to the series of comments on the acceptance and then unacceptance of a job offer that ran in columns 8, 10, 11, and 12 (July–November 1996; Geologic Ethics and Professional Practices 1987–1997, p. 144–146). While there may be two sides to these stories, the consulting firm appears to have been taken advantage of. Comments on both sides of these issues are welcome.

Disciplinary Action for Falsely Accusing Another Professional of Dishonesty and Incompetence

Perry H. Rahn CPG-03724, sent me The South Dakota Engineer for December 2000, which contains the detailed report of a disciplinary action taken against a South Dakota engineer who had accused another engineer of dishonesty, incompetence, fraud, and accepting bribes. “There was no basis for these allegations other than the [respondent] disagreed on the flood criteria for a water drainage.” The respondent’s accusations “were not isolated incidences of carelessness, but constituted a three and one-half year vendetta where such remarks were repeatedly published and made known to the public, registered professional engineers, and individuals associated with the engineering community in South Dakota.” The respondent’s actions were found to constitute unprofessional conduct, to have disregarded the rights of others, and to constitute slander due to lack of a factual basis for the accusations. The respondent’s engineering license was suspended for a year during which the respondent is required to take and pass a course in professional ethics. Further, the respondent will be subject to five years of probation following the completion of the suspension and was ordered to pay all costs and expenses associated with the disciplinary hearings, including the costs of the Engineering Board’s legal counsel. Among the actions contributing to the action was the respondent’s failure to file a complaint with the Engineering Board to substantiate his accusations, in spite of being informed of his professional obligation to do so.

Rule 4.2.1 of the AIPG Code of Ethics covers situations like that described in this case. It states, “A Member shall not issue (a) false statement(s), (a) misleading statement(s), or (a) sensational, exaggerated, defamatory, and or unwarranted statement(s) regarding a professional colleague. Differences of opinion occur and statements regarding opinions should be restricted to and based on logical and scientific principles and should be made in a respectful and professional manner.” One reason for bringing this South Dakota case to your attention is to point out that when you believe that a colleague has behaved unprofessionally or unethically, the solution is to bring the matter to AIPG’s or a state licensing board’s attention by filing an appropriate complaint. By simply making accusations yourself, you may be violating Rule 4.2.1 and may find yourself accused of slander, etc.

The other point in the South Dakota case addresses the issue presented in the last sentence of Rule 4.2.1, namely that differences of professional opinion do not necessarily mean that the person with whom you disagree is either incompetent or unethical. You can vigorously air your professional disagreements, but must do so in a respectful and professional manner.
Ethical Rules and Ethical Ideals: Both are Needed

I was recently asked by Geotimes to review a book, Fundamentals of Ethics for Scientists and Engineers by E.G. Seebauer and R.L. Barry (Oxford University Press, 2001). While I won’t repeat my review here, Seebauer and Barry’s approach reflects a common problem faced by those considering professional ethics: is the purpose of professional ethics to encourage us to reach for perfection or is it to set the bar below which disciplinary actions should occur? Should ethics be approached positively or negatively?

Seebauer and Barry approach ethics positively. They emphasize ethical virtues, in particular, prudence, temperance, fortitude, and justice. The problem with this positivist approach to ethics lies in its failure to distinguish between ethical rules and ethical ideals. Ethical rules apply to all individuals all the time; examples include do not kill, do not injure, do not deceive, and obey the law. Many ethical rules are stated in the negative, “do not...” which bothers many people. But there are only a few things we are ethically enjoined from doing, particularly when compared with the infinite number of things we can do which are either ethically desirable (the ethical ideals) or amoral. Using the short list of “do nots” is simpler. Exceptions to these rules exist. In column 60 (Dec ’00), I pointed out that including standards, blanks, and duplicates within a sample stream can be viewed as a form of deception, but one that is ethically allowed.

Ethical ideals express morally desirable activities that we are encouraged to undertake, but which no one can pursue full time, nor can one pursue them equally with all people. For example, improving one’s professional knowledge is an ethical ideal expected of geoscientists (AIPG Code of Ethics Standard 5.1). We could easily spend more than 40 hours per week on such activities. But we don’t. Reality requires a balance between doing our professional work and keeping up with progress in our profession.

The problem of approaching ethics positively also arose early in deliberations of the committee that drafted the AGI Guidelines for Ethical Professional Conduct (column 38 and AGI’s website). Several members felt very strongly that nothing smacking of negativity or disciplinary actions should be included. Every statement should be positive encouragement to behave in an ethical fashion. I pointed out that by agreeing that honesty was among the principal principals in the Guideline, we automatically implied that honesty’s opposite, deception, was unethical. The automatic rejection of the opposite is true for every principle having an opposite.

I appreciate the views of those who believe that ethics, professional or otherwise, should be approached in a positive way, that ethical ideals and virtues should be emphasized. This column is dedicated to encouraging ethical behavior. Nevertheless, there also is need for the short list of ethical rules. There are actions that are ethically wrong, that we should not engage in. These require coverage as well as the ideals. Failure to recognize the need for both the ethical rules and the ethical ideals, and the differences between them leads to ethical floundering, a situation into which Seebauer and Barry unfortunately fall in their book. There is right, the ethical ideals, and there is wrong, the actions prohibited by the ethical rules. Both right and wrong exist and must be recognized.

1. A great many of our decisions are amoral. Our decision to become geoscientists and our selection of a specialty within the geosciences was amoral. Our choice of clothing is amoral although a decision whether to wear clothes can involve the ethical obligation to obey the law, which generally assumes that people appearing in public should be clothed. And some religious groups have moral beliefs on clothing choice. Within the geosciences, the general concept of working safely sometimes dictates the wearing of safety apparel.

2. While improvement of one’s professional knowledge and skills is currently an example of an ethical ideal within the AIPG Code of Ethics, the proposal that a minimum amount of Continuing Professional Development (CPD) become a requirement for certain classes of AIPG members would result in a related rule, whether formally incorporated into the Code of Ethics or not.

THANK YOU!

ASSOCIATE EDITORS

AIPG’s Associate Editors play an important part in making The Professional Geologist (TPG) the high quality journal that it is. Peer-reviewed articles in TPG are reviewed by at least three associate editors before they are printed.

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Members as well as non-members are encouraged to submit articles. Articles may be technical or professional in nature. General topics include: mining, petroleum, hydrogeology, environmental geology, and geophysical/engineering. Articles containing news of importance to professional geologists will also be considered. Deadline date for submissions is the fifteenth of the month two months before date of issue.

Manuscripts should have the following sections: title, author(s) with CPG number and address, key words, text, tables if included, figures with captions if included, appendix(es) if included, acknowledgments, references cited, and a brief biography. One original and three copies of each manuscript should be submitted. Text should be submitted on diskette or via e-mail.
AIPG’S LONG RANGE PLAN

AIPG 2001 Long Range Planning Committee

The new millennium is upon us and your 2001 Executive Committee has recognized the dynamics of change taking place in our society and industry in the 21st century, and realizes that these dynamics affect our association. AIPG needs to reevaluate its relevance to its membership and the geologic profession. On January 19-20, 2001, an ad hoc Long Range Planning Committee, established during the 2000 Annual Meeting, met at AIPG Headquarters, Westminster, Colorado to undertake the development of draft Vision and Mission Statements for the association. In addition, four areas of AIPG’s functions were identified as priority for immediate attention: 1) direct services to membership, 2) development of revenue, 3) marketing within our association and within the entire geologic community, and 4) advocacy of the geologic profession. Other functions of our association, including 5) certification, 6) establishing and promoting ethical standards of conduct, 7) monitoring the success of our profession, and 8) liaison to other organizations, also require future attention and improvement. This process takes immense effort and time.

We implore the membership to help the Long Range Planning Committee undertake this process by criticizing and advising us on this important work as we go forward. Our start of draft Vision and Mission Statements for the association requires input, review, revision, and evaluation by all members of AIPG. The future of our profession, represented by the Vision Statement, and how we achieve that vision, represented by the Mission Statement, defines who we are, how we function, and how the world views us. These are extremely important concepts that require response from all of our members. What are your priorities? What else do we need to include?

Please send your comments to AIPG Headquarters or members of the executive committee as soon as possible, because we would like to finalize the Vision and Mission Statements by the annual meeting 2001. We also require volunteers for committees that will establish goals, timelines, and budgets to expand and improve the functions of our association. This is an exciting time in the improvement, development, and expansion of our association and we want all of the members to be a part of it. So comment, criticize, and volunteer. Remember, AIPG is not just certification, it is also professional development! Thank you 2001 Long Range Planning Committee for your help!

DRAFT MISSION STATEMENT

The mission of the American Institute of Professional Geologists (AIPG) is to be the superior advocate for geology and geologists, to promote high standards of ethical conduct, and to support geologists in their continuing professional development.

January 20, 2001

DRAFT VISION STATEMENT

Geologists will value the American Institute of Professional Geologist (AIPG) as the preferred Association that provides leadership, support, and opportunities for career development and professional success of its members.

January 20, 2001

LETTER TO THE EDITOR

Dear Editor:

This is in response to the article in the November 2000 issue of TPG (The Professional Geologist), The Mercenary Side of Professionalism, but which also relates to the proposed CAMP program.

Mr. Juhas referred to the three-legged stool that supports professionalism, and went on to say that AIPG cannot alone begin to provide the necessary support of the science and technology leg of the stool. When I joined AIPG in 1976, one of the requirements for membership was continuing membership in one of the other AGI constituent societies. The purpose of this requirement was to support the science and technology leg.

In the mid-1980s when there was a downturn in the oil business, this requirement was dropped so that the laid off geologists down in the oil patch could more easily afford to keep up their AIPG dues. I doubt that there are any of those that are still trying to re-enter the oil business.

It is not time to consider reinstating that requirement for AIPG membership? This would put the missing leg back under the stool of professionalism, and those who would choose to participate.

William G. Dixon, CPG-03659
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Manuscripts should have the following sections: title, author(s) with CPG number and address, key words, text, tables if included, figures with captions if included, appendix(es) if included, acknowledgments, references cited, and a brief biography.

One original and three copies of each manuscript should be submitted. Whenever possible, text should also be submitted on diskette. Headquarters uses WordPerfect 9 for Windows '98, which is preferred, but Word, ASCII, RTF, or translatable files are acceptable. Articles can also be transmitted by e-mail.

Graphics should be clear, camera-ready, line drawings whenever possible. Photographs (color or black and white) also are encouraged.

TPGwants color slides and photographs. Slides and photographs alone may be submitted for the cover. They should have a geologic theme and an informational caption. Authors are encouraged to communicate with Headquarters via mail, fax, or e-mail. Send your article and/or photographs or communicate questions to:

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CALENDAR

2001

May 5-6. Wabash Valley Gem and Mineral Society Show Tippecanoe County Fairgrounds, Teal Rd., Lafayette, IN.

May 17-19. New Developments in Metalliferous Hydrothermal Systems, Jupiters Hotel, Townsville, Queensland, Australia, by the Economic Geology Research Unit, School of Earth Sciences, James Cook University. Townsville QLD 4811, Australia, Phone: 0011 61 (0) 74781 or e-mail: <lucy.chapman@jcu.edu.au>.

May 18-20. NAGT-ES Annual Spring Meeting, Teachers College, Columbia University (120th St. & Broadway in Manhattan), New York, NY. By the NAGT - Eastern Section (Michael Passow, 296 Cntral Ave., Englewood, NJ 07631 e-mail: <mpassow@worldnet.att.net>, <http://westy.jtwn.k12.pa.us/users/srl/NAGT.html>.


Jun. 10-15. 5th International Conference on Diffuse Pollution, Milwaukee, WI. Contact: <mburkart@nsti.gov>.


Jun. 19-22. 17th International Mining Congress and Exhibition of Turkey, Ankara, Turkey. Contact: Bahıtyar Unver, Co-Chr., Organizing Comm., Dept. of Mining Engineering, Hacettepe Univ., Beytepe Ankara, 06532 Turkey; 90-312-297-7696.


Feb. 9-Oct. 5. AEG/AIPG 2001 Annual Meeting, St. Louis, Missouri. CALL FOR SYMPOSIUM TOPICS If you would like to suggest a topic and/or chair a symposium, please contact Paul Santi, Symposia Committee Chair, at <psanti@umr.edu>, (573) 341-4927, or by mail at Dept. of Geological Engineering, Univ. of Missouri-Rolla, 129 McNutt Hall, Rolla, MO 65409.

Send notices of meetings of general interest, in format above, to Editor, TPG, 8703 Yates Drive, Suite 200, Westminster, CO 80031-3681 or e-mail: <aipg@aipg.org>.

AIPG ANNUAL MEETINGS


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CA-Barbara A. Moed
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CO-Mark A. Petersen
CPG-10563
P.O. Box 270530, Littleton CO 80127, (303) 932-7591

New Member

OH-Julie Brown
MEM-0096
429 Lovisa St., Apt. 1, Akron OH 44311, (330) 375-1390

New Associate Member

MD-Douglas T. Kuzmiak
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Also, AIPG has a beautiful educational poster, created by AGI, entitled “Minerals - Foundations of Society.” The poster has a colorful collage on one side and some mineral picture/word associations on the reverse side. The poster is designed to be an introduction to the wide use of rocks and minerals in basic everyday life. These are also available for educational use and at no cost. Please contact headquarters for details.