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AIPG NATIONAL OFFICER ELECTION RESULTS

Front Cover – Supai Formation (sandstone, shale, with some limestone) and overlying Hermit Shale, Coconino Sandstone, and overlying formations. Photograph by William J. Siok, CPG.

Back Cover – Photographs were provided courtesy of the Milwaukee Convention Bureau, Pfister Hotel, and Dale H. Rezabek, CPG.

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Taking the Pulse of AIPG's Sections

One of the most important duties of the Institute’s Vice President is to assess the condition of the sections and convey that information to the Executive Committee. This year, your VP decided to take the pulse of the sections electronically—using e-mail to contact section officers. I don’t think that’s been done before, but I could be wrong. One of the advantages of e-mail is that it tends to be fast and informal, and can elicit significantly candid and uninhibited responses. The down side of a swift, e-mail survey is that it is likely not to be rigidly systematic. To some, this assessment might seem like a triage sequence from M*A*S*H. Devising a formal and meticulously thought-out survey to send through the mail would have taken more time than my term of office would allow.

I provided a framework for the sections’ responses by seeking a “SWOT” analysis that identifies and evaluates strengths, weaknesses, opportunities, and threats for each section. I also asked for opinions on increasing AIPG’s membership.

Now for the results (see Figure 1). It’s tempting to say, “There’s good news and there’s bad news” and let it go at that. But there’s a whole lot more to it than that. Reports from several sections were exceptional and detailed (e.g., Carolinas, Michigan, Minnesota, Virginia). Reports from most sections were brief—less than a page to one paragraph—but contained important information. Some sections never responded (Georgia, Kansas, Louisiana, Mississippi, Iowa-Nebraska, North Dakota, Northeast, Oregon, and Texas). Lack of response could be due to e-mail glitches or oversights. I’m sure something went awry with the Northeast Section, because one look at Northeast’s Spring Newsletter and its website indicates that the section is in pretty good shape. The lack of a response from the Texas Section with its huge membership is perplexing. Alabama, Arkansas, Hawaii, Idaho, and Washington have no organized sections.

Several sections are in rather poor condition. In Montana, William Carrigan reported that the section has a very small membership, spread over a very large area having very limited work opportunities for geologists. He suggested that partnering with the Montana Geological Society that thrives in the Billings area might be beneficial for this AIPG section. Michael Root of the Oklahoma Section reported that there is no operating executive committee, and there hasn’t been a newsletter in years. Oklahoma has a few dedicated members who continue to support educational activities. Utah’s Ben Everitt commented that that section has been relatively inactive for about 15 years. The Utah Geological Association performs the functions of support, education, and networking in the state’s geological community, and AIPG members maintain their membership largely for national certification. Larry Woodfork of the West Virginia Section described that section as basically nonfunctioning. Larry continues to serve as section president as a point of contact for West Virginia, but has had no success in getting members to run for any office.

Several sections are in very good condition. Here are some highlights. Jim Jehn reported that the Colorado Section is a very active group involved in many local, state, and national geological issues. His section has regular monthly meetings with speakers, an active legislative committee, and regular monthly Board meetings. Among many other activities, the Colorado Section has provided a list of Professional Geologists by specialty, for the Governor’s Office and state legislators. Reporting for Ohio, Dave Mustafaga stated that within the section there is a high level of enthusiasm, and members communicate very well. The Ohio Section is working on establishing more student chapters. It also is beginning to plan a “drive-in” as the Colorado Section did. Ohio has its own website and distributes its monthly newsletter electronically. Dave also reported that the Ohio Section is looking to partner with the Ohio Academy of Science on key issues. Bruce Johnson reported that the Minnesota Section is strong and that it has established alliances with other professions through hard work and personal sacrifice. Minnesota has an e-mail tree for distribution of information to AIPG members. Regular monthly meetings are held and a full field trip and a spring social event take place. The Minnesota Section is providing educational opportunities to help satisfy the state’s Professional Geologist registration requirements. Bill Whitlock described the Virginia Section as very healthy because of the work of a core group of exceptionally active members. (This is true of many of the sections nationwide.) Virginia has section meetings at different locations around the state—allowing more members to participate. These meetings include a business session, technical presentations, and a geological activity such as a mine visit. Bill reported that the Virginia Section is very actively promoting student chapters throughout the state. The section has a website and the newsletter is distributed by e-mail.

The other AIPG sections that responded to my request for information spanned the entire spectrum from almost “very good condition” to almost “problematic.” A recurring reflection from many of the section reports was that unavoidable geographic factors strongly affect the state of the section. Chris Maner of the Tennessee Section said that in his elongated state, the western and middle members rarely communicate with the eastern members who also participate in the East Tennessee Geological Society. Bob Colpitts commented that the Nevada Section is really two widely separated groups—the Las Vegas group and the Reno-Sparks-Carson City group. The physical separation makes for some interesting communications issues. Marilyn Plitnik of the Alaska Section...
commented on that which characterizes our far northern state: "Small population spread over a large area!" She observed that the wide dispersion of members certainly diminishes activity. The same is true of the Montana Section.

Under "weaknesses" and "threats," a large number of sections reported considerable dissatisfaction that national dues are increased, and members wonder what they are getting for their money. Coupled with increased numbers of states with registration for geologists, many members are deciding to let their memberships lapse. Very clearly, AIPG National must more strongly articulate its value to the sections. It's not unlike running a state geological survey. You constantly have to articulate and market the value of a geological survey to the citizens.

Under "strengths" and "opportunities," a common theme in the reports is that a section is healthy and successful largely because of a core group of dedicated and hard-working leaders who are willing to do the bulk of the work. That seems to be what it takes. Another observation: A section is healthy and successful because its members know how to have a good time. Bringing geologists together to have fun is a key factor in raising enthusiasm.

In reading through all the section reports (in all their wonderful diversity), I think it may be worthwhile to seriously consider some regrouping. Sections that are in very good condition might restore some sections to health if they were "adopted" (at least temporarily). For example, the Ohio and/or Virginia Sections might want to consider taking the West Virginia Section under their wings. Consolidation into larger groupings might benefit sections like Montana, Oklahoma, and Utah. Perhaps the Colorado Section could provide some leadership in such an effort. In some regions, AIPG might want to consider going to sections the size of Geological Society of America sections or our own AIPG Northeast Section.

Very few sections commented on the declining membership problem—aside from concurring that it is a problem. Joe Thornton of the Kentucky Section observed: "I think that the revisions in the membership requirements are a step in the right direction, but I believe that an initiative will be necessary to totally revise the goals of the organization. I believe that the organization has become out of touch with its membership and has become much too academic in nature. I think that the organization needs to focus on the needs of the working members who are part of consulting firms, engineering firms, and corporations." Bill Whitlock of the Virginia Section said: "The Virginia Section actively recruits new members into AIPG. Several methods have been used with varying results. These include establishment of student chapters, personal contact of members with coworkers and friends, and mass mailings to professional geologists in the state." I agree with Bill's methods. In the Ohio Section, I make it a knee-jerk response to every geologist I encounter by asking them if they are a member of AIPG, and asking if they would like to have a membership application. I also tell every geologist I meet that I'm having more fun in AIPG than in most other geological organizations. That's a big selling point.

I hope this report on the pulse of the sections is helpful. I think bringing the sections into contact with AIPG National through e-mail is very healthy, and should be kicked up many notches. Increasing this modern mode of communication in AIPG can bear much fruit in my view. But it will work well only if individual members keep National updated on current e-mail addresses.
INTRODUCTION

The professional geologist may not be fully aware of it, but as he applies his technical skills to geologic problems, be they oil and gas, mining, engineering, or environmental, he enters the realm of forensic geology. This is especially true in today's regulated and litigious society. In its broadest sense, “forensic geology” can be taken to mean the application of both civil and criminal law to earth science problems. The accompanying diagram (Figure 1) relates the major aspects of forensic geology—compliance, litigation, and investigation—within a context of interrelated professional activities often impacted by both civil and criminal law. The result of professional compliance, litigation, and/or investigation activities can ultimately lead to the professional geologist functioning as an expert witness in a court of law where the forensic aspect of the geologist’s technical activity becomes manifest.

Of the three major aspects of forensic geology, it is the investigative aspect that can bring the professional geologist into direct contact with law enforcement personnel where he may be asked to use his professional skills toward the solution of very real and obvious forensic problems. As will be
discussed below, the professional skills and the personal attributes of the geologist mesh nicely with those of law enforcement professionals with but minor adjustment of outlook, objective, and scale.

The investigative aspect of forensic geology is challenging, at times it can be frustrating, but ultimately it is professionally rewarding. This writer has worked for over a decade with an interdisciplinary group of professional volunteers incorporated as the not-for-profit organization NecroSearch International, and feels confident that his earth-science skills and knowledge have contributed materially to a better understanding, and in some instances, the solution of forensic problems.

The following discussion will present the concept of forensic geology within the broad context of our profession and demonstrate that our skills, our philosophy, and our personal character traits can be practically directed toward forensic application.

FORENSIC GEOLOGY

Forensic geology may be viewed as three general aspects of professional involvement directly impacted by, and often mandated through, some regulatory authority (Figure 1). This regulatory authority may be of Federal stature such as the Environmental Protection Agency (EPA) or the Occupational Health and Safety Administration (OSHA), it may comprise a county/city agency that oversees zoning and related building codes, or it may be a sheriff’s office or local police department. As depicted in Figure 1, the general aspects of compliance, litigation, and investigation are often interlinked, with the strength of that linkage varying with applicable focus and changing with time.

The specific elements of professional interest/activity, five of which are included in Figure 1, that can be viewed to constitute the more general aspects of “forensic geology” arise from the dictates, conventions, and assumptions of both criminal and civil law. The application of civil or criminal law statutes to these often interrelated elements is variable and can be dependent on the technical specifics of a case, the desires of prosecution and/or defense, and the purview/goals of a specific regulatory authority.

Depending on a professional’s field(s) of endeavor, today’s geologist is faced with a myriad succession of written and unwritten codes relating to professional practices and ethics or to specific engineering standards. To the minerals exploration geologist, the Bre-X gold-salting scam of 1997 at Busang, Indonesia, brings home the moral fragility of professional ethics and practices flaunted so arrogantly by some but rigidly adhered to by others. To the engineering geologist, violation of simple engineering standards and the ignoring of accepted building/construction codes means structural failure, property damage, and potential loss of life. Both the ignoring of professional ethics and the violation of engineering codes often have distinct profit motives for the few but have long-lasting impact on the image, credibility, and reputation of professionals cognizant of their responsibility to the public at large.

Geologists practicing within the environmental field are very aware of the forensic application of their day-to-day professional activities through their efforts to meet the often conflicting and certainly confusing demands of environmental regulation. It is not unusual for the environmental professional to feel that in his efforts at compliance he devotes more time and effort to the form of a given problem than to its substance and solution.

As world population grows, the demands for living space, materials, and agricultural products increase and the impact on our natural environment multiplies. The January, 1999 issue of The Atlantic Monthly contains an article on land-slides that puts the engineering geologist front and center in the definition and solution of a technical problem that has very real compliance and litigation ramifications (Bell, 1999). The June, 1999 Smithsonian similarly assesses slope stability hazards with similar compliance and litigation ramifications (Millar, 1999). The forensic aspects of geology have truly met the popular print media.

Materials identification brings to mind the Sherlock Holmesian aspect of forensic geology. In a series of three essays with distinct forensic geologic focus for The New Yorker magazine, John McPhee notes that perhaps Sherlock Holmes was “the science’s first practitioner” while documenting the role of the geologist in defining materials relevant to specific forensic investigations (McPhee, 1996). Regardless of our fictional antecedent, the professional geologist may be called upon to identify materials that may comprise elements of forensic problems spanning the spectrum from compliance to investigation.

The forensic aspect of geology becomes all too obvious when the professional geologist assumes the role of expert witness. In today’s socio-political climate of increasing regulation and litigation, it is almost a given that the practicing professional will at some time in his career be called upon to give testimony relative to activity involving some form of compliance, litigation, and/or investigation. It therefore behooves the professional geologist to conduct his activities in strict adherence to professional standards, to thoroughly document his work, and to make sure his results and conclusions are based on data, information, and knowledge that fall within his field of expertise. Further, the geologist must strive to maintain both his academic and professional credentials to the very best of his ability and resources. It must be remembered that the side presenting the expert witness will present him as a knowledgeable professional, an expert in his field, and as an experienced, competent scientist/engineer. In contrast, the opposition will attempt to compromise the competence, the integrity, and the professionalism of the expert witness, often focusing on mundane and irrelevant points of that witness’ professional credentials, performance, or testimony. It has been said that any courtroom trial is not about guilt or innocence, right or wrong, but about theater—the best performance wins the Oscar. The geologist as expert witness must then be prepared professionally, technically, and personally to give the “performance” of his career.

NECROSEARCH INTERNATIONAL

During the late 1980s a series of informal discussions were held among law enforcement and earth science professionals relating to the location, definition, and exhumation of clandestine grave sites. As these discussions progressed, it became obvious that baseline data relative to the problem were extremely limited. The available data were widely scattered throughout the technical and popular literature. The decision evolved to make an attempt to develop meaningful
baseline data utilizing buried pigs, which closely resemble humans with regard to body form, mass, and composition. With the cooperation of both the Douglas and Arapahoe County, Colorado, Sheriffs, six pigs were buried under varying conditions at the Highlands Ranch Law Enforcement Training Facility south of Littleton, Colorado. These grave sites were monitored by earth science, life science, and law enforcement professionals for a year. During this period and subsequently, more pig graves were established and these continue to be monitored along with the original six sites. Preliminary results of the study of the initial grave sites were presented at the May, 1989 symposium of the International Association for Identification held in Englewood, Colorado. Since that time the professionals involved in the study and subsequently co-opted for advice, help, and counsel have been referred to as “The Pig People.”

In September, 1991, this loose-knit organization of scientific, academic, and law enforcement professionals was incorporated as a not-for-profit organization under the name of NecroSearch International. The organization has worked on some 200 identifiable forensic cases in 20 states and 6 foreign countries. The disciplines that define the organization’s core of professionals are listed in Figure 2. It should be noted that the professional practicing a discipline listed in Figure 2 often calls on resources and individuals in related fields of expertise, thus expanding the skills, advice, and practice brought to bear on a particular case or project.

The mission of NecroSearch International as taken from the Organization’s Articles of Incorporation can be summarized as follows:

- NecroSearch International is a non-profit organization that specializes in the search for clandestine grave sites.
- NecroSearch scientists and investigators work on a volunteer basis in all activities undertaken at the request of law enforcement agencies.
- The NecroSearch mission is to respond to law enforcement agencies by providing on-site investigations, technical training, and applied research relative to clandestine grave search, identification, exhumation, and the recovery and preservation of contained remains and evidence.

Fundamentally, the objective to NecroSearch International’s search for clandestine grave sites is the development of a reasoned, methodical approach to the identification, characterization, and excavation of such a grave site. Ideally, the end product of such investigation, characterization, and excavation activity is the recovery, characterization, and identification of the contained human remains in addition to the preservation and validation of evidence contained within the grave itself.

THE GEOLOGIST’S CONTRIBUTION

The contribution of the professional geologist to the mission and objective of the NecroSearch organization entails both his innate character traits and his technical knowledge and skills. These traits and skills are summarized in Figure 3.

Geology is a field science, it is an observational science, and it is a philosophical science based both in space and in time. These characteristics of the science are not foreign to the law enforcement professionals, and this writer has found working with these professionals to be both productive and rewarding.

The geologist’s knowledge of soils, geomorphology, rocks, and geologic processes, coupled with the use of air photographs, remote sensing imagery, and analytical data, can prove valuable to the law enforcement community. Likewise, the geologist’s familiarity with the field setting, his ability to solve field problems, and his experience and comfort at organizing field activities is entirely compatible with many law enforcement functions and activities. The transition from mining geologist, engineering geologist, petroleum geologist, or environmental geologist to the forensic geologist is remarkably easy and can occur almost imperceptibly.

This is not to say that the professional geologist’s involvement within a definably forensic setting is not without frustration. The information on which a clandestine grave search is based may result from highly questionable sources and may be completely erroneous. At the end of the day, a particular clandestine grave may in fact not exist. But then what guarantees that the minerals exploration geologist or the petroleum geologist finds the ore body or the reservoir at the end of a given project? However, if the grave, the ore body, or the reservoir is present, the chances of its discovery are enhanced by thorough planning, meaningful field activity,
intelligent evaluation of resultant data, persistence, and a positive outlook relative to the problem at hand. The uncertainty of result, the “risk of failure,” is an aspect of professional evolution that the geologist learns to handle whatever his specific field of interest.

The problem of scale is another frustration for the professional geologist working to locate a clandestine grave site. The petroleum geologist works at scales of 100s of square kilometers, the minerals exploration geologist works at scales of 10s of square kilometers, and the engineering geologist is comfortable working at square-kilometer scales. The forensic geologist often focuses on a square-meter target and must calibrate his eyeball, his skills, and his thinking accordingly.

As with all aspects of professional endeavor, communication is paramount. As a professional geologist working with other professionals without an earth science background, the idea is not to simplify your science but to clarify your science. Most professionals can understand what you say and why you say it if your explanation is clearly presented in understandable terms. You are not on site to amaze and confound your non-geologist colleagues—you are on site to get the job done! Work with your non-geologist colleagues and communicate with them.

CONCLUSION

The professional geologist working within today’s technical environment, whether he cares to or not, must recognize a forensic aspect to his activity. The forensic aspect results from the increasingly regulatory and litigious nature of our society. It is probable that today’s professional geologist will be called upon some time during his career to provide expert testimony and thereby enter the realm of forensic geology. The professional geologist can provide valuable technical skills and philosophical insight to strictly forensic problems working with law enforcement professionals.

The professional geologist can make a positive contribution to law enforcement through an organization similar to NecroSearch International, working constructively with its multidisciplinary, volunteer team of scientists, engineers, and law enforcement professionals. The object of any contribution is to have developed a more complete understanding of the setting, environment, and character of a clandestine grave. Through this understanding of the grave site and the recognition of a wide variety of anomalies that can result from grave intrusion into the natural/ambient setting, recognition and definition parameters can be developed to aid law enforcement in grave discovery. Development of such parameters further aids law enforcement in the methodical recovery of remains, the validation and preservation of any contained evidence, and possibly a better understanding of circumstances leading to the initial grave excavation and the burial of its contents.

The search for clandestine grave sites is but one focus of investigative forensic activity to which the professional geologist can contribute. The geologist by nature and training is an observer and investigator of the natural environment. His experience and comfort working under field conditions and his ability to define, organize, and utilize information from diverse sources are characteristics not unfamiliar to his law enforcement colleagues.

BIBLIOGRAPHY


AIPG faces a future of change in the earth sciences and in politics. Can it adapt and survive? What AIPG does is very good. What it doesn’t do may be the source of its demise as a viable and influential geological organization. The unfulfilled job for AIPG is to bring informed choices to our government and to the people. We must articulate the costs of environmental hazards and of resources gained or lost. We must educate government by bringing to it information that helps it make wise decisions.

Having had a relatively broad exposure to most of the areas of geologic practice through my career, I observe that AIPG has become largely an environmental practitioners organization and serves as a model for state licensure, but does not serve the interests of the broader geological community in advocacy in public policy. My recollection of the early AIPG is that it was to serve as the profession’s voice in Washington, and as necessary, in the various states, along with conducting a “standard of practice” certification of members.

Roles are changing. States have adopted the AIPG stance of recognizing the need to license and set standards of practice for geologists who serve the public health and safety. Only a few states with high numbers of resident geologists do not now require licensure. Among those, Texas has been trying hard to institute such legislation, and a Colorado group has announced intention to seek again for legislation. The need for AIPG to set standards and to lobby for licensure has been reduced by its own success, and its major raison d’etre has been removed.

What do geologists really, fundamentally, do? Geologists find and supply the earth resources that are the backbone of civilized society, and they protect people from themselves, with respect to their geologic environment.

Various members of the AIPG have worked diligently to develop public policy and awareness of the real issues of each of these categories, but the AIPG has not been in the forefront of such debates. Discrimination of real versus fanciful hazards, providing for the housing and transportation of the people, and sustaining the national economy are all subsets of the two major responsibilities of geologists. Today, people are making esthetic choices about scenic and recreational vistas and access to energy and mineral resources. Sometimes it’s canoeing in Kansas, or mountain views in Colorado, but the choices are being driven by a relatively affluent active constituency. This winter we may well be short of the natural gas needed to heat homes, owing to increased gas demand for generating electricity in the summer, coupled with restrictions on access to federal (formerly public) lands in the west and offshore. We surely will be paying more, so that the average home heating bill may be $200 –$300 higher than last winter. The people have made the choice to restrict access to the lands that contain the resources. Have these same people insured from harm those who gain no advantage from untrammeled scenic vistas and recreational opportunities of backpacking and mountain biking?

The American public is divorced from its resource base. It is the duty of our profession, and by extension, the AIPG, to help legislate reasonableness into public policy, to overcome the educational deficiency of our system and provide for the well-being of our citizens. Whether in resource access or in saving people from themselves, we have a civic responsibility that cannot be delegated. It is not we who make the choices, but it is we who must provide the rationale for choices. If the United State chooses to purposefully import cars and the oil to operate them, that is a choice. If the people know what they are trading for that benefit, what the costs are, and are willing to pay those costs, we can have no argument. The cost in this case is foreign ownership of U. S. assets and the means of production. As an example, in 1980 we owned about $400 billion of other countries’ economies. By 1997, other countries owned more than $1.2 trillion of our economy. That is the balance of payments deficit coming home. The effects of foreign ownership are clear: Daimler Benz bought Chrysler, BP bought Amoco and Arco, most of the pharmaceutical industry and virtually all of the concrete industry are foreign owned, and foreign investment in telecommunications is rising. We are being bought with our own money.

A democratic society has the right and the obligation to make conscientious choices, regardless of the consequence they choose. If those choices are made from ignorance of costs, however, the chosen consequences may be disastrous. A geologically uninformed public is cause for our great concern.

Licensure is not the pressing issue it was when AIPG was founded. The public policy issues today may be more complex than those of that time. We have been successful in the first, but have not exercised our prerogatives and accomplished our mission in the latter.

I have tried to demonstrate that there is a void in public policy regarding geologic resources and impacts that can only be met by an active AIPG. There is no other group to do this, as every other group suffers from an external bias. For instance, the AAPG automatically triggers an “industry” label. GSA generates an isolationist “academic” label. The breadth of membership of AIPG can overcome such bias attri-
bution. Will we choose to take action and redirect our energies? Or will we fade away?

What should AIPG do? The diverse membership of AIPG probably will not agree fully on such issues as opening ANWR (Arctic National Wildlife Refuge) to energy exploitation. We likely won’t fully agree on how much wilderness is enough, how much mineral access to public lands is acceptable, nor whether the soil loss from timbering is greater than the value of the timber or less. But I think we will agree that society needs earth resources to survive. I think we will agree that heavy-handed over-protection or over-exploitation will result in a backlash that is not good for anyone. What AIPG can do is focus its attention on these national and international large-scale issues, develop reasonable data sets upon which wise public decisions can be based, then insist that the data be used. As a start, we can use our national meetings to focus on one issue at a time, bringing together a program of information and varied opinions about the issues and creating a national dialog from a scientific perspective tempered with the reality of politics. We can publish and publicize the results of these conferences. We can lobby for the use of science in decision-making, and argue for making real decisions, rather than de facto decisions by inaction. We can identify the issues that are our turf, and fight to bring good science to the people. AIPG can be proactive. AIPG can have vision.

(I appreciate the review, editing, and suggestions made by Robert Fakundiny and William Harrison)

The First International Professional Geology Conference

The banquet on the final evening of the First International Professional Geology Conference brought colleagues together from Europe, Canada, and the United States. Francisco David Sanz Arauz, Spain; Robert Font, AIPG; Yolanda Ruiz Brey, Spain; Gareth Jones, President of EFG; Dennis Pennington, President of AIPG.

Geologists Needed for AAAS Public Policy Fellowships 2001:02 >>>

What >>> Help shape science and technology policy in Washington, DC: Contribute scientific and technical information and external perspectives to federal decisionmaking, while learning how government works. The AAAS fellowship programs provide a unique participatory public policy experience for geologists and other scientists and engineers, through one-year assignments involving domestic and international science policy issues in the Congress and several executive branch agencies. Stipends typically range from $48,000 to $52,000.

Who >>> Applicants must have a Ph.D. or equivalent doctoral level degree at the time of application in any physical, biological or social science, any field of engineering, or any relevant interdisciplinary field. Engineers with a master’s degree and three years of post-degree experience also may apply. U.S. citizenship is required. Federal employees are not eligible. Approximately 50 fellowships are awarded each year in eight different programs.

fellowships.aaas.org

When >>> The fellowship year begins September 1, 2001. Fellows attend a two-week orientation before beginning their assignments and participate in a yearlong seminar series on topics relevant to science, technology, and public policy. Application deadline is January 10, 2001.

Where >>> Fellows are placed in the Congress, the National Science Foundation, the National Institutes of Health, the Department of State, the Department of Defense, the Agency for International Development, the Environmental Protection Agency, the Department of Agriculture, the Food and Drug Administration, the Department of Justice, and other federal offices.

How >>> For application instructions and further information:
- Web fellowships.aaas.org
- Phone 202/326-5700
- E-mail science_policy@aaas.org

Underrepresented minorities and persons with disabilities are encouraged to apply.
The Ethics of Dismissals

Editor’s Note: The following two items from the June and July 2000 issues of the AusIMM Bulletin address the ethics of dismissing employees, particularly the “downsizing” or other mass layoff variety. Although these letters refer to the AusIMM’s Charter (constitution) and Code of Ethics, the issues discussed are applicable to AIPG. AIPG appreciates AusIMM’s permission to republish these letters, which retain the Australian spelling and idioms. David Abbott, CPG-04570, FAusIMM, would welcome any comments on these letters as contributions to the Professional Ethics & Practices column. He also will forward the comments to AusIMM.

Unethical Instant Dismissals

Robert Jim Morrison, FAusIMM
(Reprinted with permission from the AusIMM Bulletin, June 2000)

I have been concerned for some time at the unprofessional and unethical manner in which some retrenchments and redundancies are executed upon well-respected Members of The Institute. Typically this happens with no warning, no consultation over work performance, and with no notice.

Most of us have either experienced first hand, or have knowledge of shabby and degrading treatment of honest, loyal, hard working professionals. Dismissal without notice results in unnecessary trauma to the individual, and with it the usually unfounded implication that the person has performed badly, or has done something illegal or immoral.

The typical ‘gutless management’ approach includes either phoning the hapless local supervisor with instructions to sack the person forthwith, or rolling up to the branch office, discussing immediate work issues over, say, morning tea, then ordering the person off site with five minutes’ notice to collect personal items.

Normally, companies are able to keep this type of unacceptable behaviour relatively quiet due to the feeling of helplessness of the sacked party, and/or the threat of adversely affecting the person’s redundancy package. Colleagues are of little help for fear of being next.

A recent case, however, was spread all over the front page of a regional newspaper, destroying in a day much of the hard work done by the local Branch of The AusIMM to improve the image of the industry in the local community. It read, inter alia:

“SIX SHAFTED
Working lunch turns to last supper for sacked mine officials.”

“Mine management at ... have been recognised for making the operation one of the most efficient in the world but this week they were unceremoniously sacked ... Six senior staffers were shown the door, after being given five minutes to clear their desks ... Women sobbed ... as ... (the employees were) sacked without warning ... bosses arrived, followed by a fleet of taxis to transport the (ex-employees) ... Corporate group executive ... said that the retrenchments were part of normal procedure when a mine was to be shut down.”

Whether or not this article has been sensationalised is immaterial. Lack of action on our part to this type of behaviour is not only to condone it, but to endorse its continued use. Members of The Institute are professionals of high standing, not untrustworthy criminals as implied by the no-notice manner of such dismissals. The next victim could be you!

Under The AusIMM Charter, clause four includes among the objects and purposes of The Institute:

“a. To raise the character and status and advance the interests of the profession of engineering with special reference to mining and metallurgy and those engaged therein.”

In addition, the Code of Ethics states:

“2. Members shall act so as to uphold and enhance the honour, integrity and dignity of the profession.”

“Interpretation: The principle here is that the profession should endeavour by its behaviour to merit the highest esteem of the community.”

And under Clause 4:

“shall neither maliciously nor carelessly do anything to injure, directly or indirectly, the reputation, prospects or business of others.”

While accepting that circumstances can sometimes arise that people have to be put off at short notice, the type of action described in the newspaper article above is clearly unnecessary. It can only bring the profession and the mining industry in general into disrepute. Such behaviour is in clear breach of the Code of Ethics and the objectives of The Institute.

I believe that The Institute should issue a warning to employers and executives about the unacceptability of such behaviour, and issue guidelines to protect Members who are instructed to behave in such an unethical manner. If, in the future, unnecessarily brutal dismissals of this nature occur, The
Institute should take severe disciplinary action (including expulsion if necessary) against the offending Members, Company or Individual.

The Ethics Committee should be requested to draw up suitable professional guidelines to be followed when terminating employees. This should include:

- procedures and conditions to apply to terminating Members at short notice;
- procedures to protect employees who are directed by management to dismiss personnel in an unethical manner;
- provision for members of The Institute to withhold their services from companies that do not perform in an appropriate manner; and
- maintenance of a public register of offending companies so that Members can take this into account when considering employment options.

If The Institute cannot make an effort to protect its Members from this type of action what use is it?


There are many reasons why companies choose to undertake staff reductions in the current environment. It may be to improve the company’s competitiveness, to simply reduce costs, or to reposition for future success.

In any case, a best practice approach to terminations within a company is essential. Particular attention should be paid to making certain that all employees, those being retrenched as well as the survivors, are treated with dignity, trust and respect. Retention is a key issue and failure to achieve goals set in this area will lead to a blow out in costs. A best practice approach will ensure that the morale and productivity of remaining staff are sustained and even enhanced.

The approach taken, especially where large-scale reductions occur, will be seen as a reflection of the company’s culture, values and management philosophies and result in much more positive perceptions about the organisation, its top management and its Board by stakeholders, customers, the public, the media and future employees.

Management Principles

When undertaking terminations, there are several guiding management principles which should be adhered to. These include:

- make managers responsible for terminating direct reports;
- ensure proper coaching, by outplacement professionals, of managers undertaking terminations;
- provide terminated employees with fair and professional treatment, based on equitable notice and severance policies;
- retain quality outplacement assistance to accelerate re-employment and/or moves to alternative careers and lifestyles; and
- demonstrate open and honest communication to ensure the commitment of remaining staff.

Planning and Implementation

If these are the guiding principles, then what is the best practice approach to a termination program? In essence, it is the manner in which the planning process is implemented.

The planning process is dominated by the ‘Four P’s’. These are:

1. Prepare to communicate quickly and effectively to direct reports and peers of terminated staff.
2. Plan multiple terminations within same group to be completed on the same day if possible.
3. Depending on the scale, provide prior notice to affected publics (eg. local government, unions, etc).
4. Plan for terminations to take place in the early part of the week, preferably in the afternoon.

When implementing the process, there are several more steps that are ‘must dos’. These are:

1. Ensure the logistics (location, who is in attendance, and the handover of company property) have been carefully considered.
2. Make sure ‘clean break’ arrangements are in place if security is an issue.
3. Undertake rapid re-assignment of each departing employee’s tasks
4. Have an outplacement consultant on-site to support departing employees.
5. Implement a rebuilding and survivor management process.

Re-employment

Finally, to strengthen the morale of staff remaining with the company, it is vital to track the re-employment progress of those who have been terminated. Where a large-scale reduction has taken place, it may be necessary to establish a central co-ordination point to keep track on re-employment activities.

Positive news should be fed back immediately to the remaining staff. People will be looking for some good news after having to digest the bad news.

RightD&A is a leading Australian career strategy consulting firm. Through their parent company, Right Management Consultants, they provide global support to clients through their network of offices in over 200 locations worldwide.

Best Practice Approach to Terminations

By Ted Davies, Managing Director, RightD&A
(Reprinted with permission from the AusIMM Bulletin, July 2000)
It’s generally accepted that a lifelong career in geology is not guaranteed for those graduating with such a degree. My favorite subject, as a matter of both personal and professional self-interest, is the part which the American Institute of Professional Geologists plays and should play in predicting the future for practitioners of geology and assisting them to minimize negative aspects of that future.

The struggle to promote and advocate for our own professional interests is never-ending. AIPG is dedicated to representing the best interests of all our members, improving the credibility of the entire profession, and contributing to the development of a vision of the future regarding career opportunities. Our most successful activities in regard to advocacy are those carried out by you! For example, the Illinois Chapter of the Illinois-Indiana AIPG Section is effectively representing the professional interests of Illinois Registered Geologists.

The members of the Illinois AIPG Chapter coordinate the development of a unified response to each proposed change in regulation potentially affecting the responsibilities and privileges of Illinois Registered Geologists. Prior to the formation of the Illinois AIPG Chapter, Illinois Registered Geologists could only speak as individual practitioners, rather than as a collective voice. The geologists who are registered to practice within the jurisdiction of Illinois are able, through the Chapter, to keep a watchful eye on regulatory developments and respond with credibility and effectiveness when necessary.

The activities of the Illinois Chapter are typical of the service offered to and by AIPG members. The Chapter’s activities also exemplify that AIPG is at its most effective when members are personally engaged. Although the Illinois Chapter received both moral support, in the form of national Executive Committee participation in organizational meeting and paperwork, and limited start-up financial support, the heavy-duty work was performed by those most likely to be impacted by Illinois regulatory issues—those AIPG members and Registered Geologists practicing in Illinois.

AIPG’s approach to meeting the professional needs of its members continues to evolve. This requires a great deal of information AND participation from AIPG members. Most of the actions taken, or not taken, by AIPG are a direct result of decisions made by active members serving on a national or section level committee. Of course, it is common for members to express divergent opinions on a given issue. As a consequence, the decision ultimately made may not fit everyone’s expectations.

A current example of this dilemma is the proposal from Tom Fails’ Task Force for Continuing Professional Development. The proposal, essentially a plan for continuing education, has elicited some strong negative opinion, albeit from only two members. There has been overwhelmingly favorable opinion. But the outcome of this proposal may very well alienate some members. What’s the remedy to arguably alienating a portion of AIPG membership as a consequence of a decision made for the benefit, and at the direction of, a majority? Perhaps there’s no remedy, but only good faith effort from our leadership to do what they feel is in the best interest of the greatest number of our members.

AIPG’s strength is in direct proportion to our numbers. But more significantly, AIPG’s strength is in the level of interest, commitment, and activism of AIPG members. If YOU don’t like it, change it! But don’t give up. AIPG is only diminished if you do.
LEGISLATIVE ACTIVITIES AFFECTING GEOLOGY

Interior Releases Fossil Report

Submitted by John J. Dragonetti, CPG-02779

Background

In the fiscal-year 1999 Department of the Interior and Related Agencies Appropriations Act, the U.S. Senate ordered the Secretary of the Interior to prepare a report assessing the need for a unified federal policy for the collection, storage, and preservation of fossils collected on public lands. Further, the Senate directed several agencies to assist the Secretary in the preparation of this report. These consulting agencies included the Bureau of Land Management (BLM), the Forest Service (FS), the National Park Service (NPS), the Fish and Wildlife Service (FWS), the Bureau of Reclamation (BOR), the Bureau of Indian Affairs (BIA), and the Smithsonian Institution (SI). The U.S. Geological Survey (USGS) was added to the study group because of its special expertise in paleontology. In addition, South Dakota’s Democratic Senators Tom Daschle and Tim Johnson, both of whom have been involved in the issue of fossils on federal lands for several years, sent a letter to the Secretary asking for recommendations on how to improve the preservation and study of fossils collected on those lands. (See TPG September, 1999, page 10, “The Quest for a Uniform Policy on Fossil Collecting.”)

Report Contents

The federal government requested public comments on a draft version of the report released in a Federal Register notice dated May 21, 1999. A public meeting was held on June 21, 1999, followed by an open comment period. All submitted comments were evaluated by the study agencies. The final report, entitled Assessment of Fossil Management on Federal and Indian Lands, was released in May 2000. Federal lands identified in the report were those lands managed by the BLM, BOR, FS, FWS, and the NPS. There were no recommendations concerning Native American lands, since those lands are held in trust to be managed by Native American tribes or individual landowners. Reference was made to the BIA’s lack of authority to manage paleontological resources on these lands, its role limited to assuring that any transactions benefited the landowner. Another factor of significance to Native American interests was the requirement that federal agencies managing public lands must comply with the President’s May 24, 1996 Executive Order on Sacred Sites that protects sacred sites and allows Native Americans access to these sites for ceremonial uses.

Report Principles and Recommendations

The report indicates that fossils have scientific, educational, and commercial value; and that protection and management of fossil resources would be greatly enhanced if future congressional and administrative actions were governed by the following seven principles and recommendations:

- **Principle 1**: Fossils on federal lands are a part of America’s heritage. **Recommendation**: Future actions should reaffirm the current use of federal fossils for their scientific, educational, and, where appropriate, recreational values.

- **Principle 2**: Most vertebrate fossils are rare. **Recommendation**: Future actions should reaffirm the restriction of vertebrate fossil collection to qualified personnel, with the fossils remaining in federal ownership in perpetuity.

- **Principle 3**: Some invertebrate and plant fossils are rare. **Recommendation**: Future actions should reaffirm mission-specific agency approaches to the management of plant and invertebrate fossils.

- **Principle 4**: Penalties for fossil theft should be strengthened. **Recommendation**: Future actions should penalize the theft of fossils from federal lands in a way that maximizes the effectiveness of prosecutions and deters future thefts. Penalties should take into account, among other factors, the value of fossils themselves, as well as any damage resulting from their illegal collection. Future program strategies should emphasize education of federal managers, prosecutors, law enforcement personnel, and the judiciary regarding the value of fossils and the techniques for the appropriate protection of fossil resources.

- **Principle 5**: Effective stewardship requires accurate information. **Recommendation**: Future actions should acknowledge the need for gathering and analyzing information about where fossils occur, in particular the critical role of inventory in the effective management of fossil resources. Increased emphasis on fossil inventory should take into consideration, where possible, regional approaches across agency lines, using modern technology such as GIS. Such work should also address specific issues, such as the impact of erosion on the loss of resources.

- **Principle 6**: Federal fossil collections should be preserved and available for research and public education. **Recommendation**: Future actions should affirm the importance of curating scientifically valuable fossils as federal property, often in partnership with non-federal institutions. Future program approaches should emphasize the use of modern technology to improve curation and access, as well as the sharing of information between and among government agencies and other institutions.

- **Principle 7**: Federal fossil management should emphasize opportunities for public involvement. **Recommendation**: Future actions should include an emphasis on public education and participation in the stewardship of fossil resources. Future program approaches should emphasize the use of technology to increase public education and awareness of the importance and benefit of fossil resources.

Conclusion

Despite the stated aim of the report to develop a unified federal policy, the differing mandates, rules, and regulations governing the land management agencies for collecting fossils and obtaining scientific collecting permits have resulted in different practices and requirements among the agencies. Therefore, anyone interested in fossil collecting on federal lands should determine what agency has jurisdiction over the land, and communicate directly with the land manager for the particular parcel for which access is sought.

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.
AGI GOVERNMENT AFFAIRS MONTHLY REVIEW

Monthly review prepared by Margaret Baker and David Applegate, AGI Government Affairs Program, and AGI/AIPG Geoscience Policy Interns Michael Wagg, Nathan Morris, and Audrey Slesinger.

JULY 2000

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Congress Has Long Way To Go On Appropriations

Congress has left town for the month of August, trading committees and caucuses for conventions and campaigning. When they return in early September, the focus will be on appropriations, appropriations, and appropriations. If science programs are to do well in this frantic end game, it is imperative that when members of Congress are back in their home districts they hear from their constituents about the value of federal investments in science. AGI encourages members of Congress to contact their representative and senators to make the case for the geosciences.

Despite Congress’s best attempts to keep the appropriations process moving, they have passed only one of the thirteen appropriation bills. They can draw some small comfort in that they are ahead of last year’s process. Unlike last year, however, members are eager to get out of town by the targeted adjournment date of October 6th in order to campaign some more. Before leaving for the August recess, Congress did make progress on a number of key bills affecting the geosciences. The Senate passed H.R. 4578, the FY 2001 Interior Appropriations bill, on July 18th. The Senate version would provide the U.S. Geological Survey with a total of $847.6 million and provide the Department of Energy’s Office of Fossil Energy R&D with $401.3 million, an increase of $25.8 million above the budget request. Funding for the FY 2001 Energy and Water Appropriations bill (H.R. 4733), which passed the Senate Appropriations Committee on July 18th, would provide $915 million for the Department of Energy’s (DOE) Basic Energy Science program, well shy of the $1 billion requested. That same day, the FY 2001 Commerce Appropriations bill (H.R. 4690) passed its Senate subcommittee. The bill would provide NOAA with $2.7 billion, well above the House figure of $2.2 billion but still less than the $2.9 billion in the President’s budget request.

Once Congress returns from the recess, these three bills will be on a fast track. To move these and other appropriations bills, Congress has shifted money from the politically popular VA/HUD bill—which funds NSF, NASA, and EPA—hoping they can translate its popularity into a mandate at the end of the session to break spending caps in order to fully fund the bill. More at http://www.agiweb.org/gap/legis106/approps-fy2001.html.

Senate Appropriators Call for Doubling of NSF Budget

An AGI action alert on July 21st urged geoscientists to encourage their senators to sign on to a “Dear Colleague” letter being circulated by Senators Kit Bond (R-MO) and Barbara Mikulski (D-MD), who are seeking to convince the Senate leadership to support a doubling of the National Science Foundation (NSF) budget over the next five years. Bond and Mikulski—the Chairman and Ranking Member, respectively, of the Senate VA/HUD Appropriations Subcommittee, which funds NSF—are seeking to translate their colleagues’ support for the National Institutes of Health into support for the physical science research that underlies high-profile biomedical and information technology advances. The across-the-board doubling proposed by Bond and Mikulski would substantially benefit the Geosciences Directorate, which is the second-largest at NSF. The alert, including text of the “Dear Colleague” letter, can be found at http://www.agiweb.org/gap/legis106/bondletter_alert.html.

AAPG Testifies at Senate Hearing on Natural Gas Supply

The Senate Committee on Energy and Natural Resources held a hearing on July 26th to address rising natural gas prices, which have doubled in recent months and are expected to spike further this winter. AAPG Division of Professional Affairs President G. Warfield “Skip” Hobbs was invited to testify on domestic natural gas supply. In his testimony, Hobbs emphasized the abundance of US natural gas resources, the current supply crunch, and the need to open public lands to exploration. In response to Hobbs’ presentation, committee chair Frank Murkowski (R-AK) emphasized the need to help the public recognize the disconnect between declining proven reserves and the abundant resources that have been identified but cannot be accessed. Complete testimony is available at http://energy.senate.gov. The day before the hearing, Chevron, Conoco, and Murphy Oil filed suit against the federal government for blocking their ability to develop natural gas leases they purchased from the federal government nearly 20 years ago off the Florida coast. Last month, the Supreme Court ruled against the federal government in a similar suit dealing with leases offshore North Carolina. More at http://www.agiweb.org/gap/legis106/ocs106.html.

Kansas Republicans Vote Out Evolution Opponents

Nearly a year ago, the Kansas State Board of Education voted 6-4 to remove evolution and the age of the Earth from
state science education standards. Of the six board members who voted for the new standards, three faced Republican primary challenges and a fourth chose not to run for re-election. Two of the three, including board chairman Linda Holloway, were defeated by moderates in the Aug. 1 primary, and the open seat also went to a moderate. All of the challengers made opposition to the anti-evolution standards the central focus of their campaign. Board member Steve Abrams, who helped write the new standards, was the lone anti-evolution board member to prevail. In the primary to decide the Republican challenger for Rep. Dennis Moore, the state’s only Democratic House member, the moderate candidate who opposed the new standards lost to a conservative candidate who did not discuss the evolution issue. More at http://www.agiweb.org/gap/legis106/evolution.html.

Valles Caldera National Preserve Signed Into Law

President Clinton signed S. 1892, the Valles Caldera Preservation and Federal Land Transaction Facilitation Act, into law on July 25th. Forming the center of the Jemez Mountain range, the Valles Caldera is a resurgent caldera created by massive volcanic eruption over a million years ago. It is more than a half-mile deep and close to 15 miles across. Although most of the Jemez is public land, the Valles Caldera is primarily within the privately held Baca Ranch. S. 1892 was introduced on November 9, 1999 by Sen. Pete Domenici (R-NM) and Sen. Jeff Bingaman (D-NM) to authorize the acquisition of the Baca by the U.S. Forest Service. The Senate passed the bill by unanimous consent in April 2000, and the House passed it on July 12th by a 377-45 vote. At the signing ceremony, the president said, “Under an innovative arrangement, [this] new preserve will be managed in a way that allows for sustainable resource use while ensuring public access and full protection of the ranch’s extraordinary natural assets.” More information is available at http://www.agiweb.org/gap/legis106/baca.html.

Senate Committee Passes Oil Royalty Revenue Bill

The same day that President Clinton signed the Valles Caldera bill, the Senate Energy and Natural Resources Committee passed a bill designed to greatly increase the funds available for federal land acquisition. Following a contentious, five-day markup, the committee passed its version of the H.R. 701, the House-passed Conservation and Reinvestment Act (CARA), by a 13-7 vote. The final bill represented a compromise between committee chair Frank Murkowski (R-AK) and ranking Democrat Jeff Bingaman (D-NM). Other western Republicans generally opposed the bill, characterizing it as an entitlement that unnecessarily encroaches on private property rights. The legislation supplies nearly $3 billion in outer continental shelf oil and gas revenues to a host of conservation programs for each of the next 15 years, $450 million of which is to go to federal land acquisition under the Land and Water Conservation Fund (LWCF). If Congress fails to appropriate a full $450 million for land acquisition in a given fiscal year, then none of the other conservation programs will be funded that year. While many amendments were proposed during the committee’s marathon markup, only two passed, one dealing with water rights and the other with easements. More at http://www.agiweb.org/gap/legis106/ocs106.html.

Commission Releases Report on Women and Minorities in Science

The congressionally mandated Commission on the Advancement of Women and Minorities in Science, Engineering, and Technology Development released its recommendations on how the nation can build its domestic science, engineering, and technology (SET) work force by increasing the participation of women, underrepresented minorities, and persons with disabilities. The commission found that community colleges, which serve a large population of women and minorities, need to improve links with four-year institutions. They propose a program to target and encourage potentially able students at the high school and community college levels to move into four-year colleges, as well as to increase Pell Grants for those SET students. To improve career opportunities, the report recommends that public and private employers should be required to report yearly on the comparative pay, career development, and advancement of these groups. The report urges a media campaign to battle stereotypes and improve the public image of scientists and engineers. Finally, the commission recommends the formation of a collaborative body to coordinate, monitor, and oversee the implementation of these plans. More at http://www.agiweb.org/gap/legis106/women-science.html.

Action on Science Education Bills Probably Over

On July 25th, the House Science Committee unanimously passed the National Science Education Act (H.R. 4271), the keystone of Rep. Vern Ehlers’s (R-MI) three bill package to reform federal K-12 science education programs. Further progress on H.R. 4271 or the other two bills in the package (H.R. 4272 and H.R. 4273) is unlikely given that Congress will spend most of its remaining legislative days on the must-pass appropriations bills. Further action is also unlikely on Congress’s massive overhaul of the Elementary and Secondary Education Act (ESEA), which passed the House but awaits action in the Senate. The delay is good news for the Eisenhower science and math education programs, which are targeted for elimination in the ESEA reform measures. Both the Ehlers bills and ESEA reform are certain to return in the 107th Congress. More at http://www.agiweb.org/gap/legis106/ike106.html.

TMDL Standards Promulgated Over Hill Objections

On July 11th, U.S. Environmental Protection Agency (EPA) Administrator Carol Browner signed a rule to revise the Total Maximum Daily Load (TMDL) program in the Clean Water Act prior to enactment of a congressional bill that would have blocked funding for the rule. Senators Tim Hutchinson (R-AR) and Blanche Lambert Lincoln (D-AR) had attached an amendment to H.R. 4425, the Military Construction Appropriations Act for fiscal year (FY) 2001, that blocked promulgation of “new” TMDL rules. Because President Clinton waited to sign the appropriations bill until two days after Browner signed the TMDL rule, the rider did not apply. Opposition to the rule stems mainly from agricul-
tecture and timber groups who argue that it would cost too much and restrict state authority to control water pollution through other voluntary measures. The new TMDL rule still faces pressure from Senator Hutchinson, who may push for restrictive language to be added to the Senate VA-HUD appropriations bill (H.R. 4635), which has not yet undergone markup. On July 26th, similar TMDL moratorium language was removed from S. 2417, Clean Water Act reform legislation introduced by Senators Bob Smith (R-NH) and Mike Crapo (R-ID) in April. The bill substantially increases the authorization of funds for non-point pollution programs under the Clean Water Act — up to $750 million annually for FY 2001 through FY 2007. It also authorizes a National Academy of Sciences study to evaluate the science behind the TMDL rule, its implementation cost, and the availability of alternative non-point pollution programs; and a National Academy of Public Administration study on the breadth and success of state and other non-point pollution control programs. More at http://www.agiweb.org/gap/legis106/cwa106.html.

Ocean Policy Gets Congressional Attention

The American Geophysical Union and American Association for the Advancement of Science hosted an Ocean Policy Conference on July 18th in conjunction with the House Oceans Caucus. Formed earlier this year to raise the profile of oceans issues within the House and develop appropriate legislation, the caucus used the meeting’s panel discussions to develop a policy framework in four key areas — biology, pollution, national security, and governance. One panel dealt with marine protected areas while another addressed both the importance of a sustained, integrated ocean observation system and the consequences of U.S. failure to ratify the United Nations Law of the Sea Convention. Other panels discussed the impacts of non-point source pollution on the coastal ocean as well as ocean governance in the twenty-first century. Speakers included Jean-Michel Cousteau, President and Founder of the Ocean Futures Society; Dr. Robert Ballard, President of the Institute for Exploration; Dr. Sylvia Earle, noted marine biologist and author of the 1995 book “Sea Change — A Message of the Oceans”; Dr. Ellen Prager, Assistant Dean of the University of Miami’s Rosenstiel School of Marine and Atmospheric Science; and Dr. William Brown, Science Advisor to Secretary of the Interior Bruce Babbitt.

USGS Briefs Congressional Staff on Drought Tools

AGI, AGU, the Interstate Commission on the Potomac River Basin (ICPRB), and the American Water Resources Association cosponsored a U.S. Geological Survey (USGS) briefing on “Water Management During Drought: Lessons Learned.” The well-attended Capitol Hill briefing was the sixth and final presentation of the USGS series on Science for Safer and Healthier Communities. Speakers from USGS and NOAA discussed real-time, interactive information available on streamflow (http://water.usgs.gov/dwc) and drought conditions (http://www.cpc.noaa.gov). ICPRB Executive Director Joe Hoffman closed the session by talking about how water managers use the end-products of the USGS and other agencies in decision making. All three speakers encouraged the development of a real-time groundwater monitoring system to aid water management decisions. More on the briefing series at http://www.usgs.gov/safer/.

Schedule of Upcoming GAP Activities

- Oct. 10-14, AIPG National Meeting, Milwaukee WI
- Nov. 11-16, GSA Annual Meeting, Reno NV

New Material on Website

The following updates and reports were added to the Government Affairs portion of AGI’s web site http://www.agiweb.org since the last monthly update:

- FY 2001 Appropriations: Energy & Water (7-28-00)
- Clean Water Act Update (7-28-00)
- Forest Service Roadless Initiative Update (7/28/00)
- FY 2001 Appropriations: Commerce, Judiciary & State (7-27-00)
- National Environmental Education Act Update (7-27-00)
- High-Level Nuclear Waste Disposal Update (7-26-00)
- National Science Foundation Authorization Update (7-26-00)
- Outer Continental Shelf Royalties and CARA Update (7-26-00)
- Update on Science at the Environmental Protection Agency (7-26-00)
- Asbestos Legislation Update (7-25-00)
- Valles Caldera: Federal Acquisition Update (7-25-00)
- Senators Needed to Support Increased Funding for NSF (Posted: 7-21-00)
- FY 2001 Appropriations: Agriculture (7-21-00)
- Summary of Hearings on Rising Oil Prices and Energy Policy (7-20-00)
- Water Research and Development Update (7-20-00)
- FY 2001 Appropriations: Interior and Related Agencies (7-19-00)
- FY 2001 Appropriations: Legislative Branch (7-18-00)
- Clean Air Act Update (7-17-00)
- Mining Law of 1872 Reform Update (7-17-00)
- Outer Continental Shelf Royalties and CARA Update (7-17-00)
- Summary of Hill Briefings on Global Climate Change (7-14-00)
- FY 2001 Appropriations: Labor/HHS/Education (7-12-00)
- Congressional Energy Policy: Response to Rising Oil Prices (7-12-00)
- Arctic National Wildlife Refuge (ANWR) Update (7-7-00)
- Fiscal Year 2001 Geoscience Appropriations Update (7-7-00)
- Waste Isolation Pilot Plant Update (7-6-00)
- Geotimes Political Scene: Creationists Open a New Front (7/00)
- High-Level Nuclear Waste Disposal Update (7-26-00)
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- Outer Continental Shelf Royalties and CARA Update (7-17-00)
- Summary of Hill Briefings on Global Climate Change (7-14-00)
- FY 2001 Appropriations: Labor/HHS/Education (7-12-00)
- Congressional Energy Policy: Response to Rising Oil Prices (7-12-00)
- Arctic National Wildlife Refuge (ANWR) Update (7-7-00)
- Fiscal Year 2001 Geoscience Appropriations Update (7-7-00)
- Waste Isolation Pilot Plant Update (7-6-00)
- Geotimes Political Scene: Creationists Open a New Front (7/00)
- High-Level Nuclear Waste Disposal Update (7-26-00)
- National Environmental Education Act Update (7-27-00)
- National Science Foundation Authorization Update (7-26-00)

Collaboration

Phil Allard contributed the following comment on collaboration, which was part of the topic, “The Ethics of Class Notes on Web Pages” in column 54. “I just read your article on ethics in the May 2000 edition of The Professional Geologist. I would like to make an observation on collaboration.

“I am a geologist with the Bureau of Land Management. I have worked on many projects over the past 25 years of my career. On the great majority of these projects I was one member of a team of professionals working on the project.

“I will give just one example from 1983. I was assigned to delineate several coal lease tracts. In this process BLM decides what the boundaries of coal tracts should be, what is the most likely way the tract would be mined, and how much coal could be recovered from it. In the early stages of this process I worked alone with the cores and well logs. Then I worked with an mining engineer on coal recovery. We then worked with various resource specialists to take out areas that had obvious, irreconcilable environmental conflicts. After this all of us worked with land use planners and management to process the lease tract to the point where it could be offered for sale.

“The point of this example is that I didn’t work alone. I would like to suggest that an educational model that limits or prohibits students from collaborating on projects does not adequately prepare a student for the modern work place. A person who gets the correct answer all of the time but doesn’t know how to work with others is not suited to the work place. I do not believe it is unethical for students to work together on problem solving. This does make it more difficult for professors to evaluate individual student performance, but this is a challenge to which professors must rise.”

Allard is correct that many (most?) projects these days are collaborative efforts and training for participation in such projects is something that can be included in the academic world. I’m aware that many courses require collaborative work by teams although I’ve never personally been involved with one during a course. Comments on the implementation and success of such efforts are certainly welcome.

Allard’s comments brought to mind a topic I’ve discussed with several people recently, namely the observation that the number of co-authors on papers seems to be increasing. This can be due to the increasing need for collaboration between a number of specialists in collecting, analyzing, and interpreting the data. Nevertheless, there is the persistent suspicion, true in some cases, that professors or others in senior positions at research labs demand that their names be included in all papers published by students or subordinate employees even where the professor or senior individual contributed little or nothing to the actual work underlying the paper. “Publish or perish” is blamed as the cause.

Clearly, there are some cases where a long list of authors is appropriate. I’ve participated in a couple myself. Also, professors and senior personnel can and do make critical contributions to work reported on. The problem involves those instances where no significant contribution was made. Such instances appear to violate Standard 4.1 and Rule 4.1.1 of the AIPG Code of Ethics.

Standard 4.1 states, “Members should respect and acknowledge the professional status and contributions of their colleagues.” And Rule 4.1.1 states, “A Member shall give due credit for work done by others in the course of a professional assignment, and shall not knowingly accept credit due another.” I am unaware of any cases where an AIPG member has been accused of violating these provisions of the Code of Ethics, yet I’ve heard about instances of it happening for years. Comments are welcomed.

Honesty in Science: Use of Imagery

(column 56, July ‘00)

Raymond Lasmanis, Washington State Geologist, read my thoughts on the potential for imagery to be misleading and sent me a copy of a short article and figure he’d written for the Washington Geologic Newsletter, “Life cycle of a mineral property” (v. 16, no. 1, p. 2 & 12). He asked my views on the article in light of my observations in column 56 on the potential for imagery to be misleading or to fail to include important concepts. Lasmanis’ question shows that he got the most important point I was trying to make, namely, that we must constantly ask the question, do our images, descriptions, explanations, etc. adequately convey our ideas and do they leave anything important out?

Drawings and the like necessarily are simplifications. Likewise, the more we know about a particular rock volume, the more data are collected, the more detailed and complex our representations of our knowledge become. And there are times, as is the case with Lasmanis’ article, when our task is to briefly and simply summarize a complex subject for the general public or other non-specialist group. In simplifying, is something important being left out? Or, as in my example of mineral resource and reserve classification in column 56, is there something about the subject that is unrecognized, in that case the bias towards precious and base metal deposits?

Obviously, the previously unrecognized issues are the hardest to identify. Peer review and market focus studies are methods of determining whether important questions are being unanswered or unaddressed. If you are writing for the general public, ask some members of the general public (neighbors, friends, etc.) to critically review your work. The subsequent dialog will help you understand the degree to which you’ve met your goal.
Jon Price, CPG-07814, tells the story of the child who comes to her father asking, “What kind of rock is this?” The father answers, “Why don’t you ask your mother? She’s the geologist.” To which the child replies, “But I don’t want to know that much!” Clearly, as in the case of Lasmanis’ article, simplification is important and therefore some things are necessarily left out. The level of interest and sophistication of the reader is important. Nevertheless, the author should recognize what is being left out in order to be able to fully evaluate the importance of the material to the audience. Although there may not be room for a full explanation of all the details, one can always state that the material presented is a simplified summary and interested readers can be directed to publications containing more detailed information.

Further discussion and examples on this topic are welcomed. It’s this column’s form of peer review.

**Disclosing Conflicts of Interest Within Every Report: Rule 3.1.2**

“Rule 3.1.2 [of the AIPG Code of Ethics] states, A Member having or expecting to have beneficial interest in a property on which the Member reports shall state in the report the existence of such interest or expected interest. Consider the following situation: a member is the president of a company raising money to pursue a mineral property. Part of the offering materials contains a report by the member which describes the geology and mineral potential of the property, but does not mention his position (president) with the company. How and when is this an ethical problem? Why does Rule 3.1.2 have no exceptions?

“Clearly within the context of the entire offering package prepared by this member, disclosure is made to potential investors concerning the member’s presidency. For this particular offering, the assertion that the failure of the report to include a statement about the member’s presidency constitutes an actionable ethical violation would probably be rejected as being a technical triviality—no harm, no foul. However, the failure to include the conflict of interest can become significant without any further action on the part of the member. Let’s continue the story jumping ahead in time.

“It turns out that the fund-raising efforts were unsuccessful and a new owner has acquired the mineral property along with a copy of the member’s report recommending investment. The new owner uses the report in his promotional efforts. And the new owner can legitimately claim that the report was prepared by a geologist who is independent of him, the new owner. And in that statement is the lie, that the report was prepared by an independent geologist. The geologist who wrote the report wrote it as part of a promotional effort. That is the conflict of interest that requires disclosure. That is sufficient reason, at least for me, for Rule 3.1.2 to have no exceptions. Once written, reports have a life of their own, independent of the author’s wishes.

“The conflict of interest is a function of the circumstances surrounding the writing of the report, not the circumstances that apply later. Consider the reverse situation. A member is asked to write an independent report on a property. The client is so impressed with the report that he hires the member. In this situation the subsequent hiring does not invalidate the independence of the original report.”

I wrote the preceding four paragraphs in 1990 for a talk to the Colorado Section. My example was hypothetical. Recently an actual example of the failure to disclose the author’s beneficial interest in a property on which he reported came to my attention. This actual case highlights the link between Rule 3.1.2 and Standard 3.1 and reinforces the importance and independence of Rule 3.1.2. Standard 3.1 of the Code of Ethics states, “Members should disclose any actual or potential conflicts of interest that may affect their ability to serve an employer or client faithfully.”

In the actual case, the author was a partner in a partnership that held a claim to some water rights. He wrote several reports on those rights for the partnership. The city seeking to purchase those water rights also reportedly knew of the author’s partnership interest. However, the reports did not contain disclosure of the beneficial interest in the water rights. The author claimed that because the members of the partnership and the city knew of his interest, he had complied with Rule 3.1.1 and therefore met the intent of Rule 3.1.2. I disagree for the following reasons.

The proposed sale of the water rights was opposed, as can be expected in such cases. The reports and their credibility would be examined by those opposed to the sale and by those considering whether they should take a position regarding the proposed sale. Disclosure of the author’s beneficial interest in the water rights in the reports is required as part of the credibility evaluation of the reports. The lack of such disclosure allowed a challenge to the reports that is independent of challenges to the report’s data and conclusions. By allowing the basis for the credibility challenge to exist, the author harmed the interests of his employer or client and, thus, acted in a manner contrary to the spirit of Standard 3.1 and Canon 3. The failure is particularly clear in this case because the author knew, or could have reasonable expected, that a challenge to the water rights sale would be made. It’s part of the nature of water rights transfers in Colorado.

Rule 3.1.2 requires that disclosure of any actual or potential beneficial interest in the subject of a report be made in the report. It stands independent of Rule 3.1.1. In fact, unlike the other four rules in the 3.1.x series, which were under “Relations of Members to Employers and Clients” in the original version of the AIPG Code of Ethics, Rule

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1. The four quoted paragraphs are part of an article, “A Discussion of Certain Aspects of the New AIPG Code of Ethics,” and were published in Part III of that article in the February 1991 issue of TPG. The article was reprinted in Geologic Ethics and Professional Practices 1987-1997, p. 44-52; the quoted paragraphs are on p. 49.

2. Water rights are a very big issue in Colorado and can be bought and sold like other mineral rights. Colorado has special water courts solely devoted to defining the existence, ownership, and transfer of water rights.
3.1.2 was originally under “Relations of Members to the Public.” A good argument can be made that Rule 3.1.2 should be moved back to its original location under what is now Canon 2, “Obligations to the Public” and Standard 2.2 in particular. The present case provides a good supporting example.

Reports can have a life of their own, as shown in my earlier hypothetical example. And as demonstrated by the recent actual example, even when the people who paid for the report know of the beneficial interest, others may well, and indeed can be expected, to use any available reports. These readers are entitled to the disclosure of the beneficial interest in order to protect the interests of the employer or client. The credibility challenge hurts both the employer or client as much as it does the author.

The importance of statements about the existence or non-existence of actual or potential beneficial interest is highlighted in the requirement for some types of reports that an affirmative statement regarding such interests be included. A statement of independence can be viewed as a variation on a Rule 3.1.2 disclosure because it is a statement concerning actual or potential beneficial interest. Such statements of independence are increasingly being required in the mineral reserves estimation business, and, I would expect, in other regulations as well.

The fact that Rule 3.1.2 could be equally well a Rule under Standard 2.2 suggests a new Rule 2.2.4 should be considered. The new Rule would state: “The conflict of interest disclosures called for in Standard 3.1 and the Rules thereunder should be considered in terms of making the required accurate, truthful, and candid disclosures required by Standard 2.2. In particular, Rule 3.1.2 is incorporated here by reference because professional reports can have a life beyond that of the original client’s or employer’s interest in a particular project. Subsequent users of reports are entitled to know of any actual or potential beneficial interests in a property or on a subject that is discussed in a report that existed at the time the report was written. Therefore such disclosures must be included within a report regardless of whether such disclosures have been made by other means. When true, an affirmative statement that no actual or beneficial interests in the subject of the report is good practice and is required in some cases.”

As always, further discussion of this subject is welcomed. In particular, I would appreciate receiving comments on the proposed language of Rule 2.2.4

The Ethics of Dismissals

Elsewhere in this issue is an article on the ethics, or lack thereof, commonly found during mass layoffs, downsizing, or whatever the euphemism of the day is. The article, a reprint of two items from the AusIMM Bulletin, addresses issues relevant to AIPG. Comments are welcomed. (They will also be forwarded to AusIMM.)

Does the Possibility That a New Dam Could Fail Require an Certified Environmental Manager’s Review?

Martin Andrejko, CPG-08512, wrote, “I’d like to pose a scenario where the geologist could be in violation of a licensure law unrelated to geological registration. In the state of Nevada any environmental work must be overseen by a Certified Environmental Manager. As we all know, definitions in regulations can be left to interpretation. But does work being performed by an engineering geologist on a mine tailings dam constitute environmental work? Given the potential for environmental damage if the dam fails I would say yes, but how many of those projects have had a Nevada CEM providing oversight? How many geologists are aware of this? How would the AIPG treat this situation where the geologist was found in violation of the OCM law?”

It strikes me that the failure of any dam can have adverse environmental consequences, not just tailings dams. However, the implicit assumption in Andrejko’s question, namely that the tailings dam holds toxic wastes, does raise the issue of whether the difference between a dam holding natural water and a tailings dam warrants separate treatment. Please contribute your thoughts to this discussion.

Misuse of Geologic Maps

Douglas C. Peters, CPG-08274, wrote, “Your short discussion and questions about the misuse of digital geologic maps, and their potential misuse (TPG, August/September 2000, p. 23), is part of the issue of the consequences of wide access to digital data now afforded by both the Web and digital publications from numerous agencies, companies, and organizations. The wider issue pertains to data quality and data documentation, regardless of whether the data are in the form of a map (digital or hardcopy) or in alphanumerical databases. This topic, and how those of us on the data generation side should address it, is something of a personal campaign, albeit a low-key one, given my background in remote sensing and GIS technology.

An aspect we must come to grips with is that we have little control over how data are used, especially when the public are the users of the data! With professional clients and among ourselves, there are ethical and legal aspects of how data are used wherein control is exercised by various regulations, ethical codes, and simply good will and common sense among the parties involved. This includes the underlying understanding that both sides of the professional relationship have some understanding of the data and how they can and should be used, although not all individuals on both sides (if multiple people are involved) may have a technical understanding of the data themselves. Both parties are engaged in the work or research for a purpose to which the data apply.

“When the ‘public’ gets involved, we cannot expect the potential user to have the same level of technical understanding about the data and their limitations. They will do with the data what they want! The same problem may occur when a technical person, who may or may not know better, gets involved without concern for data limitations. If the data use results in bad conclusions, then we can only be reactive and do...
damage control or show that the results were obtained incorrectly and present what results should have been obtained instead. In a legal arena (e.g., environmental impact identification and mitigation), the public or non-governmental organizations may misuse data, knowingly or unknowingly, to support their views with the aim of producing a result perceived as beneficial to themselves. The opposing party has legal and technical recourse to fight such misuse of data, provided they understand the data themselves and can prove misuse to the legal system's satisfaction.

“The bottom line here is that the users should be knowledgeable about the data they are using, at least to protect themselves from potential legal consequences if nothing else, but we cannot force users to be fully knowledgeable. Pretty pictures on the Web or on the wall (i.e., printed from computer graphics) are compelling to most people, and the assumption that ‘if it came out of a computer, it must be right’ will prevail over concerns for accuracy, if that thought even comes to the mind of the user.

“So, how do we ensure that any misuses of our data do not come back to haunt us? First, document everything you do to generate the data and make that documentation easily accessible. For example, there is a reason that every USGS topographic map has information on it concerning map projection, geographic datum, scale, location, dates of preparation and production, and other pertinent information. This information is necessary for accurate use of the map! How many of you pay attention to the map projection or datum when using a topographic map? Well, if your study area falls at the corner of four 7.5-min. quadrangles, as many field sites seem to do, this probably doesn’t matter. The four maps usually will align nicely and you can go your merry way using them for all purposes suitable for maps at a scale of 1:24,000. However, what do you do when you cross UTM zone boundaries with your study area? Suddenly, the maps may not line up so well, and map projection and UTM zone become an issue to which you had better pay attention. If you change scales, you run into even more potential trouble because the map projection can change as you go to smaller scales (e.g., a published 1:1,000,000 topographic map probably will not have the same projection as a published 1:24,000 map). That is why they put all that information on paper maps, to help keep you from misleading yourself.

“In the realm of digital data, particularly for GIS databases, there is something called ‘metadata’ or perhaps a ‘data dictionary’. ‘Metadata’ is information about the data in question. When multiple data sets are involved (e.g., a GIS database), the metadata may be compiled into a document or collection of files called a ‘data dictionary,’ which is designed to help you both understand individual data sets and to find the data you need. U.S. government agencies have a mandate to produce metadata for their publicly available data, such as the extensive documentation available for digital data sets from the USGS (see website http://edc.usgs.gov/webglis for examples of data sets and metadata).

“Unfortunately, many data generators do not consistently produce metadata for their databases. Compiling metadata generally is not a fun task. Those who do know the metadata for their data may not go the next step of making metadata widely and easily available to potential users. Too many folks who put data, pictures, maps, etc. up on the Web don’t care where they got their data from or who will use it.

“However, explicit documentation of data quality and limitations is the only way we can cover the issue of making sure the user has the resources available to make knowledgeable use of our data. Again, we cannot hold every user’s hand to ensure they do this, but we likewise should not be the cause of them going ignorantly forth when using our data. If the user misuses our data, then it is ‘our’ (referring to all ‘knowledgeable’ parties in the matter) responsibility to point this out to both the user and whoever they may be misleading in their ignorance. After all, education is one of the stated goals of AIPG and other professional societies, so let us be proactive in our educating users and potential users of our data, maps, graphs, and so on.

“Finally, in this context, let me specifically answer the questions raised at the end of the column item on misuse of geographic maps. Does the public recognize limitations of data? We have to assume most do not and appropriately document our data, and make that documentation available, so that they can understand the limitations. What sorts of problems will or could arise from public use of data? Documented or not, data can be misused by the public, willfully or in ignorance, and you can make a laundry list of potential problems, big and small, that could result. Do we have an ethical obligation to warn against misuse? Absolutely, and documentation is the only simple means we have to do so short of restricting access to all data, which is not a desirable procedure in a democracy. How should we deal with misuse? In a legal setting, related to professional practice in some way, there are
specific remedies and means of addressing misuse of data, assuming misuse can be proven. In the general public arena, especially on the Web where ‘the public’ can be the entire world, the best we can do is be vigilant on an individual and society level and address misuse in a professional manner, through education of the users and viewers and revision of results, when we observe it. How much of a problem has misuse been? I have only some anecdotal evidence on this, but it appears to have been limited so far to specific cases of willful misuse of data or simple (and perhaps ignorant) misuse of data for inappropriate purposes. However, the potential for misuse is great, and can only increase as more data (in any form) become easily available through media such as the Web. Vigilance, documentation, and education are the only simple tools available to keep such misuse in check.

**Expert Testimony**

(columns 55 & 57, June & Aug/Sept 2000)

Ronald E. Yarbrough CPG-06545, wrote, “Thank you for an excellent discussion concerning the ethics of being an expert witness. I wish to make a few points after working with many attorneys and over 40 legal actions. A good defense attorney, who trusts your judgment, will first ask you to conduct a desk study of materials provided and your library and make a field visit. If, in your opinion, the client they represent is at fault, they will tell the geologist ‘Thank you, and I do not wish a report and will hold your bill until I settle this action.’ Unfortunately, some attorneys will look around until they find someone who will say what they want! Those people are in trouble if the opposing attorney is good and he has a good expert. If it is your opinion that their client is not at fault, that is when the real work is to begin. A good defense attorney has a ‘legal theory’ that he must work from and the expert must be aware where, why, and how the attorney is utilizing existing law. I insist that the attorney go to the field with me and, if they have to, get very dirty like we have to sometimes. I guess I am lucky, I have never had a lawyer say he would not go to the field with me.

“I have found some plaintiff attorneys impossible to work for. Some want you to go cheap and just ‘wing it.’ It is my opinion that our ethics code does not allow us to do that, and I have said so. I lost some money, but it is best in the long run.

“Might I add something to Perry Rahn’s comments. Honest lawyers are always interested in the truth, and most not only wish to win, but if they know that they cannot, they work hard to settle the case. A good scientist can support only one point of view if he or she is convinced that it is the right view. If it is not and one must squirm in the discovery deposition, his own lawyer will try to settle the case and not go to trial. I have watched some of my opponents squirm through the deposition and trial— it is not a pretty picture.

“You asked how is the truth arrived at in an adversarial system like our legal system.’ Sometimes it is not. I have been a part of an expert team in several trials and we were right in our opinions. The jury disagreed. No truth but the legal system was satisfied. Case histories by AIPG members would be interesting reading, both wins and losses and why the expert thinks they won or lost.”

Yarbrough is correct in pointing out that the legal system sometimes fails. However, my point is that the scientific method fails, too. One has only to examine the changes in ruling paradigms over the years to realize this. The creationists are fond of pointing out what they view as the problems with evolutionary theory. The point is that both the scientific and adversarial (legal) methods of arriving at the truth can work and both can fail. Like the creationists, we tend to remember the legal failures more than the successes.

### State Geological Survey Receives Grant to Study Decorative Stone

The Industrial Minerals and Uranium Section of the Wyoming State Geological Survey (WSGS) recently was awarded a $23,896 grant from Union Pacific Land Resources Corporation (now a wholly-owned subsidiary of Anadarko Petroleum Company) to study decorative stone in southern Wyoming. Sites to be studied will include, but are not limited to, those with Union Pacific surface and mineral ownership. The award will fund field studies of quarry sites and publication of the study results.

Decorative stone includes dimension stone, decorative aggregate, and decorative rock (moss rock, fieldstone, and flagstone). Ray Harris, Principal Investigator for the project and Head of the Industrial Minerals and Uranium Section of the Survey, estimates that approximately 60 sites will be studied in detail. After the scheduled October 31, 2002 completion date for the project, a final report will be published by the WSGS.

This grant is a milestone in government-industry partnerships. Although the WSGS has previously received private industry funding for geologic studies, this is the largest award to date.

*Press Release from the Office of the Wyoming State Geologist, Lance Cook, State Geologist*

### Washington State Geologist Licensing Program

P.O. Box 9045

Olympia, WA 98507-9045

www.wa.gov/dol/bpd/geofront.htm

The Legislature passed ESSB 6455 in the 2000 session to license and regulate the geology profession in Washington. This law is now known as Chapter 253, Laws of 2000. It will be codified into the Revised Code of Washington later this year.

- The Washington State Department of Licensing (DOL), Business and Professions Division, with the advice of the Geologist Licensing board, will administer the program.
- A Geologist Licensing Board will be established. The duties, responsibilities, authority, and composition of the board are dictated by statute. In general, the geologist licensing board will examine and license geologists, engineering geologists, and other specialty geologists to ensure that individuals who are licensed have met educational and experience levels as defined by the board. The board will also provide enforcement activities.
LETTERS TO THE EDITOR

Comments on Policy Statement on Wetlands

Dear AIPG:

I agree with the content of the draft policy statement, but am unclear as to its intended use. At first glance, it appears to be a case of preaching to the choir. This is based on my assumption that most practicing geologists and most association members fundamentally agree with the content (I could be wrong, but I feel safe in saying that most geologists that I interact with would support the content). A more in-depth look raises the question of whether this is the first step in sanctioning a lobbying effort to a wider audience? If the latter, or another less obvious purpose, is not the ultimate goal, then the policy does not appear to serve a tangible purpose. This brings me to the real reason for this e-mail, which is to request a clarification on what the purpose of AIPG policy statements really is, and what audience are they intended for?

Donald A. Brice, CPG-07986

Response:

Thanks for your message and thoughtful question. The short answer is that AIPG Policy Statements are intended to advise the public at large and the geologic community, including AIPG members, of the AIPG majority opinion and official stance regarding a specific issue (or issues) that is related to or affects our ability to practice. There are times when it is desirable, during efforts to amend legislation for example, to have an effective statement readily available to represent the majority view of practicing geologists. A policy statement is a part of defining AIPG's raison d'etre. A policy statement, representing an organization of thousands, is also a far more effective commentary than a single opinion personally rendered.

William J. Siok, CPG-04773
AIPG Executive Director

Comments on Policy Statement on Wetlands

Dear AIPG:

I agree that wetlands are an important natural resource and with both ecological and economic benefits. Wetlands improve water quality by filtering harmful pollutants from groundwater 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.

Proposed AIPG Policy Statement on Wetlands

Draft 3

The following policy was adopted by the Executive Committee on April 30, subject to publication in TPG for comment by the membership and possible further amendment before final adoption. It is subject to review by AIPG’s lawyer as well.

Wetlands are an important natural resource with both ecological and economic benefits. Wetlands improve water quality by filtering harmful pollutants from groundwater 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.
LETTERS TO THE EDITOR (continued)

There will always be those people who seem compelled to attempt to control others. Certain religious groups would move us toward a theocracy. Racist groups might strive for a "pure" race of some sort. Wealthy outdoor-lovers strive to tell third- or fourth-generation landowners in the west how they may use their hard-won land, or whether the "public" should take away that land. Neighborhood associations strive to direct homeowners how they must roof, fence, or paint their properties. Section 404 of the CWA is too intrusive, and is just another assault on our liberty by those inclined to control others.

R. Vance Hall, CPG-04530

Response:
I recently read with interest Mr. R. Vance Hall’s comments on the wetlands policy statement that is still in discussion. I am glad he agrees with many of the concepts in our draft wetlands policy statement. I certainly agree with Mr. Hall that I do not want the government intruding into our lives. Wetlands restoration and preservation should be recognized as important and critical, not because of government regulations, but in spite of it.

My heroes, writer and conservationist John Muir and geologist G.K. Gilbert, worked hard to preserve and restore natural environments, not because of government regulations, but because it was obvious to them that restoration and preservation seemed to be the reasonable and appropriate response to the degradation of the environments that they were witnessing.

Even if the federal or state laws did not require wetlands restoration or preservation, I do believe it is a good reason for the natural benefits (better local fishing, better environmental remediation) and economic benefits (increased tourism due to larger wildlife populations) that healthy wetlands provide to communities. Therefore, I propose that a positive statement be made by AIPG on wetlands restoration and preservation, not because the government mandates it, but because it is the appropriate response as temporary caretakers of the earth and its natural resources for our children and grandchildren.

I hope we can come together as geologists and make a statement that is meaningful on wetlands preservation and restoration. I agree with Mr. Hall and I request that Mr. Hall might be willing to put aside his contempt for government intrusion into our lives and work with us to support a wetlands policy that AIPG can be proud of. Our policy statement can be pro-wetlands without being supportive of government regulations.

James A. Jacobs, CPG-07760
AIPG National Advisory Board Representative

Comments on Policy Statement on Wetlands
Dear AIPG:

General Comments—I have worked for the St. Louis District, both part time and full time, for the last 17 years. In the early 1970s, after the passage of the Clean Water Act and enforcement of section 404 by the Corps and EPA, most of the work was done in Planning where I worked. I teamed with a biologist and made determinations where wetlands were jurisdictional wetlands. As you stated in Draft 3, hydrogeology (both surface and groundwater), geomorphology, soils, and plant life were all important. We utilized all of these important parameters. Today, the Regulatory Branch is 80 percent biologists and 20 percent soil scientists--no geologists. This is generally true throughout the Corps. How did this happen? And how do we make sure that geology is included in wetland studies?

I recommend that letters to our congressmen and women is one avenue, and geological state registration boards must get tough on those biologists making geologic determinations that may affect the health and safety of the citizens of the state. Another avenue is through the USGS, as they are a part of the federal agency wetland group. They must speak up as new wetland manuals are produced. The Corps (Waterways Experiment Station—Vicksburg, Mississippi) is now working on a "Hydrogeomorphic" means of establishing wetland quality. The people I met with from Vicksburg were all biological scientists and engineers. When I asked "where are the geologists working on the geomorphology?" I only got blank stares! The AIPG wetland committee should look into the lack of geological scientists working on the project.

Ronald E. Yarbrough, CPG-06545

Public Lands
Dear Editor:

Recent opinions and articles in The Professional Geologist would lead some to conclude that our organization is primarily a group of activists and apologists for the extractive industries. Our Association’s president has even joined in, with a recent rambling attack on the idea that the earth’s climate may be changing. While we certainly represent oil, gas, and mining geologists, I also know that there are those of us whose work involves the engineering, environmental, and education fields. Many CPGs may feel, as I do, that protection of wild places is important for a number of reasons both tangible and intangible, and that decisions cannot forever be made based solely on economics. With that in mind, I would like to respond to the letter by my colleagues Lee Gerhard and Logan MacMillan, which was printed in the August/September issue. In it, the authors are very critical of policies that prevent access to "resource exploitation" on some public land, and blame environmental activists for an impending energy crisis.

The Federal government—that is, you and me—owns two-thirds of the land in Western states. These lands are administered by different agencies within the Departments of Interior and Agriculture. There are varying levels of protection from commercial enterprise on Federal lands. Generally speaking, all oil, gas, and mineral exploration and development are prohibited in our national parks and wilderness areas. The next level of protection is the status of National
Monument. Most monuments are protected from new exploration; existing claims are honored. That is one reason for the tremendous uproar in Western states when President Clinton created the Grand Staircase-Escalante National Monument in southwest Utah in 1996—there are tremendous coal reserves beneath the desert canyons and mesas of the region.

The vast majority of public land, however—including national forests and Bureau of Land Management holdings—is managed as "multiple use." That means recreation and wildlife protection must try to coexist with grazing, logging, and mineral extraction. For most of the 20th century, Federal lands were managed with little thought to what Gerhard and MacMillan refer to as "aesthetics." Ranchers and timber companies controlled policy in national forests and on BLM lands. The 1874 Mining Law gave Federal land to mining companies for a small fraction of what it was worth (and still does on occasion). Oil and gas royalties from public land that were intended for wildlife and conservation programs were instead returned to the petrochemical corporations by Congress as incentives to keep up production. The result, not surprisingly, was profits for the corporations at the expense of wild areas that all Americans own.

By the 1980s, however, public opinion had begun to change. Some of this was due to outrage over the corporate subsidies in an era of huge Federal deficits. But the main reason for the new awareness was simply that more Americans were vacationing on public land. Federal land managers had no choice but to accommodate recreation under the "multiple use" policy. This of course led to conflicts with those who had for decades used these public lands for profit with little oversight.

Only modest changes have been made in the way public land is exploited for resources—it is still a sizeable subsidy for miners, petroleum companies, and so forth. But as Mr. Gerhard and Mr. MacMillan correctly point out, the trend is presently toward denying access to areas with value in recreation or wildlife conservation. Unfortunately for those of us who enjoy wilderness and feel that it is important for America’s quality of life, the management of our wild lands is at the whim of politics. During the little oil crisis early this summer, it appeared that Americans would do anything to get gasoline prices back down to $1.25 a gallon. Western congressmen would likely have been able to scrap access restrictions to petroleum exploration in many areas, including the big battleground, the huge Arctic Wildlife Refuge. There was talk of giving oil companies large "incentives"—that is, Federal handouts—to increase domestic production. A show down between the Clinton administration and business-friendly Congress was averted when OPEC agreed to raise production. As my colleagues pointed out, a similar jump in natural gas prices is expected over the winter.

Much has been said in The Professional Geologist recently to the effect that our country needs a new energy policy. That is true. America’s dependence on fossil fuels is dangerous. So what should we do? As geologists, we can all agree on one thing—fossil fuels are a finite resource. We will eventually run out of them, like it or not. There is, then, a clear choice. Do we keep chasing after oil, gas, and coal at the expense of everything else until it’s all gone? Do we forever sacrifice Mr. Gerhard’s and Mr. MacMillan’s "aesthetics"—clean water, healthy wildlife populations, scenic vistas, a refuge from the cities—just to maintain a way of life that we already know is doomed? I would never wish for the end of someone’s livelihood, but if the choice is between undisturbed wilderness and low energy prices, I’ll take wilderness. There will be alternates to fossil fuels, but there is no substitute for the natural wonders of our country.

What do my opinions on public lands and conservation have to do with our profession? This battle over environment versus exploitation will not go away in our lifetimes. If the public perceives that our organization is filled with shortsighted oil and gas industry executives merely looking out for their jobs, AIPG will suffer. As a CPG whose primary contact with other members is through The Professional Geologist, I must admit that this is sometimes my perception of our organization. Geologists need to be seen as leaders, not as being dragged, kicking and screaming, into the 21st century. Our publications should reflect this concern.

My colleagues in the exploiting industries should not be too angry with me for my opinions, because they will have the last laugh. The next administration will consist of two oil men who care little for "aesthetics." Combined with a Congress that is hostile to conservation, I expect that public land access will be much less of a problem for domestic oil and gas developers. Congressional talk of selling Federal land—our land—by Congress in the past few years may even come to fruition. So do not despair, my friends. The piper will be paid—taxpayers and those of us who love wild places will continue to foot the bill.

Neil M. Croxton, CPG-08827

To Lisa Boettcher, President, AIPG Michigan Section

Dear Lisa,

This is a belated but nonetheless sincere THANK YOU, once more, for all your help during the hectic, intense, grueling Monday at NCSL in Chicago on July 17. You deserve full praise and thanks for unexpectedly showing up, doing all the organizing of materials on the tables, and tirelessly greeting visitors to the booth, as well as getting out materials from the boxes for the visitors and noting names. We needed everybody who was in the booth that day, and your presence was crucial to making as many contacts as we did.

As President of the Michigan Section, you’ve set an excellent example for other Section officers (not just Michigan Section, but all Sections in or near states where NCSL meetings will be held) in the future. I’d like to see your volunteer participation held up as a model for other Sections to follow.

Thanks most sincerely once again, Lisa.

Myrna M. Killey, CPG-06033
AIPG National Editor
Karen B. DeStefanis, CPG-09043, has been named an associate at Leggette, Brashears & Graham, Inc. (LBG), a professional groundwater and environmental engineering services firm based in Trumbull, Connecticut.

A certified professional geologist, Ms. DeStefanis has extensive hydrogeologic experience. She has managed the design and installation of monitor, supply, and recovery wells; development of golf course water supplies; soil and water sampling for potential contamination; environmental site assessments for property transfers; and Superfund site remedial investigation and feasibility studies. Prior to her promotion to associate, she was a senior hydrogeologist with LBG.

Ms. DeStefanis currently serves as a member of the Norwalk Water Quality Committee and the Norwalk Conservation Commission. She previously served as a member of the Norwalk Harbor Management Commission. She is active in the American Institute of Professional Geologists and the Association of Ground Water Scientists and Engineers. She holds an MS degree in geology from the University of Connecticut and a BA in geology from Franklin and Marshall College. Ms. DeStefanis is a resident of Norwalk.

Lawrence Fieber, CPG-09240, has joined Burns & McDonnell as a senior consultant in its Chicago office. Mr. Fieber will be responsible for expanding Burns & McDonnell’s environmental consulting presence in the Chicago area. He has more than 13 years of environmental consulting experience planning, designing, and managing Phase I environmental site assessments, soil and groundwater investigations, risk-based corrective actions, traditional and innovative soil and groundwater remediation projects, and environmental compliance audits.

Mr. Fieber has a bachelor’s degree in geology from the University of Illinois and a master’s degree in geology from Southern Illinois University. He is a licensed professional geologist in Illinois and Indiana and a licensed lead-based point and asbestos inspector in Illinois.

Mr. Fieber is a recognized leader in the environmental and geological communities. He is on the board of directors of the Lake Michigan States Section of the Air and Waste Management Association and is past president of the Illinois-Indiana Section of the American Institute of Professional Geologists.

Robert Kirkham, CPG-04782, a geologist with the Colorado Geological Survey, received the Colorado Scientific Society Past President’s Award for the Best Paper of 1999. Bob’s paper, “Dissolution of evaporite causes widespread active collapse in west-central Colorado,” was delivered to the Society in April.

Bob Kirkham and other Colorado Geological Survey staff members began a geological mapping program in the Glenwood Springs area in 1993. As the mapping progressed, various odd geological structures were noted but their origin was poorly understood.

While working on the geological map of the Carbondale 7.5 minute quadrangle, Kirkham discovered additional evidence that led to the formulation of a theory involving the collapse of a large area due to the dissolution and flowage of beds of evaporite beneath the earth’s surface. Evaporite minerals such as halite, which is sodium chloride or common table salt, and gypsum, which is calcium sulfate, are easily soluble in water. Because of the low density, beds of evaporite can also flow underground. As the evaporite minerals either dissolved or flowed, open voids were created underground, into which overlying strata could collapse.

Continued work in the area by other Colorado Geological Survey and U.S. Geological Survey scientists corroborated, expanded, and clarified Kirkham’s original hypothesis. The paper presented at the Colorado Scientific Society meeting was based upon the cooperative work of the scientists from both the state and federal geological surveys.

Kirkham received a bachelor’s degree in geology from Western Illinois University. After completing his master’s degree at the University of Nevada at Reno in 1976, he began his career with the Colorado Geological Survey. In the intervening years, Kirkham also had his own consulting business and worked for the Colorado Division of Minerals and Geology. In 1995, Kirkham became the team leader of the Colorado Geological Survey geological mapping program.

The Colorado Scientific Society, founded in 1882, promotes knowledge, the understanding of science, and its application to human needs, focusing primarily on earth science but welcoming members with interests in all fields of science.

The Colorado Scientific Society Past President’s Award for the Best Paper is given annually. Bob Kirkham is the 39th recipient of the award. Papers are reviewed by a committee for both presentation and content. Kirkham’s paper was selected on its merits for usefulness and significance, impact, pertinence, timeliness, originality, results, and substantiation.

Robert A. Larson, CPG-08113, an engineering geologist with the Los Angeles County Department of Public Works, was recently elected Chair of the Engineering Geology Division of the Geological Society of America. This Division is the oldest engineering geology group in the United States.

James H. Williams, CPG-00374, retires as Missouri State Geologist. The Missouri State Geologist and Director of the Missouri Department of Natural Resources’ Division of Geology and Land Survey, Dr. James Hadley Williams, retired June 20 of this year after a nearly 50-year career in public service, mostly in Missouri. Jim Williams, CPG-00374, a Charter Emeritus member of AIPG, was honored by his AIPG colleagues on August 4th as the AIPG-Missouri Section bestowed upon him an award created to acknowledge extraordinary careers in geology by AIPG-Missouri Members. The award bears his name to specifically honor Jim’s lifetime of exceedingly important conquests in professional geology. The AIPG-Missouri section is pleased to announce the instauration of the James
Hadley Williams Outstanding Career Achievement Award and the inaugural issuance to the award’s namesake on August 4, 2000. AIPG thanks you, Jim Williams.

John L. Bogdan, CPG-08341

Edward R. Yopp CPG-06236, has recently been elected President of Georgia Mining Association in Atlanta, Georgia.

The Georgia Mining Association is a non-profit corporation organized to advance and encourage the mineral resource industries of the State of Georgia.

He has 25 years of experience in the industrial minerals business in mining, mineral processing, and environmental assignments. He is presently employed as Site Manager of Engelhard Corporation, Hartwell Plant.

AIPG Missouri Section President, Tim L. Kent, CPG-08382, presenting the first ever AIPG Missouri Section, James Hadley Williams Outstanding Career Achievement Award to the award’s namesake, before a packed house at the University of Missouri, Rolla Missouri campus on August 4, 2000. Nearly 300 of Jim’s family, professional associates, employees and friends attended the retirement dinner party. Twenty-five speakers, including a State Senator and other high-ranking state officials, presented nearly two dozen accolades in the forms of Senate Resolutions, speeches, commemorative plaques, and other beautiful mementos. The evening was a fitting testimony to the enormity of Jim’s career accomplishments.

WASHINGTON - The century-old mystery of Earth's "Chandler wobble" has been solved by a scientist at NASA's Jet Propulsion Laboratory in Pasadena, California. The Chandler wobble, named for its 1891 discoverer, Seth Carlo Chandler, Jr., an American businessman turned astronomer, is one of several wobbling motions exhibited by the Earth as it rotates on its axis, much as a top wobbles as it spins.

Scientists have been particularly intrigued by the Chandler wobble, since its cause has remained a mystery even though it has been under observation for over a century. Its period is only around 433 days, or just 1.2 years, meaning that it takes that amount of time to complete one wobble. The amplitude of the wobble amounts to about 20 feet at the North Pole. It has been calculated that the Chandler wobble would be damped down, or reduced to zero, in just 68 years, unless some force were constantly acting to reinvigorate it.

But what is that force, or excitation mechanism? Over the years, various hypotheses have been put forward, such as atmospheric phenomena, continental water storage (changes in snow cover, river runoff, lake levels, or reservoir capacities), interaction at the boundary of Earth's core and its surrounding mantle, and earthquakes.

Writing in the August 1 issue of Geophysical Research Letters, Richard S. Gross of NASA's Jet Propulsion Laboratory reports that the principal cause of the Chandler wobble is fluctuating pressure on the bottom of the ocean, caused by temperature and salinity changes and wind-driven changes in the circulation of the oceans. He determined this by applying numerical models of the oceans, which have only recently become available through the work of other researchers, to data on the Chandler wobble obtained during the years 1985-1995. Gross calculated that two-thirds of the Chandler wobble is caused by ocean-bottom pressure changes and the remaining one-third by fluctuations in atmospheric pressure. He says that the effect of atmospheric winds and ocean currents on the wobble was minor.

Gross credits the wide distribution of the data that underlie his calculations to the creation in 1988 of the International Earth Rotation Service, which is based in Paris, France. Through its various bureaus, he writes, EORS enables the kind of interdisciplinary research that led to his solution of the Chandler wobble mystery. Gross's research was supported by NASA's Office of Earth Science.

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American Geophysical Union,
AGU RELEASE NO. 00-21
Harold E. Karges, CPG-00869, 72, a consulting geologist, died of cardiac arrest at his home on May 18, 2000.

Mr. Karges was a native of Wichita Falls, Texas, and a longtime resident of Rankin County. He was a graduate of Texas Christian University, where he earned a degree in geology. He was a Navy veteran and a scoutmaster. He was a member of First Christian Science Church where he was a former first reader and participated in many church activities.

Mr. Karges was a consulting oil and gas geologist and was active in many oil businesses. He was a registered independent geologist licensed in Mississippi and Florida. He was a member of AIPG and AAPG, where he served on the Certification Committee of Certified Petroleum Geologists and the Division of Professional Affairs. He was a long-time member of the Mississippi Geologist Society and a member of the Society of Independent Earth Scientists.

“He was never too busy to sit down on the floor and let my daughter run a wet comb and brush through his hair,” said daughter-in-law Wanda Karges. “He was a warm, loving, and compassionate man—not just with us, but with everybody.”

“He bent over backwards to help the guy who was down on his luck,” she said, “I never heard him raise his voice or say a harsh word to anybody. He was an all around good guy.”

“He was a real good father to us,” said his son, Carl Karges of Sandhill. “He was a scoutmaster, and he took us to Boy Scout camp in the summers.

“He was the kind of guy nobody had anything bad to say about,” he said.

Other survivors include sons Hardy Karges of Flagstaff, Arizona, and Wilson Karges of Brandon; sister JoAnne Karges of Flagstaff, Arizona, and Wilson Karges of Fort Worth; and three grandchildren.

Memorials may be made to The First Church of Christ Scientist, 125 S. Congress St., Room 106, Jackson, MS 39201; or The Salvation Army, 111 E. Capitol St., Jackson, MS 39201.

The Clarion-Ledger, Sunday, May 21, 2000

Richard P. Swirczynski, CPG-01662, was born in Oklahoma City, Oklahoma on March 28, 1920. He died on April 22, 2000 in the hospital in Casper from a massive blood clot after heart surgery.

He grew up in Oklahoma City where he worked as a teenager in his father’s bakery. After his high school days at Central High, he attended the University of Oklahoma, earning a Bachelor’s Degree in geology in 1943.

Along with many of his friends, he joined the Army and initially worked with Army mules in the pack artillery at Fort Sill, Oklahoma. He claimed the Army mules taught him many valuable lessons. He became a First Lieutenant and served in the Asiatic/Pacific campaign in World War II. He then returned to the University of Oklahoma for postgraduate studies in geology.

Dick worked for Sohio Petroleum from 1947 to 1954. He was District Geologist for Sohio in Casper, Wyoming and became well known as an excellent “prospect generator.” His unique “oil-finding” abilities were utilized by several oil companies after he left Sohio. He was directly involved in the discovery of several oil fields in Wyoming while working for several different oil companies.

He developed a most unique and effective system of making isopach maps of the Skull Creek Shale, which occurs just below the Muddy Formation (Lower Cretaceous). The Muddy sandstone is one of the best oil-producing formations in Wyoming. With these isopach maps Dick could follow the dendritic pattern of deposition of the Muddy. After his early work in the 1960s, the technique began to be widely used and taught in other depositional environments.

Dick’s great “sense of humor” helped him survive the grueling Pacific campaign. He was an active member of the First Presbyterian Church. He belonged to AAPG, AIPG, the Rocky Mountain Association of Geologists, and the Wyoming Geological Association.

He loved to hunt, and each year he took his horses up to an A-frame cabin that he built in the Wind River Mountains near Pinedale. One year he found a huge bear trap chained to a log with some of the bear’s claws still in the trap.

He was preceded in death by his first wife, Margaret Paris Swirczynski. In 1972 he married Jean Tillery Rice of Tulsa, Oklahoma. He is survived by his wife; son Paul; two daughters, Bonnie White and Leslie Evans; and many grandchildren and great-grandchildren.

No one in the geological fraternity will ever be able to fill his shoes. He will be sorely missed.

Roy E. Guess, CPG-02894

James O. Jones, CPG-07039, San Antonio, Texas.

John T. Humphrey, CPG-06112, Durham, New Hampshire.

Earth Science Week Flyers Available

Thanks to AGI, AIPG has, for distribution, colored 8½ x 11 flyers announcing Earth Science Week 2000. If you are able to use some of these announcements, or know an educator or other interested individual or group who would have an interest, please contact AIPG headquarters for details. The announcements are available at no cost.

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.
This service is open to AIPG Members as well as non-members. The Professional Services Directory is a 12-month listing offering experience and expertise in all phases of geology. Prepayment required. Advertising rates are based on a 3 3/8” x 1 3/4” space.

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Oct. 4-5. NGWA Eastern Focus Conference will tackle key issues facing groundwater scientists, engineers, and other professionals concerned with groundwater anywhere along the Eastern seaboard, Newburgh, NY. Contact: NGWA Customer Service Center at (800) 551-7379, or visit the NGWA Website at <www.ngwa.org> and click on the “Education” button.

Oct. 11-12. Drought 2000: Impacts, Policy, and Technology, Des Moines, IA. Contact: NGWA Customer Service Center at (800) 551-7379, or visit the NGWA Website at <www.ngwa.org> and click on the “Education” button.


Nov. 10-15. Managing Earthquake Risk in the 21st Century, Sixth International Conference on Seismic Zonation, Palm Springs, CA. Contact: Earthquake Engineering Research Institute, 499 14th St., #320, Oakland, CA 94612, Ph.: (510) 451-0905, e-mail: eeri@eeri.org, http://www.eeri.org.

Nov. 13-16. GSA Annual Meeting, Reno, NV. Contact: GSA, P.O. Box 9140, Boulder, CO 80301, Ph.: (303) 447-2020 or <www.geosociety.org>.


2001

Sep. 29-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 Department of Geological Engineering, University 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.

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<th>As of 08/23/00</th>
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TOTALS 4,930 4,809

ADVERTISERS INDEX

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Applicants for certification must meet AIPG’s standards as set forth in its Bylaws on education, experience, competence, and personal integrity. If any Member or board has any factual information as to any applicant’s qualifications in regard to these standards, whether that information might be positive or negative, please mail that information to Headquarters within thirty (30) days. This information will be circulated only so far as necessary to process and make decisions on the applications. Negative information regarding an applicant’s qualifications must be specific and supportable; persons who provide information that leads to an application’s rejection may be called as a witness in any resulting appeal action.

Applicants for
Certified Professional Geologist

NY-William K. Fetter
P.O. Box 37, 70 Pleasant Hill Rd., Mountainville NY 10953. Sponsors: Peter Sutherland, David Muscalo, Richard Kummerle.

NV-Alan J. Morris
237 S. Ashford Dr., Spring Creek NV 89813. Sponsors: David Mako, Curtis Freeman, Keith Bettles.

RI-Jonathon D. Pullafico

NJ-Paul V. Schatz

NY-Keith A. White

Applicants Upgrading to CPG

NJ-Gene P. Fowler

PA-David S. Miller

MI-William J. Prall, Jr.
Environmental Solutions, Inc., 1023 Business Park Dr., Traverse City MI 49686. Sponsors: Scott Park, David Skrocki, Beth Lincoln.

Applicants for Reinstatement

ID-Robert C. Lewis
P.O. Box 1364, Kamiah ID 83536. Sponsors: Don Keill, Matt Shumaker, Roger Haskins.

CO-Richard F. Madole

Applicant for Registered Member

OH-Howard M. Miller
1328 Cuyer Ave., Cincinnati OH 45208. Sponsors: Donald Brice, Dennis Connair.

Applicant for Member

CO-Irene Carpinteri
CTL/Thompson, Inc., 375 E. Horsetooth Rd., Bldg. 3 #100, Ft. Collins CO 80525. Sponsors: Dave Glater, Thomas Chapel.

Applicants for Student Adjunct

CT-Adam R. Goss
P.O. Box 4437, 222 Church St., Middletown CT 06459

VA-Emily D. Johnson
225 W. Tazewell Way, Williamsburg VA 23185. Sponsor: Tom Dufty
New Certified Professional Geologists

MI-Conklin, Linda C.   CPG-10508
3164 North Jefferson Rd., Morehead MI 48642

CO-Deng, Qingping   CPG-10515
2134 W. Maples Pl., Highlands Ranch CO 80126, (303) 620-0020

CO-Flinley, Thomas W.   CPG-10516
537 East 9th St., Loveland CO 80537, (970) 663-0138

AK-Hunter, Robert B.   CPG-10517
17957 Meadow Creek Dr., Eagle River AK 99577, (907) 522-4301

AK-Muniz, Herminio R.   CPG-10518
Hart Crowser, 2550 Denali St. #705, Anchorage AK 99503, (907) 276-7475

NV-Coyner, Michael J.   MEM-0051
3447 Montezuma Way, Sparks NV 89434, (775) 687-5050

TX-Hauwert, Nico M.   CPG-10521
2401 Bahama, , Austin TX 78733, (512) 282-8441

CT-McNally, Jeffrey N.   CPG-10522
12 Fordyce Hts., New Milford CT 06776-3606, (914) 232-2500

NJ-Prothro, Calvin K.   CPG-10523
20 Netcong Highlands, Netcong NJ 07857, (973) 597-7418

TX-Serenko, Thomas J.   CPG-10526
Southern Clay Products, 1212 Church St., Gonzales TX 78629-3008, (800) 324-2891 x723

NY-Robbins, Mark E.   CPG-10527
Fenley & Nicol Environmental, 445 Brook Ave., Deer Park NY 11729, (631) 586-4900 x167

New Member

NV-Orobona, Michael J.   MEM-0051
223 E. Spring Creek Pkwy., Spring Creek NV 89815, (775) 778-4070

MN-Tilema, Christine A.   MEM-0052
798 10th St. NW, #202, New Brighton MN 55112, (651) 659-1328

PA-Hersey, Kasey D.   MEM-0053
1201 Pointe Court, Chester Spring PA 19425, (610) 407-7920

NJ-Turner, Brad W.   MEM-0055
101 Fieldcrest Ave., Rantian Plaza III, Ste. 2B, Edison NJ 08837, (732) 417-5887

MI-Iseler, Jason P.   MEM-0057
Southern Clay Products, 1212 Church St., Gonzales TX 78629-3008, (800) 324-2891 x723

NY-Robbins, Mark E.   CPG-10527
Fenley & Nicol Environmental, 445 Brook Ave., Deer Park NY 11729, (631) 586-4900 x167

New Associate

Mi-Buchin, Jamison L.   AS-0009
1306 W. Herbison Rd., De Witt MI 48820, (517) 641-7333

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