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The Professional GEOLOGIST

- PARTICIPATE IN THE AIPG WASHINGTON D.C. FLY-IN THIS YEAR!
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- WANTED: Volunteers with Political Savvy!
- AIPG Geology Scholarships

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Participate in the AIPG Washington D.C. Fly-In this Year!

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FRONT COVER— *Scientific Name:* Cupulocrinus gracilis. *Common Name:* sea lily; *crinoid.* *Age:* Ordovician (about 450 million years old). *Locality:* Beaver Dam. *Source:* Donated by H. Hempel, 1979. This image was acquired from the internet at <<http://geology.wisc.edu/~museum>>. Image is copyrighted 1996 by the Friends of the Geology Museum.

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Internationalization: Here to Stay!

International trade has always been a significant factor in our economy. Although the term tends to be overused, globalization as a process will continue to dominate headlines and intergovernmental relations between countries. Many segments of our industries such as computers, chemicals, pharmaceuticals, banking, wastewater treatment, etc. are highly dependent on exports and on overseas operations for significant profit sources. More and more companies are locating offices and/or facilities outside of the US. Foreign countries, on the other hand, are becoming more technically advanced with technical centers of their own that not only will compete with US companies overseas, but will eventually expand into the US market as well. A good example is essentially the relocation of many technical capabilities of the oil and mineral industries to overseas locations. Geoscience staffs are common and expanding in many third world countries as those countries develop their own scientific capabilities. Competition, in other words, will intensify in international and domestic markets. Corporations located in the US that are involved in the environmental and earth resource areas still own major innovative or state-of-the-art technologies. This great technology base allows US companies to export their products and services if the companies understand that the key to survival is to increase market share wherever that may be. Foreign companies understand this aspect of the US market because they are investing in US companies or buying US technologies to better market themselves. No matter what side of the fence you are on, foreign or domestic, competition is intensifying, with global outlooks necessary for survival.

If you think you can ignore the international marketplace and just concentrate on a particular niche somewhere in the US, you may be mistaken. Foreign companies already dominate in many key sectors of our economy, and, as a matter of fact, dominate in many oil and mining industries and environmental industries in the US. As a result, an international company will introduce foreign procedures and quality goals to stan-

darize their operations in the US with their other facilities overseas. Therefore, as you work for one of these companies, you will have to become familiar with non-US rules and operations. The importance of these changes will have major effects on your career whether you are aware of it or not.

As we enter this new century, I believe it will be more important to have ties with companies or institutions overseas. Developing international partnerships and strengthening ties with companies overseas, or locating additional operations overseas, will become key to successful companies. Relationships with commercial attaches of embassies and international organizations, as well as companies, are just as important to maintaining steady growth of any company. It will be just as important for AIPG to expand its affiliations with international societies to delve into the changes that are occurring in various countries and the importance of trends within regions of the world. Organizations such as NATO (commercial side), United Nations, World Bank, Import/Export Bank, and OECD are important intelligence links to the global market. AIPG is lucky to have a good relationship with the European Federation of Geologists as we cooperate and develop common programs that will help the geological profession throughout the global market. That is one of the reasons why AIPG will be active at the First International Professional Geology Conference in July 2000, in Alicante, Spain. I think it is also important to coordinate with the European Federation of Geologists to help them succeed in this endeavor for the future of not only European geology but for geologists throughout the world. Cooperation and development of strong ties to the Canadian Council of Professional Geoscientists also is key to AIPG members for their future. As part of the many activities of the 2000 Executive Committee, AIPG is evaluating reciprocity agreements between the Geological Society of London and other organizations. Having this type of agreement will help US geologists in an ever-increasing competitive world to maintain their careers.

Participate in the AIPG Washington D.C. Fly-In this Year!

The annual AIPG Washington D.C. Fly-In is scheduled for May 1-3, 2000. AIPG encourages the participation of members who are interested and able to contribute some time to this important political activity. If you are interested in participating this year, please send an e-mail to AIPG headquarters and you will be placed on an e-mail list to receive all Fly-In information. This is an opportunity for self promotion at its best. Please give serious consideration to participating in this advocacy effort on behalf of yourself and the entire profession.

VOLUNTEERS NEEDED!

Membership Development Committee

One of AIPG's greatest accomplishments can be professional career development. Let's share the benefits of AIPG with our colleagues and friends. Please volunteer to help with our national membership development committee. The ideas are abundant, but workers are few. Get involved by contacting Dawn Garcia, Chairman, at (520) 792-2800 <dgarcia@theitgroup.com>.

ACADEMIC DEPARTMENTS' VIEWS OF ACCREDITATION

Robert G. Corbett, CPG-04502

INTRODUCTION

In higher education, there are two distinctly different types of accreditation, *regional institutional accreditation* and *specialized-unit accreditation*. Colleges and universities strive to obtain and maintain accreditation by a regional accrediting agency, a status widely acknowledged to warrant respectability of the overall operation, policies, and programs at the school. Central administrators have great respect for and go to great lengths for regional institutional accreditation. Specialized unit accreditation, also known as disciplinary accreditation, is either generally opposed by central administrators (Harclerod, 1980) or held to be less helpful (Elsass and Pigge, 1980) than regional institutional accreditation. Central administrators, although pleased when a chemistry or an engineering program is accredited by the American Chemical Society (ACS) or the Accrediting Board for Engineering and Technology (ABET), tend to resent the influences that such external groups exert. Typical reasons given include duplication of effort and the costs of the process, but generally unstated is their resentment of the external pressures exercised in matters of resource allocation.

Should we be promoting establishment of voluntary accreditation for college and university geoscience departments and their curricular programs? AIPG's Academic Education Committee already has a program of cooperative evaluation of geology programs (Corbett, 1994), measuring how closely a department meets the expectations presented in our AIPG publication, *Education for Professional Practice*. This evaluation is not accreditation.

WHY MEMBERS OF AIPG SHOULD CARE

It comes down to what should constitute professional education for future geologists, and should those practicing the profession and hiring new graduates have some say in determining the professional curricula? What form should that say take? Disciplinary accreditation would involve a checklist of skills and experiences needed and a standardized curriculum, formulated in large part by panels of professionals, with only a minority representation from academe.

Accreditation may not be appropriate for the geosciences for a number of reasons. Read on, and see the thoughtful comments from department chairs of 142 programs in the geosciences.

Regardless of your thoughts on whether accreditation is necessary, many of us are discouraged both by change and lack of change in the preparation of students seeking a career in the profession. On the one hand, a field camp course is no longer required in many programs. On the other hand, the traditional curriculum on some campuses does not allow students exposure in more appropriate courses in geoscience, math, computer science, and other sciences. Some programs are prevented from change by local rules, budget constraints, or current faculty expertise. These concerns about curricula are recognized in articles by Corbett, 1992; Eaton, 1995; Hatcher and Corbett, 1996; and Feiss, 1996, 1997, 1998. They were the subject of a "Hot Topics at Noon" at the G.S.A. meetings in Toronto in 1998. In order to assess more of what is currently covered (key concepts) in courses for majors, a "Geoscience Curriculum Survey" is underway, initiated by faculty at Lake Superior State and assisted by the American Geological Institute.

VIEWS FROM ACADEME

Views from academe were sought in a recent survey. In October, 1999, I wrote to 325 department heads/chairs, alerting them that their opinions were needed via a two-page faxed questionnaire. Here was the opportunity for them to express their thoughts and opinions and have them made known to the larger geoscience community. I suggested that they talk to others, particularly colleagues in engineering and chemistry, about how well they regarded their versions of accreditation. I also suggested they visit the websites <http://www.abet.org/ABET> and <http://www.acs.org:80/education/cpt/guide.html> in order to gain details firsthand about these two disciplines and their accreditation.

By the end of December, I received 142 responses. Only 30% of respondents would welcome accreditation, whereas 43% were neutral or uncertain, and 27% were opposed. Even this level of support dropped to 17% in response to whether they would welcome standards being developed by a committee largely external to academe. On the other hand, if disciplinary accreditation were in effect, 52% would probably seek it and 73% felt that not being accredited would have some negative effect on their program or graduates. For those respondents having a choice in accreditation model, 60% preferred the ACS model.

What is most enlightening about the results, however, are the free-form comments (volunteered answers) provided by the respondents. I thank each person who took the time to express his/her views by checking off a choice to each question on the survey, but I doubly thank those who provided thoughtful comments explaining the position chosen.

VOLUNTEERED ANSWERS AND PERSPECTIVES

Five questions were posed to determine the views of the respondent to voluntary accreditation. Three possible short answers that could be checked were provided below each question, and respondents generally selected one of these choices. Additional space was available under each set of short answers, in order for the respondent to provide reasons for or an elaboration of the answer (volunteered answer).

Most of the 142 respondents provided volunteered answers using these spaces. I have categorized the 245 additional answers into categories. The types of answers, by frequency, are summarized in order to gain additional insight into the thoughts of respondents.

Please note that in this method of categorization and the counting of responses, some respondents listed the same thoughts in volunteered answers to more than one question, and I counted each occurrence as one answer. That is, one respondent may have given a similar volunteered answer to up to three questions. Also, some respondents provided multiple volunteered answers in elaborating a single response, and in several instances listed both pro and con aspects for accreditation.

Here are the categories of volunteered responses, in decreasing order of frequency. The first six categories range from 18% to 9% of the total answers provided.

Negative effect on curriculum

The largest volunteered response was that accreditation would diminish flexibility in curricular offerings, stifling creativity, innovation, and curricular reform, and impose a narrower, job-related (vocational) perspective.

Loss of control over curriculum

Many are opposed to the imposition of curricular requirements established by a committee composed primarily from outside of academe, a situation typical in disciplinary accreditation in other fields. Some are willing to place trust in a board of at least 50% academics, others want all academics, and some claim that the department faculty must have sole say in establishing curricula within the department.

Leverage for improved funding

Accreditation would provide leverage for obtaining funding from the college or university for their program. This attribute was the one most mentioned by departments with 5-10 full-time geologists, but far less frequently by smaller and larger departments. Six responses maintained that accreditation would not increase leverage, and could result in closure of programs if demands of an accrediting agency could not be met by the college.

Prestige

Accreditation of a program was expected to improve credibility, visibility, and prestige.

No need

There is no need for accreditation. Accreditation would serve no need or purpose, and could be counterproductive. Some pointed out duplication with existing state requirements; others that graduate school admissions policies are not concerned with accreditation; that geology (unlike chemistry or engineering) is too broad in scope for accreditation to be useful, in that the degree prepares students for many professions; and that significant voices are urging more interdisciplinary preparation. One response from a person believing industry is promoting accreditation commented that "employers don't need to hire our grads if they don't like our curriculum."

Unwanted bureaucracy

Accreditation would bring micromanagement, too many rules, more paperwork, higher costs, and unwanted bureaucracy. This was the most frequent concern expressed by departments of more than 10 faculty. Many of these respondents had specific negative comments for ABET accreditation, one describing it as an "unfortunate humiliation."

Some respondents had personal experience with ABET accreditation, and most of it was negative. These were extracted from other categories, and are presented here.

ABET

As part of other answers, 13 responses used phrases such as frustrating, confusing, or not worth the effort, in references to ABET, whereas only one response found ABET accreditation worthwhile.

Less frequent responses

These comments constituted less than 4% of the responses, but are clearly important to the responders.

- All reviews are useful, but should not compel change.
- Accreditation would probably insure a minimum quality in geologic education.
- Accreditation might exempt a program from some local requirements (e.g., foreign language).
- We would still need to have non-accredited programs in an accredited department.
- We are a liberal arts college, not vocational or technical.
- Disciplinary accreditation helps our university in seeking regional accreditation.
- Small programs are at a disadvantage in seeking accreditation.
- One accreditation model can't apply to all programs; external reviews are more likely to be unbiased
- Accreditation is a source of friction on our campus.
- Practicing geologists recognize need for a strong curriculum.

FINAL THOUGHTS

There are other ways than accreditation to encourage geoscience departments to reform curricula where needed. Each is in use on some campus. Periodic program reviews through internal self-studies, by an advisory board, by an outside consultant, or by AIPG's Academic Education Committee are some of the approaches. These generally result in recommendations, not mandates. We regard an appropriate curriculum as important, and AIPG will not certify applicants whose college course work is unsuitable for a career in geology. Helpful also are articles written by members of the profession who survey course work desired by employers. A current example is Heath, 2000. In some states, a curriculum is prescribed, either by an education agency or by a licensing or registration board.

If we agree that the masters degree is the degree of choice for most professional geologists, then the onus is on the graduate schools, their admissions requirements, and departmental degree requirements. Many will admit students with good academic records but with a shortfall of course work on a probationary status, and the student can make up undergraduate course deficiencies while working on a graduate degree. The final assessment is in the marketplace, where jobs are not offered to graduates with weak or deficient course work or who come from universities with a poor reputation.

REFERENCES CITED

- American Institute of Professional Geologists, 1991, Education for Professional Practice, 1991, Arvada, Colorado, 16 p.
- Corbett, R.G., 1992, Undergraduate geology curricula - what we expect, what graduate schools expect, and what exists: *The Professional Geologist*, v.29, n. 11, p. 13-16.
- Corbett, R.G., 1994, AIPG Cooperative Evaluation Program: *The Professional Geologist*, v.31, n. 5, p. 13.
- Eaton, G. P., 1995, Re-shaping America's earth-science curriculum: *Geotimes*, v. 40, n. 1, p.4.
- Elsass, D.G., and Pigge, F.L., 1980, Opinions of college administrators concerning cooperative accreditation: *North Central Association Quarterly*, v. 55, p. 25-32.
- Feiss, P.G, 1996, The survival of academic geology programs: *GSA Today*, v.6, n.4, p. 16-17.
- Feiss, P.G, 1997, Undergraduate science education: *Geotimes*, v. 43, n. 1, p. 17.
- Feiss, P.G, 1998, Undergraduate science education: *Geotimes*, v. 44, n. 7, p. 13.
- Hatcher, R.D., and Corbett, R.G., 1996, Educating professional geologists for the 21st century: is accreditation part of the answer?: *Geotimes*, v.41, n. 4, p. 5, 35-36.
- Harclerod, F.F., 1980, Accreditation history, process, and problems: AAHE/ERIC/Higher Education Research Report No. 6.
- Heath, C.P.M., 2000. The technical and non-technical skills needed by Canadian-based mining companies: *Journal of Geoscience Education*, v.48, n. 1, p. 5-18.

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AIPG GEOLOGY SCHOLARSHIPS

AIPG announces the availability of up to four \$1,000 geology scholarships for AIPG Student Members. Details will soon be published in *TPG* and on the AIPG website <www.aipg.org>.

Summary of the January, 2000 AIPG Executive Committee Meeting

**James A. Jacobs, CPG-07760, AIPG National Advisory Board Representative, and
Mike Lawless, CPG-09224, AIPG National Secretary**

The January 22, 2000 Executive Committee meeting focused on a call for new members and a need for new sources of revenues. Some innovative plans were discussed regarding these two priorities.

The 2000 Executive Committee (ExCom) had its first meeting on Saturday, January 22, 2000 at the new AIPG headquarters in Westminster, Colorado with President Dennis Pennington presiding. Those present included President Pennington, President-Elect Fakundiny, Vice President Berg, Treasurer Buchanan, Secretary Lawless, Editor Killely, Editor-Elect McLemore. Advisory Board Representatives Hoyt, Jacobs, Knight, and Plitnik were also present. AIPG staff was represented by Executive Director Siok as well as AIPG staffers Wendy Davidson and Cathy O'Keefe. Observers and visitors included Past President Tom Fails; John Howard, Missouri; Dave Abbott, Colorado; and Gary Van Guilder, Minnesota.

The first order of business was the adoption of the agenda and approval of minutes from the October 3, 1999 meeting and December 17-22, 1999 Interim Action. The Secretary's Report provided information that is key to the future health of the organization. During the last 12 months, from December, 1998 to December, 1999, total membership (all categories) had dropped from 5,103 to 4,962, with a drop of 193 in CPG Active status. There was an increase in retired CPGs and a decrease in candidates for certificates. General members and student affiliates also increased. These figures were used by President-Elect Fakundiny to urge ExCom members that one of the most important efforts that AIPG can undertake in 2000 is to increase membership beyond the 159 applications AIPG received last year.

The Treasurer's Report indicated that overall, AIPG is in much better financial shape than we were twelve months before. A great deal of the credit should go to the Executive Director, who has brought AIPG into line with expenses and projected profitability. Treasurer Buchanan noted that the fundamental problem is the reliance on dues and poor revenues from other sources, especially publications. Through the ensuing discussions, ExCom members agreed that we can not continue to publish at a loss, and AIPG needs to find alternate sources of revenues.

The Editor's Report was provided by Editor Killely. She noted that articles are needed for *TPG* Wendy Davidson is continuously updating the website at <http://www.aipg.org>. For publications, *Environmental Risk and Liability Management for Corporations and Consultants* is ready for press. *A History of AIPG 1963-2000* is likely to be made available electronically on the AIPG website. Earth Science Week (ESW) should have more focus from national AIPG. The state Sections could use the ESW as a great opportunity for public outreach and press releases. AIPG will pursue discussions of teaming with a variety of other geological organizations that might have better publication distribution networks than AIPG. AIPG will consider publishing a catalog of publications including popular volumes published by others. ExCom agreed that AIPG needs to create sustainable new sources of income. One idea discussed was to find out about out-of print or hard-to-find government publications (USGS, state survey reports, etc.) that might still be in demand. Using scanning technology, these documents could be offered by AIPG for a fee.

The AIPG Foundation will distribute \$23,000 in 2000, not including \$4,500 for publication of the new edition of *The Citizens' Guide to Geologic Hazards*. President Pennington suggested that he would like to see an AIPG Internship program started where an intern would serve at headquarters. Sections with specific and appropriate funding needs (such as grants for outstanding earth science teachers or students) should make application with the AIPG Foundation Grants Committee.

ExCom held an Executive Session to discuss confidential information related to specific CPG applications, nominations for officers for 2001, as well as honors and awards. Later, President-Elect Fakundiny and Vice President Berg provided written reports and presented summaries of their

respective reports. Executive Director Siok provided a written report including projected income and budget for 2000, and a schedule of activities for the year.

President Pennington discussed his plans for the year 2000. This will be a "back-to-basics" type year, focusing on membership development, non-dues income, grants/scholarships, support to Sections, and advocacy. He wants to revive inactive Sections; each member of the ExCom "adopted" an inactive Section to work with to increase activity and involvement of membership. Pennington would also like each Section to establish (if not already established) a strong relationship with its state geological survey. This year we will also re-evaluate all AIPG committees and ensure that the ones we have are the ones we need. Unnecessary committees could be disbanded, while additional committees could be established. Our publications policies will be reviewed and future publications evaluated on a more business/marketing-oriented basis. He will focus on marketing AIPG to a wider audience, publicizing the benefits of membership in AIPG.

President Pennington met with AIPG Past-Presidents and discussed establishing a strong mentor program for young geologists. National student scholarships funded by the AIPG Foundation are being evaluated by President Pennington. Setting up a visiting lecturer program was also discussed. The Washington Fly-In will be continued and expanded if possible. Pennington would like to see an employee of the USGS on the Advisory Board, with the goal of expanding the number of members within USGS. President Pennington also submitted a written report on the status of professional accreditation in the geological sciences.

Membership is a critical element in AIPG's continued success. President Pennington will work with others to establish a recruitment incentives and membership contest. The Membership Committee will promote the new membership categories, promote sponsorships by vendors and contractors, and advertise in appropriate publications. The benefits of AIPG membership for students, such as job networking and learning about the profession, will be promoted. In addition, professors and teachers will be encouraged to join AIPG as part of the membership development program. As well as bringing in new members, President Pennington noted that several AIPG Sections were in need of re-energizing. A plan was developed at the meeting to help facilitate the restoration of the less active Sections.

Representative Plitnik reported that the 1999 Annual Meeting hosted by the Alaska Section was a success. Chairman Travis provided a written report regarding the upcoming AIPG 2000 Annual Meeting, including an outline of the preliminary program. Chairman Howard of Missouri provided copies of the memoranda of understanding between AIPG and AEG for the AIPG 2001 Annual Meeting. This is planned as a joint meeting. Other meeting dates and locations were discussed.

AIPG continues to be active in working with a large variety of geology professional societies throughout the world. Of particular note is the European Federation of Geologists First International Professional Geology Conference, July 11-14, 2000 in Alicante, Spain. Past President Fails is the First Vice President on the Executive Committee for the conference. Ethics Committee Chairman Abbott will also attend this international meeting, presenting a session on ethics.

The Washington, D.C. Fly-In is scheduled for May 1-3, with the next ExCom meeting to be held on April 30.

Position statements or white papers may be a valuable way for AIPG to present objective information to the public and the profession. Nonetheless, based on the discussions at the meeting, any statements made must be able to account for the wide variety of viewpoints that are held by our diverse membership. No specific position statements are available for review at this time.

Self-Interest

William J. Siok, CPG-04773

I now know firsthand what is meant by the expression "springtime in the Rockies"! The weather here is a true delight. It's possible to enjoy a snow storm one day, and the next day enjoy the feel of the warm sun melting the snow.

It's somewhat of a metaphor for AIPG, I think. One day can be spent mired in the intricacies of a problem brought in by a member, an ethics complaint, or a sticky procedural matter associated with legislative activity in one of the states. The next day can be very different and routine.

I don't enjoy dwelling on the negative, and will usually attempt to place a constructive spin on the negativity which sometimes flows into this organization. To quote one of our charter members, AIPG has its share of "...those who are generous with their criticism, but stingy with their time and talents." It would be vacuous to say I don't understand why some exhibit this attitude, because I do understand. We all understand. But rather than try to perform psychoanalysis, I want to use this space to try to convince the disgruntled, critical member (and ex-member) to turn his or her cynicism into productive activity on behalf of their personal self-interest.

It's no wonder we geologists can't establish the same level of public recognition and respect held by engineers, for example; we're too busy criticizing each other! I never cease to be amazed that in our profession we have a few geologists who are not averse to providing rapid-fire critique about one issue or another, but are unwilling to bring their concerns to AIPG and there articulate the specifics and then join the effort to address the issue! Some of these fill the ears of any available listener with complaints, yet will not use their membership prerogatives to present their points-of-view and lead the organization to achievement of the desired change. Why is it that we geologists will not pull together for our individual and collective benefit?

I suspect we are, in part, reflective of general society. We are not, after all, each cut from the same cloth. But we should be able to agree upon some fundamental propositions such as:

- Encouraging reciprocity between jurisdictions which have (or soon will have) geologist registration statutes. Further, work to encourage uniformity and compatibility of registration provisions.
- Conducting more effective lobbying efforts, state and national, on behalf of the profession. [Of course, this means money and time. "Let some

one else do it for me, I'll reap whatever benefits are gained. I'll also be very angry if a new law which I didn't have any interest in promoting (or stopping) doesn't address my grievances. Maybe my displeasure can be attributed to AIPG not doing what I think it should do, even though I am not active in the organization, even to the extent of formally expressing opinions."]

- Working diligently to improve public relations. (To let the public know about the geology behind their plastics, pharmaceuticals, clothing, building materials, heating, auto mobility, food (nutrients, water, "soil"), jewelry, flood control, water supply, waste disposal, earthquake warnings, landslide protection/mitigation, spectacular natural features. This is only a partial list, but do most laymen know about their daily dependence upon products, materials, and services available due to the efforts of geologists? We shouldn't be arrogant about our role, but should publicize it.)
- Providing employment assistance for experienced geologists. (How many of us don't know at least one geologist who has lost a job at least once? With willing volunteers, AIPG could certainly be of greater assistance here. AIPG offers free employment advertising in *TPG* for members—and this fact has been published numerous times in *TPG*—but rarely do ads come in. The AIPG website also has a place for members to post resumes. At the very least, we should be able to help one another find employment, especially in the case of job loss.)
- Assuming some responsibility for monitoring and guiding career counseling and assistance for undergraduates. (Do undergraduate geology majors receive the best advice regarding immediate employment opportunities and long-term career prospects? Do they understand the benefits of starting, early in their professional lives, the development of a network of colleagues through membership in professional associations like AIPG?)

How many and what type of admonitions grab geologists' attention and dedication? What could be a better, all-encompassing answer than self-interest? How about we start negotiating with one another, agree to attend to one or two of these items, devote some of our valuable time and talent to AIPG, and work together to promoting ourselves?

WANTED:

Volunteers with Political Savvy!

The State Affairs Committee is seeking new volunteers to assist Sections in political, legislative, and regulatory affairs. If interested contact John Howard at (314) 843-4220 or by e-mail <johnthoward@worldnet.att.net> or Bill Siok at (303) 412-6205 or e-mail <wsiok@aipg.com>.

1ST INTERNATIONAL PROFESSIONAL GEOLOGY CONFERENCE ALICANTE, SPAIN

July 10-14, 2000

The Spanish Official Association of Geologists, the European Federation of Geologists, the American Institute of Professional Geologists, the Canadian Council of Professional Geoscientists, the Spanish Geological Society, and the University of Alicante are pleased to present the 1st International Professional Geology Conference, to be held in Alicante (Spain), from July 10-14, 2000.

AGI GOVERNMENT AFFAIRS MONTHLY REVIEW

January, 2000 monthly review prepared by Margaret Baker, David Applegate, MEM-0002, and John Dragonetti, CPG-02779, AGI Government Affairs Program.

- Preview of the President's Science Funding Request
- 5th Annual Science-Engineering-Technology Congressional Visits Day
- Interior's Solicitor General Releases New Mining Opinion
- Course and Name Change for National Institute for the Environment Supporters
- New Forest Service Rules for Special Permit Cost Recovery
- DOE Announces Geothermal Initiative
- Gore, McCain Win in Granite State
- Looking for a Few Good Summer and Fall Interns
- New Material on Website

Preview of the President's Science Funding Request

In a speech on January 20th at Caltech, President Clinton announced that his budget will include several large funding increases for science, technology, and engineering programs. Clinton stressed the importance of supporting increased funding in all scientific and engineering fields because "advances in one field are often dependent on breakthroughs in other disciplines." The President's budget request will include a \$675 million increase for the National Science Foundation, the largest dollar increase in the agency's history. Clinton also announced \$500 million for a nanotechnology initiative that will cut across several federal agencies. Although the President's budget is not officially released until February 7th, indications are that most geoscience-related agencies will see increases this year. The president's budget, however, is just a request, and it will take a concerted effort from the scientific community to convince Congress to turn the presidential request into bipartisan reality.

5th Annual Science-Engineering-Technology Congressional Visits Day

Please come to Washington on April 4-5, 2000 for Congressional Visits Day (CVD). Over 200 scientists and engineers from academia and industry are expected to participate in this fifth annual event to voice support for increased federal investment in science and technology. Last year, 20 geoscientists participated, and we would again like to see a strong contingent of geoscientists visiting their members of Congress and congressional staff on Capitol Hill. We need your help to identify geoscientists who would be interested in participating, and we particularly encourage the leadership of AGI's member societies to come. CVD consists of an opening day of briefings by key administration and congressional leaders followed by a day of constituent meetings with senators, representatives, and their staff. AGI will join with AGU to hold a pre-briefing for geoscience participants on the first day, and we can help arrange the constituent visits. If this event appeals to you or you know of someone who would be interested in coming to Washington, please contact Margaret Baker by e-mail at mab@agiweb.org or phone at (703) 379-2480 ext. 212.

Interior's Solicitor General Releases New Mining Opinion

Interior Department Solicitor John Leshy, fresh from tangles with Congress over his views on mill-site size under the Mining Law of 1872, issued another controversial legal opinion earlier this month that sets a precedent by which the Bureau of Land Management (BLM) can reject a mining permit application due to environmental and cultural degradation. The legal opinion was in response to a permit application for the Glamis Imperial Mine in southeastern California. In Leshy's view, the mine is located in an area of important religious, cultural, and historical resources for the Quechan people as well as a delicate desert environment. First proposed in 1994, Glamis Imperial mine would be an open-pit, cyanide heap-leach gold mine that is proposed to extract up to 150 million tons of ore. Leshy's opinion endorses the Federal Advisory Council on Historic Preservation's request that Secretary Babbitt and the Department of the Interior help to protect cultural resources. More information on the decision is available in AGI's mining law reform update at <http://www.agiweb.org/gap/legis106/miningup99.html>.

Course and Name Change for National Institute for the Environment Supporters

On January 26th, the Committee for the National Institute for the Environment (CNIE) announced that it was changing its name to the National Council for Science and the Environment (NCSE), declaring victory in translating its goals for improving science information for environmental decision-making into National Science Foundation (NSF) initiatives. CNIE originally formed in 1989 with the goal of establishing a new federal agency — the National Institute for the Environment — but in recent years shifted toward a goal of establishing a semi-autonomous NIE within NSF. The National Science Board rejected the idea but undertook a study of environmental science at NSF. The ensuing report called for a major increase in funding for environmental research and, in CNIE's opinion, recommended implementation of "most of the activities initially proposed for a National Institute for the Environment." As a result, CNIE announced last October it fully supported implementation of the report and was suspending its call for the creation of a NIE. The newly named NCSE will work to "develop an online information dissemination system through which users can find understandable, science-based information about the environment." More at <http://www.agiweb.org/gap/legis106/nie99.html>.

New Forest Service Rules for Special Permit Cost Recovery

In November, the U.S. Forest Service proposed new rules to include a fee for processing an application for special-use permits. Because many geologic research and educational activities in the national forests require such permits, the issue is of interest to our community. According to Forest Service staff, such permits include paleontological permits issued on National Forest System Lands. Processing fees range from \$75 to \$750, but can be waived for institutions submitting evidence of an IRS exemption under Code 501(c)(3)— a classification that most scientific societies and universities fall under— and that studies are of public benefit. Since most paleontological permits are issued to institutions or organizations for scientific or educational purposes, it is anticipated that they may qualify for a waiver of the processing and monitoring fees. However, any waiver or exemption is not automatic but subject to the required evidence being submitted with the permit application. Where a third party contractor (subcontractor) is involved, that contractor may require a permit and may have to pay associated fees. This will be determined on a case-by-case basis. The complete proposed rule: "Recovery of Costs for Processing Special Use Applications and Monitoring Compliance with Special Use Authorization" was published in the Federal Register on November 24, 1999. The comment period has been extended to February 24, 2000. Information can be obtained on the web at: <http://www.fs.fed.us/recreation/permits/>

DOE Announces Geothermal Initiative

On January 24th, Energy Secretary Bill Richardson and Senator Harry Reid (D-NV) announced a new Department of Energy initiative to expand and develop the use of geothermal energy in the western states. The program, known as GeoPowering the West, aims to provide ten percent of the electrical needs of the western states by 2020, to supply electric power to at least 7 million homes by 2010, and to double the number of states using geothermal energy. GeoPowering the West will award nearly \$5 million in grants to geothermal activities in Nevada, California, Texas, Utah, Idaho, and North Dakota. A draft action plan for the program is available at its website—<http://www.eren.doe.gov/geopoweringthewest/>—along with a list of the grants already approved by the program. In a Las Vegas Review-Journal article, Reid said: "This modest investment by the federal government has the potential to stimulate billions of dollars in investment and tens of thousands of new jobs."

Gore, McCain Win in Granite State

All right, there is nothing particularly geologic about the presidential campaign except for the time period over which the campaigns have been waged. Nor have the geosciences been a hot topic in the debates, but New Hampshire's nickname is a good enough hook to remind geoscientists that campaigns are gearing up in all 50 states for the entire House of Representatives, a third of the Senate, and innumerable state and local offices (at least we can't enumerate them). In an earlier campaign season, the Nevada Section of the American Institute for Professional Geologists (AIPG) set a great precedent by hosting a candidate's debate on issues important to geoscientists in Nevada, asking questions about resource development, environmental protection, and related topics. Non-profit societies cannot support or endorse candidates, but they can encourage a healthy debate of the issues. It's all part of being active citizen-scientists.

Looking for a Few Good Summer and Fall Interns

AGI is seeking outstanding geoscience students with a strong interest in federal science policy for a twelve-week geoscience and public policy internship in Summer 2000 and a fourteen-week internship in Fall 2000. Interns will gain a firsthand understanding of the legislative process and the operation of executive branch agencies. They will also hone both their writing and Web publishing skills. Stipends for the summer interns are funded jointly by AGI and the AIPG Foundation and for the fall interns by the AAPG. Applications must be postmarked by March 1, 2000. For more information on application materials and the internship, visit <http://www.agiweb.org/gapac/intern.html>.

LETTERS TO THE EDITOR

Dear Editor:

Dennis Pennington's message (February, 2000) about "Politicization of the Physical Sciences" is right on target, but two points need to be added. First, the process of politicizing ("political correctness") of all sciences resulted from failure of university administrators in the late 60's and early 70's to correctly interpret student concerns. In their desire to placate student protesters, university administrators began to pressure faculty to lower standards and place less demands on students. Science departments (and individual faculty) that did not do so quickly found that their so-called colleagues in the "Liberal Arts and Social Sciences" pushed through elimination of laboratory science requirements, and permitted substitution of "science and society" courses to meet science requirements; some required science courses were taught by faculty in the humanities and social sciences. To survive consequences of declining enrollments, university science departments began to offer more entertaining courses such as "Dinosaurs" and "Geology of National Parks" so as to increase enrollments, and therefore maintain or increase university science department budgets (all formula funded).

Second, the growth of Congressional earmarking appropriations for university science projects during the 1980's added to politicization. These congressionally initiated earmarked funds were outside the peer-review guidelines of agencies such as NSF, NOAA, and NASA. University administrators, with concurrence of certain scientists on campus, used the Congressional appropriations process to finance new initiatives while traditional sources of science funding decreased or were level-funded during the 1980's and the early and middle 1990's. The trade-off for funding such programs, some of dubious merit, resulted in closer political ties between campus administrators and elected officials. Inevitably, political priorities

intruded more into campus life, including science. As Washington priorities changed during the 1990's to the "politically correct" mode, government bureaucracies contributed to a deterioration of traditional values of academic freedom, tolerance, and peer review on campus by promulgating new and onerous guidelines and "politically correct" strategic plans. Consequently, a world dependent on technical innovation, including earth sciences, may rely less on intolerant, politically correct university environmental for development of new technologies required for economic growth. In the geological sciences, the high tech capability appears now to reside more within industry and less in academe, perhaps as a result of the changing face of US academic life.

George D. Klein, CPG-01487

Dear Editor and President Pennington:

Thanks, Dennis, for bringing up a subject of more than significant interest to not only all geologists, but applied scientists generally. Maybe it's not too late to save some of the others from our own mistakes.

No less than thirty-five years ago the academics among us pooh-poohed the idea of grabbing the environmental ring when geologists had the ideal opportunity to do so. (Who else was more qualified than **[geo]earth scientists** to deal with earth problems?) The oil and gas types simply didn't see the forest for their own tree, the mining guys couldn't see past the problem they were helping to create, and the engineering consultants just hired more specialists. A (very) few of us started our own environmentally-oriented companies and did just fine, thank you, but even then couldn't get the message across to our professional peers.

We blew it, as a profession. Everyone else now does environmental work, and most of it is pretty shoddy. Not only that, but so many other occupations have encroached on our territory that

we can't possibly win the battle to get it back. Lawyers and politicians are running our show, and the academics are in a tizzy. We even have to *fight* to get the fact of evolution on the ticket! Global warming, a geological *fact* with sound geological defense, has been taken away as well to be exploited by those same lawyers and politicians (and so-called "scientists," ill-informed academics from almost any other discipline). Now we are even losing geology departments to the diluted and lukewarm "environmental" whatever. I repeat—we blew it, and we blew it *big*.

Yes, environmental organizations are "more interested in radical politics" and political correctness than in getting it right. Power, money, and lawsuits are *de rigueur* these days, to our discredit. You speak of our profession needing "to speak out with facts...when misinformation is presented..." To *whom?* Who will listen to a geologist?

This is why I have switched fields, as it were, to ETHICS. The message has to come from upstairs, from a higher level. The appeal has to be made from the perspective of *truth*. This of course is not the easy way to get to lawyers and politicians, but we haven't got to them with scientific "reason" or "facts to governments, organizations, and industry, in a manner that all groups can understand." I'm afraid that science has lost out to the hoi polloi for now, and it's going to take something more than science to restore balance.

A couple of years ago I was pretty much alone, but headway is being made. More people are listening. Yes, educational curricula *should* include courses in ethics, etc., but not the kind of ethics currently being sold by a number of business schools at some pretty prestigious universities these days. I can provide any number of examples. If we don't watch out, we're going to lose *that* battle, too. And yes, I've dropped alumni support.

Ethics, anyone? I can use all the help I can get!!!

Fred L. Fox, CPG-01273

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:

- Update on the National Institute for the Environment (1-31-99)
- Mining Law of 1872 Reform Update (1-28-00)
- Oil Royalty and Valuation Update (1-27-00)
- Natural Hazards Mitigation and Insurance Update (1-24-00)
- Natural Hazards Mitigation and Insurance Hearing Summaries (1-18-00)
- Action Alert: Participants Needed for Congressional Visits Day, April 4-5 (Posted: 1-21-00)
- Land Sovereignty and National Monument Acts Update (1-11-00)
- Energy Policy & Conservation Act Reauthorization Update (1-11-00)
- Geotimes Political Scene: The Two Cultures (by AGI 1999-2000 Congressional Science Fellow Eileen McLellan; 1/00)
- *The Professional Geologist* Government Affairs Report: The Age of Rocks Versus the Rock of Ages (1/00)
- Crown Jewel Mine Decision Update (1-4-00)

Sources: Department of the Interior, U.S. Forest Service, Department of the Interior, Environment & Energy Update, Greenwire, Library of Congress.

PROFESSIONAL ETHICS & PRACTICES - Column 53

Compiled by David M. Abbott, Jr., CPG-04570, Ethics Committee Chairman, 2266 Forest Street, Denver, CO 80207-3831, 303-394-0321, fax 303-394-0543, DMAgeol@aol.com

Ethical Dilemmas Posed During a Mineral Project Appraisal (Feb '00)

Robert H. Paschall, CPG-00118, commented on Trevor Ellis' article in the February *TPG*. He wrote, "I would like to say I enjoyed Trevor Ellis's experience with Mr. Rising Sun but 'shuddered after reading' would be more like it. But I will say that I admire his candor and his actions in the course of that assignment.

"I am California Registered Geologist Number 8, and both a Senior Member and Honorary Life Member of the American Society of Appraisers (ASA), with a specialty designation in mines and quarries. I received my Life Membership for the articles I've written on mineral properties appraisal, in which I've been engaged since 1962.

"Copies of the Uniform Standards of Professional Appraisal Practice (USPAP), the FBA's Principles of Appraisal Practice and Code of Ethics, and AIPG's rules reside in my file cabinet. With that background, here are three other tales that provide pertinent lessons.

"I had just started on the job of appraising a rock deposit that had been subjected to inverse condemnation by the Federal government. 'Inverse condemnation' is applied to properties of prospective value whose owners are prohibited by government from operating them. In this case the owner had been ordered by the government not to open a quarry on a property whose mineral rights he owned but that lay on government land.

"I was talking to my new client when he asked me, 'Do you want to know what I think my property is worth?' I said very firmly, 'No, and I don't want to know.' He asked in a rather belligerent tone, 'Why not?' And I told him, 'I may be asked on the witness stand, 'Did Mr. Quarry tell you what he thought his property was worth?' I'm a terrible liar, so I want to be able to say honestly, 'No, he didn't.'" That quieted my client down. In fact, he was a nice guy who was ignorant of the implications of his questions, and we got along very well after that.

"Another condemnation case involved a very valuable property. My hard-boiled client, who was the condemnee, had assembled a three-person team consisting of a lawyer, an accountant, and me. At an early meeting he told us, 'I want you guys to know that if you win this case for me, I'm going to give you a very good bonus.'

"I immediately said, 'John, I am going to forget what you just said, but if you ever say it again, I'm going to walk out that door and never come back.' He turned to the lawyer and asked, 'What the hell's the matter with this guy?' The lawyer said, 'John, Robert is working for you on an hourly basis. If it appears that he was working on a contingency, which is what can be inferred from your offer, his testimony in court won't be worth a damn.' John, who was arrogant but no fool, then quieted down. And a good thing, too. When it came to my being deposed, the opposition's attorney demanded that I give him a copy of every invoice sent to my client and every payment I had received. He had virtually smelled what John had said several months earlier.

"The third case also involved condemnation, in this case an idle but a once-active gold-mining property. I was employed for the job by a major law firm. I have never liked that, much preferring that I be employed by a property owner, with his lawyer and me on an equal professional basis. In fact, I can say as a working axiom: Do not work for law firms. Work for property owners.

"Since the job was far from home, and was obviously going to be a lengthy one, I asked for and got a sizeable retainer. And a good thing, too. After I had done considerable work analyzing geologic and engineering reports on the property, I got a call from a lawyer with the firm. In the course of a very strange conversation he said, 'We think that the property is worth \$18,000,000.'

"I had already decided that the law firm had undertaken the job on a contingency, with an agreement to take a percentage of the award, so therefore the bigger the value the better. I made no response to his statement, but following our conversation I wrote him a letter that said, in brief, 'I'm not sure how a lawyer in [unnamed city] was able to estimate the value of this property when I don't have the foggiest idea yet what

it's worth. But I do know that I am not interested in anyone else's opinion of value. I'm the one who's been hired to do that.'

"Would you believe that I never heard from that law firm again, nor did I get any more money, and the case sort of died away, unless they got someone else who was willing to do their bidding. It would have been an interesting case, but I was pleased to say farewell to people who told me what my opinion of value should be."

Paschall has been in the mineral property appraisal business for a long time. He's the author of the AIPG pamphlet, *Appraisal of Construction Rocks*, now in its second edition (1998). He's a man with some strong opinions that are worth considering. Other comments on either Ellis' paper or Paschall's comments are welcomed.

The Ethics of Class Notes on Web Pages

In a front-page story in a Sunday *Denver Post* (1/23/00), reporter Dave Curtin described the websites containing class notes for a wide variety of courses at some of Colorado's top research universities. A geology class at the University of Colorado at Boulder was listed as one of the examples of the range of classes for which notes are available. The companies sponsoring the websites "pay students up to \$400 a semester to post their notes online." Advertising directed at students supports the websites. Curtin points out that the class notes are published without the professors' permission and suggests that the practice raises a variety of educational and ethical issues.

Curtin reports that some professors, on learning of the practice, were outraged that they received no royalties or other compensation for a part of their intellectual production and claimed copyright violations. One professor likened the practice to buying term papers from the Internet. Several professors also questioned the accuracy and the quality control of the notes, which even the posting sites rank according to perceived utility. However, other professors, when informed of the practice by Curtin, viewed it as an additional educational tool students could use to learn, particularly when they had to miss class. Another learned that the notes he posted on his own web site were copied onto the class notes services' website. This professor recognized that anything put on a website can be used by anyone with access to it. Administrators at two universities reportedly are considering adopting policies on the practice of having class notes made available on such websites.

I have exchanged class notes with fellow students when one of us missed a class. I would guess that all of us have. I've also found it useful at times to review the perspective of another student's notes for a class for which I have my own notes. I've never heard the practice questioned. I also very much remember one course I took in which I really wished I could have video tapes of the lectures so that I could watch it three times. One time just to listen to it, one time to take notes, and one time, with pauses, to draw the diagrams used to illustrate the lecture. My wife, Sue, recalled a class in which the professor asked her to prepare duplicates of her notes for a hearing-impaired student.

But website-posting technologically changes the availability of the notes dramatically. Are professors being deprived of their intellectual property without their consent or compensation? (They are being paid to give the lectures.) Does the existence of such readily available class notes help students learn by providing them with an additional tool? Or is it a crutch for the lazy? What about quality control? Does the practice violate the AIPG Code of Ethics? If so, which part and how? I urge students and professors to send me their views of these questions and any other related views.

I sent a draft of the foregoing to AIPG's student members, professors, and others I know who are involved in education. The following are the replies I have received to date. I've indicated the university affiliation when known. Please feel free to contribute your ideas.

Dallas H. Abbott (Lamont-Doherty Earth Observatory, Columbia University) commented, "At Barnard and Columbia, the professors put class notes on line. ...I really don't see anything wrong with it. Having the notes on line doesn't mean that the students don't have to learn the mate-

rial. Furthermore, the professor can always include something on the test that was **only** covered in class. I do this. In my view, the most important job of the professor is to engage the students and make them think by asking leading questions. Class notes will **never** be able to replace this type of give and take."

Lee C. Gerhard, CPG-03461, (Univ. Kansas, formerly Colorado School of Mines and Univ. of North Dakota) noted that, "I don't teach many classes anymore, but I have some observations on the topic. First, the notes taken by students are theirs to dispose of as they will, just as are reporters' notes on speeches I've made. However, let the user beware. The notes are no better than the student who took them. When students are taking notes, many of the salient points and connectiveness of the lecture are lost. As a teacher, I think I would now have my own notes on my own website, for free, and quality controlled by me. That way I could encourage the class to listen to the thread of the lecture as well as any detailed data of information—that would be in the notes already."

"I always wanted to forbid the taking of notes in order to get more students to listen and engage in concept development, but I couldn't, as notes are the classical way to summarize lectures. I would have been negligent in forbidding note taking because the students would think they had nothing to study from."

"Further, each time I taught a class, I tried to update the materials. So the old notes are on the web? Who cares? I'd worry if my favorite exam questions appeared on the web, but that would be a sign they needed freshening up as well."

"The world has changed. I'd like to go back and see what I could have done teaching with modern technology."

"Thanks for the opportunity to comment."

George J. Bagnall, SA-0093, (James Madison Univ.) wrote, "Thank you for allowing me to provide you with my input on the subject of web-notes. I recently left school and still have strong opinions on the matter."

"It is a common practice, as mentioned in the article, to share class notes with peers. However, in my experience, it was usually with (granted exceptions are obviously true) the reason for missing class being a hang-over, a sunny day, or plain old apathy. I only missed 10 classes the entire time I was in college and was often asked for my notes. This really and truly bothered me; why should I give out my notes? I like sunny days as much as the next person but managed to make it to class. I venture to say that Web-notes may be used as a supplement to studying for a few, and I stress **few**, students. I can say with near certainty, however, that the majority of people who utilize this service are not using it in an **ethical** fashion. Instead of supporting the learning process, it will provide a license/justification to the lazy for skipping class."

"It is true, as the author mentioned, that sharing notes while studying for a test is quite beneficial. This implies however, that there are two sets of notes used for the purpose of augmenting understanding. Think back to preparing for a test. Did anyone use a classmate's notes, in their entirety, instead of their own? I think not. Instead the comparison was used to gain a better understanding of a particularly tricky piece of material. For me the procession of a certain phase diagram sticks out in my mind, and I benefitted greatly from studying a classmate's notes in accordance with my own. Needless to say, this is far different than using someone's notes from an entire semester of Petrology."

"This seems to fly-in-the-face of everything I took the AIPG to stand for, namely, ethics and quality. I hope to see the AIPG take this ludicrous method of studying the same way as I do. The Internet is certainly a useful entity, but it shouldn't be used to cheat scholastically."

"Let me leave you with this final question: would you want a geologist that passed all her/his courses by skimming notes of the Internet to find a 'safe' water source for your family, or would you prefer the geologist who was present for all the classes and field trips on the job?"

In response to the question concerning which specific sections of the AIPG Ethics Code apply to the use class notes on the web, Bagnall "would hold users of such notes in violation of Canon 4," specifically Standard 4.1, which states, "Members should respect and acknowledge the professional status and contributions of their colleagues." and Rules 4.1.1 and 4.1.2, which state:

Rule 4.1.1: 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.

Rule 4.1.2 A Member shall not plagiarize another in oral and written communications, or use materials prepared by others without appropriate attribution.

Bagnall continues, "In addition to violating the aforementioned, standards the practice of using class notes violates the spirit of virtually all of Canon 5. This does not in any way advance the profession of geology; in fact, it acts to discredit all the hard work that you, I, and all other ethical geologists have done, and take pride in doing."

A **student contributor** who requested anonymity wrote, "In order to create an intelligent response to your questions I have restated them with my following responses. I wish to remain anonymous."

"1) Are professors being deprived of their intellectual property without their consent or compensation? (They are being paid to give the lectures.) On this issue is it really their intellectual property? In most classes I have been in there is a certain amount of expertise that the instructor brings to the class, but really the notes are derived from a number of sources, primarily the required text. The professor is not really producing anything new and original, just providing a clearer way to highlight the important parts of the text or outside readings. So any diligent student should be able to also create their own notes, and are they compensated for that? Notes are an opinion in one person's mind of what is important, but are not original ideas."

"2) Does the existence of such readily available class notes help students learn by providing them with an additional tool? Or is it a crutch for the lazy? In any university, whether or not the notes are published on the web, there is always trading of notes between classmates and students who have already taken the course. I feel that this helps a student learn, because no two people see a subject in the same way; there are many interpretations, especially in the sciences. Of course this can be used to encourage laziness in students, but the instructor should be able to disable this crutch (accessible class notes) by creating more thought-provoking exams which are not necessarily verbatim from the notes but which encourage thought and applications of major concepts that were covered in the notes. There are always going to be students looking for the easy way out; what they will find in the end is that there is no such thing. There are no notes for life."

"3) What about quality control? There is no need to worry about quality control; the buyer must beware, as the cliché goes."

"4) Does the practice violate the AIPG Code of Ethics? If so, which part and how? This practice does not violate the AIPG codes unless the instructor has specifically forbidden the use of such notes."

Robert H. Fakundiny, CPG-04977, (SUNY) provided the following outline of thoughts on the subject.

1. Class notes are provided to help the student learn the material presented in class, either to pass an exam or to be applied to the performance of a discipline, not to make money.
2. Characteristics of class notes (with common level of quality)
 - a. Passed out as reproduced copies by the Professor (good)
 - b. Put on website for students by Professor (good)
 - c. Taken as handwritten notes by student (usually poor)
 - d. Occasionally photographed or videotaped by student (moderate)
 - e. Occasionally tape-recorded by student (moderate)
 - f. Class notes that are copyrighted by Professor—most sophisticated form is a text book (good)
3. Philosophy
 - a. I have always believed that what information or insight I received in a classroom lecture was mine, giving due respect to the source, i.e. proper referencing, where appropriate. The Professor is paid to impart this knowledge and I paid to receive it.
 - b. Most classrooms are open. That is, students or other teachers who are not enrolled may "audit" the course with or without the Professor's approval, depending upon local protocol.
 - c. It is not legally nor ethically required that I take good notes, that I comprehend or apply correctly the information given, although I might fail the course accordingly.
 - d. A very small proportion of the material presented in the classroom is not already published or, at least, in the public domain, especially in undergraduate courses. That which is not is most probably the Professor's own research or the research of his close colleagues, and is most likely lacking peer review.
4. The Challenge to the Professor

- a. The Professor can control, to some extent, the use of class notes by copyrighting them or forming them into a text book that is copyrighted.
 - b. Tests have to be designed to measure the student's comprehension and newly acquired skills and not the student's ability to amass and memorize the notes of others. I prefer to give open-book exams, which allows for notes to be used.
 - c. Term paper topics must be defined and limited, such that they can only be created after the assignment is made. I know of no way to prevent a student from contracting someone else to write a paper after the assignment of a topic is given. Assignment topics such as "critique the plate tectonics paradigm" are certainly contestants for a quick download off some website. In contrast, "describe the geology of the roadcuts on Route 10, two miles north of town, and speculate on their geologic significance" might stymie a nationally pervasive term-paper writing syndicate. I encourage students to work together as pairs or groups on term projects, and especially to critique each other's work. Isn't that what we do as professionals?
 - d. Why not use the class time for answering questions, giving special examples, providing the information in alternate ways, and generally carrying on a dialog with students and not worry about your notes flooding the market?
5. Ethics
- a. Notes should be transferrable among student colleagues, providing the source (Professor, class, date) is provided, the student knowing full well that the Professor is not responsible for the student's ability to comprehend or transcribe the content of the class material.
 - b. Students should not receive compensation for sharing notes beyond the cost of formatting into an intelligible language, reproducing, and transferring the notes.
 - c. Professors are responsible for providing testing mechanisms (pop tests, mid-terms, oral presentations [I once had a dance major choreograph a dance to rocks], interviews, and special projects) that measure the individual student's comprehension of the material. This makes the Professor's job more difficult, but we must tailor our classroom activity to address modern technology.
 - d. If, after the Professor, who is supposed to be more clever and more knowledgeable, uses all of her talents to keep the student honest and the student passes, they have both accomplished what they set out to do.
 - e. Remember, you can only make a process safe from cheating by designing it so that cheating does not help.

Charles Wm. Dimmick, CPG-03886, (Central Connecticut State Univ.) stated that he is in total agreement with Fakundiny's points 1, 3 and 5. On Fakundiny's point 4.a, Dimmick comments, "When a professor puts notes on a web page, she/he needs to state that the material is copyrighted. Under current copyright law, as I understand it, this statement is all that is needed for protection. That being said, I personally would have no problem with anyone copying and distributing any material I posted, as long as due credit is given, and as long as the material is not altered in any form which distorts the meaning of what is posted (by changing context, for example)."

Dimmick believes that Fakundiny's point 4c is valid, but focuses on a slightly different topic, testing, than the focus of this discussion. A separate discussion of testing is certainly welcomed if someone else wishes to comment.

Dimmick also commented on the fact that companies are paying students for their class notes, "I am appalled. However, we (AIPG) have no control over the student actions. I would think it would be up to the relevant universities."

Regarding the reported professorial reactions, particularly those relating to lack of royalty payments, etc., Dimmick notes "Some people, including some professors, are too damn greedy and protective. I give away much of my intellectual production regularly. It is part of my duties, as a professor at a public university, to expend effort to educate the public, not just the students in my course. When I do work for a private client that is an entirely different matter."

Dimmick searched the AIPG Code of Ethics for relevant sections and reported, "I have searched the Code of Ethics, and I cannot twist them to cover this practice. It is not being done by AIPG members, for one thing."

I tend to agree with Dimmick on this. However, Bagnall has correctly noted that the Standard 4.1 Rules on giving property credit, where credit is due, come closest to being relevant. But before pushing these Rules too far, I suggest remembering that most courses, particularly undergraduate courses, consist of a survey of material extending beyond any one professor's particular field of expertise. As the course numbers get higher, particularly in graduate courses, the number of citations to the primary literature increases. Does anyone feel that this practice should change? Also, because we are discussing notes for particular classes, the identity of the professor may be noted in the header material or elsewhere in the notes for the term even if the identity is not listed every day. Finally, as pointed out in the original newspaper article and by Gerhart, the anonymous student, and Fakundiny, the notes are summaries prepared by students and are not the complete professorial exposition. The quality and utility of the notes therefore varies considerably. While I'm sure professors would like credit for their lectures, I doubt they want credit for the notes. As Gerhart points out, the situation is similar to a reporter covering a speech. The person delivering the speech may copyright the text of the speech, but the newspaper copyrights the reporter's story.

More discussion of this subject is most welcome. How many agree with Gerhart's proposal that note taking should be banned so that the lecture can be listened to? As suggested above, if I receive appropriate comments, I'll start a new discussion on testing methods and other teaching strategies.

E-Mail Signature Lines: Like Letterhead, Use the Right One

Many e-mail programs allow you to set up and automatically attach a standard "signature line" to all the e-mail you send. These signature lines typically contain your full name, affiliation, address, telephone and other contact numbers, and sometimes your favorite quotation. Such information is generally irrelevant for your regular correspondents but it can be quite important for someone whom you don't know, particularly if you want a non-e-mail response. But they can cause trouble, as illustrated by a California example in early February.

The President of a California geologic organization was asked by the California Board for the Registration of Geologists and Geophysicists to distribute by e-mail the press release announcing the revocation of a geologist's license for negligence and incompetence. The organization keeps an e-mail list of those interested in activities of the California Board. The e-mail transmission closed with a statement that the organization was distributing the press release over the manually entered signature of the president acting in her official capacity. The problem arose because the automatic signature line containing the name of the president's consulting firm was included at the bottom of the message. Comments were made that inclusion of the automatic signature was an inappropriate advertisement for the firm. The problem could have been avoided if the automatic signature line either had not been included or had been a signature line for the organizational position instead.

The general point being discussed is the mixing of personal and organizational business (or mixing one organization with another). My byline at the head of this column reflects my AIPG position, not my consulting position. However, turn to page 1 of *TPG*. The top, left-hand side of the page lists the names, addresses, phone and fax numbers, and e-mail addresses of the Executive Committee. Eight of the eleven members of the 2000 Executive Committee list their professional affiliation addresses, because that is where they normally receive professionally related communications. The 2000 Executive Committee's information does not differ from previous Executive Committees. Similar information is included on AIPG's official stationery every year. I've never heard a complaint asserting that such listing represents some sort of special treatment.

When I submit an article unrelated to my official AIPG position to *TPG* or other profession publication, I do list my professional affiliation as do other authors. I personally find such information about authors useful. And if my article brings in consulting work, so much the better.

So why the flap over the automatic signature line in the California case? Perhaps it stems in part from the relative newness of e-mail as a communications medium. Personally, I don't use an automatically attached signature line in my e-mail. I do have a signature line that I can use optionally. My e-mail program allows the use of several different signature lines. The appropriate one for the message is selected. What are your thoughts on the subject?

CALENDAR

2000

May 8-10. *Rietveld Method Short Course*, Atlanta, GA. Contact: Georgia Institute of Technology, Atlanta, GA 30332-0385, Ph.: (404) 385-3052, e-mail: angela.arnold@conted@conted.gatech.edu <www.conted.gatech.edu>.

May 17-18. *Southwest Focus Ground Water Conference*, Austin, TX. Contact: NGWA at (800) 551-7379, e-mail: csr@ngwa.org, or <www.ngwa.org>.

May 22-25. *Geochemical Modeling of Aqueous Systems*, Dallas, TX. Contact: NGWA at (800) 551-7379, e-mail: csr@ngwa.org, or <www.ngwa.org>.

May 25-26. *Screening Modeling for Natural Attenuation with Bioscreen, Biochlor, and the NA Tool Kit*, Dallas, TX. Contact: NGWA at (800) 551-7379, e-mail: csr@ngwa.org, or <www.ngwa.org>.

Jun. 18-23. *The Pacific section of the AAPG and the western region SPE* will hold a joint convention at the Westin Hotel, Long Beach, CA. Contact: AAPG, P.O. Box 979, Tulsa, OK 74101, Ph.: (918) 584-2555.

Jul. 10-14. *1st International Professional Geology Conference*, Alicante, Spain. Contact: AIPG, National Headquarters, 8703 Yates Dr. #200, Westminster, CO 80031-3681, Ph.: (303) 412-6205, e-mail: aipg@aipg.org, or <www.sri.ua.es/congresos/1ipgc/1ipgc.htm>

Jul 20-22. *46th Annual Rocky Mountain Mineral Law Institute*, Vancouver, British Columbia. Contact: Mark Holland, 7039 E. 18th Ave., 3rd Fl., Denver, CO 80220, Ph.: (303) 321-8100, e-mail: info@rmmlf.org, or <www.rmmlf.org>.

Aug. 3-5. *Conference on the History of Geologic Pioneers*, Troy, NY. **Call for papers.** Contact: Northeastern Science Foundation, Inc., affiliated with Brooklyn College of the City University of New York, P.O. Box 746, Troy, NY 12181, Ph.: (518) 273-3247, e-mail: gmfriedman@juno.com, <www2.netcom.com/~gmfstf/>

Aug. 3-8. *GeoDenver 2000*, Denver, CO. Contact: American Society of Civil Engineers <www.asce.org/conferences/geo2000>.

Sep. 6-8. *1st World Conference on Explosives and Blasting Technique*, Munich, Bavaria, Germany. Sponsored by: International Society of Explosives Engineers and by German Society of Explosives Engineers, Ph.: +46 8 679 1700 or fax +46 8 611 1091.

Sep. 17-20. *The Society for Organic Petrology, 17th Annual Meeting*, Bloomington, IN. Contact: Maria Mastalerz, Indiana Geological Survey, 611 N. Walnut Grove, Bloomington, IN 47405, Ph.: (812) 855-9416, e-mail: mmastale@indiana.edu, <http://adamite.igs.indiana.edu/tsop>

Sep. 21-24. *AEG's 43rd Annual Meeting, AEG 2000, Linking Tradition and Innovation*, San Jose, CA. Contact: Robert Tepel, Chair, Ph.: (408) 9971-6932 or <www.aegweb.org>.

Oct. 10-14. *AIPG 37th Annual Meeting, Learning from the Past - Directions for the Future*, Milwaukee, WI. Contact: Jack Travis at (920) 854-7869, e-mail: travisj@itol.com, <www.aipgwis.org>.

Nov. 12-15. *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, <www.eeri.org>.

Nov. 13-16. *Geological Society of America Annual Meeting & Exposition, Summit 2000*, Reno, NV. Contact: GSA Meetings Department, Ph.: (303) 447-2020 or 1-800-472-1988, <www.geosociety.org>.

Dec. 3. *RMAG Annual Meeting, A New Exploration Strategy for Unconventional Basin Center Hydrocarbon Accumulations*, Denver, CO. Contact: The Rocky Mountain Association of Geologists, 820 16th St., #505, Denver, CO 80202, (303) 623-5396 or (303) 573-8621.

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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