Executive Committee Policy
On Section Responsibilities Announced

Sections of the American Institute of Professional Geologists (AIPG) are not independent entities but instead each is an integral part of AIPG which is a single national organization. As a result of in-depth studies which have been made this year regarding the responsibilities between AIPG national and AIPG sections, the following policies are placed in effect by the AIPG National Executive Committee. There is no intent of these policies to stifle sections from promoting the profession of geology, which truly may require different policies in different areas of the nation. Instead, the intent is to assure that AIPG remains viable as an effective national organization and operates in accord with applicable federal and state statutes that arise as result of AIPG's incorporation and registration as a professional organization.

Operations:
1. Sections are subject to all AIPG Constitution and Bylaws provisions.
2. Sections shall not lobby for passage of any state or national legislation or regulation in the institute's name without written permission of the Executive Committee.
3. Sections shall operate on the same fiscal year as the national.
4. The election and installation of section officers shall coincide with those of the national officers of the institute.
5. The Executive Committee has the authority and the obligation to remove from office any section officer who does not uphold and properly adhere to the institute's Constitution and Bylaws and policies.
6. Each section president shall submit an Annual Report, which will summarize section activities to the national secretary. The report is due on or before March 1 of the following calendar year.
7. No section shall schedule a meeting on a date that conflicts with any National Meeting.

FINANCES
1. All section financial resources are the property of AIPG and the sections and section treasurers are only authorized to manage the funds for the institute.
2. All section financial accounts will be controlled and maintained by the section treasurer, as authorized by the national treasurer, under the name of "American Institute of Professional Geologists (Respective) Section."
3. Section treasurers shall keep an accurate accounting of all section income and expenses. Any money taken in as income or disbursed as expense by the section must go through the section checking account. Sections shall provide the national treasurer quarterly reports of income and expenses.
4. Sections may not incur debt beyond the assets of the section.
5. Sections shall not undertake any sort of fund raising activity without the written permission of the National Executive Committee.
6. Section treasurers shall prepare and submit a year-end section financial accounting (expense/income) summary to the national treasurer. The report is due on or before March 1 of the following calendar year.

Amendment Ballot Shipped - Please Vote Affirmatively

Each member has now received an official ballot that designates a proposed amendment (an addition) to AIPG Bylaws that defines a quorum. With this ballot came a letter from Sam Evans which requests that members vote for the amendment which will enable us to amend the Articles of Incorporation. Note that the definition of a quorum applies to the Articles of Incorporation and appears as an addition to Article IX of the Bylaws. This definition of the quorum does not supplant the methods to amend the Constitution and Bylaws as currently established (see your 1988 Directory for a current copy of these documents.) Because Colorado Law requires either 10% attendance at an annual meeting (an attendance level never reached in the recent history of AIPG) or alternate definition of a quorum (which AIPG has neglected to define) the institute is paralyaed by its own Bylaws to effect any changes in its own Articles of Incorporation. AIPG cannot change the Articles to indemnify its officers and cannot even dissolve the corporation in Colorado without 10% of its members showing up at an annual meeting! Under Colorado Law, a mail vote is not a recognized alternative and therefore the institute cannot provide its members with this option to change the Articles of Incorporation. If you have reservations about voting affirmatively, please contact Carol Beckett at AIPG Headquarters. It is very important to both the institute and to future officers that this amendment pass.
Geologists Murray and Carr Honored By Societies

BLOOMINGTON, Ind.—Two Indiana University geology professors were honored by their professional societies at a combined annual meeting of the Society of Mining Engineers and the American Institute of Mining, Metallurgical, and Petroleum Engineers held in Phoenix, Ariz.

Haydn H. Murray, CPG 279, was installed as president of the 22,000-member SME, and Donald D. Carr, CPG 3819, received the Hall Williams Hardinge Award from the AIME, a 50,000-member organization representing various engineering societies.

Murray has served on the SME board of directors and is presently a member of the industrial minerals division where he has been involved in programming and scholarship activities. In conjunction with his presidency, he will serve as trustee and member of the board of directors of AIME.

A former chairman of the IU department of geology, Murray is the author of the chapter on clays in the third, fourth and fifth editions of the AIME volume "Industrial Minerals and Rocks."

Carr received the Hardinge Award for outstanding achievement in the field of industrial minerals. In addition to his teaching duties at IU, he is branch head for mineral resources and data management for the Indiana Geological Survey where he has worked for 24 years.

Carr has served as chairman of the Industrial Minerals Division and as director of the society. He is the author of a chapter on limestone and dolomite in the fourth and fifth editions of AIME's "Industrial Minerals and Rocks."

Correction on Florida Lobbying Costs

Edward B. Nuhfer - Editor

Seven months ago, TPG reported that the Florida Section had incurred a debt of $40,000 to obtain lobbying assistance for the Florida geologists' registration bill. A memo of April 11 from Henry J. Lamb, CPG 4430, to President Sam Evans noted that the actual outstanding debt was $4000 instead of $40,000 as printed in the Florida Section Newsletter and subsequently reprinted in TPG. A copy of Lamb's letter was furnished to me by President Evans in May and enabled the correction.

If serious errors are found in an issue of TPG, please prompt in notifying the editor directly. My feelings will not be hurt and the membership will receive correct information.

Institute Album

Edward E. (Bud) Rue, CPG 12

June of 1963 marked the first month of any official activity toward the founding of AIPG. The late Bob Becker, CPG 41, found out about our very tentative plans and invited the steering committee to have their initial meeting at Oklahoma City. He volunteered to be the host and make all the arrangements.

Bob was assisted by several members of the Oklahoma City Geological Society, namely Bob Hancock, CPG 44, Jack Taylor, CPG 237 and others.

The enthusiastic support received from local geological groups from all over the country clearly illustrated the grass roots support that AIPG had from the beginning. The institute was founded in a vacuum of support from the national groups then claiming to represent geologists. Most of these national groups were promoting geology—not geologists.

So, by June 4, 1963 enough names had been put into the hat to mail out an announcement requesting that individuals serve on the steering committee and attend the initial meeting at Oklahoma City.

The invitation read as follows:

"THE AMERICAN INSTITUTE OF PROFESSIONAL GEOLOGISTS (Tentative name)

In the past five years, national scientific societies have been unable to resolve professional needs of geologists. These societies have supported the professional movement to a limited degree by cooperating with the AGI and its Professional Standards Committee realizing that any system of certification or registration and the internal disciplining of geologists should represent all branches of geology.

The AGI conducted endless studies and accepted many subcommittee reports on the subject of professional upgrading and has as yet not been able to resolve a course of action.

On the other hand, the work of various local geological societies has been vigorous and rewarding. Positive action has been taken by many of these local groups and some have organized new professionally oriented societies, notable Iowa, Illinois, Indiana-Kentucky and Virginia. It is quite obvious that the vast majority of support for professional improvement will come from these local groups.

The need is primarily for a national institute to coordinate these activities by promoting uniformity of standards and maintaining reciprocity between them. It should also aid these groups in the field of public relations. The public image of geologists is poor in many areas of the country.

Therefore, a meeting of a Steering Committee will be held:

Place: Skirvin Hotel
Oklahoma City, Oklahoma
Date: Friday, September 13, 1963
Time: 9:00 A.M.
Host: Mr. Robert M. Becker

Purpose: To formulate the aims of the new institute and determine an organizational structure as to representation of local groups and financing of initial expenses. Narrowness of scope and selfishness of purposes are to be avoided. The finest leadership must be obtained."

The results were most satisfying. Each person asked accepted and all except one attended the steering committee meeting in person.
St. Francis Dam Disaster

A tributary of the Santa Clara River, San Francisquito Creek, was the site of the St. Francis Dam failure of 12 March, 1928, which killed about 600 people and destroyed bridges, several miles of highway, several hundred homes, and more than 10,000 acres (4000 ha) of field crops. Completed in May 1926, the dam had been built by the city of Los Angeles to be a reservoir for water from the Owens River and a source of electricity. It was 200 feet (60 m) high and 700 feet (210 m) long.

Unfortunately, the dam was planned without geologic advice. It was constructed in a narrow part of the canyon where the east wall is composed of thin-layered Pelona schist dipping down toward and underlying the canyon floor. This schist is fragile and readily breaks into small flakes. On the canyon’s west wall the schist is separated from the younger Sespe Conglomerate by the San Francisquito fault and a gouge zone of a few inches to more than 5 feet (1.5 m) thick. In this locality, the Sespe is not only badly sheared and fractured, but also has a dry crushing strength of 520 pounds per square inch (14.6 kg/cm²). It was discovered, moreover, that a sample of this conglomerate placed in water almost immediately disintegrated to an incoherent pile of gravel and mud easily stirred with the finger! Even the pebbles broke up along tiny fractures. This simple test, regrettably not performed prior to construction of the dam, showed that the conglomerate was cemented with only thin films of clay.

Ironically, upon learning of the proposed dam site and being familiar with the area’s rocks and the location of the San Francisquito fault, several geologists suggested that the dam not be built. Their proffered advice was ignored, however.

The reservoir was first filled on 5 March, 1928 and shortly afterwards seepage was observed in the conglomerate. Later analyses of the seepage water showed a marked increase in dissolved calcium sulfate, which was derived from solution of the gypsum in the conglomerate. The significance of the seepage was not fully appreciated by those on duty at the dam, and in the middle of the night of 12 March, a week after the dam had been filled to a depth of 185 feet (56 m), the dam failed.

It is probable that seepage increased rapidly in volume shortly before the dam’s failure, washing out the soft conglomerate, undermining the west abutment of the dam, and permitting the concrete to crack into large blocks. Blocks up to 10,000 tons (9100 metric tons) were swept down the canyon and as much as a half-mile (0.8 km). The intense swirling of the water probably undercut the schist on the east wall, allowing a huge block of concrete to slide down the dip of the rocks into the canyon. The torrent of water swept every shred of vegetation and loose rock from the canyon to a height of 50 feet (15 m) near the dam. The floor poured into the Santa Clara River near Castaic, sweeping people, houses, groves of trees, and bridges seaward. Some victims were not missed until their remains turned up during excavations for sand and gravel.

From Geology of California, R.M. Norris and R.W. Webb, 1976, John Wiley. Recommended by Ellen F. Hodas, CGP 6966. Hodas notes: “Efforts by engineers such as those in Kentucky to undermine geologists’ credentials should look at California’s experience.”

Colorado Survey Surveyed

Geological Survey Task Force Releases Report and Recommendations

The Colorado Geological Survey Task Force, appointed last October by Governor Roy Romer, has released its report. It includes 12 specific recommendations for the future of the Survey.

“The Colorado Geological Survey was re-established nearly 20 years ago, and it seemed an appropriate time to look at where it is now and where it needs to be,” said Stan Dempsey, president of Royal Gold Inc. and chairman of the task force, made up of representatives from the minerals industry, as well as the business, academic, local government, legislative and public sectors.

To answer the Governor’s general question “How can the Survey be improved and strengthened to be of greater value to the State of Colorado?”, the task force interviewed past and present employees, constituents and observers. They also examined its budget and staffing history and studied statutes and past performance records.

The findings represent a consensus of a diverse membership, Dempsey said: “The task force was unanimous in recommending that the Survey be strengthened. Its mission and responsibilities to the economic, environmental and social well-being of Colorado are too important to neglect...The task force feels that the Survey can and should play a more prominent role in economic development in the state, especially in the area of encouraging mineral development balanced with environmental safeguards.”

One of the report’s major recommendations is that the Governor appoint an Advisory Committee to aid in long-range planning and in establishing a research program involving the Survey, local universities and federal projects.

Other recommendations are that the Survey continue to seek cash funding for projects when they conform to the agency’s mission and do not infringe on private contracts, and that it continue to cooperate with the U.S. Geological Survey and other federal agencies.

The report also says that the Survey should collect basic geological data and specimens and make them available to the public. It should also resume sponsorship of educational and technical programs on the state’s geologic and mineral resources and increase its production of maps, publications and presentations.

Many of the task force’s recommendations would require an increase in general-fund appropriations from the legislature. However, the report makes no specific recommendations concerning the number of positions that should be supported by general funding rather than cash funding. The number of general-fund positions within the Survey has dropped from 16 in 1983 to 2.8 in 1988.

The Survey has broad statutory charges that range from advising local governments on geologic problems and defining and mitigating geologic hazards to inventorying Colorado’s mineral resources and promoting their orderly development. In the past year, the Survey has been involved in projects such as site selection for the Superconducting Super Collider, mudflows and landslides at sites across Colorado and statewide testing of radon levels in private homes.
Strategic Minerals - A View From the Geologic Profession*

Ernest K. Lehmann, CPG 583

Mineral raw materials are basic building blocks of the physical structure of our society. Without iron and steel, copper, cement, sand and gravel, aluminum, diamonds and a host of other basic commodities, we would have no roads, no buildings, no tools, no furniture, no transportation or communications as we know them. We would be back to a pre-stone age existence. Even stone age man used mineral materials for tools.

Because these truly basic building blocks constitute a relatively small proportion of the GNP and are produced by a relatively small segment of our society, the mineral industry has relatively little political power. On the other hand the process of producing minerals disrupts the landscape and on occasion has apparent adverse impacts on the environment. Therefore mineral production triggers negative reactions in some segments of the society. This unfortunate lack of political clout and the sometimes negative image of the industry does not decrease its importance.

There is an increasing awareness at least by some thoughtful people, such as those here today, of the essential nature of the products of the minerals industry. There is the understanding by you that some of these products are strategic and critical to the society. As you know, without cobalt, safe and efficient jet engines cannot be built; without manganese there can be no production of basic steel; platinum group metals are required in oil refining; diamonds to produce cutting and grinding tools; bauxite to produce aluminum. The list goes on and on.

Because of this essentially, strategic and critical minerals are an issue of great national import and there is no single group better qualified to discuss the issues related to strategic and critical minerals than the members of the geologic profession who constitute the membership of AIPG. Basically the problem is a supply problem and the geologic profession is the profession concerned with the identification, delineation and evaluation of the supply of minerals.

In order to discuss questions related to strategic and critical minerals, we should first define our terms, establish the scope of the problem, identify who has the problem, and examine strategies for dealing with the problem. We can then suggest essential ingredients of a policy to be adopted by AIPG, by the profession and by the nation.

First then, let’s all be sure as to what we mean by “strategic” minerals. Various definitions for the quality of being “strategic” have been suggested. For our purposes let me suggest that in order to be “strategic”, a material must be “critical” and its source of supply must be “vulnerable” to interruption. To be “critical” a material must:

(1) be essential to the national defense or industry and
(2) lack suitable substitutes.

To be “vulnerable”, the sources of supply must be subject to substantial disruption. The combination of these attributes constitutes the quality of being “strategic”.

Because of the vagaries of domestic demand and geologic setting of individual nations, a substance strategic to one nation may or may not be strategic to another. A national strategy and response to strategic minerals issues needs to take into account not only the geology of the particular country and its industrial and military needs but also the competing or complementary strategies of allies and competitors.

From the U.S. viewpoint, in spite of our widely divergent geology and resource base, we are critically dependent on imports for a major portion of the supply of many minerals.

The U.S. Bureau of Mines maintains data on a large list of mineral commodities. Of these, about 33 are ones for which the U.S. is a net importer and Canada is not a significant supplier. Of these 33, OTA’s 1985 study on strategic minerals vulnerability concludes that there are 20 where there is a high degree of geographical and political diversity, leaving 13 which for the U.S. are strategic. This list includes platinum, diamonds, cobalt, berylhum, chromium, manganese, vanadium, graphite, rutile, bauxite, tin, tantalum, and columbium. Of these, four appear especially important: platinum, cobalt, chromium and manganese.

Many of the 86 commodities tracked by the USBM are critical in that they are essential in one way or another to our civilian economy or to our military security. Many are also strategic and critical to other major industrial powers and to developing economies. Sources of developed supplies of these commodities are limited. A study by the USBM shows that for 13 commodities, four countries control from 40% to 100% of the world’s production and eight countries from 60% to 100% of the supply. This includes some minerals other than the OTA’s 13 strategic minerals.

We also need to understand that the list of strategic minerals is not fixed and may be changing for any individual country. For example in the case of the U.S., the list may be rapidly growing because of the decline in domestic production capacity of metals such as zinc and copper.

Let us examine briefly the reason many of these minerals appear in the U.S.’s list of strategic minerals. The chief reasons for dependence on foreign imports are economic, institutional, and political. These three factors are of almost equal importance. Purely geologic factors are less vital, at least for the U.S., as reasons for a weak and declining domestic mineral industry and our increasing dependence on foreign ores.

An economic factor that is critical is that mineral prices are in a large measure cyclical but difficult to predict, while production capacity is inflexible. This creates a high degree of economic risk and uncertainty for investors and makes investment in mining unattractive.

The nature of the occurrence of many of the most critical minerals, for example, tungsten, tin, chrome and cobalt, is as relatively small deposits requiring extraction by labor-intensive methods; this circumstance favors those occurrences which are located in countries with a low-cost labor supply and little environmental or social regulation or protection. Further, the proliferation in the developing world of state-owned mining enterprise, often aided by international financial institutions, results in the subsidized production of minerals and metals for political and economic reasons internal to the producing countries. However, this subsidized production drives down world prices and makes many potential U.S. producers uneconomic.

Some of the reasons for dependence on foreign sources are of a purely geologic nature. We have not as yet discovered within the United States economically significant deposits of nickel, cobalt, chromium, tin, diamonds, and many other materials that could supply a significant portion of the nation’s needs.

*A talk delivered by Ernest K. Lehmann at the AIPG Western Forum, April 15, 1988 and at the AIPG Governmental Affairs Conference in Washington, D.C.
Still other reasons for dependence are institutional and political. Public policy in the U.S. over much of the last thirty years tended to create disincentives to mineral exploration and development. Policy disincentives have included increasing withdrawals of public lands from mineral entry and complex, lengthy, and costly environmental regulations and procedures.

For all of these reasons, growing dependence on mineral imports is increasingly placing ever more commodities into the category of being strategic. This is because the U.S. supply is increasingly vulnerable to interruption by competitive forces in the world market, by political developments and unrest in the supplying countries or by direct armed intervention.

What are the strategies for reducing our reliance on imports?

The strategies include: (1) stockpiling; (2) substitution; (3) conservation; (4) diversifying foreign supplies; (5) increasing domestic supply. Let me briefly touch on these.

Stockpiling:

Stockpiling is not a new concept. Joseph advised the Pharaoh to stockpile grain against lean years. The US defense stockpile began in 1939 before the US entry into World War II and has continued since. However the stockpile targets have changed in quantity and type of material over a period of time. As to quantity, the original goal was to have a supply of critical materials sufficient to meet essential needs for five years. This was reduced to three years and later to one year and then was raised back to three years.

There are several problems with stockpiles. One is that there are changes in the type of material required by the users. For example, it is reported that some of the cobalt on the stockpile is not up to specifications for use in making the critical alloys required for jet engine blades. It would have to be reprocessed and thus is not readily available in an emergency. Much of the manganese and chrome in the stockpiles have also been reported to be “off” specification. Stockpile managers, like generals, tend to fight the last war instead of accumulating materials that will be required for the next one.

Another problem is that stockpiles get used for political purposes. A good example of this occurred during the Vietnam era, when the Johnson administration suddenly declared as excess certain minerals and released these from the stockpile to reduce commodity prices and contain inflation.

Perhaps the worst problem is that stockpiles are expensive investments that bring no return to the owner.

Conservation:

Conservation is a viable technique to reduce mineral import dependence and vulnerability. Learning to make parts with less of a given strategic mineral may be attractive both as a cost saving strategy and as a strategic minerals strategy. However, this is not as simple as it seems. For example, if the proposed conservation practice involves a change in the alloys specified for a given part, there may be long lead times required to “qualify” the new alloys for the particular use. Under these circumstances conservation may be neither practical nor important.

Conservation also can take the form of recycling. However, the cost and efficiency of recycling are critical. Further, recycled materials may not meet required specifications and may require extensive reprocessing or may not be able to be reprocessed for use in high specification alloys. In the case of some commodities, such as that of manganese required in steel making, reprocessing may not be feasible at all.

Substitution:

It may be possible to substitute a new material for a critical one. For example, ceramics may be substituted for cobalt or chrome alloys in certain applications. Again, however, the problem is one of qualifying the substitute material for a particular use. This is often a very time-consuming process that may take five to ten years. Further if the substitute material is not readily available from domestic sources, we may have moved from the frying pan into the fire.

Diversifying Foreign Supplies:

The important known sources of many important mineral raw materials are located in a relatively few countries. By diversifying, by encouraging development of new sources of supply in other countries, we can reduce vulnerability imposed by dependence on a few sources. This can be done by encouraging exploration and development of these mineral raw materials in many countries. Such a strategy frequently has the added benefit of aiding less developed nations. There remains, however, the risk that these sources will become unavailable because of adverse political changes, war or because our competitors acquire control of these supplies.

In fact the strategy of diversifying foreign supplies raises the issue of who controls these supplies. In the last analysis, it is who controls foreign supplies of strategic minerals that is the key issue. For example, the case of chrome, the important producers are South Africa, Zimbabwe, Russia and Turkey. Given this case of characters, control of chrome production can be an obvious problem for the Western block. Because we are dependent on southern and central Africa for so many of our strategic mineral supplies, e.g. chrome, cobalt, platinum, and manganese, the increasing political upheavals in South Africa should give us all concern.

Less obvious than the political control is the more subtle control of supplies of many important commodities by our competitors and sometimes allies through financial and market mechanisms. In many cases, this subtle form of control has been exercised by agencies of these governments or by quasi-government companies through their ownership, management and control of supply by contracts with producers and producer countries.

From the age of discovery in the 16th century onwards, the “have not” industrial and mercantile powers have tried to acquire sources of raw material supplies in the less developed world. Though initially this took the form of overt colonialism, since World War II it has been in the form of a more subtle neo-colonialism. As opposed to many of the industrial powers, the U.S., formally largely self sufficient through domestic sources production, probably has not proportionally acquired control as large off shore holdings as have the British, French, Japanese and other countries. In fact we are Johnny-come-latelys to the neo-colonial game and much less expert at it than many of our competitors. Because we are less expert, we may find ourselves squeezed out of these critical raw material supplies by none other than our “allies”.

Diversifying foreign supplies also raises questions of geography and access in time of emergency. Manganese is an example of a bulk commodity which must be shipped great distances by vessel to U.S. ports. The transportation of manganese is highly vulnerable to interruption by military actions, but the commodity is absolutely essential for the production of basic steel. Bauxite, another bulk commodity, represents
a similar problem. Supplies of either would be affected by a long
term emergency in which ocean shipping was interrupted. On
the other hand users of cobalt or platinum require much smaller
quantities. These commodities are also relatively high in price,
permitting air transport. Thus, supplies of these metals would
not necessarily be interrupted for long by an event such as a
World War I and II style submarine blockade.

**Increasing domestic supply:**

A viable active private-sector minerals industry, constantly
adapting the quality and quantity of its production to the
marketplace, constitutes a “living”, self-managing inventory
of mineral raw materials. The existence of such an industry ob-
viates the temptation to use the stockpile for short-term political
considerations as opposed to national defense needs. It reduces
dependence on foreign supplies. It eliminates the long lead times
required by substitution and some conservation strategies.

Strategies for increasing domestic supply need to focus on
several ideas: These include

1. making land available for exploration and development;
2. improving the environmental and regulatory climate;
3. removing financial disincentives or improving financial
   incentives for exploration and development;
4. fostering research in the areas of mineral exploration and
   mineral extraction.

**a. Land Availability.**

It can be said that the single most important factor for suc-
cessful exploration leading to the discovery of new conventional
or unconventional sources of supply, is access to land on which
to explore. The federal government owns one-third of the na-
tion’s land; the states and large corporations own additional large
areas. Clearly, policies that restrict access to these large tracts
reduce the chances of discovery of additional or new supplies. Current federal policies have withdrawn from 40 to 60% of
federal lands from exploration.

If it is the national policy that a domestic materials industry
is important, then many of these lands should be reopened for
exploration and kept open. Why keep such lands open for
repeated exploration? Isn’t one round of exploration enough?
The answer is no, it is not enough. Geology and mineral ex-
ploration are evolving sciences. New theories and concepts as
well as new exploration tools allow our profession to look again
and again at areas that have already been explored, perhaps
several times, and to make significant new discoveries. That
this has occurred when the geologic theory, the financial means,
and the land are available can be readily demonstrated. To name
just a few examples:

New geologic concepts led to the discovery of the New
Lead Belt in Missouri in the mid 1950s. By the late 1960s,
these discoveries ended the substantial post-World War
II U.S. dependence on lead imports.

Geologic concepts and diligent exploration led to the
discovery in 1967 of significant and economic deposits of
platinum-group metals in the Stillwater Complex in
Montana. This discovery is expected to reduce the almost
total U.S. dependence on imports for these critical metals
by 6 to 10 percent.

Improved exploration methodology and changing
geologic concepts have led to the discovery of one major
and several small copper-zinc deposits in Wisconsin. If
these deposits are developed and domestic smelting
capacity is rebuilt, this production could substantially
reduce U.S. dependence on imported zinc metal supplies.

Changing concepts and technology have led to recent
interest on the part of industry and possibility of domestic
diamond production. No commercial deposits have yet
been found, but hitherto unexplored areas are being search-
ed and conditions favorable for diamond occurrence are
being identified.

**b. Improving the Environmental and Regulatory Climate.**

In the last twenty-five years we have seen a vast increase in
environmental laws and regulations. Many of these were urgent-
ly needed. Others are based on unfounded or unwarranted con-
cerns or are a guise for blocking economic activity and develop-
ment. Unnecessary regulation and unnecessary delays result in
making U.S. domestic minerals producers less competitive. It
is timely to re-examine these rules, laws and processes so as
to assure that only the necessary ones are imposed and to
streamline the process of permitting and monitoring.

**c. Fostering Research**

The domestic minerals industry is greatly assisted by a strong
research program aimed at understanding the geology of mineral
deposits, improving exploration technology, increasing efficien-
cy of mineral extraction and mitigating environmental effects.
This can be done through cooperation between government,
academia, and industry.

**d. Financial Incentives and Disincentives.**

An urgent need is to find new ways to meet the financial needs
of domestic industry, especially the small companies who by
their nature are more inventive, ambitious and risk-oriented
-all qualities required to be successful in mineral exploration.
This is especially true in the strategic minerals arena where many
of the commodities occur as relatively small deposits that are
unattractive to large companies.

The Position of the American Institute of Professional
Geologists.

From an analysis of all these factors, the institute is developing
its own policy with respect to the issue of strategic minerals.
I suggest that the AIPG position should be as follows:

- With respect to scarcity of mineral materials, the quality
  of being designated "strategic" or "critical" in nature can
  commonly be attributed more to political and economic
circumstances than geological circumstances.
- A vital, stable domestic mineral industry is the most ef-
  fective guard against dependence on imports for basic supplies
  of strategic and critical mineral commodities.

In my mind this should be encouraged by a realistic lands policy,
an improved regulatory climate, by developing financial incen-
tives and by research.

- The location, assessment, and evaluation of known and
  potential domestic sources of strategic and critical mineral must
  be prime targets for scientific endeavors funded by public and
  private sectors.
- New and alternative minerals and materials technology must
  be encouraged.
- Research to mitigate existing technological constraints
  associated with minerals resource development must be sup-
  ported both in the public and private sectors. Particularly im-
  portant are technologies which would support mineral resource
  development under environmentally-sensitive circumstances.
Geology In A Jocular Vein  
- Specious Thoughts  
From Richard J. Proctor

When I worked for the Metropolitan Water District in Los Angeles, there were about 800 employees in the office building. One day, on our way to the cafeteria, the Chief Engineer said to me, in all seriousness, that maybe those of us professionals who are higher up in the organization ought to wear some kind of pin or insignia so that others would know who we were. It seemed to him that too many employees were walking past us without saying hello, or saluting, or bowing, or something.

This got me to thinking about status in our profession. So, tongue-in-cheek, I offer the following on how to identify the more accomplished professional geologist from those less blessed. Of course, all three classes below must have attained the status of AIPEG Member before being allowed to wear the appropriate insignia. You may wish to add other attributes.

PROPOSED GEOLOGIST INSIGNIAS  
(To be worn proudly in public)
Purpose: To recognize the really competent geologist from the rest.

Some Attributes of the MIDLIG Geologist

MIDLIG = Mid-Life Geologist
Age: Usually between 30 and 50 years old. Starting to notice a paunch.
Work: Would rather be in a cushy office than in the field.
Money: Underpaid and under-recognized.
Professionalism: Writes papers for professional journals to inform, and also to get recognition from colleagues.
Books: Is rightly proud of his/her library and certificates.
 Probably drives: Station wagon or Porsche.
Favorite drink: Wine or beer

Some attributes of the YUMPES Geologist

YUMPES = Young Upwardly Mobile Professional Earth Scientist
Age: Has 5 to 10 years experience. Is bright, energetic and altruistic.
Work: Prefers field work to office or lab.
Money: Underpaid and under-recognized.
Professionalism: Joins professional societies and attends their meetings.
Books: Buys lots of books "for future reference".
 Probably drives: 4-wheeler or 280Z.
Favorite drink: Beer or milk.

Good News on Replacement of Seals

Last month TPG reported that the replacement of the impression seals to update from CPGS to CPG would cost $30.00. Since then, the headquarters office learned that an update of the impression seal can be done by simply replacing the removable steel dies. This costs only $10.00 rather than $30.00.
Treasurer's Report
John T. Galey, Jr., AIPG Treasurer

As per Article X, Section 7, of the Bylaws, an audit of the 1987 financial status of the institute was done by Wagner and White, Certified Public Accountants, of Golden, Colorado. The recently completed audit indicates that the institute completed 1987 with an excess of $9,646 income over expenses compared to a loss of $3,569 in income over expense in 1986. Members equity, the difference between assets and liabilities computed at the beginning of each fiscal year, increased in 1987 from $66,332 to $75,976. This reserve approaches the desired amount for a three-month operating expense level. A portion of Wagner and White’s audit is reproduced here. Copies of the complete audit are available from Headquarters on written request.

BALANCE SHEETS
December 31, 1987

ASSETS

CURRENT ASSETS
Cash in checking and savings $257,695
Accounts Receivable 0-
Inventory 41,239
Prepaid expenses 12,460

TOTAL CURRENT ASSETS 311,394

FURNITURE AND EQUIPMENT
Furniture and equipment 87,622
Leasehold improvements 4,318

Less accumulated depreciation 62,359

$342,085

LIABILITIES AND FUND BALANCE

CURRENT LIABILITIES
Accounts payable $ 2,202
Accrued compensated absences 3,175
Withheld taxes payable 774
Section dues payable 27,565
TOTAL CURRENT LIABILITIES $ 33,716

COMMITMENTS 0-

DEFERRED INCOME 232,391

FUND BALANCE $ 75,978

$342,085

STATEMENTS OF INCOME/(LOSS) AND CHANGES IN FUND BALANCES
For year ended December 31, 1987

REVENUE
Membership dues $320,600
Reinstatement and application fees 8,180
Publication and supplies sales 10,993
Interest income 12,693
Miscellaneous income 0-

Total revenue $352,466

EXPENSES
Accounting and legal $ 6,551
Contract labor 4,027
Contributions 11,481
Depreciation 14,403
Educational affairs 444
Equipment rentals 7,110
Insurance 7,705
Lobbying expense 7,647
Membership directory 10,170
Membership promotion 6,698
Miscellaneous expense 4,023
Newsletter publication 44,299
Office supplies and expense 8,063
Pension plan contributions 8,256
Postage and shipping 23,935
Public relations 7,033
Publications 25,402
Rent and utilities 24,054
Salaries 80,975
Supplies 6,333
Taxes - other 1,198
Taxes - payroll 5,662
Telephone 3,957
Travel and meetings 23,394

Total Expenses $342,820

EXCESS (DEFICIENCY) OF REVENUES OVER EXPENSES 9,646

FUND BALANCE - BEGINNING OF YEAR 66,332

FUND BALANCE - END OF YEAR $ 75,978

Financial Outlook for 1988
The financial outlook for 1988 is good. Dues collected as of March 31, 1988 are $287,655 compared with $301,905 as of the same date one year ago. The decrease of $14,249 can be attributed principally to the loss of income from active and retired membership categories. The table below compares membership statistics with dues income for the periods March 31, 1987 and March 31, 1988 and illustrates the income loss even though the institute shows a slight membership increase.
Dues Statistics

<table>
<thead>
<tr>
<th>Date</th>
<th>Dues Received</th>
<th>Active</th>
<th>Retired</th>
<th>Associate</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/31/87</td>
<td>$301,904</td>
<td>3,745</td>
<td>562</td>
<td>69</td>
<td>4,376</td>
</tr>
<tr>
<td>3/31/88</td>
<td>287,655</td>
<td>3,650</td>
<td>690</td>
<td>81</td>
<td>4,425</td>
</tr>
</tbody>
</table>

Difference -14,249

Dues Loss/Member (1) $75 $50 --

Total Dollar Loss (7,125) (6,400) -- (13,525)

As can be seen from the membership statistics, the retired membership category is growing. An additional statistic is that 37% of our membership are between 48 and 62 years of age and 24.9% are 63 years of age and older. Only 38% are less than 47 years old. (Also see p. 12-13 of this issue.)

To enhance a solid program of services to the members and expand the role of AIPG as the professional organization for all geologists, we must attract new membership to our active roster.

Congratulations!
AIPG Members Receive Honorary Doctorates

Honorary doctorates were presented by Rocky Mountain College to John F. Fanshawe, CPG 1144 and Oramel Seager, CPG 1885. Fanshawe is a consulting geologist in Billings and a former visiting professor of geology at Rocky Mountain College.

Fanshawe, who specializes in mineral and fossil fuel as well as geothermal resources, served as president of the Rocky Mountain Section of the American Association of Petroleum Geologists; president of the Montana Section of the American Institute of Petroleum Geologists; chairman of the Rocky Mountain Section of the Geological Society of America; and has an honorary life membership in the Montana Geological Association. He was born in Philadelphia, and received three degrees, including a doctorate from Princeton University. Later, in Montana, he joined Montana Power Co. as staff geologist. He opened his own consulting office in 1971. Fanshawe is the author of 16 publications.

Seager was a geologist in Oklahoma, administrator of geological surveys in Montana and Wyoming and planner of exploration and drilling in Egypt and Saudi Arabia.

He is credited with being personally responsible for the discovery and development of a significant amount of this country's energy deposits, and he has been recognized as a leader in developing Middle East oil reserves.

Until recently he served as a petroleum consultant in exploration and development in the Middle East and North Africa.

California Section Produces Field Guide

Geologic Field Guide to the Southwestern Salton Basin Area was released in February by the California Section AIPG under the editorship of Stephen M. Testa and Keith E. Green. The guide contains 33 pages of text, a selected reference list and a map stratigraphic chart. Those seeking copies should contact Steve Testa at ERI, 21818 South Wilmington Ave., #405, Long Beach, CA 90810 (213) 518-4597.

Fakundiny to Chair North American Commission on Stratigraphic Nomenclature

At a recent meeting of the North American Commission on Stratigraphic Nomenclature, (NACSN), held in conjunction with the annual meeting of the GSA in Phoenix, Arizona, Robert H. Fakundiny (CPG 4977), State Geologist and Chief of the New York State Geological Survey (3136 Cultural Education Center, Albany, NY 12230) was elected Chairman of NACSN. Over the next year NACSN will review comments on the 1983 North American Stratigraphic Code (published in the AAPG Bulletin, v. 67, no. 5).

Society of Independent Professional Earth Scientists

John C. Roberts, CPG 4988, an independent geologist from Oklahoma City, Oklahoma, was installed as President of the Society of Independent Professional Earth Scientists (SIPES) at the Society's 25th Annual Meeting at Wichita, Kansas on April 8, 1988.

Other new officers of the organization for 1988-89 are A.H. Wadsworth, Jr., Vice-President, of Houston, Texas and Hugh W. Cuffman, Secretary, of Lafayette, Louisiana. H. Vaughn Watkins, Jr., of Jackson, Mississippi continues as Vice-President of Natural Resources and William E. McCommons of Dallas, Texas continues as Treasurer.

Newly elected members of the board of directors are Lucius C. Geer of Houston, Texas; Charles B. Godfrey of Midland, Texas; Leonard E. Jordan of Shreveport, Louisiana; Victor E. Ratliff, CPG 2220, of Oklahoma City, Oklahoma and Fred M. Thompson, Jr. of Corpus Christi, Texas.

Directors continuing on the board are William G. Ellis of San Antonio, Texas; Raymond M. Goodin of Wichita, Kansas; Robert M. Grace of Midland, Texas; Gene L. Howard of Denver, Colorado; Robert R. Lamb of Dallas, Texas; Philip J. McKenna of Denver, Colorado; Harry Westmoreland of Lubbock, Texas and Gene B. Wiggins, CPG 4714 of New Orleans.

No Directory Yet? - Contact Headquarters

Both Administrative Manager Carol Beckett and Editor Ed Nuhfer gained the hapless knowledge that some of you AIPG members may not have received your directory yet. President Sam Evans was one such individual, so at least take comfort in the fact that you are in good company. The directory was printed and mailed in late April by W.C. Brown Publishers in Dubuque, Iowa who did a very fine job on the production. However, the spiffy new 1988 Directory required a plastic coat on the cover to retain the silver ink in place. This was the first time that Brown had done bulk mailing on one of these new plastic-coated stocks and it appears that the adhesive conventionally used for the label doesn't stay tightly on the new covers. Brown has promised AIPG an adjustment and we need to report the adjustment as soon as possible. If you have not received your directory by now, it is certain that your label separated from your directory. Phone Carol at headquarters immediately and she will ship you a directory.
BLM Report on Coal royalty reduction

A recent BLM report has determined that reducing the royalty rate for coal from underground mines on public lands from 8% to 5% would not lead to increased production. Current regulations enable such reductions and several companies have sought the reduced rate.

The report’s conclusions differ from the position taken by Assistant Secretary Steven Griles and the report has met with stiff resistance within the Department of Interior. The report is considered a “working draft” at this point, according to the Assistant Secretary’s office.

Gulf of Mexico lease sale sets record

A recent central Gulf of Mexico lease sale set an all-time record for the number of blocks receiving bids. 931 bids for a sale of 684 blocks brought in high bids exceeding 404 million dollars. A reduction of the minimum acceptable bid from $150/acre to $25/acre “played a large part in the results” according to the MMS. Most of the tracts in the sale were reoffers and had been offered as many as five times previously without receiving any bids.

Lawsuit against new 5-year OCS leasing plan

Petitioners’ briefs for a lawsuit against the new DOI 5-year leasing plan were filed in March. The suit (87-1432) is being filed in the U.S. Circuit Court for the District of Columbia. The federal briefs are expected in about two months. Amicus briefs were filed in April by industry intervenors, including API, scheduled to file in June. The five-year plan covers OCS lease-sales scheduled from July 87 through June 92.

Senate approved of water projects bill

The Senate Environmental and Public Works committee approved 16-0 a 1.6 billion dollar water project bill (S-2100) for the U.S. Corps of Engineers. The projects proposed are described as all being “squakie clean” and “worthy”. Some, however, had not been approved by the Secretary of the Army or OMB at the time of the bill’s passage. One of the two major projects covered by the bill’s funding is construction of new dam and locks on the Ohio River to replace existing structures near Olmstead, Illinois. The second project is the Chicago Underflow Plan for floodwater storage and reservoirs in quaries at McCook and Thornton, Illinois.

EEZ mapping office

The departments of Interior and Commerce have established a joint office to coordinate mapping of the EEZ, using a standard surveying system. The office is to be headed by Gary Hill of the USGS.

Proposed OCS lease sale draws comment

Public comment on the controversial northern California OCS lease sale (Sale 91) has been so voluminous that MMS has been forced to delay two other sales scheduled for offshore southern California (Sale 95 and Sale 119). The MMS office in Los Angeles has been overwhelmed by the public’s response to the Sale 91 proposal and the other sales are being rescheduled in order to permit the office to respond to the comments on the proposed Sale 91.

Natural Gas Policy Act definition change proposed

The Federal Energy Regulatory Commission (FERC), has proposed to amend its regulations for defining Devonian shale for purposes of qualifying under section 107(c)(4) of the Natural Gas Policy Act (NGPA).

The proposal would expand the definition to allow producers to measure Devonian shale from a selected interval rather than from the beginning of the stratigraphic interval encountered in the wellbore, as is the current regulatory requirement. Further information can be obtained from Julia Lake White (202-357-8530) at FERC.

DOE Special Research Grants

The Office of Energy Research (OER) has announced interest in receiving applications for Special Research grants that will support research in subsurface science. Research efforts should be directed to developing an improved long-term understanding of the geochemical, microbiological and hydrologic mechanisms associated with contamination in subsurfaces and particularly in groundwater. Applicants should request DOE’s Research Initiative Plan (DOE/ER-0344) for added details. Applications are due August 1, 1988. Further information can be obtained from Mrs. Jean A. Morrow, (301-353-5544) or Dr. Frank J. Webber (301-353-4208).

Coal lands opened to lease by application

The BLM has cancelled two federal coal production regions and opened the areas for lease-by-application. The cancellation of the Fort Union Coal Production region will allow lease-by-application in 36 counties in Montana and North Dakota. The cancellation of the Green River - Hams Fork Coal Production Region will allow lease-by-applications in 11 counties in Colorado and Wyoming. In both instances, the action was based upon the current economic situation in the coal markets. Further information can be obtained from the appropriate BLM state offices.

Corps of Engineers

Final rule of discharge of dredged material in the waters of U.S. or ocean waters, effective date April 6, 1988. For information, contact Dave Mathes or Joe Wilson (202-272-0397).

DOE


BLM

Proposal withdrawal and public meeting, Big Horn County, Wyoming. BLM proposes withdrawal of 11,335 acres to protect Spanish Point Caves and associated Rarstic subsurface waterways. The lands will be closed up to two years from surface entry and mining. The land will remain open to mineral leasing. Comments due by July 13, 1988.
DOE
Study on Dry Cask Storage - Radioactive Waste. For opportunity to comment on study, contact Gregory Hartkopf at (202-386-2839).

BLM

DOE
Final rule Conduct of Employees and Financial Interest, and Interests in Energy Concerns.
Nuclear Waste Policy Act of 1981; Spent Fuel Storage & Disposal; compliance with Section 223; Notice Update.

Bur. Reclamation
Notice of intent to prepare EIS - Sea water intrusion project, California.

OSMRE
Final rule: Surface Coal Mine & Reclamation Operations; Requirements for Permits & Permit Processing.

MMS
Termination of Final EIS on development of Gorda Ridge polymetallic sulfides.

Forest Service

Corps of Engineers
Notice of meeting - Coastal Engineering Research Board, Waterways Experiment Station, Vicksburg, Mississippi. May 2-6, 1988.

DOE
Notice of intent to prepare EIS - Elk Hills (NPR-1) California's expansion of steam flood activities.

DOE
Finding of No significant impact - Divestiture of NPR's #1 and 2.

NPS
Draft EIS - Gates of the Arctic National Park in Perserve, Alaska. Comments due July 18, 1988

EPA

FS
Notice of intent to prepare EIS - Bitterroot National Forest, Montana, on proposed vermiculite mine. Contact Mike Oliver, Darby, Montana (406-821-3913).

JUNE 1988

Hugh Hay-Roe

The Biblical Approach

Make sure you are not treating your business readers as if they were your former professors. Hit them between the eyes with your main points. They will be grateful to you for saving their time. This approach will save your time, too.

Whether or not one interprets the Bible literally or as history, the Good Book certainly takes a historical approach: it starts with Genesis and ends with Revelations. As technical writing consultant Jerry Murray has pointed out, that is what we learned in college to do with our scientific and technical reports. We followed the advice of the King of Hearts in Alice in Wonderland: "Begin at the beginning, and go on until you come to the end: then stop."

This strictly chronological tack happens to generate what professors have usually needed in student reports. As undergrads and especially as graduate students, we had to demonstrate our command of both the inductive and deductive methods of reasoning. The prof needed to know if we had read the relevant literature; done necessary field work and lab work meticulously and completely; made the logical inferences from the raw data; mastered the specialist's terminology; and finally, if we had arrived at a coherent interpretation that permitted us to draw some conclusions. (The conclusions might not even be newsworthy unless we were working in a frontier area, either geographically or scientifically.)

In short, to satisfy the professor on all these points, we had to go through a detailed historical review of the project. The Biblical approach generated a thick report that landed on the professor's desk with a satisfying thump. Although some professors were grateful for slim reports they could get through in less than an hour, others had grad-student slaves to help with the reading and grading. They scanned our term papers for all the standard headings, and checked them to see that we had included the required bibliography and appendices.

But leaving the groves of academe for the cold, cruel world outside, we encounter a very different situation. Unfortunately, what the professor required is not at all what's needed by busy on-the-job readers. They chronoLOGICAL approach is not the only logical one; we need to switch to the different logic of "reader-friendly" organization.

In short, the suspense-filled Biblical sequence is rarely suitable for business writing. Give the reader your findings and recommendations; THEN support them with evidence and interpretation. Don't lead up gradually to your main points through a long-winded chronological recap of supporting data; this is the single biggest time waster in on-the-job writing. (And because geologists are trained as scientists dedicated to unraveling history, we are often among the worst offenders).

Hugh Hay-Roe consults in petroleum geology and technical writing. As a writing consultant, he is associated with Murray Associates International.

"Write It Right" featuring Hugh Hay-Roe appears in TPG courtesy of the Texas Section.
Results of Membership Study

Stan Johnson, and able co-workers Carol Beckett and Wendy Davidson, have completed a study of the profile of AIPG membership. Some of their graphs depicted here, reveal the character of the membership and indicate future direction. AIPG is heavily populated by members with significant experience. On the positive side, this reflects AIPG's role of leadership because many officers of national geological organizations are AIPG members and officers of these organizations usually have noteworthy reputations based on years of solid accomplishments. However, a particular concern that accompanies this stature is that a significant number of members will enter retirement in the near future. New young members are needed to follow in the tradition of AIPG leadership.

Stan will provide a slide-illustrated summary of the implications of this study at the business meeting at the Annual Meeting in Tulsa.

Graph 1: This graph shows the percentage of our membership in each birth-year interval: 1896-1910, 2%; 1911-1915, 3%; 1916-1920, 6%; 1921-1925, 13%; 1926-1930, 16%; 1931-1935, 13%, 1936-1940, 8%; 1941-1945, 9%; 1946-1950, 14%; 1951-1955, 13%; 1956-1960, 2%.

Graph 2: This graph shows the AIPG Membership Age groups and the percentage of that age group. The number of members per age group are: 1896-1910, 104; 1911-1915, 139; 1916-1920, 275; 1921-1925, 538; 1926-1930, 676; 1931-1935, 556; 1936-1940, 347; 1941-1945, 369; 1946-1950, 596; 1951-1955, 550; 1956-1960, 90.
Graph 3: This graph shows the number of members certified in five year periods since 1963.

Arquero Receives Kentucky Section Scholarship

Mrs. Cheery Arquero of Richmond, Kentucky was selected to receive the AIPG’s Kentucky Section field-camp scholarship in the amount of $250. John Philley, president of the Kentucky Section, reports that the section may be able to offer two awards in 1989.

Harrison H. Schmitt to be Lunch Speaker at AIPG Annual Meeting in September

An excellent addition to an already fine Annual Meeting program will be the presentation of ‘‘A Geological Field Study on the Moon’’ by Dr. Harrison (Jack) Schmitt as the lunchtime address.

Schmitt was born in Santa Rita, New Mexico and was exposed to geology almost from the cradle. His father was Harrison Ashley Schmitt, an independent mining geologist who was well known in the Southwest. Jack obtained his undergraduate education at the California Institute of Technology, was a Fulbright Scholar at the University of Oslo and obtained a doctorate from Harvard in 1964. His work experience encompasses the U.S. Geological Survey (1957-1965) and the National Aeronautic and Space Administration (1965-1975). At NASA, Schmitt became nationally famous as an astronaut on Apollo 17 mission to the moon on December 10, 1972. Dr. Schmitt became Senator Schmitt between 1977 and 1983 when he served as senator from New Mexico. He currently serves on the President’s Foreign Intelligence Advisory Board and on several other governmental committees.

Jack Schmitt is qualified as a jet pilot and is author of nearly seventy publications. He is one of a very select group of individuals who may now look up to the Moon and know ‘‘I’ve been there!’’ He was the only scientist to go to the Moon and the last of twelve men to step on the Moon during the Apollo Program. He brings a unique breadth and an impressive depth of experience that ranges through the scientific, the administrative and the political. Be sure to mark September 27 through October 1 on your calendars for the Annual Meeting. Attendees at the Annual Meeting will certainly be in for an outstanding experience from such a distinguished speaker.
ALASKA

The Executive Committee of the Alaska Section - AIPG met on Friday, February 5, 1988, with Jim Brown, Ross Schaff and Linda Okland present. Since we did not have a quorum, no business was transacted. However, we did discuss plans and proposals for the coming year.

Suggested activities for membership committee include conducting a membership drive, putting together a section directory, and surveying the membership to find out what members need/want expect from the organization.

A more active role for the Education Committee was suggested, with potential projects including participation in the Alaska Science and Engineering Fair, conducting a workshop for students and/or teachers in cooperation with Imaginarium, and investigating ways to increase the geology course offerings at local colleges. Linda indicated an interest in working with this committee.

Section Meeting dates for 1988 were reviewed. They are 2/16, 3/15, 4/19, 5/15, 9/20, 10/18, 11/15 and 12/20 (annual business meeting). Board meetings were tentatively scheduled for 5/6, 8/5 and 10/7, with additional meetings to be scheduled if needed. We would like to build programs for the year around the general theme of “Increasing the Professional Geologists’ Profile in Alaska”. Possible speakers include Henry Cole, Governor Cooper’s science advisor and Sam Evans, national AIPG president. The possibility of holding one or two evening program meetings was also mentioned. The public relations pamphlet distributed from AIPG national contains some excellent ideas for programs and publicity which we should try to implement.

ARKANSAS

The Arkansas State Board of Registration for Professional Geologists has announced that any geologist working within the state, in the public sector, after July 1, 1988, is subject to the “Registration of Geologists Act of 1987”. Those applicable geologists shall be required to have a Certificate of Registration or a Temporary Certificate indicating registration application.

The “Grandfather Clause” for registration without examination is effective until May 1989. Geologists with necessary qualifications who wish to apply for registration without taking a written examination should write to the board for application forms not later than May 1, 1989.

Requests for forms and information should be made to:
Secretary
Arkansas State Board of Registration for Professional Geologists
Vardelle Parham Geology Center
3815 West Roosevelt Road
Little Rock, AR 72204

CALIFORNIA

COMMITTEE APPOINTMENTS

Jim Slosson has been recently appointed to several committees including the Colorado Natural Hazards Mitigation Council, County of Los Angeles Hillside Development Guidelines Committee, Natural Research Council Committee on Ground Failure Hazards, ASCE Disaster Preparedness Committee and the Abalone Cove Landslide Technical Panel.

STATE BOARD ACTIVITIES

The State Board of Registration for Geologists and Geophysicists has asked its Professional Practices Committee to review the current situation regarding continuing education (CE) within the profession, determine whether a problems exists, and made recommendations for improvements. Senate Bill 87, required registered geologist and geophysicists to 15 hours of (CE) as a condition for each (biennial) renewal. The Committee has also been asked to evaluate the pro’s and con’s of mandatory (CE) for registered professionals.

The Committee is considering several ideas which might encourage and facilitate greater participation in CE by California’s earth scientists. A regularly up-dated, comprehensive listing of scheduled CE offerings in the state could reach interested professionals who do not receive individual notices from the sponsoring organizations. A questionnaire to registered geologists and geophysicists accompanying their biennial registration renewals, could provide -- on a voluntary basis -- useful data on the current level of participation in CE programs. The Board has contacted the California Section AIPG, and other professional societies in the state, asking their opinions on several aspects of this issue.

CALIFORNIA REGISTRATION EXAM SCHEDULE

The registration exam for geologists and geophysicists will be given September 16, 1988 and for engineering geologists on September 17, 1988. The final filing data to qualify for the exam is May 1, 1988. For more information contact the State Board of Registration for Geologists and Geophysicists, 1021 “O” Street, Sacramento, California 90814 (916/445-1920).

A DAY IN THE FIELD WITH DIBBLEE

The Thomas Wilson Dibblee Geological Foundation and the Coast Geological Society presents “A Day in the Field with Thomas Dibblee on the San Julian Ranch” on Saturday, October 1, 1988 - 9 a.m. to 5 p.m. Tentative events include Rancho San Julien Diatomite Mine: Tour, Guided Tour through Ranch House and Geologic Features, Santa Maria Style BBQ and games. This will be a fun raising event for the Dibblee Geological Foundation. Donation for the entire day of events will be $25. The organizers are seeking sponsors for the onsite field trip transportation (vans, etc.), food, refreshments, and BBQ labor. For information contact: John Powell at 805/653-5556, Hans Schwing at 805/656-7600 or Helmweitz Ehrenspeck at 805/967-7820.
Carolinas Section
1988 is the Year to Get Involved

We in the Carolinas Section have some very interesting challenges for 1988.

There are two very fine programs - in-place and expanding - in the Carolinas for the improvement of earth science education for the general public. Details about them are included later in this newsletter. Get involved with them any way you can!

There is a need to increase our ability to help society in matters "geological". This may be done through individual professional geologists volunteering their assistance; another way is by volunteering to help in activities sponsored or coordinated by the section. Increasing our membership to include more of the many talented geologists in the Carolinas should help to increase our section's contribution. Take the challenge to recruit more geologists for our organization. Let's make AIPG-ers out of those good non-member geologists you know!

Everyone in society is involved in discarding or generating solid waste, and sometimes it may even be hazardous. But very few members of society are willing to address the enormous problem of how should we handle all those wastes. However, many people become intensively involved if any proposed handling of those wastes is to be done near their living area, home or work. I am not inferring that we geologists alone must solve this serious problem. Our challenge is to initiate actions to achieve coordination of professionals of appropriate disciplines - Geologists, Engineers, Chemists, etc. - with politicians at all levels to obtain valid solutions for the serious lifestyle-threatening problem (it might be a LIFE-threatening problem) of safely handling vast quantities of wastes, some of which are hazardous.

Possibly the most interesting challenge for us is that idea which you have been thinking about, but haven't quite gotten around to mentioning yet. Think it through, write it down, and give it to one of the section officers. We promise to immediately put it before all section members for consideration on how best your idea can be implemented.

Relative To The February TPG

* Please read again President Evans' Address to AIPG Members. Sam packs a lot of important ideas in his short message.
* If you haven't yet made up your mind exactly how you will get involved in '88, read the article "Dr. Technician?" on page 3. That will possibly answer your "WHERE" question -- ANYWHERE you can become involved will help! But do get involved.
* Wally Hendrix, CPG 688, wrote a fine Letter to the Editor which addresses a topic seldom discussed. We geologists should be careful not to fall into merely a butting contest in our dealings with other professions, such as the engineers. Each profession performs critical services for society's protection. Let's keep the relationships between our professions on a positive, help-society-first level. Then any minor differences can usually be settled without bitter feelings.

Earth Science Education Improvement
South Carolina

The Education Improvement Act was actually signed in 1984, but the S.C. Earth Science Education Program has been developing to its present high level of assistance for earth science teachers for more than 20 years. A fine quarterly Earth Science Newsletter is published which lists services available, interesting new books, availability of summer upgrading-courses for teachers & where, plus current earth science events and information. Other important services include: a speakers bureau, available for both classroom talks and field trips; published installments of earth science sourcebooks; an electronic bulletin board for computer access, and video tapes on many different topics. Ole Olson, CPG 1611, is your contact to volunteer for help.

North Carolina

The organization in N.C. is the Education-Industry Committee for Earth Science. Its focus is to explore how improvement in earth science education can fit into the basic education plan for N.C. It was formed in September, 1987, met again in February 1988, and the third meeting is planned for mid-May. Chuck Welby, CPG 1033, has attended those meetings and reports they were both exceptional, being well attended and having interesting talks presented. Several important committees have been formed to pursue different facets of potential improvement. Practicing geologists interested in earth science education are urged to join the group. Contact Chuck if you are interested in more details about this program.

Our elected officers for 1988 are:
Steve Edgerton - President
Dan Madison - Vice President
Jim Bales - Secretary-Treasurer
Russ Patterson - Chairman, Screening Committee

The publishing of a Carolinas Section Directory was discussed. Suggestions included having it contain names and affiliations of all section members, and that it be broken into lists based on your areas of geological interest, such as aggregates, hydrogeology, exploration, etc. What are your comments? If there are no major objections presented, minor changes can be made and the lists could be generated quickly from the current AIPG Directory. If you are talented in publishing bulletins, i.e. know sponsors willing to pay for publishing the directory in a nice format with stiff cover, or know of publishers willing to print a small bulletin at an even smaller fee, please contact one of the section officers.

Dan Madison, CPG 6910, gave an interesting presentation of The Geologist in Environmental Consulting that covered much of state-of-the-art pollution clean-up.

The N.C. Research Triangle area is being considered as a site for the U.S.G.S. Atlantic Marine Geology Branch. It is currently located at Woods Hole Oceanographic Institute in Massachusetts.

JUNE 1988
FLORIDA

The Governor of Florida, Bob Martinez, has appointed eight members to the newly created Board of Professional Geologists. This list includes five professional geologists, two lay members and the Chief of the Florida Geological Survey as an Ex-Officio Member. The listing includes four AIPG members as follows:

Dr. George L. Freeland, CPG 4448
Dr. Sam B. Upchurch, CPG 3852
Dr. Thomas A. Herbert, CPG 2551
Dr. Walter Schmidt, CPG 6029

For those interested in more information about the Florida Licensing law they should write to: The Board of Professional Geologists, Florida Department of Professional Regulation, 130 North Monroe Street, Tallahassee, Florida 32399-0750.

Charles W. "Bud" Hendry, State Geologist of Florida, has retired after 38 years of service to the state of Florida. Bud was appointed State Geologist in 1971 and served as Chief of the Florida Geological Survey and later Director of the Division of Resource Management within the Department of Natural Resources. Dr. Walt Schmidt (CPG 6029) will replace Bud as State Geologist. Walt was appointed Chief of the Florida Survey in 1985 and has been with that agency for 14 years.

Sincerely
Walt Schmidt, Ph.D.
Chief, Florida Geological Survey

LICENSEING UPDATE AIPG/FLORIDA MEMBERS NEED TO REQUEST APPLICATION

It has come to the attention of the Florida Executive Committee that the Department of Professional Regulation will not be sending out notices to individuals regarding obtaining and submitting their applications for licensure. Instead, the Department has asked that organizations, including AIPG/Florida, to inform their members that they need to request an application packet from the Board of Professional Geologists. The address is:
The Board of Professional Geologists
Department of Professional Regulation
130 N. Monroe Street
Tallahassee, FL 32399-0750
(904) 488-9912
If there are any questions, you might want to call AIPG’s legislative chairman, Richard Councill, or the Department itself.

KENTUCKY

Kentucky Section Scholarship Fund

At an executive committee meeting held on January 18th in Lexington, it was decided to use the profits from the national meeting, supplemented by some funds from our treasury, to establish a $10,000 scholarship trust fund. The interest from the fund will be used to provide $250 grants to assist eligible Kentucky undergraduate geology students in defraying the expense of attending a summer geology field camp. It is anticipated that two grants will be awarded in 1988. Section President John Philley, has sent application forms to the department chairs of all the public and private colleges in the state which have geology programs.

Ernest K. Lehmann Foundation

In response to a request from the Ernest K. Lehmann Foundation, which is strongly endorsed by our national organization, the Executive Committee also decided to donate $1,000 of the profits from the national meeting to the foundation.

The Lehmann Foundation, which will begin dispensing grants after it has accumulated a $1,000,000 principal, has as its goals:

1) public information and education, (2) research on public issues, and (3) international forums for professionals.

While there was strong sentiment on the committee to utilize all of the profits from the meeting on a worthy Kentucky cause, such as our scholarship fund (after all the profits were largely due to the efforts expended by our section members), it was felt that we should follow the practice of the last several national meetings by making a modest donation to the Foundation.

Job Opportunities Within State Government

Our section is compiling a roster of job titles within our state government, Department of Personnel, that should be of interest to our membership. The roster will contain those job classifications that specifically require training in geology and also other job classes which do not require geological training but would allow persons with such training to be considered.

There are many geologists working in state government and there may be opportunities for many more. Along with the roster will be a summary of the steps one must take to become a state employee. Watch for further announcements.

Spring Symposium

The final touches are being made for our 1988 Spring Symposium and banquet to be held jointly with the Geological Society of Kentucky. The date is April 15, 1988, Friday, at the Harley Hotel in Lexington. Our technical session will be from 2:00-5:00 p.m.

Kentucky Directory

Paul Dubois is in the process of preparing a directory for the Kentucky Section which will include our statement of purpose, code of ethics and section constitution as well as our section’s history and our membership roster.

Registration Bill

Although our efforts toward hosting the national meeting in 1987 precluded an effective “grass roots” effort toward promoting our registration bill in the 1988 General Assembly, it was hoped that the unexpected election of Wallace Wilkinson to the governorship would be of benefit to us. To date, however, our contacts in the administration have been too preoccupied with the budget crisis to be of assistance to us. Although there are about six weeks left to 1988 session, things don’t look promising.

THE PROFESSIONAL GEOLOGIST
The Kentucky Society of Professional Engineers, however, has published a position paper opposing the registration of geologists. (Published in February TPG.)

Dr. John Philley, in his capacity as section president and as Dean of Arts and Sciences at Morehead State University, has written two letters to KSPE addressing their inaccurate statements regarding a geologist’s education. In addition, he has sent letters to the geoscience chairs at other Kentucky colleges and universities urging them to express their concerns to KSPE and to their local legislators.

A formal complaint has now been filed with the Engineering Registration Board. Please take a few minutes to express your concerns about the KSPE position paper to your legislators, the Engineering Registration Board and KSPE/CEC.

Dr. Nelson Passes Away

The geologists of Kentucky recently suffered a great loss through the unexpected death of Dr. Vincent Nelson. Dr. Nelson was a significant contributor to the science and profession of geology. Our sympathies are extended to his family.

MONTANA

The 1988 Montana Section AIPG Officers are proposing a summer field meeting to be held at Dillon, Montana, on June 25-26, 1988. The meeting will include a field trip to the nearby mining districts of Argenta and Bannack and to the area around the Marathon wellsite on upper Blacktail Creek in the Snowcrest Range. A tentative schedule of events is as follows:

Saturday, June 25
8:00 A.M.: Assembly at the Beaverhead County Museum in Dillon
8:30 A.M.: Depart Dillon for the Argenta area
9:15-11:30 A.M.: Field tour of the Argenta mining district
11:30 A.M.: Depart Argenta for the Bannack area
12:15-1:00 P.M.: Brown bag lunch at Bannack State Park
1:00-4:00 P.M.: Field tour of the Bannack area
6:00-7:00 P.M.: Social hour sponsored by Western Energy Company
7:00-9:00 P.M.: Dinner Meeting

NEVADA

The February meeting was opened by outgoing President, Ray Irwin. Ray called for continued vigilance and action by the membership in legislative matters affecting the business of many of our members, principally, taxation and wilderness. He stressed the important contribution that can be made by the professional geologist in supplying quality information to elected representatives regarding these issues. He then initiated the election of 1988 officers. The outcome of the election by show of hands at the meeting is:

President - Steve Friberg
Vice President - Larry Lackey
Secretary-Treasurer - Ellen Hodos

Most of the committees need members and Steve requested interested members to contact him. Steve also mentioned that his personal goal for this presidency was to increase membership. As things stand now, our membership is so small that it has been difficult to build any balance in the treasury and officers have normally supplemented any shortfall out of personal funds. A larger membership would enable the section to raise money to cover postage and mailings of announcements and other needs.

Volunteers were requested and will be followed up in weeks to come. The meeting was closed by new President Steve Friberg.

The Nevada Section officers and committee chairmen for the 1988 season are as follow:

President - Steve Friberg
Vice President - Larry Lackey
Secretary/Treasurer - Ellen Hodos
Membership Chairman - Dick Thomassen
Screening Board Chairman - Kel Buchanan
Program Chairmen - Clancy Wendt
Regulatory and Legislative Chairmen - Bill Nork
Newsletter Editor - Dale Bugenig

Several of the committees are in need of additional help for the 1988 season. Even if you are not sure how much time you may be able to donate, I urge you to contact one of the committee chairmen and discuss with them what you can contribute.

OKLAHOMA

The Oklahoma Section of AIPG held its Annual Meeting on March 4 and 5 at the Embassy Suites in Tulsa. Approximately 60 individuals registered for the meeting.

A meeting of the Oklahoma Section officers and Executive Committee was held on Friday afternoon, March 4. This meeting was immediately followed by a meeting of the National Convention Committee, which is planning for the 1988 National Convention of the AIPG, which will be held in Tulsa later this year. On Friday evening, most of the convention goers attended the mixer where hors d’oeuvres and cocktails were served. Saturday morning, the Annual Meeting got underway with some excellent technical presentations, which covered a wide variety of topics. Speakers and topics included William Weissrock on "CO₂ Flooding for Enhanced Oil Recovery," Allan Hetzel on "Risk Reduction in Oil and Gas Exploration using Electrotellurics," Andy Obrachta on "Ground-Water Studies at Hazardous Waste Sites," and S.M. Logan on "Hydrologic Assessment for Service Station Leaks and Spills." The noon luncheon was followed by the Annual Business Meeting. Numerous topics of interest to geologists in Oklahoma were discussed, and Murray McComas presented the Pioneer Professional Geologist Award to Lon Turk (CPG 277). Charles Mankin, Director of the Oklahoma Geological Survey and past President of AIPG, and Sam Evans, this year’s president of AIPG, both were present at the Annual Meeting, and both spoke to the attendees during the business meeting. After lunch, a professional workshop was held. Workshop speakers and topics

Lon B. Turk receives Pioneer Professional Geologist Award from Dr. Murray R. McComas, CPG 2440.

LON TURK RECEIVES PIONEER GEOLOGIST AWARD

The 1988 Pioneer Professional Geologist Award was presented to Lon B. Turk (CPG 277) at the Annual Meeting of the Oklahoma Section of AIPG. Murray McComas made the presentation to Lon during the Business Meeting at the Annual Meeting.

Lon is a graduate of the University of Wisconsin, with a B.A. and M.A. in Geology. He was elected to the membership in the American Association of Petroleum Geologists in 1930, which was two years before he received his B.A. He became a member of the Geological Society of America in 1952 and is a charter member of AIPG. Among his many accomplishments are numerous publications on Oklahoma geology and considerable success in finding oil. He was responsible for testing a well in Oklahoma City that sprayed oil on Huey Long, who was delivering a speech at the fairgrounds, downwind of the well.

Fred Fox, CPG 1273
ETHICS(?) and REGISTRATION? Revisited

A few letters have trickled in. One CPG who is also a PE finds the Geologist-Engineer controversy "humorous" and "on the petty side." But a missed point -- the controversy is valid. Another CPG calls for registration as a qualification in court. Also a valid point, but a sad commentary. A couple of other letters are of the sort: "we must organize..." and "someone should...". The trouble with this kind of letter is that they point to well-known problems but offer no solutions. Wayne Hutchinson sent along an article from INSIGHT (March 7), and Russ Slayback has taken an inside shot at AIPG in his latest NE Section editorial, (See April, 1988 TPG), Let's start with that one.

Russ notes that (most?) NE Section members are environmental/engineering-hydro-type geologists (CONSULTANTS) faced with growing frequency with competing with PEs for geological work, because PEs ARE REGISTERED AND WE'RE NOT. Registration as an engineer gives them a right to do geological work? "What a crazy idea!" says Russ, and any rational person would agree.

But our world's a crazy place. Joe F., a soils engineer/PE registered in several states, is openly peddling his services in ENGINEERING GEOLOGY in NJ. Joe is NOT a geologist, but for some reason can't settle for being just an engineer. He does NOT have the required degree, or courses, or any other qualifications to practice geology. At one point an application for registration as a geologist in California was properly denied. Anyway, articles in the newspapers describe what "Geologist tells...", and then go on to say what Joe said. I, for one, feel violated. Joe's been hired by at least one municipality to review real geologists' reports regarding building over limestone. Humorous and petty, indeed! Joe's lack (of ethics) casts serious doubt on his qualifications as a professional of any sort, but apparently it's accepted that engineering registration allows a person to practice whatever he pleases, with the tacit support of the PE board. This is protecting the public? This is NOT humorous! And to permit unqualified people who happen to be legally registered in another discipline to practice what we hope to be professional geology is NOT petty.

It's abundantly clear in the NY-NJ area that engineers don't WANT geologists registered! And consider KSPE/CEC of KY (Feb. 88 TPG): "The conflict between geologists and engineers cannot be avoided if geologists become licensed to practice independently from engineers." What do we do, roll over and laugh?

The INSIGHT article makes more than one point, but here's a good place to insert some quotes that would seem to apply to this case: "(Registration) gives consumers a false sense of security... people are led to believe that they're protected when they're not." "...serious reservations about whether licensing does in fact protect the consumer." "The building code (doesn't) protect the public...the professional does." And my favorite: "licensing gives incompetents instant credibility."

Want some more? The INSIGHT article does indeed supply
some. It makes the point about professionals' "concern" for protection of the consumer:

"More often than not (registration is) an instrument for increasing the income of persons who practice in the profession." Does it make sense that (they) work so hard to...lobby year after year to protect the public?...why are...groups so eager to be regulated? And one that says it all: "rarely does a consumer go before the legislature and demand that a group be regulated."

Finally, "to be CERTIFIED, a professional must meet some standard of competence. Those who do not meet it cannot use the professional title." I like this! How about you?

For my part, I'd like to see certification with teeth. CPGs used to need eight years of experience. Some professions (even our own, in some quarters) require continuing education. If our certification meant something, it would grow those teeth in a remarkably short period of time, and would not depend on the engineering community to allow us to practice our own profession.

APPLICATIONS RECEIVED

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


BOWERY, Michael, 23107 Singing Wind Road, Diamond Bar, CA 91765. Sponsors: Stephen M. Testa, John Fryberger, Michael Rector, Robert Dickey, Tom Hill.


BUTERBAUGH, Gary J., 244 Creek Road Apt. #1, Camp Hill, PA 17011. Sponsors: Lane Schultz, Scott Laird, Gerry Ahnell, Robin Mueser-Robotson, Keith Rasmussen.

FLORIAN, Marc D., 12630 Ashford Pt. Drive 214, Houston, TX 77082. Sponsors: Annette Brewster, Richard Fuller, Rick Bost, Jay O. Gallagher, Chilton E. Prouty.

HARRINGTON, Anne H., 3318 S. Halifax Way, Aurora, CO 80013. Sponsors: Donald W. Beaver, Sally W. Bilodeau, Keith S. Thompson, Don E. Penniman, Sandy Wright.

HEINEMEYER, Gary R., 5061 W. Camino Del Desierto, Tucson, AZ. Sponsors: Russel C. Babcock, M. Dan Regan, Michael H. Green, Greg McKelvey, Grant R. Newport.


MILLER, Marc A., 2 Crest Road, Danbury, CT 06811. Sponsors: Gerald Friedman, Carl Burgchardt, Samuel T. Pecs, Arthur Van Tyne, Alex Warnath.


TOMIK, John C., 8419 Lace Bark Lane, Liverpool, NY 13090. Sponsors: James T. Mickm, Thomas Johnson, Geoffrey Seibel, Donald Coates, C. W. Fetter.


VOGT III, Rudy F., #5 Overbrook Road, Louisville, KY 40207. Sponsors: William C. MacQuown, Mike P. Sanders, Henry Morgan, John Miller, Bill Biehl.

WIDDICOMBE, Roberta E., 2598 Terraced Hill Court, Pottstown, PA 19464. Sponsors: Cullen Sherwood, Michael Mulhern, Cliff W. Bourland, Ron Hosek, Gordon Pirie.


NEW MEMBERS
(as of May 31, 1988)
Caldwell, Billy R., CPG 7464, Fort Worth, TX
Cobb, Richard P., CPG 7455, Springfield, IL
Cromwell, John E., CPG 7456, Topanga, CA
Dihrberg, Karen J., CPG 7457, Norman, OK
Klise, David H., CPG 7458, Ventura, CA
Malbrough, Lynn P., CPG 7459, Greenwood, MS
Mason, Charles E., CPG 7465, Moorhead, KY
Meyer, Michael R., CPG 7460, Pierre, SD
Pulliam, Duane K., CPG 7461, Chatham, IL
Reed, John K., CPG 7462, Houston, TX
Stewart, Kristi S., CPG 7466, Bellaire, TX
Vogt, Timothy J., CPG 7463, Black Hawk, SD
Wardrop, Richard T., CPG 7467, Downingtown, PA

NEW ASSOCIATES
(as of May 31, 1988)
*Caldwell, James M., A398, Knoxville, TN
*Leonard, Katherine E., A400, Wheaton, MD
*Zankert, Thomas M., A399, Orlando, FL
*Associates accepted if applications were in processing before December 31, 1987.

IN MEMORIAM
Clayton H. Johnson, CPG 1010, passed away on April 9 in Columbia, MO. He received his bachelor's and master's degrees in geology from UMC and his doctoral degree from Cornell University. He taught at UMC for 37 years.
He was a member of the Geological Society of America, The American Institution of Professional Geologists, the Missouri Academy of Science, the Missouri Science Teachers, the National Association of Geology Teachers and the Association of Missouri Geologists.

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