SOME ENVIRONMENTAL PROBLEMS IN MICHIGAN - OR, WHERE DO WE DUMP IT?

In this day of impact statements, constraints of geological, political, environmental and, not least of all, public fear, some factors in the location of burial sites. These sites include landfills for solid wastes, liquid wastes, "outlawed" products of chemical warfare, nuclear wastes, etc. Then there are special purpose burials as the deceased cattle in Michigan caused by the inadvertent poisoning of cattle feed by polybrominated biphenyl (PBB); or other special needs as a place to bury an otherwise low frequency (RF) command control and communications system, the Navy Seafarer project.

Landfills for solid wastes represent problems everywhere and the problems grow exponentially with population. The PBB poisoning in an area of Michigan's having which hopefully will remain unique to Michigan. Public fear of ground-water contamination near burial sites outweighs the aesthetic, land use and eye pollution factors. In one example, the Governor of Michigan ordered the Department of Natural Resources to locate a prime site and one or more alternate sites for poisoned cattle in the spring of 1976. Before site exploration had been carried out, well over 100 petitioners in the area, the nearest farmhouse being over a mile from the site, created a delaying action which only recently has been overcome after numerous hearings, and a program of continuous monitoring instigated. The persistence of PBB in the soil system may extend the problem for sometime, depending to a large extent on the final definition of toxic levels permitted in the cattle before they have to be destroyed.

Another environmental hazard somewhat indigenous to this general area is the dumping of taconite tailings into Lake Superior along the north shore (near Silver Bay, Minnesota) by Reserve Mining Company. The iron ore tailings contain asbestos fibers alleged to be a potential cause of cancer among inhabitants using unfiltered Lake Superior water. A Minnesota court order to close operations by July 7 of this year has now been reset for April, 1980 because of Company difficulty in acquiring land disposal sites to handle about 67,000 tons of taconite wastes daily, with final costs of construction estimated at about $75 million dollars.

The Seafarer and TEDA nuclear waste disposal projects have the most serious implications to Michigan and to the nation.

Seafarer Project - The Navy Seafarer project has wide implications to Michigan as the prime area of consideration and to Wisconsin, Nevada and New Mexico as possible alternative sites. Other states that have been considered are Texas, Arizona, Colorado, Idaho, Utah and California.

Generally, the principal deterrent to western sites lies in the conductivity of the rock, as compared to sites in Michigan or Wisconsin where the Laurentian Shield offers wide areas of rocks having low conductivity required; also eastern states generally are avoided because of population and area (space) constraints.

The scope of the project is indicated by the dozen volumes of environmental impact statements, prepared cooperatively by several different governmental agencies. The original plans for the submarine communications system in Michigan calls for the laying of 2400 square miles of two-inch cables in a grid pattern across about 4700 square miles of land in the Upper Peninsula. Comparative studies of potential sites indicate Michigan to satisfy the prime requisites of area (space); rock conductivity, terrain and population; and also with minimum cost and minimum risk of either short-term or long-term adverse environmental impacts.

Opponents cite possible environmental damage and allege that the system's electro-magnetic field may pose a threat to wildlife and humans. Residents of the Upper Peninsula have voiced strong opposition on these grounds and it is expected that over the next few months Miliken has extracted a promise from the Pentagon that he be given veto power should the project prove undesirable to the people of the Upper Peninsula of Michigan. He has tried to exercise the veto citing the referendum among Upper Peninsula residents. This raises an interesting point in regard to a gubernatorial veto when confronted with a project deemed important to national security - if this is the stand that the government will take. President Carter campaigned against the Seafarer project in Michigan at least in its original layout, sensing, apparently, a groundswell of opposition. This opposition mostly boils down to the small number of residents who don't want what they are called to as the "happy hunting ground" of Michigan.

The 23 million dollar budget requested by the Navy to begin land acquisition for the project was turned down by the House Armed Services Committee. The project under its present plan would appear to be dying - if not dead. There could be a number of reasons if this happens - but the candidate falls more likely in the political arena than environmental and health-hazard areas. The generous use of existing right-of-ways under a towsmanship-range setup for the long antennas and cable grids would appear to create minimum damage to the sparsely settled region. The health-hazard factor from low frequency waves appears less threatening among physicists (which Secretary of Defense, Harold Brown happens to be), electrical engineers and others knowledgeable in this area, than to the populace. The NAS report of 1974 is cited by proponents of the project to play down the fears of those concerned with the health-hazard.

In a Congress often conservative in such projects, many apparently recognize the importance of emergency communication with submarines in a deep water, more secure position - something apparently not now available. Many consider our submarines our greatest deterrent, the Cruise Missile, etc. notwithstanding. All Michigan Congressmen oppose a Michigan site. Congressman Carr (Dem.) a member of the House Armed Services Committee, has suggested that an out-of-state site be explored and/or research on other systems, as the laser potential, for such communication. In any event, the Navy Department has been blamed for their "foot-in-the-door" policy in allowing the Governor veto power (through the Pentagon) and then pursuing the Michigan site so steadfastly. On the other hand, the Governor has been apprised of his (Continued on page 2)
"naivete" in assuming the decisive power of a gubernatorial veto in the face of a possible favorable government decision based on national security.

Though there is little that can be called unique about the proceedings to date, the follow-up action on the Seafarer project will be interesting to watch.

ERDA Nuclear Waste Project - The salt section of the Michigan Basin has been considered as a potential for nuclear disposal since the early AEC investigations of the 1950's. At that time, some thought was given to the salt mines of the populous part of the southeastern part of the state, of which Detroit is the hub. News of government interest in the area, however preliminary it may have been, produced shock waves among the citizens that still reverberate today. The salt deposits in Kansas at the Lyons Mine were subjected to experimentation using irradiated fuel as early as 1961 and have been in use for 18 months in the mid-60's (Project Salt Vault). Data were collected on the influence of elevated temperatures, temperature gradients, radiation fields and stresses. Analysis of the data prompt the AEC to plan a Federal waste depository adjacent to and encompassing the Lyons Mine. Further investigations over the next two years indicated a high density of oil and gas exploration holes in the immediate vicinity and a nearby solution mining operation. Abandonment of the potential site (1972) was primarily based on man's activities - not geological criteria.

Geological surveys were made in other salt basins to identify potential alternatives, including another look at the Michigan Basin. ERDA has found the southeastern part of the Lower Peninsula (Alpena, Montgomery and Presque Isle counties) to be a prime candidate for the first exploratory testing of a nuclear disposal site. A "trial ballon" was launched in the spring of 1976 with the project being given the natives of the area and Michigan Congressmen. Governor Millikan apparently believed he had veto power, which he had demanded, when former ERDA Administrator Robert Seamans, in a September 1976 letter, allegedly promised the state a limited veto based on specific safety and environmental issues. In April of 1977, an attempt was made to draw up an agreement between the Governor and ERDA which called for ERDA to cease any operations within Michigan within 90 days if they fail to come to an agreement with the project with the state. The public awaits the outcome of this dilemma.

Geologically, the area is considered by government geologists to fulfill the general requisites gleaned from the Project Salt Vault experiments: that the salt should be at least 200 feet thick; no less than 200 nor deeper than 2000 feet; and an areal extent of several square miles beyond the burial site; the area tectonically "stable", removed from high population density; access to rail and highway transportation; and, obviously, removed from exploration activities for fuels or minerals.

The area may well prove out geologically, but it may also prove to be a textbook example of the political pitfalls that await the nuclear waste program.

The Editor

EXECUTIVE COMMITTEE MEETING

A meeting of the Executive Committee of the Association was held on June 11 and 12 in Washington, DC. James U. Hammersley, Legislative Counsel for the Association, was present and gave a report on legislative activity for the first six months of 1977. He reported that the following members have prepared and given testimony before legislative committees and regulatory boards on the following matters:

John T. Galey, Outer Continental Shelf
John A. Taylor - H.R.1614, Outer Continental Shelf
James W. Skehan, S.J. - H.R.6673, Earthquake Hill
Adolf U. Horner - H.R.7009, Seabed Mining, S. 9
T S Ary - H.R.39, Alaska Wilderness Conservation

The testimony is being prepared and plans are being made to testify on legislation introduced to be introduced on such matters as construction of dams, natural gas pricing, revision of the Mining Law of 1872, and H.R. 5709. H.R. 5709 is a bill introduced by Congressman Udall that prohibits oil and gas exploration by an individual, corporation or association from acquiring control of any lease or claim on public lands if they control two or more subsidiaries of energy minerals, or engage in two or more operations relative to energy minerals. H.R. 5709 is considered to be the first step toward divestiture in that no horizontally or vertically integrated company will be able to acquire additional leases or claims in the public domain.

Relative to divestiture, it was determined that response from the membership on this matter was not sufficient to support an Association stand either for or against. It was decided that a further attempt be made to obtain factual data on the probable effects of divestiture on the profession.

It was noted that the principal basis for President Carter's energy proposals is an assumption that most of our energy resources have been found, and that the remaining resources are rather than exploration as key to our future. It was decided that President Taylor, with the assistance of the Executive Committee, prepare a statement to the effect that the Association is not adequate for the foreseeable future if proper incentives for exploration are available.

Adolf U. Hocka, Chairman of the Legislative and Regulatory Committee, asked that it be reported that High B. Montgomery, Larry D. Woodford, James Boyd and Benton M. Willoughby are very active additions to his Committee.

Thomas D. Barber, Program Chairman for the Annual Meeting to be held in San Antonio, Texas on December 1st, 2nd and 3rd, presented tentative plans for the Annual Meeting program. A program entitled "The Future Is Now", dealing with our scientific, professional and legal registration problems was approved by the Executive Committee.

The Executive Committee approved the establishment of a fitting memorial in honor of Martin Van Couvering, and referred the matter to the Awards Committee for determination of the form of the memorial and the specific relative to recipients.

It was reported that the Environmental Geology Committee, in the name of the Association, is co-sponsoring the I. C. White Memorial Symposium on Geologic Hazards and Land Use to be held on August 4 and 5, 1977 in Morgantown, West Virginia. Specifics regarding the symposium may be inquired of Peter Leasing, Chairman of the West Virginia Section, or from Headquarters.

Donald E. Hallinger, Chairman of the Finance Committee, presented a report on the status of Association finances for the first five months of 1977. He noted that membership had declined by 109 since January 1, and that most of the decline was due to suspensions for non-payment of 1977 dues. Expenditures were reported to be $9,240 under the anticipated for the first five months.

A report from the Nominating Committee was read, with the Committee recommending the following candidates for Association offices for 1978:

President elect: Edward E. Rue
Vice-President: Thomas A. Simpson
donald E. Hallinger
Secretary-Treasurer: Derek B. Tatlock

J. M. Eggers
Suzanne Takken

The Executive Committee approved the recommendation.

It was reported that a new Guide, "Geologic Logging And Sampling Of Rock Core For Environmental Purposes", is complete and at the printer.

It was suggested and agreed that the Programs and Goals Committee submit an interim report for publication to the members with a solicitation for suggestions from the members.

TESTIMONY - A.P.C.G.S.

(Technical office on the Senate Committee on Natural Resources regarding S. 9, Outer Continental Shelf, prepared by John T. Galey on April 19, 1977, Washington, D.C.)

Mr. Chairman, I am John T. Galey and I live on Laurel Hill at R.R. 6, Somerset, Pennsylvania 15501. I have been an independent geologist since 1933 and discovered the first deep sand gas production in western Pennsylvania in 1949. I have been an oil producer, drilled numerous dry holes since then and expect to find some more pools and drill some more dry holes.
As to my background, my great grandfather began drilling wells and producing oil in 1860, and I began growing up hearing of the experiences of six (6) of his eight (8) sons and of a grandson, my father, who were all oil and gas producers. The tales so fascinated me that I was impelled to study geology and learn how to find oil and gas myself. I have, therefore, had a long-time interest in oil and gas. I received my B.S. in Science at Princeton University and did graduate work in geology and petroleum engineering at the University of Pittsburgh.

The Association of Professional Geological Scientists, on behalf of myself and this task force of an organization of over three thousand (3,000) scientists whose professional activity encompasses many fields of geology, am a fellow of the Geological Society of America and a member of the American Association of Petroleum Geologists of which I am a Past President of the Eastern Section and Certified Petroleum Geologist #100.

I offer you my views from my standpoint as a Professional Geologist, a natural gas producer, and as a past President of the Association of Professional Geological Scientists, whose membership includes all segments of geology, the science which instills in the minds of its disciples the faculty of determining the most likely areas to prospect for oil and minerals.

Geologists of a hundred years ago were aware of the need for man to live in harmony with nature, and present day geologists are even more acutely aware of the need for preserving the environment. Too often, preservation is not in fact of greater importance than other necessities, the necessity of preserving balance between natural resource development and environmental protection. This is a responsibility which keeps life going - in contrast to preservation which would stop life to serve a future contingency.

Our mutual objectives are, I believe, to substantially reduce our dependence on foreign oil by expeditiously identifying, as actual, as distinguished from potential, reserves in the OCS and developing them without delay to make them available to our economy while we, at the same time, protect our priceless environment and recognize that the economic and political benefits of OCS development, should be considered.

The question of the S. 9 that is presented is what role is the Federal Government to have in the development of the Outer Continental Shelf. The Association of Professional Geological Scientists (APGS) does not argue that an OCS Bill is desirable, but does believe that the independent role of the geologists be maintained to assure proper OCS development. One of the certain provisions of S. 9 that would virtually destroy that role and drastically hinder OCS development.

Initially, under the provisions of S. 9 the Secretary of the Interior has the power to establish a Federal program for exploratory drilling. The implications of this are obvious, as it only doubles the existing Federal bureaucracy in these days of the vast public outcry to reduce Federal bureaucracy, but it plainly places the Federal Government in competition with the private sector. By having its own advance knowledge of geological information, the Federal Government is set to dictate any terms and conditions that it wishes. This would destroy private incentives to obtain OCS development. As well, the governmental exploratory program does not contemplate the enormity of the task, the delays in reaching the production phase, the wasted cost of efficiency to do the job, the high costs and removal of manpower and equipment from the private sector just for exploratory drilling. The public sector would be forced to appropriate funds to accomplish this risk with no guarantees of success. The Congress would then be forced to justify. The necessary funds were not accomplished, which is highly probable, as you know. It is this risk factor that is best left in the hands that can absorb the risk - private enterprise.

Another feature which must be stricken from the bill is the section that calls upon the Secretary of the Interior make all data, information, maps, interpretations and surveys available to the States. The massive sharing of data would activate the danger of a release of essential confidential data to one or the other and to one desired. There is no true method of controlling information once it is beyond a small circle of people. Proper confidential data can be maintained only with selected and controlled security plans. To release this to the States opens many opportunities for releasing this necessarily confidential data to anyone who can find the avenues to obtain "leaks" of the information. I hope this body is not naive enough to believe that such dangers are not real and not possible.

In addition, the veto powers that are able to be exerted by many, many parties will do nothing but inhibit OCS development, at a time when the United States is depending critically on foreign sources of oil. The Interior Department will have the power under S. 9 to suspend or cancel a lease that threatens damage to the environment. This new governmental entity can delay the procedure of final operations while they make known their objections. This have been adopted in part by the Secretary of the Interior and we concur with him that provisions to eliminate regional advisory boards be adopted and replaced with consultation between the governors of States and the Secretary of the Interior.

The Secretary of the Interior should have complete discretion as to which of the OCS leasing alternatives he now has and where and when he deems it appropriate to use them. The Secretary requires flexibility in the method that best promotes development of a specific area and assures a fair rate of return to the public for the oil and gas that may be discovered.

There has been some complaint that the large cash bonuses deprive operators of funds which might be more usefully employed elsewhere. One of the bonuses gives the operator more incentive to develop his land in order to retrieve the bonus. The difficulty with royalty bidding is that a bidder may skimp off the greater part of his investment if the non-economic level is reached at his royalty bid. He then abandons his well and leaves more oil than he should be in the reservoir if he can't renegotiate his royalty.

Royalty bidding has been successfully employed in state owned lands in Pennsylvania. I set up the lease for this in the early 1950's in conjunction with the Attorney General's office for the express purpose of obtaining the largest return on royalty for the State. Fortunately, the reservoir didn't contain oil and was readily drained of its gas so the operator did not have to produce it. The bonus paid and royalty paid was less than administrative costs and are less to be desired than the former methods. Recent studies of the Department of the Interior show that the presently employed bonus bid leasing system promotes maximum development.

It is highly desirable, from the standpoint of operating efficiency, that tracts larger than the presently fixed 5670 acres be leased. This means exploration of geologists can be run on a commercial basis and gas recovery thereby maximized. The Secretary is provided with flexibility of the lease size that best suits the geologic setting.

The key to proper and successful OCS development is to promote legislation which will clear the way for the exploration and development of OCS production. By establishing some new problems, as proposed in S. 9, delay can only be magnified.

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(Argument before House Subcommittee on Science Research and Technology regarding H.R. 35 - A bill to reduce the Hazards of Earthquakes and for other purposes, by W. S. Skelton, S.J., and Edward F. Chibulis, Washington, D.C.).

Mr. Chairman and members of the Subcommittee on Scientific Research and Technology. I am Professor James W. Skelton, S.J., representing the Association of Professional Geological Scientists whose professional activity encompasses many fields of geology. I am Director of Boston College's Westmont Observatory, a research institute in geophysics and geology. I am also a Professor in Boston College, Chibulis, who head up our seismology program at Westmont Observatory. It is relevant to the present topic to indicate that Westmont Observatory has the longest record of monitoring earthquake activity in the continuously active region in northeastern U.S., our observing facilities dating to 1930. Additionally, I served last year on the Earthquake Hazards Committee of the Association of Engineering.

The bill appears to be adequate in its overall emphasis and scope. That there is a critical and timely
need for such legislation is clear as evidenced by, among others, the increased construction activity in some of our major cities and the rising number of nuclear power plants throughout the U.S., and unusually high and devastating seismicity during the past several years in various parts of the country. A constant threat of a major catastrophe exists in many metropolitan centers in the U.S. should an earthquake of the size of the San Fernando event of 1971 occur. One thing is clear, although the eastern U.S. is commonly and erroneously believed to be earthquake free, the population density in the East, the large size of cities, particularly the northeastern U.S. makes it highly susceptible to the full effects of earthquakes. It is for these reasons that sufficient emphasis and support be given in the administration of the Bill to research programs directed toward understanding the seismo-tectonic processes in this section of the country, as well as to the western U.S., where the seismic problem is obvious.

Just as the Bill points out that it is not desirable to concentrate in one place the expertise required to address the many facets of earthquake hazard reduction, so too is it not desirable to concentrate in one place the storage and distribution of physical data related to earthquakes. Therefore, consideration should be given to the concept of Regional Data Centers, which would encourage the involvement of and stimulate those researchers most knowledgeable about processes in their own areas, and would provide more immediate access to those data appropriate for the region.

Advances in earthquake prediction require a prior knowledge of fault locations and a sufficient amount and accuracy of earth structure data. Earth structure faults may be active, if not known from geologic observations. In California and to a lesser degree in the entire western U.S. it has been generally recognized and mapped and there is a large amount of information as to what faults are known or may be active. This, unfortunately, is not the case in much of the Eastern United States. Two decades ago only a few faults had been recognized and mapped in New England. Geological mapping in the meantime has shown that region to be highly faulted. A new map of the Boston area (the Boston region shows it to be at least as much faulted as comparable areas in Southern California, and is indicative of faulting in the region. But vast areas in New England and much of the East Coast is lacking this important data base upon which to build an adequate Earthquake Hazards reduction program. Limitations of funding in recent years and other priorities than earthquake hazard reduction have limited the amount of such basic mapping particularly in the eastern two-thirds of the United States, the use of aerial geophysical surveys and the use of Satellite Landsat images can help speed the process. The development of such maps as the Boston area is proceeding with the acquisition of more precise and detailed information from improved permanent and portable seismograph networks will enable the identification of active faults in the region.

The information on regional geology also is necessary for, and is part of, the development of regional tectonic studies. These studies subdivide regions into areas of differing geologic histories and movements. It is this information that is fully integrated with the earthquake history of the region and the effects (intensity) of the earthquakes that result in seismic zoning or micro regionalization.

The regional geologic and tectonic studies are critical to the program in the east. We have programs at Weston that have addressed the earthquake hazards reduction in the northeastern U.S. and we have been cooperating with University, state and Federal agencies to acquire the necessary information.

One of the problems of the past and present is that while the data are many very excellent and there are many very excellent on the east coast, they have been trained and specialized in fields that only indirectly contribute to the types of studies mentioned. There is a shortage of types of geologists on the east coast with the proper background for the regional studies.

A program such as that envisioned by H.R. 35 can only be successful if it addresses, at least in part, the question of training of geoscientists in field geology and geophysics.

Concerning the level of funding, it appears to be sufficient, provided that higher priority be given, at least initially, to Physical Studies and to Structural Studies. As in the work on understanding and amelioration of the various physical processes and their associated effects can be obtained before bringing to full support levels those programs for Social, Legal, and Economic Research and for Implementation Programs.

Relevant to funding, we believe it would be more effective to fund a single agency rather than two, to administer the program. We further believe that the National Science Foundation would be the appropriate agency for this function. The inclusion of its long-standing experience in working with those organizations in the public and private sectors who are most qualified to solve this problem.

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(Testimony before House Ad Hoc Select Committee on Outer Continental Shelf regarding H. R. 1614, Outer Continental Shelf Act by John A. Taylor, Washington, DC.).

Mr. Chairman, I am John A. Taylor and I live in Oklahoma City, Oklahoma. I offer my statement and recommendations as a geologist with over 30 years of practice, principally in the petroleum industry. I have been involved in activity throughout most of the United States and also some amount of foreign work. This activity also includes work in the offshore Gulf of Mexico of the United States. Nearly 20 years of this experience was with major oil companies, and it was twelve years as an independent geologist and oil operator. However, I appear today principally as a representative of the Association of Professional Geoscientists of which I am currently President, an organization of over 3,000 geological scientists whose professional activity encompasses most of the fields of practice in earth science and a vast array of geological and geophysical programs through which we are involved with the identification of Petroleum Geologists which has a membership of 17,000.

I appear here instead of Mr. John T. Galey from Somerset, Pennsylvania, a past President of the AGPS, due to an unavoidable conflict which prevented his attendance.

I have a personal interest in the outcome of this hearing. I appreciate the fact that this Committee on H.R. 1614, which I am very happy to see embraces exactly some of the same objectives as the AGPS. If I may paraphrase them as follows:

1. "H. R. 1614 also provides new authority and directs it to appropriate federal officials to assure balanced and orderly development of such resources."
2. "The need to increase the domestic supply of oil and gas is great, but there is also a need to develop our Outer Continental Shelf in an orderly manner--".
3. "H. R. 1614 provides for this development in a way that furnishes protection to the environment, considers alternative uses of coastal lands and water, insures the use of the best and safest technology, and limits adverse impacts on affected states and local government areas."

Thus, my remarks today are in the spirit of providing the vision of the people which I believe will be constructive in an effort to use good legislation to be written, if it must be written. The OCS Lands Act of 1953 has served us well, and surely, with some updating, principally in environmental concerns, we could be moving ahead with well formed exploration programs. We believe that our activity for many years, indeed several generations in matters of the environment, mineral exploration-definition of jurisdiction provides authority and responsibility for our statements.

America will continue to rely on oil and gas for most of its energy needs for at least the next fifteen years, and very probably many more, while we race against time to develop the alternative energy sources that are needed, and efficiently required where the economic health of our country, the economic welfare of our people, and the strategic position of our country is involved. Certainly, the President's fully justified and well expressed, has expressed very well the critical issues facing this nation unless we move ahead rapidly in solving our increasing energy problem. If we are to be assured that the OCS, our best known source of potentially large oil and gas reserves, be developed expeditiously and without further delay. Unfortunately, there has been considerable language in the media and elsewhere about the vast reserve that lie offshore, especially directed at the Atlantic coastal region, only waiting to be tapped. Only one word applies to this threat and that is "speculative". Reserves are speculative until drilled and until they are very fortunate to immediately uncover large reserves of a probable and proven nature in the initial.
exploratory wells of the Atlantic coastal region, but it could easily take an entire series of wells, indeed an entire series of years before the type of information afforded by the actual drilling. The data from the network of information needed in defining the reservoir beds with their accompanying source beds that is the hallmark of any large reserve project, find themselves in the dissonance of Federal lands and to the affected states, the proper coordination of planning such that the State and Federal Governments may be aimed at, one way or another, at the same time, our search of Federal lands may serve to encourage the potential off the Atlantic coast.

All of this is all the more reason to get at the job before we become obsessed with the idea that oil is essential for foreign imports which now is passing the 50% mark in our supply requirements. The North Slope of Alaska production, which has played an assembled considerable geological and geophysical evidence, to provide such estimates to anybody outside their own organizations prior to a competitive lease bidding situation. Certainly, only those companies who have made the investment in or organizing the information should be privileged to the more informed bids and not have that bid possibly compromised by inadvertent leakage of information. Again, I submit that the Federal Government does not want the misadventures which may accrue from such procedures that might bring discredit upon its employees or departments.

The Ad Hoc Select Committee, in its wisdom, has introduced principal problems such as information not being released to a state or any regional advisory board until the parties who own the information are informed of the results. It is likely that the designee of the governor of any affected state may inspect privileged information under the auspices of the Secretary of the Interior, that inspection shall not take place prior to the sale of the lease covering the area. Here, we are already in trouble. Certain information, especially geological information, does not change with the same rapidity, but once we reevaluate such information with additional geophysical crew work or with certain data processing techniques. This results in great expense and such expense, in effect, raises the price, which we face the governor’s designee. He reviews such information in an area in which no lease sales are planned in the near future, a number of years thereafter leases are put up for bid and such information becomes available to other potential bidders who then compete with the principals who did and paid for information originally. What a mess we would be in again. In short, it is difficult for me to imagine what kind of safeguards, when people are involved, can ever maintain such information with the destructive result of a detailed and geophysical reconnaissance on the status of the affected areas and the potential difficulty is the requiring of such information of the lessors at the outset. Surely the Bill can provide for a policy of making and releasing information pertinent to the environment, production information, etc., that the State and Federal Government can properly adopt. I think that in the case of certain confidential information that can cause nothing but trouble for all parties concerned when it is removed from its original repository.

Another important aspect is the distribution of information, as envisioned in the Bill, would surely cause, in numerous circumstances, companies to reduce expenditures and activity or to conduct their operations in an unusual fashion if they know the information they are potentially receiving will be released to another party and eventually be made available almost on an "open file basis". The potential result would be lessened geological and geophysical reconnaissance and the knowledge of both the Federal Government and the lessors and in the end, the public as well.

Certainly, the Secretary of Interior’s statement provided in his testimony on the companion S. 9 Senate Bill, "that an effective and constructive mechanism for consultation and coordination between the Department and our coastal states and communities" is certainly in order, and which all parties should applaud. I know that the Ad Hoc Select Committee is aware of the overwhelming delays that have greatly increased the joint cost and finding time in the face of increasing costs and have not numerous leaks of information to potential bidders. These bidders would thusly enjoy the privileged information and have ever been a part of paying for its assimilation in the first place to the definite injury to the parties who developed the information and made the expenditures at the outset. I believe that if the Federal Government had realized the quagmire into which they were about to step they would retrieve themselves before they become implicated in a series of incidents which could bring discredit upon them.

Now, there certainly is certain information that should be shared which I'm sure industry would be glad to provide and should provide as to certain environments in which information is available. This report and the deposition of Federal lands and to the affected states, the proper coordination of planning such that the State and Federal Governments may be aimed at, one way or another, at the same time, our search for...
exploration and development of OCS reserve potential. I fear that the Senate bill in H.R.1614 as I view it and an examination of a myriad of new rules and regulations and procedures that, when it is finally signed down to the various governmental departments to administer and they have been interpreted and their meaning altered, will result in the lessees being, as one commentator has said, "to be exposed to the full brunt of people who have been shuffled off the island of safety and will be exposed to the full brunt of the law that applies to them unless they are exceptionally well advised and perhaps are in a better position than the rest of us to know what the law is and how to avoid it."

Surely this provision did not consider the matter that it takes the drilling of many wells to understand even a small part of the fields that are being subjected to exploratory definition.

I understand that the exploratory drilling under the auspices of the Federal Government could easily lead to an unmanageable nightmare of administrative bureaucracy, that it might well jeopardize the excellent income the U.S. Treasury is now reaping under its present, long established, well proven and easily administered plan.

When would such an operation stop? The tendency would be to expand. The over 16,000 wells drilled in the relatively small offshore Louisiana province still enjoy rapid exploratory activity and a myriad of areas could be classified as "frontier" areas. The classification is still considered when the Federal Government would find it necessary for national security or "environmental" reasons for the purpose of expediting development in "frontier areas".

"Frontier areas" don't necessarily lie in the far reaches of the Pacific, the Bering Sea or the Norwegian Arctic. They can be found in the continental United States. Yes, the Bill, I think, would authorize the Secretary of Interior to enter the exploration business which industry already practices with its vast spectrum of resources available through over 100 years of activity.

For instance, look at the Naval Petroleum Reserve on the north slope of Alaska which was drilled under Federal auspices to the tune of $30,000,000. The millions of dollars we have invested in more than respectable exploratory tests or drills. "Frontier areas" can easily lie deeper in a given area where dozens of wells have been drilled and many more are planned. When do we stop? When can we expect to see this "frontier areas"? It is interesting to look at some of the major oil finds of the last fifteen years and note that several were in, and among, and around, scores of tests that were dry and that came to nothing. And we can think of Bell Creek in the Rocky Mountains, and Black Bayou in Northern Louisiana and Fairway Field in East Texas. These were eventually found by the application of the tremendous multiple exploratory effort of hundreds of earth science practitioners along with the readiness and vision of rich capital to seek out the means. And the lookout the nooks and crannies of the oil and gas basins of the United States. I sincerely hope that the Federal Government, through Section 206 of the Bill, will take the opportunity to ensure the exploration business which industry already practices under its vast spectrum of resources available through over 100 years of activity.

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Oil is finally cornered in substantial reserves, usually in a step by step program, resulting finally in exploratory tests, of which industry-wide statistics demonstrate only one in ten will be successful and indeed only one in approximately 4o can even be considered a significantly large find as to be commercially viable. Does the Federal Government really want to enter this fray, when they have already given their cash and are eating it too with the royalty allocation flowing into the government coffers and the hundreds of millions of dollars from bonus bids at lease sales.

H.R.1614 provides for eight different types of bidding procedures. These eight embody the typical cash bonus bid with a fixed royalty and new variable combinations of partial royalties, a share of net profits, and the net return to the lessee-operator and any such plan will need to carry provisions for timely reduction in the amount of royalty or net profits allocation such that premature abandonment is not forced.
Accounting procedures for determining at which point re-
action must be had will need to be worked out and in my
opinion will require considerable administrative detail.
Industry is well aware of the problems involved and knows
from their own experience the difficulty in the
technical aspects of accounting at which point royalty
taxes should be reduced, and to whom and how much should
be charged, when and if the leases, etc., are abandoned.
Motivation of the framers of this Bill should be complimented for their
attempt to build in or to provide more flexibility in the
bidding procedure whereby we do not get into accounting nightmares afterward in
trying to define what we have done.

It is incumbent upon us to note that the results so
far from the U.S. Government's royalty bidding experi-
ment in the Gulf of Mexico three years ago are strikingly
impressive for both the industry and the government.
Drilling on five of the eight tracts leased in that
October, 1976 sale has netted only one discovery. And I
understand that the operators say they aren't sure when,
if at all, they will drill the three untapped tracts.
The big problem for operators with the high royalty
rates. They range from 52% to 82% and operators
say finding production sufficiently prolific to pay out
after the royalty allocation is difficult.
The Government, on the other hand, potential lease bonuses that could have run into millions of
dollars. A royalty bid basis appears to have validity
only in areas where production is certain in "drainage tract" sales. However, I do not wish to
give the impression of disagreeing with the Government's
effort to attempt a royalty bid basis in the operators
indeed, this is an area in which encouragement should be
the rule of the day. Perhaps, a good alternative would be
having a reduced royalty basis for the operators who
cover his original investment in exploration and drill-
ing with the increased royalty rate thereafter.

What can I say about environment that hasn't been
said by many professional people from the mineral explo-
ration business and others, except to note that whatever
we do must arrive at the degree of activity which is
have been allowed and indeed stopped in many areas to the
detriment of the nation's ability to produce the energy
which is rapidly driving up the cost of energy supplies.
It is evident to many qualified practi-
cioners that are knowledgeable about environmental con-
cerns that we have gone about this program of environ-
mental protection in a willy nilly fashion far more than
need to have been done.

It is estimated, for instance, that at least 74% of
about 900 leases issued since the major Gulf of Mexico
sale three years ago will be or already are leas-
ayed at a cost of between $3 million and $15 million.
These estimated costs include survey work for drilling hazards
which, if run independently, are estimated to have cost
$2.5 to 3 million dollars. $2 million to $3 million is attributable to archeological work, the
benefit of which is difficult to assess. This, in my
opinion, is an example of the misuse of funds from which
in the end the public will suffer.

The matter of MER (Maximum Efficient Rate of Pro-
duction) is being addressed increasingly by the Federal
Government. MER in practice, is determined by engineering
guidelines that arise from measurements of pressure, fluid,
and flow characteristics of the reservoir from which
the well is producing, and certain standard prac-
tices that have evolved in the oil and gas industry from
years of experience and observation on what a well
can be flowed without damage to the producing capacity of
the well, damage to the formation well face, or by creating pressures increased with the well that
could sufficiently alter the fluid interface rela-
tionships or indeed even cause coning of water or some-
times gas to and into the reservoir. The problem of coning of water into a gas reservoir, such that the well
or wells are irreparably injured. Thus, MERs cannot
really be set by fiat or order, but must be set by an
administrative level where we are under con-
stant observation, and this is best done by the oper-
ator who is in continuous consultation with his field
engineers and production people. One government
Government to enter the area, presuming to set MERs for
wells and fields, is entering an additional area of
activity that will not harm both the Federal Government
and the lessee's interest.

I appreciate the opportunity to appear before the
Committee today Mr. Chairman, and the chance to discuss
some of the points in H.R.1614 in which the organization
I represent is vitally interested. May I also add that
my personal experience being in the area of production
operations, drilling, and exploration and as a gradu-
ate geologist and engineer having operated both within
the auspices of a major company and now as an independent
operator has given me considerable opportunity to experience
many of the things to which the Government addresses
itself, much of which it would be much better to leave
to the multiple approach of the industry. Thousands of
operators, professionals, in analog with the work and without
undue regulation and interruption that can do nothing
but add further hardship to our declining account bal-
ances, energy supplies the yield in new reserves found is directly proportional to well footage
drilled. Let the wells be drilled and the reserves will be
found. This is the way it always has been and we see
nothing on the horizon to change that. It is as simple
as that.

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[Testimony before the Subcommittee on Mines and
Mining of the Committee on Interior and Insular Affairs
in regard to H.R.3350 - Deep Seabed Hard Mineral Act
by Adolfo U. Honkala, Washington, DC.]

Honorable Chairman Kazen and members of the Subcommittee on Mines and Mining of the Committee on Interior and Insular Affairs. My name is Adolfo U. Honkala, Consulting Geologist from Richmond, Virginia, and Chairman of the Legislative and Regulatory Committee of the Association of Professional Geologists. After referring to as AGPS. The interest of the AGPS in this legislation is two-fold, first in that it provides proper use of geology and its application, and second that it will outline to a reasonable mining situation in which geologists can express confidence as to the economics.

First, AGPS would like to make reference to several places in the Bill where it feels the insertion of the term "geological is necessary. I cite page 5, Section 3(7) line 2, "Geological" should be inserted in front of "geophysical", and page 7, Section 4(b) (2), where "geological" should be inserted in Line 1, either before or after engineering. The term "geological" as specified on page 16, Section 6(4)(1) "physical oceanographic and geological data relating to characteristics of seabed and water therefrom". Therefore, the competent geologists and geological contractors must be provided by the insertions previously referred to.

Second, In Section 7 (a) there is no given period for the "Establishment of environmental criteria and objective environmental standards". The lack of a definite date of establishment of such criteria could negate the efforts of the licensee were the Standards set at a date far future of the initiation of commercial recovery.

Commercial recovery by this Act could be expected to start by January 1, 1978. Knowledge of the pace of previous environmental standard development leads one to conclude that such standards should be first to protect against unknown violations or deviations.

Third, AGPS would express its opposition to the extremely large front end money expenditures specified on page 19, Section 8 on Line 11. This amounts to $21,750,000 over the first ten years not counting carrying charges on the money involved, which surely will have a very high interest rate because of the risk involved.

Fourth, geologists and AGPS members recognize that research, testing and evaluation costs are tied to an ore deposit as an integral part of the per ton ore cost. To deny compensation under Section 13 if for these costs seems irrational. If the argument is made that these items are reusable or recoverable, it does not entirely apply because each mine to be developed will be different. One lease is all the industry can take if an International Treaty denies the firm the producing area it developed.

Finally, Mr. Chairman, I have brought with me Dr. John
Moses, now retired, but until very recently Chief Geolo-
ist for Reynolds Aluminum Corporation of Richmond.

Some of the awards by academic and professional mer-
ities are under continuous observation, and this is best done by the oper-
ator who is in continuous consultation with his field
engineers and production people. One government
Government to enter the area, presuming to set MERs for
wells and fields, is entering an additional area of
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nothing on the horizon to change that. It is as simple
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A. Wayne Wood, Chairman 1977 Annual Meeting, has assured us that the weather in San Diego on December 1, and will be excellent. Y'all come, hear!!

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Mr. Chairman, Members of the Committee, Ladies and Gentlemen, my name is T S Ary. I am appearing before you today to discuss the Alaska Land Bill (H.R. 39), as an Exploration Geologist and President of the Association of Professional Geological Scientists (APGS).

APGS is an organization of professional geological scientists dedicated to maintaining a professional attitude and approach to the geological sciences. As geological scientists we are dedicated to the task of providing this country with the best possible technical knowledge in the field of Geology and Minerals.

It is the policy of APGS to express to the public and to legislative bodies the role of geology and the opinions of professional geological scientists. The APGS appreciates very much the opportunity to appear before this Committee to present testimony on H.R. 39 - "The Alaska National Interest Lands Conservation Act".

I have spent the last 25 years as an explorationist. I have degrees in Geology and in Mining Engineering. I have worked as a small independent miner, prospector, consulting geologist, and an officer in a mineral exploration company. I have worked in numerous areas in Alaska prospecting for several commodities. I am, therefore, qualified to speak both as a small prospector as well as the corporate exploration manager about the mineral importance of Alaska lands.

Contrary to Mr. Rusk, I believe the lands contain tremendous economic potential for natural resource development.

The principle that the use of land for the extraction of minerals is its highest and best use was recognized at an early date and was incorporated into both the Common and Civil law systems respecting the relative rights of surface and mineral estate owners.

The new policy of mineral dominance will be the only one to alter this. The rapid disappearance of shallow mineral occurrences and the fantastic increase in metals consumption in the United States emphasizes the importance of policy of mineral dominance is not justified but required.

The APGS, in urging a continuation of policies that recognizes the highest and best use of public lands is to have the lands managed in a multiple-use concept. The development of their mineral resources must be recognized as altering the public interest, not merely acting from self-serving motives; for it is only by preserving so much which is needed for mineral development and providing the necessary incentives for industry to develop the minerals, that the United States can hope to satisfy its requirements for metallic minerals from domestic sources.

In order for the exploration geologist and the mineral industry to continue vigorously to develop the domestic mineral resources of the United States, the public lands must remain available for prospecting.

H.R. 39 is cited as the "Alaska National Interest Lands Conservation Act". And I would like to emphasize the word conservation, not preservation! National interest is not too difficult to define. It is in the national interest to keep available for prospecting those lands which many factions desire to withdraw before an adequate inventory of the resources has been completed.

The term "Conservation" is a little more complex to define. It is all things to all people. It is what the eyes of the beholder wishes it to be. Webster's New World Dictionary of the American Language defines conservation as "conserving, protection from loss, waste, etc." This is the context in which geological scientists look at our resources. With adequate control, the non-renewable resource can be recovered, the ground properly reclaimed and used again for renewable resources. Anything less would be a wasting of our nation's resource base.

Secretary of Interior, Cecil A. Andrus, in his statement of April 1, 1977 before this Committee, chose to view H.R. 39 as "... the highest environmental priority of this administration... There was little mention in his statement of the national priorities for the discovery of new minerals and energy. Anything less than true conservation or multiple-use of these lands will only add one further escalator in the ever increasing inflationary spiral.

We have many responsible geologists in our membership. We are concerned about the need to balance the competing and worthy objectives of the development of our natural resources and the protection of our environment. Bills such as H.R. 39 are forms of environmental overkill and destruction of the national or state economies or the economic havoc which they cause. H.R. 39 as now written is a preservation bill. The representatives of Southeast of Alaska, the Heart of Colorado acknowledged this in his testimony.

Only a nation such as the U.S., with its affluence, can consider locking up so many acres of prospective resource rich lands. The developing world nations consider resource development as the answer to their development problems and resource development, they are raising their standard of living, reducing unemployment, improving their health, welfare, and educational facilities. They are taking steps to protect their God-given natural resources. In contrast, H.R. 39 appears to have been designed to protect Alaska at the cost of its economic viability and its population - native and non-native.

The mineral industry has, over the past 200 years, provided the raw materials and energy which has allowed the United States to become the foremost power in the world. If we lose the opportunity to prospect for, discover, and develop our raw materials, we will revert back to that pastoral character which is satisfied to sit and contemplate the beauty and serenity of the wilderness.

The Congress set forth the nation's mineral policy objectives in the Mining and Minerals Policy Act of 1970. The Act declared that it is the continuing policy of the Federal Government to encourage private enterprise in the development of economically sound domestic mining and to foster and encourage the development of domestic mineral resources.

H.R. 39 does not encourage the development of the Alaska lands, nor does it provide access to the natural resources which would allow Alaskans to be self-sufficient, nor does it retain the lands in Federal ownership to be managed under a multiple-use philosophy. No! H.R. 39 proposes that 217,455 square miles, or almost 37% of the state of Alaska - an area approximately equal to the entire states of Utah and New Mexico - be withdrawn from federal ownership and managed under a multiple-use philosophy.

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Just consider what effect a withdrawal of that magnitude in the early life of these states would have had on the history of the U.S. Think of the valuable mineral resources in those states which would not have been available in the national interest and to the people of the U.S.

The APGS objects to H.R. 39 for the above reasons. The Bill would deny the nation potential sources of energy, copper, gold, lead, iron, uranium, zinc and nickel so critically needed, which may be located in the large areas covered by the proposed withdrawals.

The Bill denies access to most of the lands proposed to be withdrawn from mineral entry. It would also tend to make the use or development of these lands difficult to the citizens of Alaska under the Alaska Statehood Act and to the native corporations under the Native Claims Settlement Act. H.R. 39 would tend to deny the movement of resources across the withdrawal lines from landowners. I question if this is in the national interest. It certainly is not in the best interest of the natives of Alaska.

At this point in time, it is premature to withdraw these lands from mineral entry. The amount of exploration...
which has been conducted in Alaska is minimal. Our knowledge of the geology is limited. It has only been recently that we have had the equipment, ability and the need to start a thorough examination of our last frontier state.

Before such large amounts of land are withdrawn, an inventory of the lands should be undertaken. This responsibility was recognized by Congress when the Wilderness Bill last passed Congress at that time provided for examination of the resource potential prior to a lock up of those natural resources.

Geological scientists discover mineral and ore deposits only where they happen to be. The lands necessary to allow us to search for the hidden deposits. Without that right of access, we will never find those hidden ore bodies in the areas proposed for withdrawal under H.R.39. Mr. Chaffee is right. Access is very important to the members of AFPG. Without this access, we cannot adequately discharge our responsibilities to provide a continuing supply of raw materials for our economy.

As I mentioned earlier, we have just scratched the surface of Alaska. We have scant knowledge of the extent of Alaska's mineral potential. If Congress closes the access door to Alaskan lands as proposed by H.R.39, Congress will be locking away an uninvestigated resource base of tremendous size. AFPG believes that such a policy would be poor land use planning and would be contrary to our national interest and to the spirit of the Mining and Minerals Policy Act of 1970.

AFPG recognizes that there are many uses to which Alaska lands can and should be put. It is in our national interest that these lands be administered under the concept of multiple-use to provide the necessary flexibility and balance which is needed to produce the maximum returns from our Federal lands.

The industry and the U.S. Forest Service have established a working relationship under the multiple-use concept which would prove to be valuable in Alaska. A true multiple-use management system of the D-2 lands appears to be the best approach to the situation. It would allow for the development of a new flexibility rather than emotions. H.R.39 now embodies a single purpose thrust, the wholesale withdrawal of lands based upon the administrator's highest environmental priority. Economic considerations should also be a part of the discussion of D-2 lands. The Alaska Statehood Act, the Native Claims Settlement Act, and many other congressional actions have recognized this fact and have taken it into consideration.

H.R.39 appears to ignore this fact.

AFPG would urge this Committee and Congress to keep in mind all of the nation's needs and goals when considering the D-2 lands. We need a balanced bill which will take into consideration those competing but worthy objectives, the development of our natural resources and the protection of the environment. There should be no single land usage which dominates all others and works against the national interests.

We should have a sound multiple-use administrative concept and policy that would allow the maximum usage and create the maximum return from our public domain.

Thank you very much for the opportunity to present this statement.

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THOU SHALT NOT GUZZLE


President Carter's energy plan is weaker than it looks, and certain to be made still weaker in Congress. But it is America's first attempt to tackle politically created problems with political weapons, and is welcome as such.

To put the televised piety into proportion; World energy supplies are not "running out" in any long-run sense of the phrase.

There is a lot of oil and gas in the ground which is thus far unpumped or unfound, but politicians and tax-gatherers have muddled into a period of high prices while making it unprofitable to pump and find them.

Even when these depletable reserves run out, as they eventually will, man is clever enough to unlock other forms of energy now locked into matter; in the earth, the sea, the light of the sun.

The real problem is how to get from here to there when man's next chosen method of generating energy during the 15 years of the 1980's, by nuclear power, might fall into the hands of madmen who want to blow us all up.

Meanwhile, too much of the present stock of oil is inconveniently placed in the irascible Middle East.

With more political guzzling than Mr. Carter's predecessor showed, such transitional problems should be easy enough to solve. For the world is permanently in a state of transitional political periods - the way in which people are willing to mistake them, at least in retrospect, for golden ages of stability. Adjustment is continuous. In the past 30 years, Europe has passed from a coal-based economy to an oil-based one, with real improvements in living standards as a result of low resource costs of Middle East oil. A number of third-world countries have moved, in the same time, from economies based on wood or dried animal dung to new structures using oil, gas, nuclear power or dung again. There is no reason to think that such dramatic changes will not be possible in the future.

There is equally no reason to think that such dramatic changes will be painless. The problems start from the fact that most present energy resources are available in the form of depletable reserves, immeasurably measured. Much of the capital stock in an industrial economy is unsuited to rapid changes in energy supplies. But a gradual shift would enable the stock of capital assets to adjust to the depletion of any one form of energy are impeded by uncertainty. It is just not possible to forecast accurately the future availability of reserves of indeterminate size.

So adjustments take place abruptly as everyone realizes simultaneously that one trend has been replaced by another. In the late 1940's, British and German coal miners were being assured that none of them need fear for their jobs before the end of the century. By the late 1950's and 1960's, with a majority of the European and Japanese coal mines shut down, the widespread assumption was that oil prices would fall gradually for the foreseeable future, making coal and other fossil fuels uneconomic. This was based on a reasonable set of views about future energy reserves, increasingly out-dated by the political imperatives of the Middle East (particularly of Saudi Arabia and Libya) and by the rates at which oilfields were being depleted (East) and at which new discoveries were made (Faw) while oil was thus cheap.

And America Regret OPEC

By the early 1970's, the slow change in this set of views suddenly exploded. "Gaffe" suddenly became a popular word. The editors of the New York Guzzler, America, found its own "proven" oil and gas reserves running down - in the face of gas because of grossly uneconomic price controls, in the case of oil because its oil companies could make more money importing cheap oil from the Middle East than by expensive secondary recovery from the ancient oil wells of Oklahoma, Louisiana and Texas.

The OPEC price rises that followed were made possible by the opening of America's vast market to imports from OPEC countries (in addition to its traditional supplier, Venezuela). Mr. Carter's America now imports 45% of its oil supplies, against a bare 12% imported by Lyndon Johnson's America 10 years ago. This American incitement to OPEC power was only dimly glimpsed at first almost everywhere, most dimly of all in the United States.

The crisis came when America's will to act was weak. Power was slipping away from the president towards congress and the courts. Political pressures on government which in the past had denied the Arab's full claim to cheap Arab oil in order to protect Texas oilmen, now switched to preventing the necessary adjustments of the energy economy. America's northeastern consumer lobby, having won its flight with Texas, was now, and remains, in full cry against increases in price. The environmentalists harangued more new stripmines of coal and, abetted by high interest rates, the building of nuclear power stations as well.

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America's government has not been the only one to fail. Other importing countries have pinned their hopes too readily to a collapse of OPEC, or to an unexpectedly rapid growth in nuclear power. Russia's government (if the implication of the Central Intelligence Agency's "secret energy brief" is to be believed) has gratefully followed the rest of the world's oil price rise without using the rest of the world's efficient oil production techniques. For all of 1979, America's energy consumption per dollar of gnp is higher than anyone else's. Its pitiful response to the changed circumstances of the 1970's has been the slowest. Mr. Carter believes that, even with Saudi Arabia pumping up capacity for all it is worth, even with Alaska and the North Sea at last coming on stream, America and its allies face fairly transitional years during which western oil demand will come - at the least - very close to available supply. Each year, there could be fears about possible supply constraints; each year there could be lengthy arguments with OPEC to prevent it putting up prices. Increasingly Mr. Carter's Middle East policy will be hampered by the need to keep well in with Saudi Arabia, and his Indian Ocean policy by the need to satisfy a Shah of Iran who desperately needs high-oil-price money and is not beyond using blackmail to get it. By the mid-1980's drastic action might be necessary. Better to act now.

There are three simple questions to ask about the new policy as now suggested in its first draft by the president. Is its target the right one? Will the proposed means reach the desired end? Are there undesirable side effects?

Targets and Methods

Mr. Carter's principal targets are to reduce the growth in energy consumption from 4% a year to 2% by 1983; and to reduce oil imports in 1985 to 6m barrels a day from 1976's 7m barrels a day. These targets are strangely unbalanced.

The first target is important for the long run, ambitious and right. The second is important for the 1980's, relatively unambitious compared with some other estimates, and leaves little margin for error. Mr. Carter's import targets will do little to threaten the unity of OPEC, and could well mean the US trying to extract real increases in the price of oil in the early 1980's. But, at least if it is reached, it will greatly reduce the likelihood of another stepchange in the price of OPEC oil. And the prospect of an eventual drop in the growth rate of energy demand may help to concentrate OPEC's mind.

The difference between the two targets shows up also in the way in which Mr. Carter proposes to reach them. By placing much importance on the price mechanism (which will take years to make an impact) and far too little on encouraging new domestic supplies of oil and gas. Mr. Carter ends up with a policy that is riskier than it need be. This is the weakest part of his programme. Mr. Carter's personal pessimism about the size of America's ultimate reserves will doubtless be used to justify his plan in Congress by in- cluding too many concessions to the oil companies, have led him to give little incentive to increase exploration. Instead he hopes on another breath, signing bills to impede stripping.

Side Effects

Mr. Carter's plan to pay back through the tax system the cash taken from oil consumers will certainly introduce a fresh set of distortions into the economy, some desirable, but mostly not. His plan to get better insulation fitted to 90% of American homes will span a fresh set of commechanics who will bring the techniques of the medecare mill to this new and promising source of mugs.

His hope to extend federal price control on natural gas from gas traded inter-state (that is between states) to gas traded intra-state (within its state of origin) is folly. The intra-state framework is a good barometer to the price that should be paid for gas. By eliminating it Mr. Carter will not merely lose a useful indicator. He will encourage the bad habit of price control recurs, only more widely, when the natural gas partice starts bumping up against its new, higher ceiling in a few years time. And dooms to stow in his energy department's locker, timed to explode about 1980 when a less popular Mr. Carter is running for re-election.

Mr. Carter on energy is, as in his relations with Russia, saying and trying to do the right thing in his own quite dangerous way. He is extending his practice of treating economic issues in moralizing terms, his habit of restating his policies in the puritan streak in America. He is saying "Thou shalt not gusle" - and adding that offenders against this moral rule will have to pay. . . nothing now, you understand, but five cents some time maybe.

To any non-American Mr. Carter's energy policy is rather feebler than its scatological sales patter implied. To Americans it proposes a revolution in thinking, if not immediately in the motor cars that Americans drive; finding that auto manufacturers always wanted, but failed to get, President Ford to do. He is meeting the political problems of energy head-on with political weapons-publicity, congressional arm-twisting, the authority of the presidency. And he is meeting the energy problems of energy-how to get through the oil-uncertain, dangerously nucleur years to a time when the other sources of energy locked up in matter can be released - with the first hesitant steps of American commonsense. He is right to want, however hesitantly, to discourage demand and needs to do far more to encourage supply.

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APGS Petroleum Proportion Gains by Seven Percent in First Year

(Submitted by Allen F. Agnew, CGPS 240, dated May 30, 1977)

The makeup of the membership of AIPG has changed since it became APGS, with the addition of a lot of AAPG members and smaller numbers from AGS and SEAG.

Comparing the 1977 CGPS Membership Directory with the last APG one (1975), we see that the total membership jumped 58%, from 2277 to 3460. This increase came mostly in 1976, as prospective members at the beginning of 1975 held off until the CGPS was born, on January 1, 1976.

Petroleum people now constitute 63% of the APGS membership, with mineralogists 18%, engineering 10%, ground water 5%, and the remainder 3%. This is a change from four years ago. When the comparable numbers for petroleum were 56%, other oil and geology 24%, engineering 13%, ground water 6%, and the remainder unchanged at 3%.

Thus the gains from 1975 were in petroleum (6.9%), while the other three categories lost - minerals (4.5%), engineering (1.1%), and ground water (1.0%).

The other aspect of the APGS membership matrix is the 4% increase in corporate and consultant/independent membership while the government and academic people lost 4%. Thus, the corporate and consultant/independent members now constitute three quarters of the total APGS membership.

It is interesting to conjecture whether the 3149 APGS members on January 1, 1977, which are slightly less than 40% of the estimated 9,000 geological scientists in the U.S., are representative of that larger group. Does this suggest anything about a prospective membership drive, which would attempt to make APGS more truly representative of all aspects of the applied geological sciences -- where the professional does interact with society?

MEETINGS AND CONFERENCES

UNR-NEC Conference on Energy

The University of Missouri - Rolla and the Missouri Energy Council of the Missouri Department of Natural Resources will hold the Fourth Annual Conference on Energy, October 11, 12 and 13, 1977, at Rolla.

The theme of the conference, Energy Crisis: Where Do We Go From Here? has been adopted to allow for a broad spectrum of responses and recommendations for solutions to the nation's energy problems. The call for papers deadline was April 15, an extended deadline for additional programmes is September 14, with final paper deadline October 11.

Additional information regarding the conference can be obtained from Dr. J. Derald Morgan, Conference Director, 108 Electrical Engineering Department, University of Missouri - Rolla, Rolla, Missouri 65401.
The Rocky Mountain Section of AAPG will hold its 27th Annual Meeting on March 19-22, 1978 in Salt Lake City, Utah at the new convention center, Hotel Utah A call for papers, including a direct invitation to APGS membership, has been circulated. The theme of the meeting is "The Rocky Mountain Exploration Frontier with new activity in the Hingeline and Basin-Range Provinces. More information may be obtained from, or abstracts of 250 words or less may be sent to, Terence L. Britten, Technical Program Committee, 3280 Bernarda Drive, Salt Lake City, Utah 84117.

International Human Resources Development Corporation

(I.H.R.D.C.)

The IHRC is sponsoring a number of educational and training programs. Below are listed those offered to the end of this year. Additional professional training is available from Dr. David A. T. Donahue, President IHRCD, 8 Arlington Street, Boston, MA 02116, Telephone 617-536-0202.


Well Log Interpretation: Instr. Donald Pimco, Oct. 10-14, Houston; Oct. 31-Nov. 4, Calgary.

The New Seismic Explorer: Field, Processing and Interpretation, Instr. Donald Magnan, October 3-7, Houston; December 5-9, Calgary.


Simulation of Oil and Gas Reservoir Systems, Instr. various, November 14-18, Calgary.


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STATE SECTION NEWS

California

In April, the Section co-sponsored a symposium with a new women's organization (Concerned About Petroleum) at the Bakersfield Civic Auditorium. The theme of the meeting was "Political Facts of Life as Regards to Energy." The speaker was Lloyd Hall, Executive Vice President of the Independent Petroleum Association of America. Panelists were Harrison H. Schmidt, U.S. Senator from New Mexico; Jerome O'Brien, President of California Independent Petroleum Association; Robert Hana, Vice President Exploration and Production, Shell Oil Co.; and Donald A. Hendrickson, Vice President and Manager of Governmental Relations, ARCO.

The April Section Newsletter indicates APGS concern and efforts to preserve the professional integrity and effectiveness of the State Board of Registration for Geologists and Geophysicists. This concern is indicated in the following letter from the California Section President, Edward A. Hall to our Executive Director:

Dear Art:

I plan to attend the APGS Advisory Board meeting June 11, in Washington, DC, and hope to participate in discussion of registration problems suggested as an agenda item by Howard Anderson, California Section president-elect, in his letter to you of May 4, 1977.

A number of problems have arisen in California with the State Board of Registration for Geologists and Geophysicists. I am convinced that these problems should be made known to all who are interested in setting up a registration law in their state. None of these problems were foreseen when the original California registration law went into effect in June, 1970. I am writing this letter in hopes that those who are aware may be able to write a better law or devise a better system.

There is no doubt that a better system would be one wherein the state would grant legal status and registration to applicants who met the requirements of APGS certification review boards. However, the trend has been the other way in California, and the registration law was passed in 1970 after we tried and failed on the better approach. Since then, things have departed much farther from the ideal.

Between 1970 and 1974, while Ronald Reagan was Governor, the registration act functioned as intended with six professional geologists and two public members on the board appointed by the Governor. The six geologists gave adequate geographic coverage plus representation from the oil, gas and geophysical industries. The board functioned at full strength for an extra year, as provided by the act, but from June 1, 1976 to present, the board has functioned with only three professional members.

The next disaster to overtake the board was the passage of a bill at the request of the Governor (SB2116) to establish a major public members on the board. This bill became effective January 1, 1977, and provides for an eight-man board, including five public members (one with expertise in geology). Also included are three registered professional geologist (one petroleum geologist and one geophysicist).

The Governor's rationale for this action can be best explained by the following quote which appeared in the national magazine for the American Association for Retired Persons: "What I envision is that citizens participation will insure that the occupations and the professions serve the people, not just themselves," the Governor said. "A greater deal of privilege and restriction and monopoly have grown up. We must break down the barriers that separate privilege from professionalism and quality from restrictions, and we must insure that the first order of every profession and occupation is service. Lay citizens can be a vital ingredient in our democratic process," he said.

In a statement in response to the appointments, the president of the Consumer Federation of America said: "Governor Brown's action shows that a state official who desires to serve the people can do wonders toward improving consumer protection. We hope that his effort will become a model for our own state and for similar appointments at the federal level."

This we can only view as a classic case of overkill so far as our geology board is concerned. Our professional board members have never had any aim but serving the public by upgrading the practice of geology.

The tragedy of the situation is that the board has lost its ability to properly represent the geologic disciplines and the geographic distribution of our profession. Governor Brown's public member appointments so far have been good, fair-minded people, but they simply are not trained to handle the technical details. Their vote is nevertheless required to meet the quorum requirements of the act. The board has turned in desparation to the geological societies, including APGS, for input on new examination questions which must be constantly changed for twice-yearly examinations. Developing good problems is one of the most difficult and thankless tasks in the world, and dedicated geologists will be needed on the examination committee which the board has asked us to form. I am attaching a copy of a letter dated March 17, 1977, written by John Wolfe, executive secretary, which further explains this problem.

Next, we had the problem of the directory. The first and only directory was published in 1973, and is hopelessly out-of-date. It does not include the names of about 1,000 geophysicists plus 500 geologists due to new members and dropouts. When the board requested a new directory, the Director of the State Department of Consumer Affairs refused to get it. This act did not mandate printing of directories. After considerable letter writing, plus some arm twisting by some hard-line legislators, we were able to get a directory. APGS members get the lions share of the credit for this. Three thousand copies will be printed at a cost of $4,700, to be mailed to cities, counties and
libraries, then on request to registered geologists and geophysicists and last to other interested persons. Those who plan a new registration act should be sure to include language permitting for completion of a regulatory every two or three years. It does little good to be registered if the registrants must remain anonymous.

The most recent fly in the ointment is a bill, AB 1619, designed to politicize the state board by giving the Director of Consumer Affairs power to replace the executive officer. This one takes power away from "the people" since "the people" now dominate the board. It would create chaos since there were five different Directors under the Reagan Administration who had two different men. A highly-qualified professional is needed as executive officer, and a good man must be assured of continuity in office without the threat of replacement for political reasons. We hope that our letters will help kill this senseless bill.

In summary, we created a registration board with high hopes that it would do a service to the profession and to the public. Yet, in the past two and one-half years, we have had to struggle to keep it alive and functioning properly. We only hope that our problems will not be repeated in other states.

Very sincerely yours,
/S/ Edward A. Hall
President, APGS Cal Section

The current officers for the California Section are: Edward A. Hall, Pres.; Howard T. Anderson, Pres. Elect.; David Cummings, Secy.-Treas.; and William A. Ahlred, Editor. The board has representatives from five areas in California, four Standing Committees, and two Special Committees.

Colorado

D. Keith Murray, CPGS 446, served as Chairman of the "1977 Symposium on the Geology of Rocky Mountain Coal" which met in Denver on May 9 and 10. Sponsored by the Colorado Geological Survey, the symposium consisted of ten scheduled papers focusing on a basic stratigraphic framework approach to coal exploration and mine planning, and covered the role of depositional environments in the understanding of the occurrence, geometry, correlation, and character of coal beds; and the recognition of other geologic factors that are important to mine planning. There were also workshops on lithologic classification of core and computer data retrieval, interactive computer mapping, recognition of depositional environments from coal cores, and petrography of Western coals.

The April meeting of the Colorado Section in the Radisson Hotel, Denver, covered benefits and liabilities of a registration bill with Colorado engineering geologists (which may affect geologists in other disciplines). John W. Reid, CPGS 448, and Thomas Gray represented the Association of Engineering Geologists at that meeting, and Dudley W. Bolyard, CPGS 81 and Earl G. Griffith, CPGS 90 represented the position of the geologists who oppose the bill as it is written.


Florida

The Florida Section showed recent renewed activity in regard to a registration bill. In April, an Ad Hoc Registration Committee was appointed to reconsider a draft approved in 1973 by the Florida Legislature. The Committee attempted to introduce the bill through the Department of Natural Resources. However, preparation and inadequate language in the bill was not pre-filed and the section withdrew it from this year's session. There will be a strong attempt to pass the bill in the 1978 session.

The Legislative Committee of the Section furnished a list of all pre-filed bills affecting geologists and the membership; also it furnished a list of geologists and specialities to the Department of Administration for their use in eliciting expert advice and testimony.

In other action the Section established an Employment Committee to serve as a clearing house for geology employment in the State.

Officers for the year 1977 are: Michael E. Zellars, Pres.; Daniel P. Spangler, Vice Pres.; John P. Barnardi, Secy.-Treas.; and Casper Rappenecker, Chairman of the Screening Board.

Illinois-Indiana

The Illinois-Indiana Section held their spring meeting May 6 in New Harmony, Indiana, once a leading center of scientific development and intellectual activity. The community was established by Robert Owen, a Welshman, in 1825, who established a laboratory for scientific research. Among his four sons was Robert Dale Owen who as a Congressman drafted the bill for founding of the Smithsonian Institute; and David Dale Owen, who was commissioned to make the first geological survey of the new government lands in the west. In 1838, William Maclure, later to become the first head of the U.S. Geological Survey, founded the Workingmen's Institute here. Some 21 million dollars have been raised through federal, state, and industry sources to restore the community and early laboratories, including the David Dale Owen Laboratory. At the meeting, George W. White, CPGS 218, gave a talk on "Geological Heritage of New Harmony", and Michael Hager spoke on "Geological Restoration Work in New Harmony".

The proposed registration bill for geologists in Illinois is, or has been until recently, in the Illinois Legislative Reference Bureau where the legal language of the bill is being polishes for reintroduction to the legislature. The bill, written by an APGS committee, had been introduced in the Illinois House, where it passed the first reading before being referred back to committee. Earlier, the bill had been revised and approved by committees of the Illinois Association of Professional Engineers and the Illinois Association of Soil Classifiers, and recently was revised to be in full agreement with suggestions of the Illinois Geological Society. The chairman of the APGS Ad Hoc Registration Committee is Paul B. Dumontelle.


The fall meeting of the section is to be in early October at the Argonne National Laboratory and will have a general theme of "The Geologist's Role in Energy/Resource Development".

Louisiana

A letter from A. J. Gaudin, President of the Louisiana Section indicates the principal concern of the section this year has been the registration issue, mostly in contacts with the Louisiana Section of SPIES who has been working closely with the Texas Section of SPIES towards registration. Apparently the Texas Section of AAPG has not supported registration and the Louisiana Section has recently passed their ordinance through a polling of their membership. A Legislative Committee was set up with Vito Gotautes and James F. Cooper accepting the task of forwarding information for the National Advisory Board. Following are the results of a state-wide poll on some important issues:

Report by Poll Co-Chairmen: Vito A. Gotautes and James F. Cooper of the results of the March 1977 Poll Distributed by the Louisiana Section, A. J. Gaudin, President.

APGS POLL STATISTICAL SUMMARY

Thirty replies were received from a total of 130 section members for a 23 percent of the total Louisiana Section Membership. These replies concerned the poll wherein the following questions were asked:

1. I am FOR ______ AGAINST horizontal and/or vertical divestiture.

   RESULTS: For 29% are against

2. I am FOR ______ AGAINST a "good" Registration bill for geologists in Louisiana at this time.

   RESULTS: For 15% Against 13% Neutral 1% (only if absolutely necessary)

3. I would like the Louisiana APGS to work on a model ("good") registration law to use or submit in the
event registration becomes an issue, whether brought by the actions of an individual or a group such as SIPES or any other.

RESULTS:  For  24  
Against  3**
No opinion  3

80% are for preparing a good model registration bill.

*Under Question No. 1, one response was marked "for" but the following remarks were made: "I believe any divestiture can only weaken the effectiveness of the industry at a time when we obviously need all the strength we can muster to assist our nation". This reply was interpreted to be against divestiture and was counted as such.

**Under Question No. 3, one response was not marked in for the "for" or the "against" column and the following remarks were made: "I do not think AGPS should get involved with SIPES working on a registration bill for geologists. The proposed SEC rule change pertains to programs registered with the SEC and was designed to end the Schedule "D" registrations which a large number of unscrupulous people were abusing. It appears to me that SIPES is using this, along with other SEC publicity, as a basis to get a bill passed which would strengthen their organization. If the Federal and State Securities does go through with the proposed changes and these changes have an adverse affect on the position of Independent Earth Scientists, the local Geological Societies and a.1 of the various geological organizations should work jointly toward alleviating the problem." This reply was interpreted to be "against" and was counted as such.

SUMMARY AND A PARAPHRASE OF SOME OF THE REMARKS ON THE FULL BALLOTS RETURNED

QUESTION NO. 1

"Oil industry is operating in a competitive and efficient manner. Divestiture would decrease efficiency, increase costs and maximize confusion." (These two sentences quoted from one response seem to reflect the attitude of most of the people who responded.)

Other ideas expressed:

"We have about 100 times too much government."

"Divestiture would no doubt provide many more jobs which would add to overall costs."

"It would be a step back for free enterprise system and a victory for Communist causes."

"Major oil company resources, exploration philosophy, etc., are needed to accelerate development of coal resources in this country."

"I am opposed to any divestiture as it is opposed to the free market concept."

"Against divestiture because of the apparent elimination of large outlays of capital for expensive exploration and production opportunities."

"I do not believe it is possible to arrive at an equitable compensation for stockholders after the divestiture... I question whether or not divested companies would be able to raise sufficient capital to conduct expensive operations offshore and in the Arctic. The only way to raise capital would be to combine into operating groups which would probably violate anti-trust laws. I cannot envision any change in anti-trust laws to accommodate the oil industry."

No remarks for divestiture.

QUESTIONS NO. 2 & 3

For: Several responders expressed the following idea: "I believe registration is inevitable. If this is true, procrastination would put us in a defensive position rather than one of internal control."

Against: Remarks:

"Geologists work too great an area to be harrassed by registration laws."

"The registration board would probably eventually be taken over by the state governments. If we could remain independent, it would be great. It would cause difficulty in working across state lines. If a geologist could be licensed by a national society and thereby not be restricted from working in any of the 50 states of which he must work, I would tend to be for it."

"This is tough to vote on. Not being a consultant, it might be an unfair vote. If its intent is to get civil engineers and the like out of the geology business then yes I am for it. If the intent is to narrow the geologic profession into the hands of a few then I am against. Some of the less educated but excellent geologists may be hurt. I don't know what is best. I think a discussion should be held."

Respectfully submitted.

/s/ Vito A. Gotaucus
/s/ James F. Cooper

The Louisiana Section plans a September meeting in Lafayette with the following planned as speakers: John A. Taylor, President, AGPS; William C. Bulla, Secretary of Natural Resources Department of Louisiana; Lee Richardson, Professor of Marketing at Louisiana State University and President of the Consumer Federation of America.

Michigan

The Michigan Section of the AGPS was formed this year. Officers are: Jeff Sutherland, President; Don Malott, Vice-President; Bob Minning, Secretary-Treasurer; Chip Frouy, Past-President; and Peter Rudec, Executive Committeeman.

Besides statutory committees, the Executive Committee has established a legislative committee and a committee to analyze controversies including the project Seafarer and the propriety of nuclear waste depositories in Michigan bedded salt formations. A bill for registration of geologists in Michigan has been resubmitted and is in the process of being printed. The bill was prepared under the aegis of Michigan Basin Geologic Society, without formal AGPS input. The section expects to review and evaluate the bill and perhaps recommend changes. The probability of the bill becoming law is remote in the near future because of diminishing geologist support for it.

One of the more important activities at this stage is building our membership. George Gallup will serve as Chairman of the Screening Committee.

Mississippi

Joseph F. Fritz, AGPS Advisory Board Delegate, has made a study of what Mississippi petroleum geologists are doing today. The 225 geologists identified as active in petroleum geology in Mississippi were placed into seven arbitrary categories which he believes describe the profession within the state. The basic data only are reproduced below and represents the situation as of the summer of 1976. Fritz, based on his own experience in the profession as well as discussions with his associates, has made observations regarding trends, salary levels and the state of the profession in Mississippi.

<table>
<thead>
<tr>
<th>Category</th>
<th>Income</th>
<th>Number in Miss.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Employed by State Agencies</td>
<td>$11,000-$23,000</td>
<td>16</td>
</tr>
<tr>
<td>2. Employed by Universities (adjusted)</td>
<td>$17,000-$27,000</td>
<td>14</td>
</tr>
<tr>
<td>3. Employed by Federal Government</td>
<td>$21,000-$32,000</td>
<td>32</td>
</tr>
<tr>
<td>4. Employed by major oil companies</td>
<td>$15,000-$40,000</td>
<td>26</td>
</tr>
<tr>
<td>5. Employed by large independents</td>
<td>$18,000-$40,000</td>
<td>13</td>
</tr>
<tr>
<td>6. Employed by small independents</td>
<td>$20,000-$45,000</td>
<td>50</td>
</tr>
<tr>
<td>7. Self-employed independent geologists</td>
<td>$10,000-$100,000</td>
<td>74</td>
</tr>
</tbody>
</table>

225

The Mississippi Section has prepared a proposed bill
for registration in Mississippi and is scheduled to be placed on August 1.

Current officers for Mississippi are: Robert E. Schmieg, Pres.; Ernest H. Boswell, Vice-Pres.; Stratton H. Bull, Secy.-Treas.; Robert E. Schmieg, Screening Board Chairman; and Joseph F. Fritz, Advisory Board Delegate.

Missouri

The Missouri Section has actively followed and voiced opinions concerning dam and toxic waste legislation. The Section has also made known their thoughts on the make up of a bill concerning pre-construction and exploration investigation by archeologists prior to earth disturbance.

It appears the toxic waste bill which makes reference to geologic conditions among other items, likely will pass this session. It appears further that the dam bill will not pass, although there have been several recent dam failures.

The current officers for the Missouri Section are: James H. Williams, Pres.; Paul L. Hillman, Vice-Pres.; Paul D. Proctor, Secy.-Treas.; William C. Hayes, Screening Board Chairman; and Louis Unfer, Jr., Advisory Board Delegate.

Northeast

The Annual Spring Meeting of the Northeast Section was held in the Lexington Hotel, New York City on May 24. President Jack Taylor was the featured speaker.

The New York registration bill has been stalled in the legislature, principally because of the continuing fiscal crises. Legislative liaison in New Jersey has resulted in an effective advisory role for the APGS with the Department of Environmental Protection.

A special membership development meeting is planned for September in Hartford, Conn., to better serve the New England part of the Section. An Albany, N.Y. Chapter is active and a Boston Chapter is an objective.

The 1977 Northeast Section officers are: Russell G. Slayback, Pres.; Angelo Tagliacozzo, Vice-Pres.; Thomas L. Tessier, Secy.-Treas.; and Severn P. Brown, Screening Board Chairman.

Texas

There apparently is concern in Texas about the new state securities laws and new SEC proposals prompting variable responses. The Texas Section of BIFES has put a bill into their legislative hopper in March hoping to circumvent new SEC proposals that it is believed would make geologists and oil and gas operators "brokers" and, therefore, subject to the regulations of the SEC, when they deal with the public.

According to the March newsletter of the Texas Section-APGS, certain suggestions were offered as to modification of the state securities law regarding professional geologists. As to registration a motion was made and carried that Senator Mengden, who is authoring a bill relative to geologists and the sale of oil and gas leases, be told that the majority of Texas Professional Geologists oppose registration. James A. Wheeler, CGFS 109, has some statements in this regard printed in the edition and is reproduced below.

REGISTRATION OF GEOLOGISTS

In the past few years there has been a number of cases where oil operators have been accused of illegal and fraudulent promotion of investment capital under the Schedule B section of the Securities Act. In most of these cases, a promoter was involved who has solicited investors that were not knowledgeable in oil and gas exploration.

There are many independent geologists who have, as an ongoing business, geologic work at this time, concluding that insufficient evidence exists to determine what effects, if any, this type of legislation will have on geologists.

Current officers for the Virginia Section are: Frank H. Jacobeen, Jr., Pres.; Kenneth M. Drummond, Vice Pres. Donald Leav, Secy.-Treas.; Charles W. Stuckey, Jr., Editor; and four Executive Committee members. The Annual Meeting will be held on October 8, 1977, in Charlottesville.
West Virginia

The Environmental Geology Committee of the APGS, with cohost West Virginia Geological Survey and Association of Engineering Geologists, will sponsor the L. C. White Memorial Symposium on "Geologic Hazards and Land Use" at the Lakeview Inn, Morgantown, West Virginia, on August 4 and 5. The field trip on the 4th will visit areas of landslide, subsidence, landfill, burning coal waste, strip mines, coal-waste dams, and water pollution. August 5th will have a morning conference and an afternoon panel discussion on "How Do You Handle Hazardous Geologic Problems". For additional information, address Peter Lessing, West Virginia Geological Survey, P.O. Box 879, Morgantown, WV 26503.

The West Virginia Registration Bill apparently died in the Finance Committee. The Executive Committee is developing a revised Fiscal Statement to be attached to the Bill after distribution to the membership for comments.

Current officers of the Section are: Peter Lessing, Pres.; Porter J. Brown, Vice-Pres.; Wiley S. Rogers, III, Secy.-Treas.; and Sidney S. Galpin, Editor.

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PROFESSIONAL PARAGRAPHS

Jack R. Birchum CGS, senior geologist for Colorado Interstate Gas Exploration, Inc. in the South Rocky Mountain District of the Northern Region at Denver, has been promoted to District Geologist for the West Texas-New Mexico District. Jack will be based in Midland, Texas, and will report to Robert L. Mussellwhite, Regional Manager of the Southern Region.

J. Hadley Williams CGS, Chief of Applied Engineering and Urban Geology, Department of Natural Resources, Missouri Geology and Land Survey, was special guest lecturer at a short course on Basic Hydraulics and Dam Design offered May 16-20 at the University of Missouri-Rolla.


W. Dean Crafton CGS, has been elected the 54th President of the 2800 member Houston Geological Society, the world's largest local geological organization. Dean is Senior Staff Geologist in the Gulf of Mexico Region for Cities Service Company.

Willie L. Tidwell CGS, was elected Secretary of the Houston Geological Society. Other officers of the HGCS are: Jeffrey V. Morris, First Vice-President; William A. Fowler, Jr., Second Vice-President, and Eleanor M. Hoover, Treasurer.