

# A History of the Association of Engineering Geologists (A Commemorative Review of the Association's First 25 Years)

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## PROLOGUE

Early in the evening of 3 June 1957 ten Sacramento area geologists gathered in the home of Harold D. Woods to discuss professional problems of engineering geologists in general and in California in particular. At 7:30 p.m. the meeting came to order. After 3½ hours of lively discussions and debate, the meeting adjourned having decided to organize a professional society to be known as the California Association of Engineering Geologists (CAEG) and to study the import, the need for and the means of obtaining State registration of engineering geologists. Committees were named to carry out these objectives, as well as to sound out other geologists for their views on these matters. After years of talk in innumerable "bull" sessions on the need for an organization to be a forum for engineering geologists and to speak up for them, action was finally underway. Let us backtrack along the trail leading to that meeting for a glimpse of its background and to appreciate developments which were to lead to the formation of the Association.

According to legend, the immediate trigger for this meeting came during a coffee break at the California State Department of Water Resources. There are two versions of the cast of characters. Both are probably right. Larry James says they were he, Woody (H. D. Woods), and Bob Laird. Woody says he and Claire Holdredge spoke the fateful words: "Let's go do it" over cups of coffee. And they did. Telephone calls to the head geologists

at three Federal and two State agencies and to two consultants, inquired about their thoughts and interest. Favorable responses were unanimous. These individuals were invited to the meeting and each agency head geologist was asked to bring along another geologist from his organization. Ten could attend the first meeting. Joseph Poland and George Worts, Jr., of the U.S. Geological Survey (USGS) Groundwater Branch could not. However, the host had introduced "The Old Quaker," a member of the well-known Bourbon family, who so enlivened and contributed to the congeniality of the evening that an instant tradition was established for the future.

What made the "Let's go do it" scenario inevitable had occurred at the "Conference on Geological Engineering Problems of Water in California" held 18-19 March 1957 at the University of California, Berkeley. The conference, called by Parker Trask, Professor of Geological Engineering, was attended by leading engineering geologists in the state and by others with corollary interests. The greatest impact on most geologists came not from the technical matters, interesting as they were, but from some informal remarks by John McGill, of the USGS Engineering Geology Branch, Los Angeles, following his talk on disastrous landslides in southern California. Thousands of artificial slopes in hillside subdivisions failed during the heavy rains of 1952 following 7 years of drought. There had been much loss of life and millions of dollars in damages.

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As a result, grading ordinances were revised to stringently regulate development procedures in the hitherto virtually unsupervised field. McGill then commented that the new Building Code would require an engineering geology report in addition to the existing requirements for a soils engineering report. They would be needed to obtain a grading and building permit to develop certain Critical Hillside Areas as designated on USGS Engineering Geology Maps. The astounding idea that a building code would have an engineering geology requirement caused a shock wave in Sacramento.

City Planners in Los Angeles estimated that half a million or more homes would be built on the lower slopes of the Santa Monica Mountains. Therefore, this requirement would obviously have a major influence on the field of engineering geology and its private practitioners. At the time, there were probably few in private practice. Engineering geology was a field limited largely to Federal and State agencies and a few large engineering firms. Engineering geologists were hired by informed employers who could judge the qualifications of their employees. Now there loomed the prospect of a new type of client, completely uninformed on professional qualifications for an engineering geologist. Questions immediately arose among Sacramento geologists. On the public's side "How can an official charged with responsibility for administering the laws or any private, uninformed client, determine that a geologist is qualified to prepare an engineering geology report for the site, or further, how can he be assured that the author is even a geologist?" The question was indeed serious for the public's safety and welfare; lives could be endangered. On the side of the profession, the questions were how to protect its reputation against disasters by unqualified people and the charlatans hovering about. At that time, other professions did not have that problem. They enjoyed State sanctioning such as registration for civil engineers and the State Bar for attorneys. Geology was wide open. Anyone could adopt the title of Geologist.

There was also another professional problem. Soils engineers in private practice commonly felt that the geology factor could be handled by them. They also had a strong, alert society acting as a watchdog to speak up for them in political circles, which they did quite effectively. A lesser consideration was that some geologists in other fields looked upon engineering geology as simply the application of general geological principles. This was

more or less true. Just drop the "simply" and add "plus experience on engineering projects." The latter item was an all-important fact the older engineering geologists had learned the hard way from years on the job.

Nowadays engineering geology is firmly established as a broad field with a considerable body of literature and geotechnical procedures. Engineering geologists are widely employed in the private sector and are heading firms. In this environment, there is probably little awareness that it wasn't always so. In the old days for instance, the roaring twenties, only the occasional large engineering project would have a geologist and then only for consultation. The consultant would likely be a noted geologist at some leading university. We all know, of course, of the preeminent part played by Dr. Charles P. Berkey of Columbia University in promoting the use of geology and geologists on engineering projects. In California there were, to name only a few, Andrew Lawson and George Louderback of the University of California, Berkeley; Bailey Willis of Stanford; and F. L. Ransome of the California Institute of Technology. The consultant would work in the early stages of a major project and only occasionally or not at all thereafter. Attention to geology other than this was haphazard; even so-called geologic logs were compiled by engineers in the office from the daily reports of the drillers. In 1929, the Corps of Engineers hired Ed Burwell into the Jacksonville (Florida) District to work on the Cross Florida Canal. (Burwell later became the Corps' first Chief Geologist.) About the same time, Floyd Johnston was hired into the Rock Island District (Illinois) as the navigation improvement of the upper Mississippi River began. It was not until 1931, however, that the Bureau of Reclamation hired its first staff geologist. He was Frank Nickell who had just received his Ph.D. at Cal Tech and was recommended by Dr. Ransome for work on Boulder (now Hoover) Dam. Ransome, as consultant, had been doing the preliminary geology studies along the Colorado River for site selection. He recognized, as the final design and construction stages approached, that the geological details essential to the building of this unprecedented structure could only be discovered, unravelled, and properly interpreted by a full-time geologist on the job. Nickell, an excellent geologist, had included civil engineering in his graduate studies and, thus, was cognizant of the engineering problems. The upshot of it was that this first staff job was so successful, and with the urging of Dr.

Berkey, also a Bureau consultant, that other geologists were hired as new projects were undertaken and Nickell became Head Geologist in the Chief Engineer's office.

Likewise, in 1931 and through Berkey's influence, the U.S. Army Corps of Engineers' Portland District appointed a Resident Geologist for the construction of Bonneville Dam on the Columbia River. He was Claire Holdredge who, like many another petroleum geologists of that period, had been "laid-off" in the years of the great depression. The stories of Hoover and Bonneville Dams were repeated later at the Tennessee Valley Authority (TVA) where a strong corps of geologists was built by Edwin C. Eckel (father of AEG's Ed Eckel) after his appointment as Chief Geologist in 1933. TVA engineering geologists moved on to prominent positions all over the country. The Bureau designed TVA's first dam and was their consultant along with Berkey during its construction. The combination probably strongly influenced TVA in its early years. Mining engineers and geologists were commonly used in the early days. One such was Chester Marliave, father of prominent AEG members Elmer and Burton. Chester had been consultant on dams and tunnels, and from 1932 to 1939 was the geologist member of the investigating team for the California Safety of Dams unit that investigates and oversees non-Federal dams in that State. The unit was established after the disastrous foundation failure at St. Francis Dam, in March 1928, in which hundreds lost their lives. No geologist had been used in foundation studies for the design or construction of St. Francis Dam, and its failure ended this policy. In 1935 Elmer Marliave started helping his father on dam examinations, but much of his time during his early years was spent in ground-water studies.

In 1936, three geologists, Robert L. Gamer, Aubrey Walker, and William I. Gardner, were hired by the Bureau of Reclamation and stationed at Redding, California, to work as geological inspectors on investigations for Shasta Dam and other Central Valley Project features. When Gardner's headquarters moved to Sacramento in January 1942 there was only one other engineering geologist in town. He was Alan Nicoll, of the State Highway Testing Laboratory where the early work on alkali cement—aggregate reaction was being done. Alan had discovered opaline Monterey shale fragments in the aggregate to be the prime culprit in their concrete bridge problems. Time went on and other Bureau geologists appeared in Sacramento. Bob Gamer and

Dick Merriam, later of the University of Southern California, came from Shasta; Charles (Chuck) Content, who later set up an impressive engineering geology group at Bechtel, Inc., came up from Friant Dam, and many others joined the large staff working on a wide range of investigations.

The Sacramento District, Corps of Engineers, in 1943 had Claire Holdredge reassigned from the Portland District after a 6-year interval in other geological work following completion of Bonneville Dam. Holdredge was joined shortly thereafter by Ray Treasher and then by others including Bruce Hall and George Kiersch. They too were busy, mainly on major water projects.

In the postwar period Elmer Marliave rejoined the State Division of Water Resources and became its head geologist. The Division became a Department in the 1950's and rapidly expanded on studies for the State Water Plan and the California Aqueduct from northern to southern California. A total staff of about 100 geologists was employed at the peak. Elmer finally went into consulting work and Larry James took over as Chief Geologist.

About this same time, the State Highway's Bridge Department established a geological group under Hal Harned to work on bridge foundations. They brought in Harned and Ted Sommers from Kansas where, along with some other mid-western states, pioneering work in highway geology was being done. Harned left for private work in 1957 and Sommers then became its head. Ray Taber and Ret Moore were members of the group until leaving to start a partnership in private work.

Ground-water studies were an important phase of the investigations for drainage and conjunctive use of surface and ground-water supplies in an irrigation project. The studies also determined the effect that large diversions and export of water would have on ground-water recharge in the local area. Both the Bureau's Geology Branch and the State's Department of Water Resources engaged in such studies. Then with the accelerated postwar developments in California, the USGS Groundwater Branch in 1948 established a District Office in Sacramento under Joseph F. Poland. They also became involved in the mid-fifties in ongoing studies by the Bureau and State of ground subsidence due to severe overdraft of ground water on the west side of the San Joaquin Valley, California. The USGS then spearheaded these cooperative investigations that aided the siting of the Bureau's San Luis Canal and the State's

Aqueduct on the West Side and they became the world's experts on the subject.

Thus, by 1957 there had been assembled in the Sacramento area what was probably the largest group of engineering geologists in the country, or anywhere else for that matter, working on major engineering projects with an amazing variety of geological features.

The southern California story was similar. Academia dominated the consulting field and geologic work on engineering projects during the 1920's and 1930's when Los Angeles County Flood Control District had a rash of dam building. The 1930's also saw the start of work by the Corps of Engineers and by the Metropolitan Water District (MWD) on its Colorado River Aqueduct. The first full-time geologists on the payrolls did not always have that title. Several young graduates fated to be future noted engineering geologists started out on MWD's rolls in the 1930's as safety inspectors on the tunnels and canals of the Aqueduct. They were V. P. Pentegoff, T. F. Thompson, J. R. Townsend, and E. J. Zielbauer. Mason Read, another "laid-off" petroleum geologist victim of the depression, became a quarry inspector for the Corps in 1935. He enacted the typical scenario of geologists in those days who made their jobs by constantly demonstrating how the practical application of geology could benefit the work. Previously, there was apparently a feeling that geologists were too academic; but in 1938, when flood control planning studies were started, a geology section was set up for preliminary investigations and Read was named to it.

The USGS Engineering Geology Branch had its roots in the Survey's military geology work during World War II and was established as a Branch in 1944. Ed Eckel was its first Chief. The remarks by John McGill in 1957 provide an example of the broad impact the Survey's work had by providing basic data for regional planning and development.

By 1957, the large geological staffs of relatively few engineering organizations in California were well established, but it did not just happen because nature intended it to be that way. The efforts of many geologists brought about the success story.

Full-time geologists in engineering organizations were in a far different situation from that of the eminent consultant who generally worked only in the early stages of a project. The staff geologist worked largely with rank and file engineers concerned with details, the nuts and bolts as it were, of the project. They were not concerned with "big

picture," but wanted specifics. The geologist had to overcome the skepticism of people who viewed geologists as academic and given to writing unintelligible reports. Unfortunately, too often the criticism had some justification. Even in 1957, at the Berkeley conference, Larry James brought up the problem of training young, well-educated geologists newly hired by the State for their expanding program. He commented to the effect that: "They have the ability to write fine reports for other geologists but that require interpretation by an experienced engineering geologist to be useful to the engineer." One typical engineer remarked pointedly that "he just wanted to know the physical characteristics of the rock and not whether it was herbivorous or carnivorous."

The early geologists on such work as excavation, foundation treatment, and the preliminary project studies contributed immeasurably to the job, but there were problems in directing the geology studies most effectively to provide data for later stages of design. The detailed studies were far better, but more improvement was needed. There was little or no background of published material or academic training to be of help. Obviously for an effective job of developing engineering geology, the geologist had to know something of the engineering problem. Some of them, like Frank Nickell, had some civil engineering in college. Others, like Chester and Burton Marliave, Gardner, and Kiersch, were graduates of colleges of mining engineering and had received basic science and engineering as well as full geologic treatment. Some, like Larry James, took civil engineering courses outside their working hours. This exposure to engineering was a great advantage, but the essential ingredient in the development of engineering geology was the close working relationships with engineers on the job whether in planning, design, or construction. The strong feeling in 1957 that there was no substitute for that experience becomes evident in the requirements for membership and registration.

The flow of information was a two-way affair. The engineer whose ignorance of geology frequently matched or exceeded the geologist's ignorance of engineering learned that his problem could have more far reaching geological implications than his specific request for "just the physical characteristics." The education was mutual.

Communication could be a problem. Engineering formulas required numbers. Geologists work with adjectives, opinions, and probabilities founded on

experience and judgment. Case histories, prior experience in similar circumstances, were a powerful tool in reaching an opinion. In this, the geologist needed to be the guide for the engineer, to correlate the present situation with experience in a similar geologic situation elsewhere, if possible. There are dangers in geological nomenclature that are not designed for engineering needs. Take shale for instance. Experience in the clay shales of the Missouri Basin would not be representative of the behavior of the siliceous Monterey shales of California. There was a dearth of literature and most of the experience record was that of the individuals and their organization. In 1957, the Geological Society of America Engineering Geology Division's Committee for Case Histories had just been formed, and their publications were still in the future. There was hope, then only a glimmer, that in some glorious future day CAEG might help fill this gap in engineering geology.

A means of exchanging ideas and experiences was viewed as essential to improve the performance of individuals and also for there to be progress in the field of engineering geology. Many engineering geologists started out as "loners" in a sea of engineers, largely isolated from other geologists. All too often engineering came to dominate geology and then, as Dr. Berkey had remarked, "They may become mediocre engineers among good ones." Meetings would be the antidote. GSA's Engineering Geology Division had technical sessions at the GSA and the Cordilleran Section annual meetings, but they were too infrequent and generally too distant to be the answer. A surprising finding too was that a majority of engineering geologists did not belong to GSA. Another vehicle was needed.

During the evening of 3 June 1957, a two-fold decision was made: first, a professional association was needed to provide a forum for engineering geologists. CAEG was envisioned to be the forum that would provide the greatest long-lasting benefits through periodic, frequent local (section) meetings, field trips, and publications; and thereby enhance the technical field and the abilities of the individuals in it. Secondly, the organization would speak up for engineering geologists, would seek to give them equal standing with other professions before the public and in the law, and seek protection for the public and the profession against disasters, physical or to reputations, because of the actions of people unqualified in the field of engineering geology. Registration was viewed with mixed feelings, but it was

found to be the only practical means of obtaining this second objective, and the campaign for State registration came to occupy a most prominent place in AEG's first decade.

This then has been a glimpse of things as they were in June 1957. Let's have a cup of coffee, or bring in The Old Quaker for a change of pace, read on and let's see what happened over the next quarter century.

WILLIAM I. GARDNER  
Moraga, California

#### BEGINNINGS, 1957-1958

A little over 100 years after the discovery of gold along the banks of the Sacramento River in California provided the catalyst for an influx of people into the American West, another group of people, also interested in the earth and its resources, were gathered in Sacramento through their involvement in redistributing and making conservative use of California water. It was the trials of this cast of actors, in establishing themselves as staff professionals in a field long dominated by academia, or entirely ignored, that set in motion and brought to fruition an organization of people who practiced a brand of geology applied to engineering situations. It was their action-oriented experience that made them what they were, and once a decision was made they pursued their goal with a vengeance.

The select group of twelve who were invited to the meeting on 3 June 1957 had their intended meeting place in the Board Room of the Public Works Building in Sacramento preempted by some unknown group. Thus, what was to be the founding meeting was held at the home of Harold Duane Woods at 3300 Arbor Way in Sacramento. Only ten of the twelve attended: Claire Holdredge and Bruce Hall from the Corps of Engineers; Bill Gardner and Charles Hall of the Bureau of Reclamation; Ted Sommers and Bob Reynolds of the California Division of Highways; Larry James and Duane Woods of the California Division of Water Resources; John Manning, a Consultant for Ranney Method Western Corporation; and Elmer Marliave, Consultant. Holdredge was named Chairman of the group and Woods, Secretary. The agenda presented by Holdredge was as follows:

1. The desirability of registration for engineering geologists.

2. The desirability of an engineering geology organization.
3. Definition of the field of engineering geology.
4. The method and mechanics of effecting registration, if it is considered desirable.
5. The advisability of setting up a temporary organization with a temporary chairman and secretary and setting a place and date for an organization meeting.
6. The most desirable designation or title of an engineering geologist, in case of registration.
7. The education and experience requirements for registration or for membership in the suggested organization of engineering geologists.
8. The name of the suggested organization.

By a vote of nine for and one abstaining the group endorsed registration of geologists. The work of fact finding was divided up amongst the group and to Gardner was assigned the critical task of drafting qualifications for a registered geologist with particular regard to qualifications of an engineering geologist. Such a draft was later to serve as a basis for Association of Engineering Geologists (AEG) membership qualifications. The group decided on the formal name of California Association of Engineering Geologists (CAEG) upon a motion by Elmer Marliave. By 11:00 p.m., with the work appropriately divided and an impressive dent made in the "Old Quaker," the first meeting was adjourned, putting into motion an idea whose time had come.

The second meeting on 8 July 1957 at the Elmer Marliave home included Joe Poland and George Worts of the U.S. Geological Survey. Progress reports on compiling a roster of engineering geologists and contacts with other states regarding status of registration were received. Woods presented the initial membership application form. Gardner presented a classic first draft of qualifications for registration and a definition of engineering geology that was destined for long, painstaking scrutiny, but is presented here in its succinct entirety:

**ROUGH DRAFT OF TENTATIVE  
QUALIFICATIONS FOR REGISTRATION  
AS ENGINEERING GEOLOGIST**

**EDUCATION:** Graduate with a major in geology of a college or university approved by the Board or, if a non-graduate, having earned 30 semester units in the geological sciences; plus

**EXPERIENCE:** Four years of experience in geology under the direction of a geologist capable

of meeting the qualifications set forth here-in. Each full year of undergraduate study in geology shall count as one-half year of experience up to a maximum of two years and each full year of graduate study shall count for a year of experience under this section; plus

Three years of full-time experience in the application of engineering geology in close association with civil engineers on engineering practice approved by the Board.

**EXAMINATION:** A written and/or oral examination may be prescribed by the Board in addition to the above requirements but without waiver of the stated education and experience requirements.

**NO PERSON SHALL REPRESENT** himself as or use the title of engineering geologist or practice or offer to practice engineering geology unless qualified by registration or by establishing his capability of meeting the qualifications set forth here-in.

**ENGINEERING GEOLOGY:** The application of geologic data, techniques and principles to site study and to the study of ground water and naturally occurring rock, earth and soil materials or samples there-of for the purpose of assuring that geologic factors affecting the location, design, construction, operation and maintenance of engineering structures and the development of ground water resources are recognized and adequately interpreted, utilized and presented for use in engineering practice.

The August 1957 meeting resulted in the formation of three working committees: one on Aims and Purposes of the Association, one on Definition of Engineering Geology, and one on Qualifications for Association Membership. The group agreed not to open the Association to additional membership pending reports of these committees.

Monthly meetings continued through the fall with much discussion regarding aims and qualifications for membership. The Association was registered with the California Secretary of State on 4 November 1957. By the meeting on 3 December, Elmer Marliave had returned from southern California and reported that the City of Los Angeles had established a Board to compile a list of qualified engineering geologists to render geologic reports required for city construction. Marliave had read several of these reports and classified them as "sub-

par." In addition, it was rumored that several engineering firms were being set up to enter the field. Action was clearly required. Marliave recommended that CAEG take steps to substantially increase membership. The group agreed and decided to designate the twelve original members as the Executive Committee. The group set a tradition of no initiation fee and annual dues of \$5 was considered, but rejected in favor of \$3. George Worts, who was absent at the 3 December meeting, was appointed as first Treasurer of the Association and a committee composed of Sommers, Woods, and Reynolds was appointed to draft bylaws. Worts, who was to be out of town on a professional assignment for several months, requested relief as Treasurer a month later and was replaced by Charles Hall.

By mid-January 1958 some 54 letters of invitation had been mailed to California geologists, believed qualified for membership, regarding the Association. The January meeting was noteworthy in that the first Membership Committee was appointed with Poland as Chairman and the following resolution passed pertaining to formation of sections:

"The Executive Committee will establish sections in other parts of the State as the interest or need warrants, and a statewide meeting will be held as soon as practical after statewide representation can be effected."

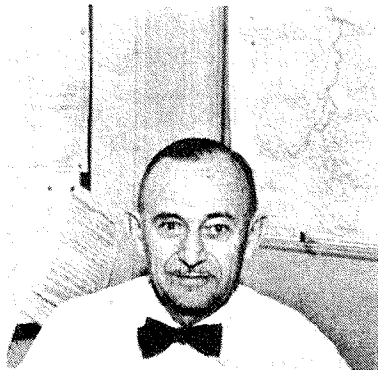
In February, Poland presented the first 25 applications for membership for approval which was quickly done since the applicants were well known. Elmer Marliave presented the Association with its first bill (\$18.72 for stationary printing) and the Committee made the critical decision not to limit membership to California residents. Considerable consternation was expressed regarding inequality of Federal salaries for employees in different professional categories. The Association opposed the practice of paying premiums for personnel in so called shortage categories. The committee concerned with the Federal pay scale problem for geologists soon, under Gardner's chairmanship, became the Professional Relations and Actions Committee, first referred to as such at the 18 March 1958 meeting. Fourteen additional new members were added in March, and the first draft on the Constitution and Bylaws of the Association was distributed and discussed on 1 April 1958. The Bylaws Committee, under the direction of Bob Reynolds, then went into session to hone the documents further. Holdredge reported that he had announced the

formation of the Association at the Spring 1958 meeting of the Cordilleran Section of GSA and that considerable dismay had followed because of fears of fragmentation into many groups. However, CAEG viewed GSA as a scientific society and as such would not address critical professional issues facing engineering geologists.

Already the Association was becoming more involved. Holdredge transmitted an early membership list to Los Angeles government entities suggesting that consultants and/or committees involved with engineering geology problems be selected from the CAEG list. On 7 May 1958, the first section of the CAEG was formed in the Los Angeles area under the chairmanship of Ed Zielbauer. The influx of applications for membership included many applicants not known to the Executive Committee and caused it to realize that the application form did not provide all the information required to appropriately evaluate applicants. On 27 May the concept of requiring three sponsors was introduced and agreed upon, including a separate form upon which the sponsor might comment on the applicant's qualifications. The Executive Committee even then was always careful to insure that those accepted to membership were appropriately qualified. Rejections were frequent even though the organization was a fledgling. Realizing the importance of regional autonomy the committee appointed a special membership committee within the Los Angeles Section to review and recommend new applicants.

On 12 August 1958, Holdredge brought a meeting to order in what was to be his final act for the Association. H. Ray Taber was welcomed to membership on the Executive Committee replacing John Manning who, after completion of his professional activities in Sacramento, had been unable to participate in the committee activities from his home in Bakersfield. Early in the summer the date and place for the first annual meeting had been set and Bruce Hall was appointed as Chairman of the first Annual Meeting Committee. The Constitution and Bylaws were approved by the Executive Committee late in the summer. Volume 1, Number 1, of the News Letter with Bruce Hall as Editor was issued on 23 August 1958. The first, one-page edition in purple ink came from an antique Ditto machine destined for early retirement. The newly organized Los Angeles Section sponsored three field trips that summer, the first to the infamous Portugese Bend Landslide. The section programmed much activity which 25 years later still continues at a high level. The

Sacramento Section, under the chairmanship of Cole McClure, Jr., was organized on 9 September, and the San Francisco Section was organized and had its first meeting on 25 September under the chairmanship of Ray Treasher. On the last day of September 1958, Bruce Hall brought the 16th meeting of the Executive Committee to order expressing deep regret at the hospitalization of Holdredge due to a stroke. Yet the business of the Association needed to proceed.



Claire P. Holdredge

On the eve of the first Annual Meeting the 12 members of the Executive Committee, officially the founders of the Association, met in the Hotel Senator in Sacramento for their final acts. A resolution that Holdredge, for his dedicated leadership, be proclaimed first President of the Association and elected to Honorary Membership was adopted. Dues for 1959 were increased to \$10 for full members and \$5 for junior members. This final meeting of the founders adjourned at midnight "in a spirit of exuberance in the knowledge that CAEG was now firmly on its feet and destined for a great and successful future."

#### THE EARLY DAYS, 1958-1962

The first Annual Meeting at the Senator Hotel in Sacramento on 11 October 1958 consisted of a full day of business, broken by a luncheon and followed by a cocktail party, establishing a tradition carried to the present. The meeting was attended by 66 members and guests. Bruce Hall chaired the morning session. His welcoming address was followed by several presentations on the purpose, organization, and future of CAEG and status reports from the regional sections. Luncheon was followed by the election of Executive Council members and of-

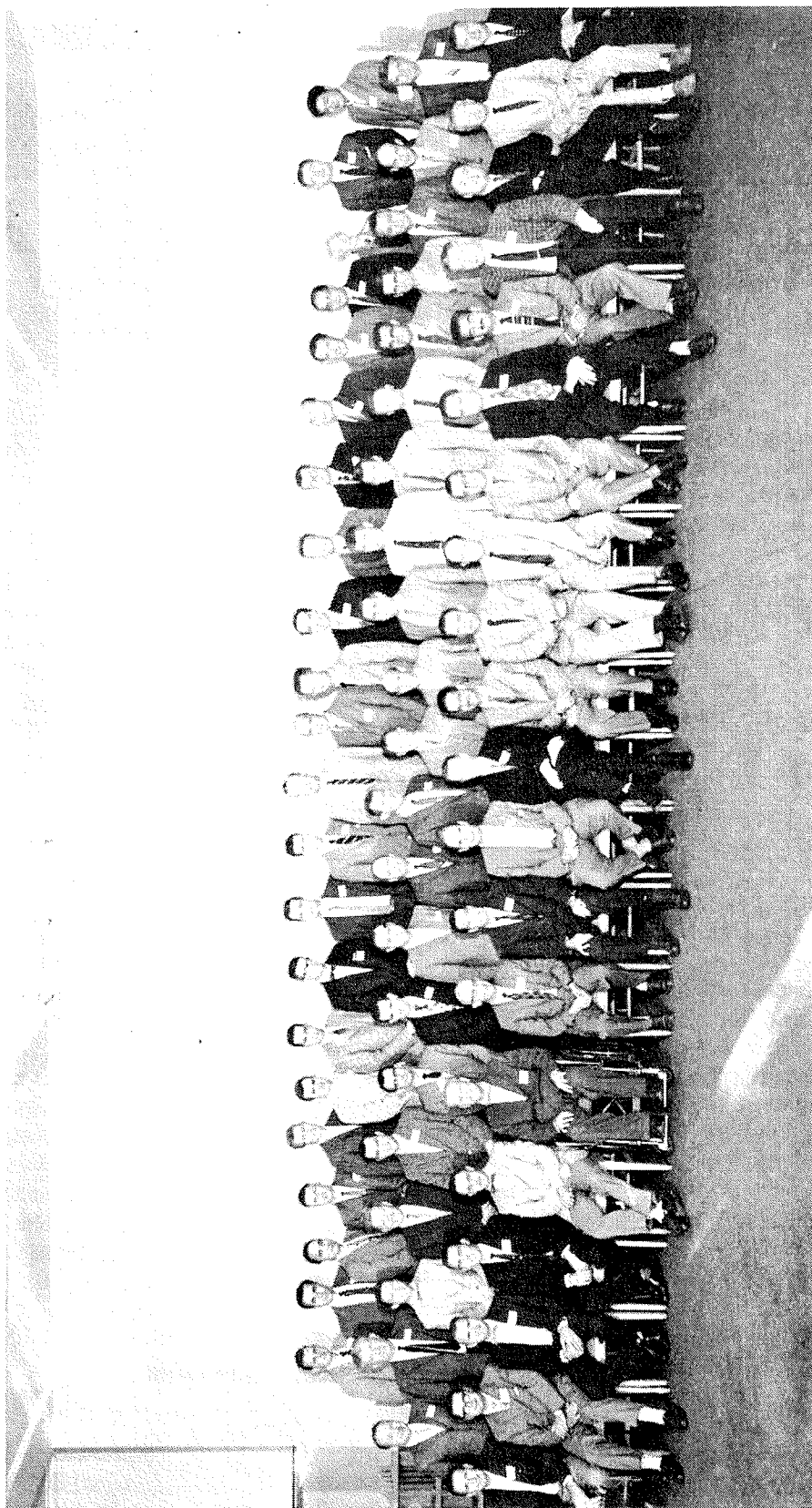
ficers; and a treasurer's report which was monumental in its simplicity: income \$224.58; expenditures \$171.44; balance \$53.14. Gardner chaired the afternoon panel discussions on membership qualifications, professional ethics and practices, building codes, public relations and information, and registration, all forerunners of what were to become standing committees. The registration discussion featured an informative talk by Douglas Locke of the State Board of Registration for Civil Engineers. An impressive closing address written by Frank Nickell and delivered by William Ellis stirred the membership closing with "This Association and its conventions provide the forum and the place for good companionship; its importance to you depends on you and what you do to make its further growth possible."



William I. Gardner

President William I. Gardner called a new Executive Committee to order late on the afternoon of 11 October 1958 where the proclamation of Claire Holdredge as first President and first Honorary Member was ratified. Charles Hall was named Editor (the Newsletter was the only publication) and to show their independence the committee reduced the dues for 1959 (which had been passed by a slightly different group the night before) by \$1 for each of the two classes of membership. They also began the dues rebate system by returning \$1.50 and \$1 for members and junior (associate) members respectively, back to the local sections. Four committees were appointed: Membership; Professional Ethics, Practices and Registration; Public Information and Relations; and Building Codes and Related Matters. A task group to look into incorpo-





First Annual meeting of the California Association of Engineering Geologists, Hotel Senator, Sacramento, California, October 11, 1958. Front row: A. L. O'Neill, R. E. Harpster, J. E. Kelly, G. A. Brown, W. D. Fuqua, R. F. Laird, R. C. Treasher, H. D. Woods, J. F. Poland, W. I. Gardner, C. E. Hall, P. J. Guthrie, C. R. McClure, R. C. Thomas, B. M. Hall, I. E. Klein, G. Marchand, C. E. McHuron, C. F. Worts, Jr., E. J. Zielbauer; Center: W. L. Burnham, E. C. Marliave, R. Farina, R. E. Trefzger, C. H. Swan, R. P. Bisio, S. L. Werner, G. Curittin, R. C. Richter, R. F. Moore, H. A. Kues, R. E. Thronson, C. E. Marek, B. H. Marliave, P. R. Fisher, R. W. Reynolds, H. R. Taber, R. T. Bean, I. I. Sommers, R. J. Anderson, L. B. James; Back row: M. J. McQuilken, W. W. Peak, J. R. Jensen, C. S. Content, F. C. Kresse, B. G. Hicks, L. West, A. B. Arnold, G. A. Kiersch, W. D. Pedersen, J. Manning, D. P. Scott, M. S. Lyons, A. L. Franks, A. D. Powers, R. Hood, W. C. Ellis, H. E. Richardson, R. C. Thompson, M. D. Binkley, J. M. Parsons, P. Y. Amimoto.

ration was established when Woods brought to the group's attention that as an unincorporated society, CAEG might be held legally responsible for the actions of its members. On this warning note the first meeting of the second Executive Committee adjourned.

Subsequent meetings of the Executive Committee handled mostly routine matters such as membership, bylaws amendments, annual convention plans, getting the Newsletter out, etc. In January 1959 the committee decided to incorporate the Association, though actual incorporation did not take place until the following year. Administrative procedures had to be developed. Painstaking review of membership applications took an inordinate amount of time. Slowly certain traditions began to form. Meetings of the local sections were reported on together with field trips. Because the nominees for President were from the Sacramento-San Francisco region, it was decided that the nominees for Vice President should come from the Los Angeles area, thus beginning the idea of a regionally balanced slate of officers. President Gardner began a dialogue with the Geological Society of America (GSA) and its Engineering Geology Division (EGD) regarding cooperation and publication of technical data. The professional problems of engineering geologists were discussed with the American Geological Institute (AGI), petroleum geologists, and engineering groups.

The Second Annual Meeting convened in Los Angeles on 9-11 October 1959 at the University of Southern California with Robert G. Thomas as Chairman of the Arrangements Committee. Registration fees were \$3 for members and guests and \$1 for students. The Association had grown to a membership of 178 during the year. Two competing field trips were offered: one to Pacific Palisades-Malibu Landslides, and the other to look at the site of the St. Francis Dam failure, Castaic, Beartrap, and Upper Borman damsites and other features of the Transverse Ranges of southern California. The business meeting included discussion on membership requirements and procedures and the obvious strong will of the Association's first Vice President and Membership Chairman, Joe Poland, prevailed in establishing and maintaining consistent standards which continue to this day. The pros and cons of registration were debated as was the activity of the Los Angeles Section in the building codes field. The attendees voted to proceed with nonprofit incorporation status. This required that the title of

"President" be changed to "Chairman of the Board," that the "Executive Committee" become the "Board of Directors," and that provision be made for disposal of assets (now just under \$500) in event of dissolution. The Boy Scouts of America was selected as rightful heirs of the Association. Technical sessions presentations on the Hebgan Lake (Montana) earthquake, which had occurred less than 2 months earlier, and a symposium on "Geology in the Nuclear Age" was held. Samuel B. Morris, Vice President of American Society of Civil Engineers (ASCE), spoke at the annual banquet on "Water Problems of the West."

How had CAEG fared after 2 years? The sections had held frequent, well attended meetings with good talks. Several field trips had been made. Engineers frequently participated. The same was true of the Annual Meeting. The Sacramento Section had joined the Sacramento Valley Council of Engineers to maintain liaison with engineering societies. CAEG had worked with the City and the County Engineers in Los Angeles on qualification standards for engineering geologists. The suggestion was made to the County Engineer that CAEG be the means of screening geologists for qualified engineering geologists. The reply, quoted in part below, was instructive and significant:

"The qualification of Engineering Geologists by an Advisory Board of (CAEG) would help solve private enterprises' problem of identifying responsible consultants. . . . However . . . such a qualification would have a very questionable legal status in government. To be recognized by a City or County, a qualification should be by the State or a Board established in (their) ordinances. . . ."

This reply effectively disposed of any idea that private certification (as was done later by AIPG and AAPG) could substitute for registration without enabling legislation. There has also been some dabbling in the education field in response to requests for comments on engineering geology curricula that were gaining some attention. In short, activities to carry out the thrust of CAEG's basic objectives had been initiated.

In October 1959, Bruce M. Hall became third President (and Chairman of the Board) of the Association, presiding over meetings of the Board every 2 months. Hall's first problem was that a quorum of elected officers was not present at the Annual Meeting in Los Angeles and that much of the work accomplished had to be redone. Work on bro-



Bruce M. Hall

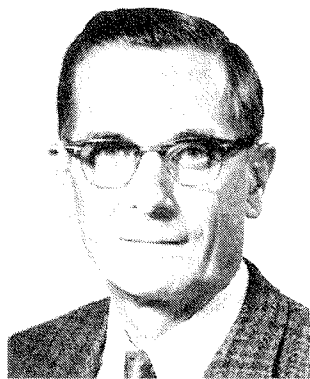
chures for registration, membership, public information, and building codes, together with Bylaw revisions, were paramount in the work of the Board and its committees. By March 1960, the treasury reached \$1,000 for the first time. Sacramento was to remain the home of the Association with all officers except the Vice President to be from that area. The latter would be rotated through the sections. In March, early inquiries were received from members in Denver regarding establishment of sections outside California, but action was deferred pending study of the Association Bylaws. Proposed Bylaws changes in June 1960 established four basic classes of membership which, except for two additions, persist to the present. A resolution was also made regarding the nominating and balloting procedures for officers. The submission of two candidates for each office, with balloting at the annual meeting, was changed to a single nominee for each office with a write-in space, and balloting by mail, establishing a precedent which still continues. The efforts of Jack McGill and others of the Los Angeles Section were monumental in the field of building codes and professional qualifications in the southern California area.

Art Arnold, as Association Editor, published six issues of the Newsletter during the year, all on schedule, with the help of Jack Eagen, Mel Green, and Dorothy Radbruch. The Association was officially incorporated in California on 29 June 1960. Continued efforts were made by Bruce Hall and past President Gardner regarding relations with the Engineering Geology Division of GSA. The possibility of CAEG becoming an associated society of

GSA was first discussed during this period (as it has been several more times over the years).

The Third Annual Meeting was held on 14–15 October 1960 on the campus of the University of California, Berkeley, with the Claremont Hotel in Berkeley as meeting headquarters and the site of technical sessions. Burt Marliave and Ray Treasher combined their talents to arrange this meeting. Total membership according to Membership Chairman Ray Richter was 209, an addition of 32 during the year, including such "foreigners" as "hearty souls" from Denver, the east coast, and Pakistan. Richter's report indicated that 47 percent of the membership worked for the State of California, 20 percent for the Federal Government, 15 percent for private industry, 10 percent consultants, and 3 percent in teaching. It was also memorable that at this meeting Burt Marliave (founding member Elmer's brother) introduced a resolution to drop "California" from the Association name because of the number of persons from outside California wishing to become members and establish sections. (A similar resolution had earlier been passed by the San Francisco Section of which Marliave was Chairman.) Ira Klein and his Public Information and Professional Relations Committee presented to all meeting attendees the 1960 General Information and Membership Roster which should be counted as the Association's first directory. Jack McGill reported on the year's efforts on building codes and related matters in the southern California and San Francisco areas, emphasizing the activity of many members in this endeavor. Probably no single group worked harder to bring engineering geology in urban areas to public attention during those early years. Robert Bean reported on ethics and registration, outlining the brochure sent to the membership relating to possible positions for the Association to take regarding registration. The membership, by a narrow plurality had voted to pursue registration of engineering geologists even though nearly half had voted for self regulation. (One can almost still hear the heated discussion from the floor.) Those most intimately involved with registration viewed self regulation to be fine professionally, but without legal status it could not replace registration. The Annual Meeting included field trips to the Lafayette Tunnel, then under construction, and to Sausalito to see the Corps of Engineers model of San Francisco Bay. Harvey O. Banks, Director of the California Department of Water Resources, addressed the annual banquet on the "Relationship of Engi-

neers and Geologists in Planning Public Work Projects," emphasizing the importance of a team effort between both disciplines.



Robert T. Bean

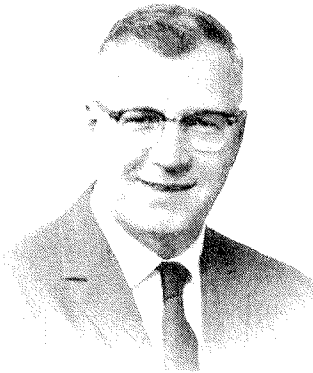
The presidency of Robert T. Bean of the Sacramento Section began on a note of action. The Professional Ethics, Practices and Registration Committee was authorized to undertake necessary action to bring about legal registration of engineering geologists in California. Discussion also included affiliation with GSA, but by the February 1961 Board of Directors meeting, the Los Angeles Section, by resolution, endorsed a policy that no such action be taken at the present time. The possible formation of a section in Denver was discussed and regretfully it was announced that the third Annual Meeting finished with a deficit of \$70.

The February meeting of the Board was saddened by the announcement of the death of its first President, Claire Holdredge, on 28 January 1961. Bruce Hall represented the Association at the funeral. The mood was compounded by the resignation of Treasurer Bill Ellis whose professional activities required him to be in Egypt. With remarkable quickness Ben Lofgren of the San Francisco Section was nominated to the Board and assigned the duties of Treasurer. The discontent of some in the Los Angeles Section who opposed affiliation with GSA was not supported by the other two sections, and the Board decided to continue dialogue with GSA. Representation from Los Angeles and San Francisco at Board meetings became an item of concern, and a compensation of \$35 and \$10, respectively, for representatives to Board meetings other than at the Annual Meeting was moved, but not acted upon until the May meeting.

When the Board met in August 1961 the possibility of deleting California from the Association's name, together with formation of sections outside the state, was again considered. President Bean himself argued hard that the Association broaden its geographical base to not only a national base, but worldwide. It was undoubtedly much of his persuasive talents which ultimately were to pay dividends less than two years later, but for the moment, California provincialism won out. The Board elected to continue the status quo, encouraging out-of-state applicants and the formation of out-of-state "regional groups" which might eventually become linked together in some sort of national federation of engineering geologists. The privileges of affiliate members were considered at this and previous Board meetings, specifically on the matter of advertising their affiliation with CAEG on cards and in reports (negative). When Bean convened the annual business meeting in October, the affiliate member problem had not gone away. A heated discussion from the floor is recorded in the minutes. Affiliation with GSA went into limbo by a tabling action of the GSA council so that further consideration was dropped much to the relief of the Los Angeles Section. Preliminary drafts of two registration bills, one by an independent board and one as a subcommittee under the engineers board, were being prepared in the state legislative council and boundaries of local sections were delineated.

The Fourth Annual Meeting took place in the Chemistry Building at the University of California, Davis, on 13-15 October 1961, with meeting headquarters back in the Hotel Senator in Sacramento. Ground water was the subject of a symposium. A Code of Ethics was presented to the membership for review and matters of building codes and state registration were presented and discussed in detail. The three sections reported on their many activities during the year, including technical meetings, field trips (Sacramento published a field trip guidebook), and professional activities. The Newsletter had been published quarterly under the leadership of Phil Larens, and while a number of questions regarding out-of-state membership, registration, and status of various membership classes were raised, it appears that many of the traditions carried many years beyond were firmly established during Bean's presidency.

Edward Zielbauer became the first presiding officer of the Association from the Los Angeles area and that Board meeting on 14 October 1961 in Suite



Edward J. Zielbauer

901 of the Hotel Senator in Sacramento brought some important changes. Glenn Brown of the Los Angeles Section was named Editor, and the President announced that two associate editors would be named from the other sections to assist Brown in his work. Registration was removed from the activity of the Professional Ethics and Practices Committee and given separate status. Past President Bean was put in charge of a Special Relations Committee to work as liaison with out-of-state groups trying to form sections. The first Emblems, Certificates, and Awards Committee was established with Robert Wilson as chairman and after much discussion it was decided that the Vice President should take on the work of coordinator of committees. Thus, Cole McClure, Jr. became the first to receive this happy task. Discussion went on until 1:40 a.m. establishing what was for many years a long cherished tradition of late night Board meetings. The next Board meeting at Zielbauer's home in Inglewood did not adjourn until 3 a.m.

In March 1962 a straw poll of the membership revealed by a vote of 2 to 1 that changing the name of the Association to Association of Engineering Geologists would be appropriate. At the Board meeting on 14 April 1962, Bean was asked to draft the required amendment and the machinery was thus set in motion to have the name of the Association reflect the rapidly growing membership outside California. This meeting was doubly important as the Emblems, Certificates, and Awards Committee outlined a plan to establish an annual award for an outstanding paper in engineering geology. Harry Kues, reporting for Robert Wilson, moved that such an award be titled the Claire P. Holdredge Award, subject to Mrs. Holdredge's approval. The motion was unanimously accepted. Problems of im-

portant persons in arrears of dues were a topic of discussion during this period. Fortunately such members rapidly realized the error of their ways and paid up. A proposal to establish an "inactive" class of membership was soundly defeated.

Financial and moral support continued for the California registration bill and required much attention. The first draft of a bill went to the members in December 1962 for their review and comment. The problem revolved around whether to finance it by contributions, special assessment, solicitation of contributions, or using existing Association treasury funds. The problem was ultimately submitted directly to the membership for a vote. At the August meeting of the Board, a communication from a group in Washington State requested the first out-of-state screening of applicants. The Board agreed that upon appropriate documentation and acceptance of five full member applicants from that area, that those members could serve as both sponsors and reviewers in that area. No less than twelve By-law changes were proposed for submission to the membership, but the most important item of discussion and action appears to have been the establishment of a society of engineering geologists not limited to a state or region. The Board of Directors pointed out to the membership that groups of geologists in several states (where CAEG already had members) were building organizations, that the Engineering Geology Division of GSA was considering formation of a professional engineering geologist society, that the Highway Geology Symposium was considering broadening their scope to a national, professional organization embracing the whole field of engineering geology and that AGI would welcome the inclusion of a professional society of engineering geologists on a par with AAPG, GSA, AGU, etc. The Board recommended "that the Association accept its responsibility as the only actively functioning professional society of engineering geologists in the United States, and in the interest of our constitutional objective of the advancement of the profession of engineering geology, ratify the proposed amendment" (to change the Association name).

On 24 April 1962 President Zielbauer sent a letter to Robert H. Nesbitt, Chairman of the GSA Engineering Geology Division, suggesting that the Division accept the proposed AEG as *the* professional society needed in the field of engineering geology, and in September 1962 an article authored by Robert Bean appeared in *GeoTimes*, clearly delineating

the arguments for an Association of Engineering Geologists, a society without boundaries.

The first Code of Ethics was published on 11 July 1962 and was a model of simplicity and clarity.

California Association of Engineering Geologists

*Code of Ethics*

- Article I It shall be considered unprofessional for an Engineering Geologist to act in any manner which will tend to bring discredit to the honor and dignity of his profession.
- Article II It shall be considered unprofessional to act for his client or employer other than as a faithful agent or trustee or to accept compensation for his services other than from his client or employer.
- Article III It shall be considered unprofessional to use undue influence or offer commissions or otherwise solicit professional work improperly.
- Article IV It shall be considered unprofessional to disclose voluntarily information concerning the business affairs or technical processes of a client or employer without their consent, provided that this article does not operate to the detriment of public safety.
- Article V It shall be considered unprofessional to express an opinion when it is not founded upon knowledge and honest conviction or to yield to undue and improper pressure.
- Article VI It shall be considered unprofessional for an Engineering Geologist to advertise his work or merit in self laudatory language, or in any manner derogatory to the dignity of the profession.
- Article VII A member will freely give credit for work done by others to whom credit is due and will refrain from plagiarism in oral and written communications, and not knowingly accept credit rightfully due another geologist.
- Article VIII It shall be considered unprofessional to compete unfairly with another Engineering Geologist for employment on the basis of professional charges

or salary, or to use the advantage of a salaried position to compete unfairly with Engineering Geologists in private practice.

- Article IX It shall be considered unprofessional to attempt to supplant another Engineering Geologist after definite steps have been taken toward his employment.
- Article X It shall be considered unprofessional to review the work of another Engineering Geologist for the same client, except with the knowledge of the other Engineering Geologist, or unless the connection of the other Engineering Geologist with the work has been terminated.
- Article XI It shall be the duty and professional responsibility of every member to uphold the standards of ethics and to encourage other members by example and counsel to adhere to this code.

John McGill chaired the Steering Committee which planned the Fifth Annual Meeting in 1962. Headquarters hotel was the Miramar in Santa Monica, California, with the annual business meeting held in the Geology Building at the University of California at Los Angeles. Technical papers given at the meeting were printed in the program complete with photographs and diagrams. Dr. Jack Green of North American Aviation spoke to the banquet attendees on "Application of Geology to Lunar Exploration." In these early years the expense of the annual meeting and its income was handled directly through the Association Treasurer rather than separately. Burt Marliave submitted an "Outline for Guide to Professional Practice under the Code of Ethics," results of the year's efforts of the Ethics and Practices Committee. This four and one-half page document succinctly laid down rules of professional behavior.

The real discussion at the business meeting, however, revolved around the proposed enlargement of the Association. A letter from Robert Nesbitt, Chairman of GSA-EGD, indicated the need for such a professional organization would be filled by an AEG and eliminate the need for further consideration of such by GSA, who, because of the emphasis on registration, did not want to get involved anyway. The Special Relations Committee of Bean,

Gardner, and James Slosson spearheaded the discussion with major comment from Ed Eckel, Ian Campbell, and John Mann. The minutes are filled with handwritten corrections on what was said, but it was plain to see the power of the Board and the Special Relations Committee in their well considered presentation. The Building Codes Committee under the leadership of Douglas R. Brown completed a brochure on "Hillside Grading and Development," intended to aid local governments in coping with such problems. The Registration Committee completed drafting a bill to register engineering geologists in California and the membership had voted overwhelmingly to assess itself the costs required to have the legislation enacted. Support from out-of-state members was outstanding. (Vote was 153 for, 33 against, with 57 percent of the total membership responding.) The intent was to carry the bill to the California legislature in 1963. Membership Chairman Will Burnham reported a total membership of 295, an increase of 46 during the year. Because of the proposed name change, a planned contest by the Committee on Emblems, Certificates, and Awards for the design of an emblem was not held, although Art Keene of the Los Angeles Section and his wife had devoted considerable time to designing various emblems. It was yet to come.

#### THE AEG, 1962–1965



Burton H. Marliave

The presidency of Burton H. Marliave was to prove a turning point in the development of the Association. Yet it was the groundwork laid by previous officers and boards which made that turning point possible. Over half of the new members accepted at the October 1962 Board meeting were from outside California (Washington, Colorado, Texas, and Hawaii). When Secretary Hubbard

Richardson and Ira Klein tallied the ballots regarding the name change on 9 November 1962, 127 were found to be in favor and only 11 against; the total vote representing 73 percent of full members. Thus, it was on 12 January 1963, the first truly AEG Board of Directors met without ceremony at Marliave's home in Walnut Creek, California, to continue furthering the expanded aims of the Association. All committees continued to submit quarterly reports to the Board. The Association joined the International Conference of Building Officials, and under James Slosson's guidance prepared Chapter 70 of the Uniform Building Code dealing with grading and excavation. The engineering geologists registration bill was submitted to California State Senator Rodda on 8 April and was introduced as SB 1349 on 23 April 1963.

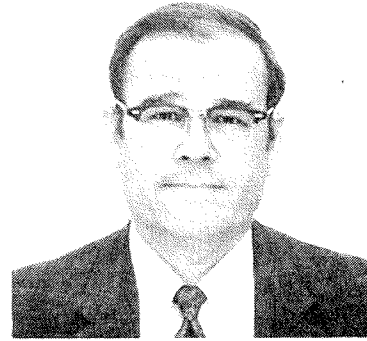
The 20 April meeting of the Board, in consideration of a report from Dorothy Radbruch and the Committee to Discuss Ways and Means of Establishing a Periodical AEG Bulletin (still remains the longest title of any committee in AEG history), voted to create a "Bulletin of Engineering Geology." The 5½- by 8½-inch format was recommended so that 8½- by 11-inch standard paper could be used, folded, and stapled in the middle. Estimated cost for 500 copies was \$400. A request by John Fryberger of Tacoma, Washington, to establish a section of AEG in the State of Washington was considered and the Board authorized formation of such a section contingent upon receipt of a written request signed by 10 or more members from that area. On 10 June the section, the first outside of California, was officially approved. The question of out of state Board representation and travel reimbursement created much discussion and \$35 was proposed for expenses for out of state representatives to Board meetings, except for the annual meeting where no reimbursement was authorized. The July–August issue of GeoTimes carried an item regarding the official change of the Association's name.

When the Board met at the U.S. Bureau of Reclamation office in Sacramento on 10 August 1963, John Fryberger of the newly formed Washington Section took his place—the first person from outside California to sit on the AEG Board of Directors. The bill to register engineering geologists (SB 1349) had been referred to a California Senate fact finding committee with the request for a hearing in 1964 and a new bill introduced in 1965. The Board reviewed proposed emblems for the Association, but deferred decision until the October meeting, re-

questing that the emblem contest be further publicized. Proposals were made by the Special Relations Committee (Bean) regarding establishment of regional representation on the Board and reducing the number of board meetings to two at the Annual Meeting and one at midyear (April). The Board agreed to defer selection of a recipient for the Holdrege award to the following year. The tax exempt status of the Association was of continued concern to the Board as was its hopeful recognition by the AGI. The annual Information Brochure and Membership Roster, the principal responsibility of the Public Information and Professional Relations Committee, would be distributed at the annual meeting, according to Will Peak, at an estimated cost of \$.50 per copy.

The Association was represented at the International Conference of Building Officials at Cedar Rapids, Iowa, by Douglas R. Brown of the Los Angeles Section who fought long and hard at this meeting and succeeded in having the grading code formulated by the AEG Building Codes Committee accepted by the Conference with few amendments. This established the AEG as an important contributor to the Uniform Building Code (UBC).

The Sixth Annual Meeting of the Association (the first under the AEG banner) took place in the Jack Tar Hotel in San Francisco on 25-27 October 1963. Cole McClure, Jr. had taken the initiative to confine the meeting sessions to the hotel for the first time, befitting the now cosmopolitan image of the expanded society, a tradition maintained at all subsequent meetings. A symposium on grouting was held, papers which later formed the initial issue of the Association bulletin "Engineering Geology." The banquet speaker was Franklyn C. Rogers, Chief Engineer of Harza Engineering Company, and Elmer Marliave led an excellent field trip to Pacific Gas and Electric's proposed nuclear powerplant site at Bodega Head. His brother Burton Marliave presided over the annual business meeting with about 100 members present. The financial health of the Association was now apparent with a cash flow for the year of a little more than \$4,000, bank balances of \$938 in the general fund, and \$1,741 in the registration fund. The Association was definitely on the move as a professional force of which the membership could be proud. Plans for publishing a Bulletin in addition to the Newsletter were well underway and the Association had received a measure of acceptance throughout North America and elsewhere in the world.



Harmon Ray Taber

Harmon Ray Taber began his term as President with a number of items and unfinished business, including California registration, an AEG emblem, constant proposed changes to the Bylaws (an activity which years later continues to occupy various Board meetings), and questions on membership procedures. At the 26 October 1963 meeting at the Jack Tar Hotel in San Francisco, Ray Treasher was elected to Honorary Membership and Floyd Johnston and Frank Wilson were among those admitted to membership. Adlai Goldschmidt was elected Editor and charged with publishing the new periodical "Bulletin." Since 1958, the Board of Directors had consisted of 12 persons, including the officers of the Association, the immediate past President, the Editor, the section chairmen, immediate past section chairmen, and others elected at the annual meeting to bring the number to 12. Bean was concerned that the Board would need to be expanded as the Association grew and added new sections. He proposed far reaching changes to representation on the Board, including fewer Board meetings and the establishment of an Executive Council. Membership Chairman Bob Harpster presented 90 applications from 25 states and 4 foreign countries to the January 1964 Board, which also approved formation of the Fort Worth-Dallas (later Texas) Section.

Ray Taber presided over the organization during a traumatic period in engineering geology, including the Vaiont Dam disaster, the failure of Baldwin Hills Reservoir in Los Angeles, and the Great Alaska Earthquake. At the 18 April meeting Pat Guthrie reluctantly reported the SB 1359, the proposed legislation to register engineering geologists, was dead due to lack of unanimity within the geologic profession. Further action was deferred pending additional study. The Denver Section was approved and



William Eck as first Section Chairman took his place on the Board. His immediate task was to sell the Board the idea of having the Eighth Annual Meeting in Denver. He was successful and thus on that day the die was cast by this growing Association to move its annual meetings about the country. Eugene Waggoner, Howard Coombs, Albert Depman, and Jasper Holland were among those admitted to membership at that fateful meeting.

At the 1 August 1964 Board meeting in the USGS library in Sacramento, changes to the Bylaws were approved and a seven-man Executive Council was established. In addition to the four officers and past President (Tabor, Eckel, Kunkel, Ford, and Marliave), John Mann and Will Peak were elected to serve on the Council. Relations with the GSA Engineering Geology Division and with the newly forming American Institute of Professional Geologists (AIPG) were good. The former had gone on record as recognizing AEG as "the" national society of engineering geologists. Vice President Eckel in Denver kept his finger on the pulse of both groups with some help from Robert Lindvall. Volume 1, No. 1, of "Engineering Geology," carrying a January 1964 date, was published in May and contained part of the grouting papers from the 1963 Annual Meeting. The orange covered 5½- by 8½-inch format was to continue for 17 years with two major cover changes (the orange cover lasted 4 years). At long last the AEG emblem contest concluded and the Association emblem was selected by Harold Goldman's Emblems, Certificates, and Awards Committee. A prize for \$25 was awarded to Richard Proctor of the Los Angeles Section for his classic design. Art Keene and Glenn Brown proceeded to design appropriate membership certificates. The year showed a 65 percent increase in membership to a total of 660 spread over 35 states, the District of Columbia, and six other countries. Thus the Tabor administration came to a close; a year of solid progress, yet with many items requiring continuing action.

The Seventh Annual Meeting of the Association was held in the El Dorado Hotel in Sacramento in October 1964 with Ira Klein leading the Steering Committee. The meeting raised to a precedent the concept of the entire 2-day meeting under one roof, in the convention hotel, which Cole McClure had started a year earlier, and set the tone for many subsequent meetings with three days devoted to premeeting and postmeeting field trips to Oroville and San Luis dams, and other nearby places. Klein

laid out an outstanding program with an extensive session on the 1964 Alaska earthquake and a movie of the 1963 Baldwin Hills failure, all to a packed house. The buffet banquet included memorable talks by Gordon MacDonald of Hawaii and Howell Williams on "Control of Lava Flows and Volcanic Mudflows." However, the minutes of the 31 October business meeting do not reflect the true character of activity from the floor over which Ray Tabor presided (Secretary Kunkel had a marvelous succinctness). Much of the meeting was devoted to comment and some very heated and vocal discussion of the registration of engineering geologists in California. At length, the membership agreed, however, to pursue registration of engineering geologists in California using only funds collected from California members. It was also at this session that Ted Sommers first suggested establishment of a student member category and Ray Whitla made preliminary application for a Washington-Baltimore Section. The Seventh Annual Meeting also conducted the first spouse activities when Zubi Thronson drove Millie Johnston, Ena Proctor, Marilyn Galster and others to the Sierra gold fields with a hair raising return that none ever forgot. With this successful meeting, both the presidency and the site for the annual meeting planned to leave California, showing that the efforts to establish a national organization were truly supported by the still overwhelmingly California majority.



Edwin B. Eckel

The marathon Board meeting presided over by Ed Eckel convened at 8 p.m. and lasted until 2:30 a.m. the following morning. Harold Goldman was named Editor. Treasurer Bob Ford gleefully showed a net gain of \$2,400 with a cash flow of

nearly \$5,500 for the 600-member Association, and Bob Valentine's Denver Annual Meeting Committee was loaned \$400 to get things started. Glenn Brown's report on the Association emblem and membership certificates was accepted and the Executive Council was given full Board powers subject to later Board override. Air travel expenses for Board and Council meetings were approved except for the Annual Meeting. By January 1965 it was apparent that the dues would need to be increased to mitigate future deficit budgets. Annual dues were, therefore, raised to \$15 and \$8 for members and associate members, respectively. Bruce Hall was appointed to serve a 3-year term as AEG's first representative in the AGI House of Representatives. The Washington-Baltimore Section was accepted into the Association with Peter Hart as its first Chairman. Corporate and contributing membership classes had been accepted by formal vote (constitutional change) of the membership. A recent ruling by the California State Board of Registration for Civil Engineers prohibiting use of the title "Consulting Engineering Geologist" unless the user was a registered engineer sent the Council looking for legal counsel. The Editor reported that there was a paucity of manuscripts for the second issue of volume 2 of the "journal" and that he was considering raising the overseas subscription price to \$2.50 because of high mailing costs.

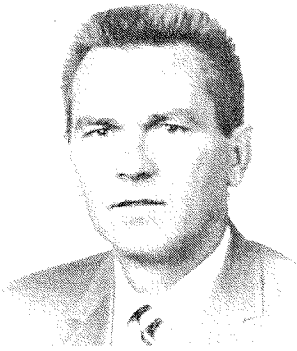
When the Board met in Menlo Park in April 1965, the Bulletin and registration were lengthy items on the agenda. With printing costs for the Bulletin at \$540 per 1,000 copies, discussion with the American Elsevier Publishing Company to publish the AEG Bulletin as part of their journal "Engineering Geology" at a much higher cost seemed doomed to failure. Yet a committee was appointed to study the matter further. By the August Council meeting the entire matter had been tabled. Editor Goldman also recommended that the Editor not be a board member (action was completed 11 years later with a major Constitution and Bylaws revision in 1976). In the registration arena the Board found itself in a "Catch 22" situation, being unhappy with the new version (SB 871) which had been drawn up by the California Legislative Council who had refused all aid from the geological community. With total unanimity from the three California sections, the Board registered opposition to that proposed legislation and resolved to continue to pursue registration of engineering geologists with the Board of Civil Engineers, an idea which was soon dropped. A per-

manent secretary's office was directed to be established in Sacramento. Associate members were encouraged to upgrade to Member by suggesting an automatic increase to their dues after 5 years to the equivalent of Member. This was not enforced until the 1970's however. The Portland, Oregon Section, which had originally petitioned on 27 March 1965 as the Oregon Section, was accepted, bringing the total sections to eight. The Association appointed its first representative, Klaus John, to the National Academy of Science (NAS) Committee on Rock Mechanics. In August the Council approved the hiring of Mrs. Laura Newman of Sacramento as Business Secretary to handle typing, mailing, and answer routine requests. She, in effect, became the first paid employee of the Association.

The Eighth Annual Meeting of the Association, the first outside California, was held on 22-26 October 1965 with headquarters at Denver's Brown Palace Hotel. Cochairmen Ed Simpson and Bob Valentine produced a number of "firsts," including two field trips by air (Navajo Tunnels and Morrow Point Dam) and parallel technical sessions due to the great number of excellent papers involved. Harold Goldman's Emblems, Certificates and Awards Committee had at long last selected the initial recipient of the Holdredge Award, bestowed on George Kiersch for his report in *Civil Engineering* on the Vaiont Reservoir Disaster. The meeting had a large registration (440). Four of the six field trips offered involved major underground projects, including the Straight Creek Pilot Bore. Joe Glass of the Hughes Tool Company proudly displayed his Bette II tunnel boring machine at the Navajo Tunnels. A symposium of "Modern Tunneling Techniques" crowned the technical sessions. At the Corporate Meeting Bob Akers reported a cash flow of over \$12,000 for the year with a deficit of over \$2,000, a bank balance of \$1,100, and a total membership of 820 persons. The "Hillside Grading Brochure" produced by the Building Codes Committee was renamed "Geology and Urban Development" and was made available for \$2 per copy. At the Corporate Meeting printed copies of most of the committee reports were available for the first time, shortening the business session considerably. Mel Green's Public Information and Professional Relations Committee reported that the annual Directory was produced at the cost of \$.40 each. The principal action of the Corporate Meeting was to assure by official motion that future annual meetings would be titled "Annual Meeting" rather than "national

convention" as indicated on the program in Denver. Dick Jahns of Stanford delivered an inspiring address at the annual banquet and the outstanding social event was a Saturday night visit to the Coors Brewery in Golden. Unfortunately the Board was in session at the Brown Palace Hotel during this long remembered affair. Other members of the Association maintained the honors and provided the safe escort of wives of Board members. The first meeting outside California was a total success, including showing a cash inflow of nearly \$16,000, a profit of 10 percent, and attendance from 31 states and Canada.

#### THE YEARS OF TRIAL, 1965–1970



Glenn A. Brown

With the Denver meeting, a practice began for the President of the Association to be a member of the section hosting the annual meeting. This practice lasted only 5 years before dissolving from its lack of logic. The Board meeting in Denver at which Glenn Brown of the Los Angeles Section began his presidency, set annual meeting locations for the next 5 years. Amongst other business was a continuing proposal from Elsevier Publishing Company to jointly publish an *Engineering Geology Journal* with AEG, a minor flap in relations with the American Institute of Professional Geologists (AIPG), and a critical interim report from Dennis Evans' Committee on Section Boundaries which was sent to all section chairmen for review and revision. The germ of the student membership idea was generated by a letter from Hugh Grice in Montreal and a committee (Grice and James Slosson) appointed to consider the matter further.

On 1 November 1965, Richard Goodman represented the Association at a formative meeting of the

Intersociety Committee on Rock Mechanics in Seattle. When the Executive Council met at Bechtel's offices in San Francisco on 15 January 1966, Goodman's recommendation regarding support of this group was accepted. More pressing matters, however, included efforts by the Northern California Structural Engineers to have Chapter 70 of the Uniform Building Code, on which Slosson's earlier Building Codes Committee had worked so hard, revised to eliminate the role of engineering geologists. An ethics matter relating to a fracas between engineering geologists in southern California on the siting of the proposed Corral Canyon Nuclear Powerplant was considered, but left to the Los Angeles Section for solution. Acting on a 3 January 1966 letter from Fred L. Fox of Berkeley Heights, New Jersey, accompanied by petitions from 10 members in the New York, New Jersey, and eastern Pennsylvania areas, the Council approved formation of the New York-Philadelphia Section, the ninth section in the Association. The question of Board size occupied time from the Board and Council meetings with Dennis Evans' Committee on Section Boundaries recommending a regional split with one board member from each region. Appropriate Constitution and Bylaw changes were made to implement this change by the end of the year. The Registration Committee name was changed to Legislation Committee and the Board established a policy requiring sections to have committees corresponding to national committees, a policy which continued until 1981.

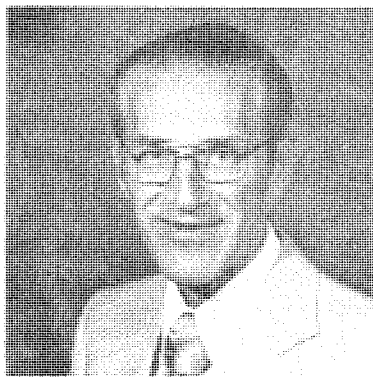
Preparation of the annual Information Brochure and Membership Roster, the forerunner of the present Directory, was delayed due in part to the chairman of the Public Information and Professional Relations Committee (Valentine) having been sent out of the country on an extended assignment. Though all sections were to respond by 1 September regarding information on section officers and committees, the problem of getting this information early enough so that the brochures and roster could be published as traditional in time for the annual meeting was becoming acute in the expanding Association.

The original Proctor designed AEG emblem was cast into a series of assorted jewelry by Haltoms Manufacturing of Fort Worth, Texas, and was available at the following annual meeting. The Holdredge Award was revised to eliminate the \$50 portion of the award; the board agreeing that the embossed certificate was adequate for such a pres-

tigious award. In addition, a permanent plaque was established on which the recipient's name was engraved.

When the 1966 Board met for its final time on 21 October, Brown read a letter from Professor M. Arnould in Paris requesting that the Association participate in the formation of an International Association of Engineering Geology (IAEG), the formation meeting being planned for Paris in January 1967. The report of the committee to investigate student membership was soundly in the affirmative.

The Ninth Annual Meeting in October 1966 at the Disneyland Hotel in Anaheim, California, was organized by the hard-working Dennis Evans and espoused the theme of "Faults and Earthquakes and their Influence on Engineering Works." The meeting included a seminar, and book by Michael Scullin, on "The Importance of the Earth Sciences to the Public Works and Building Official." The annual banquet featured the Belgian agronomist Jean-Pierre Hallet whose talk "Danger, Adventure and Excitement" (with African pygmies) probably holds the record for AEG speaker longevity. The field trips included a flyover of part of the San Andreas fault system and visits to Glendora Tunnel, Morris Dam, San Onofre Nuclear Generating Station, and landslides along the Pacific Palisades and Palos Verdes Hills areas. Richard Lung and Richard Proctor of the Los Angeles Section produced a special publication for this meeting, "Engineering Geology in Southern California" which became a best seller.



Arthur M. Hull

Arthur Maurice Hull, a quiet, reserved Texan, assumed the presidency of the Association in October 1966 at a time of experimentation. Hull was

charged with selling and implementing the proposed constitutional changes which would divide the Association into eight regions, each to be represented on the Board. The question of establishing student chapters required solution, along with questions regarding relationships with the new international association (IAEG). The effect of establishing regional representation was to "freeze" the number of persons on the Board no matter how many sections were established. The United States was divided into eight regions, each having a coordinator-representative who would sit on the Board together with the four Association officers. The possibility of sections outside the United States had not been considered. The Kansas City Section was accepted when the Council met in January 1967 with Frank Wilson as its first Chairman. The California Geologists Registration Bill, SB 1493, was passed by the State Senate, but went down to defeat in the Assembly.

When the Executive Council met in San Francisco on 5 August 1967, a bylaw change was accepted on a motion by Ray Whitla which created the category of student member with dues established at \$4 per year. With respect to IAEG, Hull invited Arnould to the 1967 annual meeting, providing for the first time a direct interchange with that group. Thus, as the Tenth Annual Meeting of the Association convened at the Baker Hotel in Dallas, Texas, an impromptu meeting with Arnould was held. While the meeting helped to clarify a number of questions regarding the purpose of the budding international group, it did nothing to bring AEG closer to an affiliation with them. The outgoing Board considered questions relating to nomination of Honorary Members, timing of annual meetings, and appointment of nominating committees as these items were not clearly covered in the Bylaws.

The Tenth Annual Meeting in Dallas was planned and carried out by Wayne McIntosh and A. D. (Pete) Henley in true Texas style, including an unforgettable "ice breaker" at the Inn of the Six Flags in nearby Arlington. The party nearly broke up, however, when the lovely female singer of the evening came down to the tables and sang "Baby Face" to George D. Roberts. The meeting was highlighted by a symposium on "Engineering Geology and Clay Shales" and a special session on lunar geology. F. Beach Leighton became the second recipient of the Holdredge Award at the annual banquet for his chapter on "Landslides and Urban Development" from the AEG volume "Engineering

Geology in Southern California" and Astronaut-Aquonaut M. Scott Carpenter presented a talk on "The Challenge of Oceanography." Field trips included visits to the NASA Space Center in Houston, the Morton Salt Mine, and the Soil Conservation Service's Amistad Dam.



Robert H. Russell

The presidency of Robert H. Russell of the Washington State Section began in October 1967 with some holdovers from the Hull presidency and an important new item. Richard Goodman brought forward the question of the adequacy of "Engineering Geology" as the ultimate publication of the Association suggesting that upgrading was in order. Goodman's proposal included a more professional bulletin format, use of a publisher (University of California Press), and establishing an annual award for the "best paper" published in the Bulletin. The Board agreed with Goodman's proposal, appointed him Editor, and knowing that the new Bulletin might operate "in the red" for a while gave the proposed program a two-year trial period. The publication of the Information Brochure and Directory by the Public Information and Professional Relations Committee under Tom Ward was also a matter of consideration. Ward suggested that the Board consider having the brochure done by the same printer every year rather than moving from place to place depending on the location of the committee chairman. The difficulties of maintaining up-to-date address files of the membership caused Ray Throckmorton to observe that the Association get out of the "bush leagues" and establish an Executive Secretary Office. (Diane McKinnon in Sacramento had assumed some of these duties already.) It was some time before a permanent Executive Director was to be a reality. A considerable amount of discussion over the selection and

nomination of Association officers took place at the April 1968 meeting of the Board. There was no nominating committee in those days. Nominations were made from the floor at the mid-year Board meeting. Many felt that the Association President should have held some responsible office in the Association prior to assuming the presidency. Robert Valentine of Denver consistently needled the Board to spread the officers around rather than concentrating on people from the west coast. The question of affiliation with IAEG continued to be a matter of discussion, but further action was delayed until after the International Geological Congress, scheduled for Prague, Czechoslovakia, in the summer of 1968 where IAEG would also be meeting. Little did the Board or designated delegates to that meeting realize that the timing of the IGC would coincide with the Soviet invasion of that country.

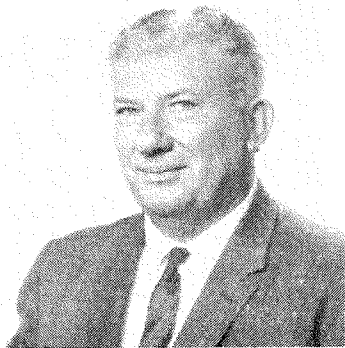
Of major concern was the continuing problem of obtaining registration of engineering geologists in California. Wilfred (Will) Peak of the Sacramento Section and Chairman of the Association Legislation Committee had picked up the gauntlet and succeeded in getting Assembly Bill 600, which would register all geologists, introduced. Opposition apparently was coming from the Los Angeles Section who wished to have more engineering geologist control over the registration board. Many crank letters, telegrams, and telephone calls to legislators, using thinly disguised names of prominent California geologists added to Peak's problems, indicating the danger posed by charlatans wishing to work in the profession. The Board recommended that the California groups resolve their differences, present a united front, and get a realistic law passed. A basic registration for all geologists with a specialty certification for engineering geologists was agreed upon and the bill passed before the California legislature recessed for the long, hot summer.

In April 1968, at the recommendation of the Editorial Board, the Board changed the bulletin name from "Engineering Geology" to "Bulletin of the Association of Engineering Geologists." The first of the new type-set format was published as Volume V, Number 1, in May; a format which, except for its cover, was not changed for 13 years.

As the 1968 year went on it was again becoming more apparent that the routine Association business for a membership of well over 1,000 needed to be taken out of the hands of volunteer personnel and placed in the hands of a professional executive secretary. There was a constant question as to who

had an up to date list of the membership. The workload of Diane McKinnon had obviously increased and additional funds had to be appropriated.

It was also at the April 1968 Board meeting in Denver that Charles Hall first suggested that an Education Committee be formed to establish grants to promising students to aid in their education. Such a fund should be setup at the University of California at Berkeley in the name of founding member Elmer Marliave who had died the previous year. A committee with Hall as chairman, including Valentine, Gardner, and Newcomb Bennett, was appointed to pursue the matter. When the outgoing Board met in Seattle on 22 October 1968, the eve of the Eleventh Annual Meeting, it was Ray Throckmorton of Tennessee who moved that \$500 be set aside from the general fund to begin the Elmer Marliave Scholarship Fund and that the membership at large be solicited for contributions. With Robert Thronson's second the motion passed and the Marliave Fund was created.

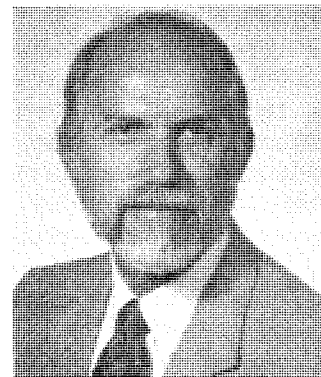


Elmer C. Marliave, Namesake of the Marliave Fund

It also became apparent at this meeting that there were conflicting statements between the Information Brochure and Directory and the Association Bylaws, and after a classic case of who would do what, outgoing President Russell convinced incoming President Cluff to have a committee work on this matter. The Association relationship with IAEG had for some unexplained reason reached the stage of inviting AEG to name one of its members as a Vice President of IAEG. This caught the Board somewhat by surprise, as the Association had little intention of getting so involved and was concerned about the financial and geopolitical obligations it might entail. Further liaison was indicated, but nothing so official. Russell's long closing Board

meeting lasted until 1 a.m. with the Executive Council continuing membership actions until 3 a.m.

The Eleventh Annual Meeting of the Association, organized by Richard Galster of the host Washington State Section, was held in October 1968 at Seattle's Olympic Hotel. Two exhausting days of field trips to look at reservoir leakage problems on the western slope of the Cascade Range and on the Columbia River were followed by a cruise on Puget Sound and an Indian-style salmon barbecue which few who attended will ever forget. The theme of "Reservoir Leakage and Ground Water Control" was heavy throughout the technical sessions and the symposium included three future Honorary Members of the Association. While Lloyd B. Underwood was to be presented the Holdredge Award for his paper on "Classification and Identification of Shales," someone neglected to notify him of the honor. When Galster called him after the meeting to inquire if he were ill, Underwood was most surprised. The head table at the annual banquet was honored by both the President of the Geological Society of America (Ian Campbell, who insisted that he was wearing two hats) and the Executive Director of AGI, Linn Hoover. Dr. Tom Hornbein held the group spellbound for over two hours as he described the first conquest of Mt. Everest via the West Ridge. Those on the postmeeting field trip to the North Cascades Skagit Project and to Libby Project, Montana, enjoyed the magnificent fall color of the Northwest under bright skies. The Seattle meeting ended an era of inexpensive annual meetings with registration at \$7, 1-day field trips for \$5 (including lunch), and an annual banquet for \$7.50.



Lloyd S. Cluff

Much of the work of the Board under the presidency of Lloyd S. Cluff was devoted to problems

of publications. Chuck Trantham finally convinced everyone that the term "Information Brochure and Directory" be dropped in favor of the simple name "Directory" which it has been known as ever since. However, problems were found in maintaining appropriate membership lists between Diane McKinnon (Administrative Secretary in Sacramento) and the University of California Press. The University of California Press finally agreed to maintain the membership lists and send out dues notices as well. The new Bulletin format was moving forward more slowly than anticipated due to a paucity of manuscripts even though subscriptions had increased. Advertising in the Bulletin was being considered and Editor Goodman indicated every hope for success. Continued discussion again revolved around the manner of selecting Association officers, a chronic problem during these expanding years.

On 1 February 1969, the Executive Council, acting on a request from Peter F. F. Lancaster-Jones of London, England, created the London Section, the first section outside the United States, pending approval of boundaries. The problem of the new section's representation on the Board was not considered, however, as the Board already contained its full compliment of 12 (eight regional representatives plus four officers). It was during this period that AIPG proposed establishing an environmental center, and Vice President Richard Lemke of the Denver Section was appointed liaison with this effort. When the proposal was submitted to the several sections for review, the general concensus was that the concept was a good one, but the proposal was unacceptable without further revision. Ultimately the proposal died for lack of financing.

On 30 April, the first meeting of the California State Board of Registration for Geologists took place and the calm, hard-working and long-suffering AEG member Will Peak was elected as its first Chairman. Peak lost no time in getting the United States' first experiment in geologist registration moving and was shortly inundated by applicants from throughout the United States and elsewhere.

At the Board of Directors meeting in Denver on 3 May 1969, the St. Louis Section was approved, acting on a letter from Ed Lutzen and signed by the ten members in that area. In addition, students at the University of Missouri at Rolla requested permission to form a student chapter. It was Hugo Pilz of the Washington State Section who suggested that this be done under the guidance of the new St.

Louis Section and so it was that this group formed the first student chapter in the Association.

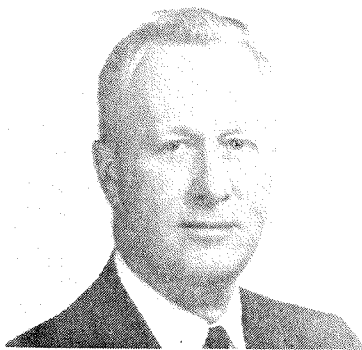
IAEG continued to court AEG and went so far as to suggest that one of the AEG officers serve as Vice President of the former. Cluff continued the stance of the Association not being represented, maintaining that AEG was already an international organization. Concern was that our dues would eventually be required to support IAEG and that while continued contact was appropriate, active participation in the society was not. It was also Cluff who insisted that an Executive Secretary for the Association should be a full Member, keeping Diane McKinnon's title as Administrative Secretary.

During the summer of 1969 the old mimeographed membership application form was revised by Albert Depman and William Conn to provide space for indicating how the applicant practiced engineering geology and sponsors comments on applicant's ethics. These gentlemen also recommended that the forms be printed rather than mimeographed. The newly instituted St. Louis Section was incensed over the Association's rejection for membership of two college professors without appropriate practical engineering geology experience, and it was Merv Johnson of the Los Angeles Section who first suggested that a special class of membership might be created for such applicants (several years later this would germinate into the Academic and Research Member category).

It was during the Cluff administration that initial efforts were made to alter the Bylaws to permit Associate Members to vote and to hold committee chairman rank in the several sections. Up to this time these privileges were assumed by full Members only. It was becoming more and more evident that the Constitution and Bylaws of the Association were becoming inadequate to guide the growing number of sections. When the Board met in October 1969 the Bylaws were changed to permit up to 2 years teaching experience credit in the requirement for 3 years engineering geology experience. On 16 August 1969, the Executive Council meeting in San Francisco accepted the Montreal Section as the 13th section, rejecting a petition for a section in upper New York State. Again the question of Board representation was considered and the new section was assigned to Region VIII. However, it was the financial health of the Association which was beginning to be of concern. Treasurer Frank Wilson noted that continued excessive costs to support the

Association's arrangement with University of California Press and continuing rebates to sections were a serious drain on the treasury, and without a dues increase the Association would soon be bankrupt. The tardiness of the new Bulletin convinced the Board of the inappropriateness of such an action prior to resolving the future of Bulletin publication. Rebates to sections over three years old were discontinued as a money saving action.

The Twelfth Annual Meeting of the Association under the direction of Peter Vardy in October 1969 met at the Hilton Hotel in San Francisco with the theme of "Engineering Geology in the Urban Environment." The meeting included excellent field trips investigating the Calaveras and Hayward faults, a special Bay area trip for planners and public officials, and a visit to the Bay Area Rapid Transit System then under construction. Vardy also, for the first time in AEG history, included an out of the area postmeeting trip, to Hawaii. The symposium on Urban Geology included panelists from many disciplines as well as from the engineering geology profession. The proceedings were published by the USGS in 1971 under the title "Environmental Planning and Geology" edited by Donald Nichols and Catherine Campbell. In addition, an excellent volume on "Urban Environmental Geology of the San Francisco Region," edited by Ed Danehy and Richard Harding, was published for this meeting. The tour of Chinatown was an unforgettable experience for many guests. It was truly a cosmopolitan meeting in a cosmopolitan city.



Richard W. Lemke

The presidency of Richard W. Lemke of the Denver Section began much as that of his predecessor had ended: on a note of fiscal concern. It was evident that the drain of the new Bulletin and the costs

of the University of California Press in handling certain business affairs of the Association would continue to be a drain on the treasury. One of the early acts of the Lemke administration was to quickly confirm Ray E. Marsell of the Utah Water and Power Board as an Honorary Member and establish the Engineering Geology Mapping Symbols Committee under Ed Lutzen of the St. Louis Section. It was Lutzen and Gordon Cordes, both of the St. Louis Section, who also began advocating additional student sections within the framework of the Association. Because of the spread of the membership, a petition from members in upper New York State to form a Section was deferred for a year at the recommendation of Dennis Evans' powerful Section Boundaries and Member Affiliations Committee.

It was the Bulletin, or rather lack of it, which continued to create the greatest consternation. Rumors were rampant as to whether Goodman had resigned or was still working on volume VII; the Bulletin was being printed in England for some unknown reason and assembled in the United States. The uncertainties resulted in the appointment of past President Eckel and Phil Burkland of the San Francisco Section to dig into the matter. Moreover, the billing and collection of dues by the University of California Press was also coming under attack. When Burkland and Eckel reported to the May 1970 Board meeting in Kansas City they had found an over-optimistic and over-worked editor struggling with lack of manuscripts, slow manuscript reviews, and a comic-tragedy of errors brought about by the newly installed University of California Press computer. As the contract work with University of California Press was to run until early 1971, it was decided to hang tough and allow the experiment to run its course, but with the appointment of a Publications Committee to oversee the general progress of all publications. Frank Wilson suggested that a managing editor be appointed in addition to a technical editor and that the former be a member of the Board. Wilson again warned that the Association could not much longer continue on a fiscal deficit path, anticipating a nearly \$6,000 deficit for the 1969-1970 year, nearly one-fourth of the budget. Bylaw revisions to permit and regulate the formation of student chapters were submitted to the membership along with other changes. The changes included permitting Associate Members to vote, increase the size of the Executive Council, and cut the full Board to one meeting annually.

By the time the Council met in Denver in July



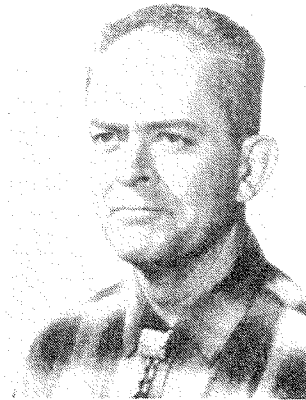
1970, the financial situation had further deteriorated and the dues had to be raised (Members \$25, Associate Members \$20, Affiliate Members \$15, and Student Members \$5). The chronically late Bulletins and the general dissatisfaction of the Council with the University of California Press pointed to implementing changes which all the actors realized had to be made. As President presumptive, Bruce Hall named Wallace R. Hansen as Bulletin Editor for a transitional transfer from Goodman, and Eckel presented a proposal from Allen Press of Lawrence, Kansas, to accomplish both Bulletin publication and housekeeping duties for the Association. While no action was taken on the latter, it was a positive move which soon would see action. Hall also planned to remove Directory publication from the hands of the Public Information and Professional Relations Committee and appoint a Directory Editor. During this period, financial difficulties experienced at the previous two annual meetings made it evident that guidelines for annual meetings were necessary. Ed Simpson of the Denver Section was appointed as chairman of a special committee to accomplish this task. The question of affiliation with IAEG had not gone away. Past President Cluff had represented the Association at the IAEG first congress in Paris in early September and was now full of enthusiasm for affiliation, but a motion for such died for lack of second. Action remained on the discussion level.

When the outgoing Board met on 20 October 1970 at the Mayflower Hotel in Washington, D.C., it was obvious that Lemke had presided over the Association during its most difficult time with the help of three excellent officers: Bruce Hall, Bob Thronson, and Frank Wilson. The Board ratified the dues increase. By now the Publications Committee under Hall had terminated the Association's contract with University of California Press and appointed Noel Ravneberg as the first Directory Editor. Robert Legget of Ottawa, Canada, was elected as the fourth Honorary Member in the Association. With proposed constitutional changes, it appeared that the Association would weather its lowest point, or perhaps in Churchillian prose, "their finest hour."

The 1970 (Thirteenth) Annual Meeting of the Association, managed by Ray Whitla of the Baltimore-Washington Section, took place in Washington, D.C.'s classic Mayflower Hotel. This was the first meeting on the eastern seaboard and had as its theme "Engineering Geology and Man's Environment." Pete Hart organized excellent field trips, in-

cluding visits to dams in the area, Calvert Cliffs Nuclear Plant on Chesapeake Bay, a look at the historic aspects of the Chesapeake and Ohio Canal, and a postmeeting tour of Puerto Rico. The banquet featured R. Buckminster Fuller, inventor of the geodesic dome; and founding member Joseph F. Poland received the Holdredge Award for his paper on land subsidence. The symposium on "Geological Problems in Areas of High Population Density" featured speakers from France, England, the Netherlands, Sweden, and Japan, a truly international meeting.

#### GROWTH AND CONSOLIDATION, 1970-1975



Bruce M. Hall

Founding Member Bruce M. Hall, now of the Baltimore-Washington Section, the only individual to have twice been elected President of the Association (though the first time was technically CAEG), began his second term in October 1970 during a period of change, growth, and reconsolidation. After a year's hiatus in which no new sections were added the North-Central Section under the leadership of Frank Wheby was accepted on 23 January 1971. The New England Section under Ronald C. Hirschfeld was established on 30 April when the Board met in Kansas City, and acting on a letter personally delivered by Charles R. Livingston, the Southeastern Section was also accepted on 30 April. Finally, acting on a letter from John M. Weaver of the Republic of South Africa, the Board, while meeting in Portland on 18 October 1971, created the South Africa Section out of an organization known as the South Africa Association of Engineering Geologists. The Bulletin under Wally Hansen's editorship and the new publisher, Allen Press,

maintained the same format, changing only to a green cover which was to last through 10 years of publication. Hansen saw to it that two issues of volume VIII were mailed essentially on time causing delight among the membership and an audible sigh of relief from the Board. Ravneberg was able to get the Directory published and mailed to the membership at a reasonable time of the year which also was helpful. But it was Treasurer Gordon Cordes who produced the best news of all; that a net financial gain was forecast for the year. By August he reached a settlement with the University of California Press and had obtained a release from any further claims against the Association, thus ending the 3-year experiment with that organization. The Board moved on, establishing a clear policy that the Association grant interest-free loans to annual meeting host sections and that the Association, not the sections, absorb any losses or profits. The upgrade procedure from Associate Member to Member was simplified to allow sponsor signatures only, rather than filling out the long form. The corporate offices were legally moved to Phil Burkland's home in San Francisco. The Los Angeles Section expressed concern that the Board voting power was unbalanced with respect to member concentration. After due consideration, this resulted in a Bylaws change to permit the Board to change regional boundaries as appropriate at any time. They immediately did, giving California two regions rather than one.

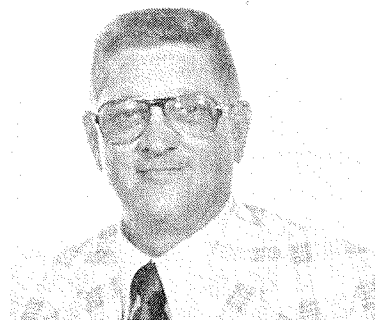
In March 1971, the AIPG was attempting to form a professional umbrella society for all geoscientists. The Association supported such a formation and was represented at its April formational meeting in Houston, Texas, by John B. Ivey of the Denver Section. When it was suggested that the new professional society be called "American Institute of Professional Mineral Explorationists" Ivey wryly noted that this did not cover engineering geologists. The meeting immediately adjourned.

On 30 April, in Kansas City, the Board finally made a decision on the Association's affiliation with IAEG, declining actual affiliation, but encouraging individual participation by AEG members in the international group. The question of a part-time Executive Secretary again was raised, but further study seemed necessary.

On 7 August 1971, the Council agreed to consolidate the membership and mailing roster in the Treasurer's office with the Secretary handling facilities for storage of publications and distribution

of mail. Thus, Gordon Cordes and Sam Sargent effectively became co-Executive Secretaries, the first real step in consolidating the business activities of the Association.

The 14th Annual Meeting in Portland, Oregon, was cochaired by Kenneth Dodds and Jasper Holland and featured symposia on "Instrumentation—Practical Application and Results" and "Rock Support Systems—Underground and Open Excavations." Both symposia were subsequently published in the Bulletin. Field trip participants visited lower Columbia River and Snake River dams, Mount Hood, the Oregon coast, and the Hanford Atomic Energy Reservation. Each day had a luncheon speaker, Robert Legget and Hollis M. Dole (then Assistant Secretary of the Interior). Ruth Terzaghi spoke at the annual banquet and Manuel G. (Doc) Bonilla of the USGS received the Holdredge Award for two papers relating to surface faulting effects.



Aubrey D. Henley

As Audrey D. (Pete) Henley of Dallas, Texas, began his presidency in October of 1971, a number of new innovations crystalized. Bulletin Editor Hansen indicated plans to publish the Bulletin quarterly, which he did, thereby doubling its frequency, and with Frank Wheby as Newsletter Editor, that document would also be published quarterly. A Committee on Geology and the Environment was established and past President Lemke appointed as its first chairman. Harold Stuart of the Portland, Oregon Section first proposed that AEG schedule its meetings at the same time and place as GSA to facilitate economy and convenience (this was not actually tried until 6 years later in nearby Seattle). Phyllis Cordes (Mrs. Gordon E. Cordes) was accepted as Administrative Secretary, further offi-

cially consolidating the business affairs of the Association in the Cordes' home in Florissant, Missouri. To further encourage Associate Members to upgrade, the Board voted to raise Associate Member dues to the same as Member after three years. By the spring of 1972 membership had reached over 1,500 with 155 outside the United States. Under Henley's guidance the Association became affiliated with the U.S. National Research Council providing a representative, Bill Swiger, on that group's Tunneling Technology Committee.

Efforts were also made to form a joint Engineering Geology Committee with the American Society of Civil Engineers and closer ties with the Engineering Geology Division of GSA. The Los Angeles Section changed their name to Southern California Section, a change approved by the Council on 25 August 1972. The AIPG umbrella society continued to be a matter of discussion with continuing efforts at cooperation between the several societies interested in such a group. It was not yet to be.

When the Association met at the Alameda Plaza Hotel in Kansas City, Missouri, late in October 1972, for the first time no outgoing Board meeting was held. The Executive Council cleaned up last minute business, thus ending an era of two board meetings at each Annual Meeting which dated back to the early days of CAEG. It was under Henley's guidance as President that the Association's house-keeping began to show some order yet major consolidation of the Association businesses affairs was left to his successors.

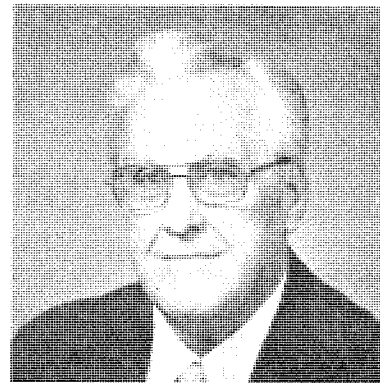
The Annual Meeting in Kansas City, organized by Richard Loepp, was on incoming president Frank Wilson's home ground. It was the first meeting since 1965 where the group had seriously considered underground construction and four of the five excellent field trips visited underground facilities. The first symposium on disposal of radioactive wastes was held. Beer was served during the symposium to "encourage informality and maximum discussion." An unforgettable technical symposium ensued in the tradition of ancient Greek philosophers.

The presidency of Frank W. Wilson of the Kansas City Section was a time of important consolidation of the Associations affairs. Wilson's term was often punctuated by his wry humor, often referring to his fellow Council members by names such as Super Sam, Ole Smoothy, Twinkle Toes, and Deadeye Dick. Wilson was variously known as Head Grump, Formidable Frank, Fearless Frank,



Frank W. Wilson

Frazzled Frank, and, to some wags, Frank the First. The sound stewardship of Gordon Cordes kept the financial outlook of the Association on a totally positive side, a nearly \$15,000 surplus at years end. The Bulletin and Newsletter under Wally Hansen and Frank Wheby were essentially on schedule and the Directory was becoming a more usable publication. Wilson recognized, as some of his predecessors had, further need for consolidating the Association business in one place and succinctly laid out concepts for streamlining the business affairs. At the suggestion of A. D. Henley and R. T. Throckmorton, the Association's first Executive Director was found in the person of Floyd T. Johnston, a recently retired (for the second time) partner of Mason-Johnston and Associates of Dallas, Texas. While Johnston's official assumption of the office was delayed until the October 1973 meeting of the Council, he nevertheless set to work immediately making ready for consolidation of functions.



Floyd T. Johnston, First Executive Director

a major portion of which had been handled from the Cordes' home with other bits and pieces scattered around the country. Cleanup matters at years end included changing the name of the Baltimore-Washington Section by the addition of Harrisburg together with providing moral support to the California Seismic Safety Committee. Wilson also urged some sort of union with the Engineering Geology Division of GSA (the second time this item was considered in AEG history), but when it was brought to the floor at the annual Corporate Meeting in Los Angeles a personage no less than former President Robert Bean rose to point out that the international and professional scope of AEG was in contrast with the GSA national and scientific status. Bean was supported by David Price, the new Chairman of the London Section who urged caution in considering such a union. The matter, therefore, again died as it had years earlier, and again, to the relief of many.

The Sixteenth Annual Meeting in October 1973 at the Sheraton-Universal Hotel in Hollywood, California, was organized by Charles A. Yelverton of the host Southern California Section. For this meeting the section produced an excellent volume entitled "Geology, Seismicity, and Environmental Impact," a compendium of papers which continues to be a true benchmark publication. Nine technical field trips were offered. As the meeting was held a brief two years and eight months after the disastrous 1971 San Fernando earthquake (Magnitude 6.4), many of the effects of that event were still available for observation and discussion. Moreover, investigations for future potential earthquake problems were in full swing making it an appropriate time for an engineering geology visit to Los Angeles. The great landslide at Portuguese Bend was given due attention together with visits to Castaic and Pyramid Dams, the California Aqueduct system, and San Onofre Nuclear Powerplant and a well remembered Saturday cruise, led by Bernard Pipkin, which began in the fog, to Santa Catalina Island. It was at this meeting that Ian Campbell was awarded Honorary Membership. The meeting had an attendance of over 600 and was a total professional and financial success.

As Samuel C. Sargent of the Baltimore-Washington-Harrisburg Section took the reins of the Association in October 1973, the planned move of unofficial Association headquarters from Florissant, Missouri, to the new Executive Director's quarters in Dallas, Texas, was underway. The adopted an-



Samuel C. Sargent

nual budget was raised to \$42,700. Fitzhugh T. Lee of the Denver Section was confirmed as Bulletin Editor after a 3-year tour by Wally Hansen, also of the Denver Section. The policy of permitting the host section to retain 10 percent of the profit from an annual meeting was established and the concept of an umbrella society under the American Geological Institute was an item of discussion. While both Sargent and the London Section supported participation of AEG in the International Union of Geological Societies (IUGS) thereby possibly making UNESCO funds available, the bulk of the Board advised caution in such international ventures and Sargent was unable to seriously consider the idea further. During these years, the overseas sections were not yet represented on the Board. The regional representation system was still in effect and Howard A. "Buzz" Spellman, Membership Chairman, was, therefore, charged with studying the problem of more appropriate representation on the Board. Also, during these years, the Executive Council included the four association officers and at least two, but not more than five, members elected from the Board. The selection of Council members and alternates frequently took up much time at the October meeting permitting further questioning of the appropriateness of the then existing Constitution and Bylaws. Between the Sixteenth and Seventeenth Annual Meetings all Board and Council sessions took place in Dallas to facilitate coordination with Executive Director, Johnston. Procedures for processing Student Member applicants were streamlined to permit the Association Membership Chairman to approve such applicants as some students were found to have graduated before the Council could meet for approval. The relation-

ship with the GSA Engineering Geology Division continued to be a matter of interest with consideration given to meeting back-to-back with GSA in Seattle in 1977 (this was eventually accomplished). However, further consideration of AEG becoming an associated society of GSA was deferred in spite of a number of supporters for the concept at the GSA meeting in Dallas.

With the enactment of geologist registration laws in Delaware and Idaho, concern was expressed regarding reciprocity between the several states. Jack Eagen of the Southern California Section was requested to investigate this question. AEG members Cluff, Oakeshott, Nichols, and Spellman continued active on the California Seismic Safety Committee, providing guidelines for preparation of geologic and seismic reports. The long delayed Annual Meeting Guide was still an obvious requirement and Chuck Yelverston's recent success at organizing an annual meeting caused him to become a natural to work with Denver's Ed Simpson in completing the work. When the 1974 board met for the final time Joe deBeer, Chairman of the South Africa Section, was present to report on his three-year-old section and asked some important questions on AEG policy. The South Africa Section began the concept of electing its officers for two years principally so that each chairman would have an opportunity to attend an Annual Meeting in response to the traditional biennial invitation from the Association. The year was unique in that the first concentrated membership drive since 1958 was held under "Buzz" Spellman's direction. The North-Central Section won \$100 in prize money for the most new section members and the University of Missouri at Rolla Student Chapter was awarded \$25 for the most new student members. The total membership of the Association now became 2,132 with the addition of 317 new members during the year. Founding member William I. Gardner was elected as the eighth Honorary Member of the Association. In May 1974 the Committee of Scientific Society Presidents (CSSP) recognized AEG and elected the Association President to membership in that committee whose purpose was to assure that science and technology were used to serve the nation.

The Seventeenth Annual Meeting, the second in Denver, was again held at the Brown Palace Hotel in the "Mile High City." John Ivey organized the meeting which had as its theme "Engineering Geology and the Natural Resources Energy Spectrum," a theme well carried out by field trips related

to mining, land use, and urban development. A symposium on "Energy" included M. King Hubbert of the USGS, Robert V. Price of the National Coal Association, and Paul Hilpman of the University of Missouri as speakers. The annual banquet featured an entertaining look at early railroads in the Rockies by Robert A. LeMassone; and Robert F. Legget was presented the Holdredge Award for his monumental work "Geology and Cities." (A month later Legget received the GSA-EGD Burwell Award for the same work, being the only person at this writing to be so honored by the world's two most prestigious awards in engineering geology.)



Raymond T. Throckmorton, Jr.

The presidency of Raymond T. Throckmorton, Jr. of the Southeastern Section was, in a sense, a time of finalization of the changes in the governing of Association affairs. It was under the Throckmorton's firm yet benevolent guidance that the Constitution and Bylaws were recomposed to essentially their present form. Frank Wilson chaired the committee which also included past Presidents Henley, Sargent, and Lemke, to formulate the documents presented to the Board in November 1975.

A Marliave Committee was finally formed to administer the Marliave Fund: a committee consisting of two members from the academic community, two from private practice and two from government service, with Ron Hirschfield of the New England Section appointed first Chairman. The question of having a legal counsel for the Association was first considered and ultimately Emmett Tucker of Alexandria, Virginia, who also served as AGI Counsel, was approved. Continued dialogue with the Engineering Geology Division of GSA was enhanced when the only priest to ever sit on the Executive Council of AEG, James Skehan, was also

Chairman-elect of the former group. (Actually, since 1971, the chairman of EGD had also been a member of AEG, an occurrence which was to continue for several years more). AEG, through the efforts of the GSA representatives was also invited to participate in the permanent ASCE-GSA and now AEG Joint Committee on Engineering Geology and John Hageman and Terry Howard were appointed as first AEG representatives. This effort was made to improve the chances of bringing the Association into GSA associated society fold. The AGI "umbrella" society continued efforts to organize, with past President Henley continuing as AEG representative. William C. Paris, Jr. began to increase the activities of the Legislation Committee to make it a better "watch dog" and "clearing-house" for all legislation affecting the profession.

The San Francisco and Sacramento sections agreed to assume the responsibility of the Eighteenth Annual Meeting, beginning their efforts just a single year ahead. The organizational work fell mainly on the shoulders of Sacramento's Carl Hauge. Throckmorton represented the Association by attending the White House Geology Meeting in July 1975, taking along two Association officers with him, thus becoming the only AEG President to date to go to the White House.

John Ivey and the Professional Ethics and Practices Committee were busy reformulating the Code of Ethics. The draft of Yelverton's "Annual Meeting Planning Guide" was submitted for review, and twice President Bruce Hall was elected Honorary Member in the Association. Throckmorton probably visited more sections during his term than any other President of the Association to date. His voice was heard and his presence observed, constantly and firmly bringing the importance of the engineering geology profession and the AEG to people outside the profession.

In March 1975, the governor of Georgia signed a "Geologists Registration Act" into law, thus the fourth state following California, Delaware, and Idaho into the licensing fold. After a flap on registration in Colorado the previous year, that state passed a law which required geologic reports to be prepared by a professional geologist. The latter were not legally registered as geologists; however, engineering geologists were registered by the Board of Professional Engineers and Land Surveyors. Samuel A. Wright, an undergraduate student at South Dakota School of Mines and Technology and a native of Africa, became the first recipient of the Mar-

lieve Fund for pursuing graduate studies. Thus, seven years after the fund was created it finally began to be put to use.

The Kansas City Section was enlarged to include Nebraska, ultimately changing its name to Kansas City-Omaha Section. At the instigation of Peter Rankilor the name of the London Section was changed to United Kingdom Section.

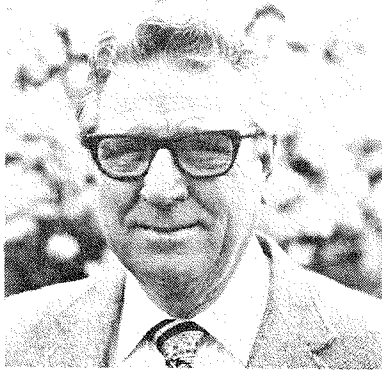
The Eighteenth Annual Meeting was the first co-sponsored by two sections and held outside the boundaries of both. It was also held at the highest elevation, Lake Tahoe at State Line, Nevada. It was indeed a beautiful setting at over 6,200 ft above sea level. With a theme of "Better Living Through Geology" the meeting embraced both engineering and environmental problems. The field trips in the crisp autumn Sierra air were partly historic in nature, part environmental and included a prophetic trip to Auburn damsite. The annual banquet was memorable for a fascinating display of sound and projected photographs presented by Raymond Pestrone and entitled "Earth Art." but it was even more memorable by the presence of nearly all living founding members of the Association. Frank Netterberg of the South Africa Section was presented the Holdredge Award. The work by Carl Hauge and his intersection committee was a model for all future annual meeting committees.

The ASCE-GSA-AEG Intersociety Committee on Engineering Geology also met at Tahoe, meeting in concert with AEG for the first time. Robert Schuster, Chairman of the committee, was (and still is) a member of all three organizations. The session indicated real acceptance of AEG as a major contributor to the work of this group.

Charles Yelverton submitted the long awaited Annual Meeting Planning Guide to the Board at Lake Tahoe, a document which has continued to assist all subsequent annual meeting committees. Membership Chairman Spellman indicated that the solid growth of the Association had now reached 2,500. However, it was the major revision of the Constitution and Bylaws which commanded the greatest attention. The Constitution was simplified to a statement of what the Association was to stand for and a succinct statement of management, thus allowing the Bylaws to carry the details of membership and administration. Frank Wilson's committee had thereby made future required changes much easier to accomplish. The major procedural changes were to have one representative from each section on the Board, require 20 full members for

formation and maintenance of a section, reduce the Executive Council to the Association officers and the immediate past President, and provide for an Academic and Research class of membership. The latter was intended as an effort to provide a place for academic geologists who provided the backbone of academic engineering geology education and to provide a place for such people in event AEG were to eventually assume the functions of the GSA-EGD. Thus, the Throckmorton presidency ended on a note of anticipation that both the administration and the direction of the Association might soon take a new track.

#### TAKING STOCK, 1976–1982



Jasper L. Holland

The presidency of Jasper Holland of the Portland Section was to prove to be a sometimes turbulent and exciting period. A Texan long transplanted to Oregon, Holland began his term by establishing, with the consent of the Board, a Publicity Committee and appointed Charles Yelverton of the Southern California Section as Chairman. When the Council met in Phoenix in February 1976, it approved formation of the first overseas student chapter at Portsmouth Polytechnic in the United Kingdom with an initial membership of 51 students. (Five years later the chapter received the rather dubious distinction of being the first student chapter to be dissolved). A group in North Carolina under the leadership of Calvin Swan and Norman Tilford petitioned for section status and was approved by telephone poll of the Council on 18 February 1976 as the Carolina Section.

The January 1976 newsletter was the most voluminous ever published to that time and included a "centerfold" of the new proposed Constitution and

Bylaws together with the new Code of Ethics for the entire membership to review and comment upon. An AEG Minority Fund was established and Charles Baskerville of the New York-Philadelphia Section was appointed by Holland to chair both the Marliave and Minority fund committees. Holland was to prove, however, that he was indeed an "activist" in bringing AEG into public eye. Beginning in April 1976 when the newly created Seismic Hazards Committee under the chairmanship of Gordon Oakeshott brought the question of adequate seismic design parameters for Auburn Dam (California) to public attention, a fracas began reminiscent of a classic "states rights" battle. The correspondence between Holland, government officials, the Sacramento Section, the Seismic Hazards Committee, and a number of articles, charges and counter charges appearing in the *Sacramento Bee* flew fast and furious. The excitement began to subside only after the Teton Dam failure on 5 June 1976 somewhat to the relief of the Sacramento Section. As the makeup of the "Blue Ribbon Panel," to investigate the causes of the Teton failure, became public, a number of members were shocked by the lack of an engineering geologist on the panel of eight engineers. Holland responded with further letters to high places and before long Howard Coombs was appointed to the panel. When the Board met in July in a hot, muggy, Hot Springs, Arkansas, they were in no mood to permit the Teton question to become another Auburn, and were most willing that the "Blue Ribbon Panel" be allowed to do their work without additional suggestions from AEG. The Hot Springs meeting resulted in approval of two new Honorary Members, Floyd Johnston, Executive Director of AEG, and seismologist Charles F. Richter. (Richter was not actually honored until the 1977 meeting in Seattle).

The proposed new Constitution and Bylaws as well as the Code of Ethics were further altered in the Arkansas heat, the Board giving full consideration to comments from the several sections as well as from individual members, adding also some further thoughts of their own. The revised document, which the revision committee hardly recognized, was thoughtfully submitted to the membership for ratification in August. To add to the excitement the upcoming Annual Meeting, planned for Philadelphia in honor of the American Bicentennial, had a problem. The Bellevue-Stratford Hotel was struck by the infamous "Legionnaires disease" after the American Legion had met there. Both Holland and

the Annual Meeting Committee under Al Depman were receiving a strong message from numerous quarters that the meeting be changed to a different hotel or cancelled altogether. With total approval of the Council and some fast footwork by Depman's committee and President-elect Ravneberg, the meeting was moved across the Delaware River to Cherry Hill, New Jersey.

The "umbrella society" concept was still very active: an organization formed out of AIPG into the Association of Professional Geological Scientists (APGS). (Several years earlier Frank Wilson had suggested the group be termed the Association of Professional Earth Scientists. This was greeted with enthusiasm until someone figured out the acronym.) Secretary Spellman and Treasurer Valentine were approved as AEG representatives on the policy board of the umbrella society. (Fortunately or unfortunately, depending on the point of view the APGS was to last only 2 years before the group dissolved and the AIPG went back into business as a separate group.)

The eight-man Executive Council including the four Association officers and four elected from the Board at large (Baskin (BWH), Galster (WA), Grainger (SE) and Proctor, Membership Chairman) met on Monday, 4 October 1976 for the final time. At noon on 7 October 1976 the new Constitution and Bylaws went into effect providing the following far-reaching changes:

Created Academic and Research, and Emeritus member classes.

Reduced the Executive Council to the four Association officers and the most recent living past President.

Removed the Association Editor and Membership Chairman from the Board.

Increased to twenty the required number of members to form a section.

Provided that each section be represented on the Board by the Section Chairman.

With the Association now providing a home for academic members, efforts began in earnest for the eventual phasing out of the GSA Engineering Geology Division, and the possibility of AEG becoming an associated society of that organization. The EGD management board was all AEG members and was likely to remain so for several years. However, as time went on, important and complex questions

regarding this relationship required solutions which were never forthcoming. Between 1977 and 1978, the union was closer than ever before or since, but it was not to be.

The 19th Annual Meeting in Cherry Hill, New Jersey, under the sponsorship of the New York-Philadelphia Section, had a theme of "Onshore and Offshore Problems, Hazards and Environmental Complications" with field trips by water along the coastal plain and visits to the Delaware Water Gap, Tocks Island Dam site, Blue Marsh Dam (under construction), urban waste problems, and highway geology problems. The annual banquet featured no less than Under Secretary of the Interior, William L. Fisher, speaking on Outer Continental Shelf Development; Shailer Philbrick was presented the Holdredge Award, and Floyd T. Johnston was presented an Honorary Membership.



Noel M. Ravneberg

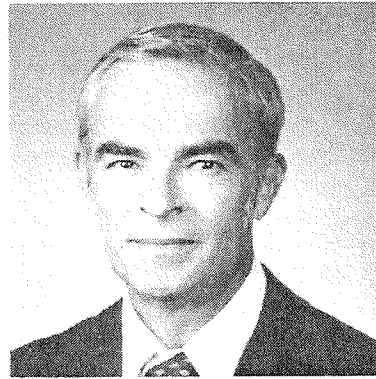
To Noel M. Ravneberg of the New York-Philadelphia Section fell the duty of presiding over the Association affairs with an expanded Board and a reduced Executive Council. Some of the flack remaining from Holland's presidency continued during Ravneberg's term, principally relating to Auburn and Teton dams. The Association's first salary survey was taken under the guidance of William C. Paris, Jr., Membership Chairman. On the legislative front a great deal of effort went into opposing the "Ryan Bill" currently in the U.S. House of Representatives. This bill would have created an Office of Dam Safety to oversee all Federal dam planning, design, and construction, and charge the U.S. Geological Survey with conducting a geologic investigation of each site. The implications of such an act were obvious to the profession and a great deal of opposition thus developed. Following in the foot-



steps of Georgia a year earlier. Oregon passed a geologists registration law in the spring. The Association maintained strong positions in the governance of the APGS (umbrella society) and the American Geologic Institute. Ravneberg guided the Board into altering the new Bylaws to permit the President to appoint committees instead of requiring action by the Board. The Portland Section, after operating 12 years under that name, finally became the Oregon Section which had been its original request. Efforts to bring new members into the Association under the new Academic and Research class were slow to bring results in spite of advertising in GSA's "The Engineering Geologist." In July 1977 a poll of GSA-EGD members was taken under the guidance of David Varnes, then Chairman, as to whether the Division should be abandoned in favor of AEG becoming an associated society. But by November only 15 percent of the division membership had responded of which 78 percent were AEG members or intended to be. Of the respondents, 58 percent (9 percent of the entire Division membership) voted to continue the division. The GSA council meeting in Seattle in November took this as a vote of confidence and refused to consider disbanding the Division. Again this off again on again union was out in the cold. The Association's third student chapter at New Mexico State University was approved. Two-time President Bruce Hall died, as did the oldest living member at that time, U.S. Grant IV, at the age of 84.

Some of the excitement of the Ravneberg presidency revolved around the long planned back-to-back Annual Meeting with the Geological Society of America in Seattle. Since Harold Stuart's suggestion in 1971, this meeting had been hoped for by many. Under the leadership of John Koloski of the Washington State Section, the Twentieth Annual Meeting of the Association featured a three-day pre-meeting field trip to visit dams and landslides on the Columbia River (including British Columbia), a stormy boat trip to a salmon bake that many still remember, and four postmeeting trips (Teton Dam, coastal engineering geology, landslides, and nuclear and coal fired powerplants at Satsop and Centralia). Charles F. Richter of California and Jasper L. Stuckey of North Carolina were made Honorary Members. The Northwest's love of mountain climbing (the 1968 meeting also featured a mountaineer), was continued by James Wickwire who spoke on the American Expedition to K2. As AEG closed, GSA began. The program included a sym-

posium on "Capable Faults and Engineering Structures" sponsored by the ASCE-AEG-GSA Intersociety Committee on Engineering Geology. By the time both meetings were finished so were the Annual Meeting committees (including the writer who immediately took a short vacation to dig razor clams!). Most everyone felt that such a marathon (though well attended) meeting should be held not oftener than once each decade.



Howard A. Spellman, Jr.

Howard A. "Buzz" Spellman, Jr., of the Southern California Section, began his term as 21st president of the Association with the Auburn Dam question, the continued efforts to make the APGS (umbrella society) a working group, and the appointment of new directors for the USGS and NOAA very much in mind. The Association had no Bulletin Editor with John Miller becoming Vice President, and Treasurer Depman submitted an annual budget in excess of \$75,000 for the first time. Executive Director Johnston was having a major disagreement with the postal authorities as to whether the Directory was a book or a catalogue. The fourth student chapter, the first to combine two schools, Lone Star at Texas A&M and Baylor universities was approved along with enlarging the Fort Worth-Dallas Section to include all Texas under the name of the Texas Section. Within a few months, Chris Mathewson of Texas A&M was appointed Student Chapter Coordinator and by February 1978 a fifth student chapter was recognized at California State University, Los Angeles under Martin Stout. The Association was indeed saddened by the death of long time member (Honorary Member) and contributor Ian Campbell in San Francisco on 11 February 1978. Considerable ef-

forts were now being made to streamline AEG business with modern data processing. The Association joined with ASCE and the American Underground Space Association to sponsor a symposium entitled "Rapid Transit Construction Costs Related to Local Geology" which was held at Cal Tech in March, published as a special Bulletin in 1981. Another student chapter, University of Nevada at Reno, was established in June. Spellman's solid and continuous support of the Seismic Safety Committee on the Auburn Dam matter aroused some dissent from the membership, but with continued Board support Spellman clearly established prerogatives of a strong president and was able to clearly explain the Association's action on this and other matters to the membership in a series of classic messages in the Newsletter.

The women's movement in AEG came into its own in 1978 under the guidance of Denise Pieratti, Mavis Kent, and Elizabeth Newton. After a special breakfast for women geologists at the 1977 Annual Meeting, the movement gained additional momentum in terms of service to and within the Association. In March 1978, Eugene Waggoner represented the Association and the profession with testimony at the U.S. Senate's Committee on Environment and Public Works. In June 1978, the Guidelines to the Code of Ethics, long a major effort of John Ivey's Professional Ethics and Practice Committee, was formally adopted. The code itself had also been adapted by the Oregon Registration Board earlier. The three sections in California banded together in Los Angeles for their first California Section Spring Meeting which amounted almost to an annual meeting with two field trips and a one-day conference. Meanwhile, the environmental movement was having something of a backlash. The APGS's Legal Action Committee was organized for the purpose of countering irresponsible legal actions by environmental groups which were hampering legitimate development of natural resources. Past President Lemke continued to represent AEG on the Policy Board of APGS and maintained the Association's voice in that group. At the close of Spellman's term an additional student chapter, California State University, Northridge, was approved and the continuing subject of IAEG membership including the establishment of a U.S. National Group was a further matter of consideration. However, it continued to be plain that the Association would encourage formation of such a group, but would not become the group.

The 21st Annual Meeting held at Hershey, Pennsylvania, in October 1978 permitted the attendees to enjoy the beautiful autumn countryside outside an urban environment, the first such meeting since the session at Lake Tahoe. With the theme on "Resolution of Geologic Hazards" and a symposium on the problems of karst regions, D. Richard Thompson's committee and the host Baltimore-Washington-Harrisburg Section maintained real control of Appalachian weather for Gerald Brant Hoover's excellent field trips into the Valley and Ridge and up the Susquehanna. A first at this meeting was a "short course" held ahead of the meeting. This new innovation, convened by Allen Hatheway and Al Geiger, was cosponsored and later published by the American Geologic Institute and entitled "Engineering Geology for Geologists." The success of this effort made the short course a certainty for many future annual meetings.



Richard J. Proctor

The presidency of Richard J. Proctor of the Southern California Section was notable for several reasons. Student membership took on a quantum change under Student Coordinator Chris Mathewson's prodding. Major additions were made to the Bylaws regarding student chapter formation and regulation, and changes were made to permit student members of a year or more longevity to apply for Associate Membership immediately upon graduation. In February 1979, four new student chapters were approved; University of Arizona, University of California at Los Angeles, Purdue, and University of Illinois. The influx of student members was greater than all other classes combined making the work of Galster's Membership Committee exces-

sive. The problem was solved by putting student membership into the activities of the Student Member Coordinator and requiring student applicants to include first year's dues with their application. In June, an additional student chapter was approved: University of Wisconsin at Milwaukee. The student paper contest was approved and enthusiastically begun. Unfortunately no award was made that year as only one entry was received. Proctor, however, was beginning to be plagued by late publications. The Board decision to publish the Directory as the first number of Volume XVI of the Bulletin created a "Catch 22" when Volume XV, No. 3 was late due to galley proofs lost in the mail. Postal regulations required mailings in sequence so that by the time the matter was straightened out, both publications were late by several months. Efforts to computerize the Directory were also responsible for some delay. The Newsletter was another matter. Editor Withington was out of the country much of the time. He had earlier requested relief from his Newsletter duties, but was unable to find a successor in the Baltimore-Washington-Harrisburg Section. By early 1979, however, Proctor had found a suitable replacement in the person of Richard C. Kent of the Oregon Section and by fall the publication of the Newsletter had shifted from the east coast to the west coast and was back on schedule. The Bulletin and Directory were more difficult problems which were not to be solved until the following year. However, consideration was given to providing an AEG Editor honorarium or hiring a part-time paid Editor together with an increase in Bulletin publication budget.

Late in 1978 the fledgling and now ill-fated APGS "umbrella society" died from lack of a Director and general lack of interest among some of the sponsoring organizations. While AEG had put considerable effort into this group, the concept of such a society was not fully supported. The name of AIPG reappeared on the scene as abruptly as it had left off two years earlier. The Intersociety Advisory Group, now under AIPG continued to function; however, with Lemke representing the interests of AEG especially in the area of opposing AIPG specialty certification. In the wake of Teton, Auburn, and other dam safety problems, this subject was on nearly everyone's lips. The Association along with ASCE was represented at the U.S. Senate and House hearings on dam safety early in April by William A. Wahler of the San Francisco Section. Under the guidance of past President Buzz Spell-

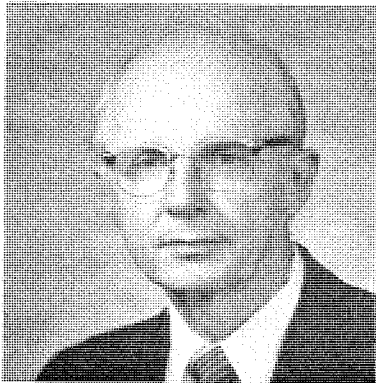
man a Dam Safety Policy Statement was drafted, circulated for comment, and approved by the Council when they met in Seattle on 30 June 1979. The passage of a dam safety act in Missouri and the sponsoring of a symposium on "Safety of Private Dams" under the direction of Mike Klosterman and Greg Hempen of the St. Louis Section furthered the efforts of AEG in this field.

The continued lack of response by the academic community to efforts by the Association to include them by creation of the Academic and Research Member class prompted the board to revise the rules and permit upgrading of A&R to full Member following 5 years of teaching or research in engineering geology and publication of two professional papers making definite contributions to engineering geology. The intent of this action was to eliminate the apparent "dead end" syndrome which many felt the class implied. The question of professional liability insurance was raised and Ted Maynard of the North-Central Section was appointed as chairman of an ad hoc committee to delve into the question. Proctor was invited, along with other professional society presidents, to the U.S. State Department in Washington, D.C., for a briefing on the SALT II Treaty. The Association withdrew its active participation in the Council of Scientific Society Presidents (CSSP) and voted to accept an invitation to membership in the Building Seismic Safety Council. The one hundredth anniversary celebration of the USGS was acknowledged by the Association in the form of a framed certificate which can be seen at the Survey headquarters in Reston, Virginia.

By 1979 a number of sections had followed the lead of the overseas sections in establishing 2-year terms for section chairmen. Proctor prodded the remaining sections toward such action for improved Board continuity. Continuing education was also an area requiring action. The success of the short course in Hershey plus the general feeling of the Board prompted Proctor to form a Continuing Education Committee under past President Glenn Brown. The Board directed the committee to look into practical short courses and the possibility of obtaining credit for courses. The short course planned for the next annual meeting to be held in Chicago would be one of these. The upgrading of expertise was the main theme to be followed. Proctor continued the efforts of his three immediate predecessors to get the membership, the Association, and the profession more publicly involved and to

improve public awareness of the profession. While his July 1979 Newsletter message produced a small controversy, Proctor stuck to his guns and maintained a strong public awareness stance ("Get involved, because others less qualified are shaping your future."). Efforts made to improve the international character of the Association included dialogue with the Japan Society of Landslides when members of that group visited the west coast in May 1979 and the Brazil Association of Engineering Geology for the potential formation of sections in those two countries. However, dialogue by correspondence was slow.

The long cherished effort of the North-Central Section to host an annual meeting in Chicago was found to be on a collision course with the Pope of the Roman Catholic Church. Abe Dolgoff and his committee had to change the meeting hotel twice before the McCormick Inn agreed to host the AEG in October 1979. In spite of the influx of the faithful, the 22nd Annual Meeting was well carried off in true Windy City fashion. Excellent field trips into the TARP underground and elsewhere, together with the institution of mini field trips (one-half day), contributed greatly to the meeting. An excellent symposium on "Responsibility in Engineering Geology," including attorneys as speakers, was devoted to professional rather than technical practice. At the annual banquet, Honorary Membership was awarded to Howard Coombs of the Washington State Section and Gordon Oakeshott of the San Francisco Section, the Holdredge Award went to Douglas Piteau of Vancouver, B.C., Canada, and Robert Legget spoke on "Engineering Geology Today" in his normal, quietly succinct and historic style.



John B. Ivey

John B. Ivey of the Denver Section assumed the presidency with a number of items requiring continued attention. Bulletin Editor Robert Matthews requested to be relieved of his duties as soon as the two back issues of the Bulletin were completed. The Directory publication schedule fell further behind. The preparation of "Professional Practice Guidelines" by the Professional Practice Committee under Mavis Kent, which had been separated from the Ethics Committee by Proctor, was well underway, but the Bulletin and Directory problem required action. Ivey was well known for his thoughtful oral and written dissertations, his unbridled enjoyment of chili and other hot foods, and his passion for careful action. He holds the record for length of a Newsletter message. After appropriate consideration he appointed Norman Tilford of the Carolina Section, who was already hard at work in the Nuclear Energy Committee and as advertising coordinator, to head an ad hoc Committee on Bulletin and Directory Format and Publication. Meanwhile, the Bulletin became thinner and continued to be behind.

Association participation resulted in the culmination of two events in November 1979: the GSA-AEG-NAGT symposium on "Academic Training for Engineering Geologists" held in San Diego, and the National Coal and Surface Mining Conference held in White Sulphur Springs, West Virginia.

When the Executive Council met on a cold weekend (it actually snowed) in Dallas in February 1980 they approved formation of multi-school student chapter in the San Francisco Bay area and one at the University of California at Davis. The method of selecting Honorary Members was felt inadequately provided for in the Bylaws and changes were formulated along with further "housekeeping" changes. These changes were acted upon by the full Board when it met in a hot, muggy New Orleans in June 1980. Not since Hot Springs, four years earlier, had such a session been held. Acting on a petition presented by Treasurer Gordon Cordes, the Board approved formation of the Lower Mississippi Valley Section to encompass the states of Mississippi, Louisiana, Arkansas, and western Tennessee as the 20th section of the Association. Approval of a student chapter at Queens University in Kingston, Ontario, Canada, created the second student chapter outside the United States. Bylaw changes included requiring annual reports from each section and each student chapter, revising the manner of nomination and election of

Honorary Members and clarification of rights and privileges of several classes of membership. The major effort by the board at New Orleans, under Ivey's patient guidance, was to approve final wording of the Nuclear Waste Disposal Policy Statement. This somewhat controversial statement clearly placed the Association approval on lithospheric waste disposal with proper geologic evaluation. The statement was widely distributed.

Ivey maintained excellent relations with AIPG throughout his term and probably did as much as any one person to improve such relations. In March 1980, at the invitation of AIPG, he presented an outstanding briefing on Engineering Geology in Setting Public Policy to members of the U.S. Senate and House staff. The Seismic Safety Committee chaired by Buzz Spellman was instrumental in developing and reviewing seismic design provisions for buildings in the United States. The second Spring Meeting of the three California Sections was held in San Francisco in May under the direction of Frank Kresse.

As Ivey's term drew to a close he was well on the way to solving the problem of the Bulletin. Tilford's ad hoc committee had recommended sweeping changes in Bulletin format which was soon approved and Christopher C. Mathewson of the Texas Section was approved as Editor with John W. Williams of the San Francisco Section taking his place as Student Chapter Coordinator. The tardy 1980 Directory originally promised in spring, then summer, was unfortunately not published until late November when Ivey was out of office. This publication was thereafter dubbed the "Lame Duck Directory," the last Directory to be published in the old 6-by-9-inch format. Such was the association's first experience into computer directory listing. Changes were coming.

Ivey presided over the 23rd Annual Meeting at the Dallas Hilton on Mockingbird in Dallas, Texas, late in October 1980. Again a short course, this time sponsored by the ASCE-GSA-AEG Joint Committee along with Texas A&M University, entitled "Engineering Geology in Construction Excavation" and a symposium on "Geological Disposal of High-Level Radioactive Wastes" was held. Tireless past President Henley's Annual Meeting Committee held tight to the theme of "Building With The Earth," and long time members Richard Lemke and Portland Fox were conferred Honorary Membership at the annual banquet. "Volcanoes and the Environment" was the subject of Fred Bullard's

address and for the second time a member of the South Africa Section, this time A. B. A. (Tony) Brink, was presented the Holdredge Award. William F. Cole of Texas A&M University was honored as first recipient of the AEG Student Professional Paper Award. Solution to the IAEG affiliation question was finalized when David Varnes of the Denver Section announced formation of the U.S. National Group under the sponsorship of the U.S. National Committee on Geology, effectively removing AEG from this periodic problem of thirteen years standing.



Albert J. Depman

The presidency of Albert J. Depman of the New York-Philadelphia Section was destined to realize several changes long in coming. The United States National Group of IAEG was approved by the parent organization and both the President of AEG and the Chairman of GSA Engineering Geology Division were to serve as ex-officio members of the groups Executive Committee. By the beginning of 1981 both the new Bulletin format under Editor Mathewson and the new Directory format under Greg Hempten of the St. Louis Section was well underway to reality in the new 8½-by-11-inch format. Thus after 10 years of the light green cover and 17 years of the 6- by 9¼-inch size, the new Bulletin appeared on time to the membership in February 1981. The revised Directory format, the same size as the new Bulletin format was published in August. In October 1980, the Board regretfully acted to dissolve the only overseas student chapter at Portsmouth Polytechnic (England) due to lack of activity. This was offset in February 1981 by the creation of Palouse Student Chapter at Washington State University and University of Idaho; the first interstate student chapter (the schools are 10 miles

apart). Also, on a stormy February day at Galveston's Hotel Galvez, the Council acted on a petition forwarded by Jeff Keaton of Salt Lake City and established the Utah Section as the 21st Section of the Association. The use of AIM in New York City for computer membership listing was abandoned and the Association listing was moved to Allen Press, so that henceforth all Bulletin and Directory publication and membership billings would be consolidated at one place.

One of the greatest concerns of the Depman administration was the increasing cost of operations, largely in publications and travel expenses. Clearly, the Association's fiscal surplus was rapidly dwindling and efforts would have to be made to balance the budget. Yet consensus was that all sections should continue to be represented on the Board and that the publications, which provided the world's window to the Association, should continue to strive to be of the highest caliber.

On 15 May 1981, the AEG Board of Directors met for the first time outside the United States, being hosted by the Montreal Section at Hotel Meridien in Montreal. Membership had crept slowly up to the 3,000 mark with still only a little over 1 percent of the membership outside the United States. The new Bulletin was widely acclaimed under Mathewson's enthusiastic editorship, and he was given approval to begin a judicious amount of color illustrations. A minor change in the Bylaws made a significant change in Association policy by eliminating the requirement for all sections to have standing committees equivalent to the Association standing committees. This permitted future chairmen to appoint members to committees as deemed appropriate, relieving the sections of inactive committee requirements. In addition, a new article was added to the Bylaws to regulate the use of the AEG logo. The special publication on "Professional Practice Guidelines" was well on its way to a publication date under the committee leadership of Oregon's Mavis Kent.

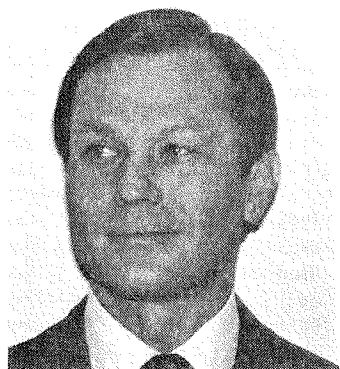
During the Depman administration a heretofore untried type of meeting was attempted; the Executive Council conference call, and considerable administrative business was thus conducted. As continuing representative to the U.S. National Committee on Rock Mechanics, the venerable Arthur B. Arnold of the San Francisco Section continued to make efforts for rock mechanics symposia to have more practical application and in so doing caused a minor fracas by his report in the News-

letter. The South Africa Section's request to form a single group with IAEG members in that country caused some concern as did a long quiet period from the United Kingdom Section.

With the appointment of past President Proctor to the Executive Council of AGI, the Association now had an even greater voice in the management of that group. As the summer wore on and many were looking forward to the upcoming annual meeting in Portland, it became increasingly evident that the major problem to be solved would be the Association's future fiscal health. During the Depman administration the problems of the quality and timeliness of publications appeared to have been resolved. Two-time Treasurer, Gordon Cordes, had administered the Association's finances during two of the most difficult periods and his voice was indeed one to be heeded. The bullet would have to be bitten!

The 24th Annual Meeting in Portland, Oregon, just 10 years from the first annual meeting to be held there, was an outstanding example of cooperation between man and nature. Mount St. Helens had erupted violently 16 months earlier and the volcano and its effects on the surrounding countryside provided much fuel for Annual Meeting Chairman Mavis Kent and her committee. Together with a field trip to the proposed high level radioactive waste repository at the Hanford Reservation and another special session on nuclear waste disposal, possibly the largest number of technical papers at any meeting offered a great choice to the membership. Honorary Membership was conferred on W. Harold Stuart of the Oregon Section. The chairmen of both the United Kingdom and South Africa sections addressed the annual banquet and Bulletin Editor Mathewson received the Holdredge Award for his lucid book "Engineering Geology." The "Professional Practice Guidelines" went on sale to the membership at the Portland meeting and became an instant best seller with its unique content and format: the Association's first special publication on professionalism.

William C. Paris, Jr., of Ann Arbor, Michigan, became the 25th president of the Association on the last day of September 1981. While Paris had earlier been affiliated with the Baltimore-Washington-Harrisburg Section, his move to the mid-continent while Association Secretary placed him in "at large" status, thus becoming the first President not affiliated with an established section. Paris lost no



William C. Paris, Jr.

time in "getting the thing off the ground." Revision of committees was made together with a clear cut distinction between standing, technical, and special committees. Some committees, having appeared to have outlived their usefulness, were abolished and the concept of additional technical committees working to provide articles for the Bulletin was established. As the new Board met in October dues were raised substantially, to \$50 for full members, though a continued subsidy for overseas sections was approved, all by a two-thirds majority of the board. The matter of an OSHA regulation against geologists entering uncased borings for examination of materials was being constantly appraised by Joe Cobarrubias of the Southern California Section, and the matter of proposed changes in U.S. Government procurement regulations was also of concern to the Board. Thus Paris' presidency began.

The observance of the 25th Anniversary of the Association was to claim much attention. In April 1982, the Board met in Sacramento, California, for a special observance in the area where it all began. The 25th Annual Meeting will be the first held outside the United States. The Montreal Section, one of the smaller AEG sections, is mobilized for success under the committee leadership of Luc Boyer. This meeting, to be held in concert with the Canadian Geotechnical Society, thus may be one of the largest gatherings of engineering geologists ever in North America. With this in mind we must anticipate and work for an ever broadening scope of Association activities and influence as time goes on. We owe this to our profession, and to the ten men

who gathered on the banks of the Sacramento on that June evening so many years ago.

#### ACKNOWLEDGMENTS

It is with considerable humility that this review of the first twenty-five years of our Association has been composed. So many people have given so much of themselves during these formative years so that the Association might prosper. The use of the indefinite article in the title was done purposely as no person could possibly research, let alone set in to a reasonable amount of prose, "the" history of a group as interesting and complex as our Association.

Most of the data presented here is taken from minutes of Board, Council, and Annual Corporate meetings, a tribute to the zeal of our past Association Secretaries, beginning with the example of H.D. Woods, in recording the business proceedings of the Association. Other items were derived from the fertile memories of many of our past Presidents who have been most gracious and open in their discussions with me. Frequently, I have relied on Bill Gardner who has contributed so much from the founding of the Association to the present time and has made a great effort to keep me honest, especially with respect to matters involving the early days of CAEG. Occasionally, I have been forced to rely on my own memory and to read a little between the lines.

If the reader has found portions of this a little rocky or perhaps too honest, this is the way the minutes record it. No criticism of persons or groups is intended. All who have participated in the affairs of the Association have always done so in good faith, but, like life itself, some things work out well and others less so. I have selected events which I consider important, interesting, and sometimes humorous. Others may agree or not and if any serious errors or omissions have been made, I apologize.

The thorough review by past Presidents Bill Gardner and Dick Proctor is gratefully acknowledged. Lastly, I wish to lead the entire Association in thanks to Floyd Johnston, our first Executive Director, for his husbandry of the Association archives. Without his care, this paper would not have been possible.

APPENDIX 1. *Past Officers of the Association of Engineering Geologists.*

	President	Vice President	Secretary	Treasurer
1958	C. P. Holdredge		H. D. Woods	C. E. Hall
1959	W. I. Gardner	J. F. Poland	H. D. Woods	P. J. Guthrie
1960	B. M. Hall	J. T. McGill	R. F. Laird	W. C. Ellis
1961	R. T. Bean	B. H. Marliave	I. E. Klein	B. E. Lofgren
1962	E. J. Zielbauer	C. R. McClure, Jr.	W. W. Peak	B. E. Lofgren
1963	B. H. Marliave	H. A. Kues	H. E. Richardson	R. S. Ford
1964	H. R. Taber	E. B. Eckel	F. Kunkel	R. S. Ford
1965	E. B. Eckel	G. A. Brown	W. L. Burnham	R. J. Akers
1966	G. A. Brown	R. H. Russell	L. J. West	A. L. Franks
1967	A. M. Hull	R. E. Whitla	M. L. McCauley	A. L. Franks
1968	R. H. Russell	L. S. Cluff	R. E. Thronson	J. S. Long, Jr.
1969	L. S. Cluff	R. W. Lemke	R. E. Thronson	F. W. Wilson
1970	R. W. Lemke	B. M. Hall	R. E. Thronson	F. W. Wilson
1971	B. M. Hall	A. D. Henley	P. V. Burkland	G. E. Cordes
1972	A. D. Henley	F. W. Wilson	S. C. Sargent	G. E. Cordes
1973	F. W. Wilson	S. C. Sargent	R. T. Throckmorton	G. E. Cordes
1974	S. C. Sargent	R. T. Throckmorton	J. L. Holland	N. M. Ravneberg
1975	R. T. Throckmorton	J. L. Holland	H. A. Spellman, Jr.	N. M. Ravneberg
1976	J. L. Holland	N. M. Ravneberg	H. A. Spellman, Jr.	R. M. Valentine
1977	N. M. Ravneberg	H. A. Spellman, Jr.	R. J. Proctor	R. M. Valentine
1978	H. A. Spellman, Jr.	J. T. Miller	R. J. Proctor	A. J. Depman
1979	R. J. Proctor	J. B. Ivey	W. C. Paris, Jr.	A. J. Depman
1980	J. B. Ivey	A. J. Depman	W. C. Paris, Jr.	G. E. Cordes
1981	A. J. Depman	W. C. Paris, Jr.	R. W. Galster	G. E. Cordes
1982	W. C. Paris, Jr.	R. W. Galster	N. A. Tilford	A. W. Hatheway

Note: Prior to 1963 officers served as officers of the California Association of Engineering Geologists. The 1963 officers served the major part of their terms as officers of the expanded Association.

APPENDIX 2. *Association Editors.*

	Bulletin	Newsletter (1)	Directory		Bulletin	Newsletter (1)	Directory
1958		B. M. Hall		1972	W. R. Hansen	F. T. Wheby	N. M. Ravneberg
1959		C. E. Hall		1973	W. R. Hansen	F. T. Wheby	N. M. Ravneberg
1960		A. B. Arnold	I. E. Klein	1974	F. T. Lee	F. T. Wheby	H. W. Maxwell
1961		P. Lorens	A. F. Goldschmidt	1975	F. T. Lee	J. T. Miller	H. W. Maxwell
1962		G. A. Brown	H. A. Kues	1976	F. T. Lee	C. F. Withington	W. J. Berk
1963		D. Radbruch	W. W. Peak	1977	J. T. Miller	C. F. Withington	R. L. Englehardt
1964	A. F. Goldschmidt	A. F. Goldschmidt	H. B. Goldman	1978	R. A. Matthews	C. F. Withington	R. L. Englehardt
1965	H. B. Goldman	A. F. Goldschmidt	M. G. Green	1979	R. A. Matthews	C. F. Withington	H. W. Maxwell
1966	H. B. Goldman	G. Curtin	R. M. Valentine	1980	R. A. Matthews	R. C. Kent	H. W. Maxwell
1967	H. B. Goldman	G. Curtin	G. DePuy	1981	C. C. Mathewson	R. C. Kent	G. L. Hempten
1968	R. E. Goodman	B. E. Lofgren	T. E. Ward	1982	C. C. Mathewson	R. C. Kent	G. L. Hempten
1969	R. E. Goodman	B. E. Lofgren	C. I. Trantham				
1970	R. E. Goodman	H. E. Richardson	F. L. Fox (2)				
1971	W. R. Hansen	H. E. Richardson	N. M. Ravneberg				

(1) The Association Editor was responsible for only the Newsletter until 1964 when the first Bulletin was published.

(2) Prior to 1971 the Directory was the responsibility of the Public Information and Professional Relations Committee.



APPENDIX 3. *Chairmen of Major Association Committees.*

	Membership	Legislation	Ethics & Practices	Awards
1958	J. F. Poland			
1959	J. F. Poland	R. F. Laird (1)	R. F. Laird (1)	
1960	R. C. Richter	R. T. Bean	R. T. Bean	
1961	C. S. Content	B. M. Hall	B. M. Hall	
1962	W. L. Burnham	B. M. Hall/W. I. Gardner	B. H. Marliave	R. R. Wilson (2)
1963	R. E. Thronson	W. I. Gardner/H. R. Taber	J. F. Mann, Jr.	H. B. Goldman
1964	R. E. Harpster	W. I. Gardner/P. J. Guthrie	D. T. Snow	H. B. Goldman
1965	A. L. Franks	W. I. Gardner/B. M. Hall	B. I. Larsen	H. B. Goldman
1966	H. L. Allsup	M. L. McCauley	T. H. Riddle	J. Colligan
1967	E. A. Hainze	W. W. Peak	D. H. Griswold	A. S. Allen
1968	R. E. Trefzger	W. W. Peak	W. H. Miller	R. C. Newcomb
1969	H. L. Allsup	A. F. Goldschmidt	R. M. Valentine	N. M. Ravneberg
1970	H. L. Allsup	W. H. Miller	R. M. Valentine	A. S. Allen
1971	S. C. Sargent	R. W. Galster	R. H. Grice	R. R. Wilson
1972	J. L. Holland	R. W. Galster	R. H. Grice	J. L. Hamilton
1973	J. L. Holland	J. E. Slosson	J. B. Ivey	J. L. Hamilton
1974	H. A. Spellman, Jr.	A. D. Henley	J. B. Ivey	R. R. Wilson
1975	R. J. Proctor	W. C. Paris, Jr.	J. B. Ivey	J. H. Williams
1976	R. J. Proctor	W. C. Paris, Jr.	J. B. Ivey	P. B. DuMontelle
1977	W. C. Paris, Jr.	W. E. Cutcliffe	J. B. Ivey	W. H. Stuart
1978	W. C. Paris, Jr.	W. E. Cutcliffe	J. B. Ivey	W. H. Stuart
1979	R. W. Galster	W. E. Cutcliffe	R. Valentine/M. D. Kent (3)	W. E. McIntosh
1980	R. W. Galster	J. H. Peck	R. Valentine/M. D. Kent	W. E. McIntosh
1981	R. M. Valentine	J. H. Peck	C. L. Taylor/M. D. Kent	W. E. McIntosh
1982	R. M. Valentine	G. S. Rasmussen	M. D. Kent	D. D. Pieratti

	Public Info. & Prof. Relations	Section Boundaries	Building Codes	Annual Meeting
1958				W. I. Gardner/B. M. Hall
1959	B. M. Hall		E. C. Marliave	R. Thomas
1960	I. E. Klein		J. T. McGill	B. H. Marliave/R. C. Thresher
1961	A. F. Goldschmidt		D. R. Brown	W. W. Peak
1962	H. A. Kues		D. R. Brown	J. T. McGill
1963	W. W. Peak		J. E. Slosson	C. R. McClure, Jr.
1964	H. B. Goldman		J. Schlocker	I. E. Klein
1965	M. G. Green	D. A. Evans (4)	R. G. Hood	R. Valentine/H. E. Simpson
1966	R. M. Valentine	D. A. Evans	E. D. Michael	D. A. Evans
1967	R. M. Valentine	D. A. Evans	C. M. Scullin	A. D. Henley/W. E. McIntosh
1968	T. E. Ward	D. A. Evans	C. M. Scullin	R. W. Galster
1969	C. I. Trantham	D. A. Evans	R. H. Gelnett	P. Vardy
1970	F. L. Fox	A. D. Henley	C. A. Yelverton	R. E. Whittle
1971	F. L. Fox	J. L. Hair	R. T. Throckmorton	R. K. Dodds/J. L. Holland
1972	C. F. Withington	J. L. Hair	R. T. Throckmorton	H. R. Loepp
1973	C. F. Withington	A. J. Depman	E. A. Nelson	C. A. Yelverton
1974	C. F. Withington	A. J. Depman	E. A. Blackey, Jr.	J. B. Ivey
1975	C. F. Withington	A. J. Depman	E. A. Blackey, Jr.	C. J. Hauge
1976	C. F. Withington	A. J. Depman	E. A. Blackey, Jr.	A. J. Depman
1977	F. B. Conselman	A. J. Depman	C. E. Hollon	J. W. Koloski
1978	F. B. Conselman	A. J. Depman	C. E. Hollon	D. R. Thompson
1979	A. W. Hatheway	A. J. Depman	C. E. Hollon	A. Dolgoff
1980	A. W. Hatheway	H. P. Oshel	C. E. Hollon	A. D. Henley
1981	S. L. Garrison	H. P. Oshel	C. E. Hollon	M. D. Kent
1982	(5)	H. P. Oshel	J. W. Cobarrubias (6)	L. Boyer

(1) From 1959 to 1961 a single committee was known as the Registration and Ethics Committee.

(2) Formed as the Emblems, Certificates and Awards Committee.

(3) Separated into two committees, 1979–1981.

(4) Originally Section Boundaries and Membership Affiliations Committee. Ad hoc from 1965–1968. Became a standing committee in 1969.

(5) Committee functions assumed by Newsletter Editor in 1982.

(6) Combined with work of the Industrial Safety Committee in 1982.

APPENDIX 4. *Chairmen of Association Sections.*

	Southern California (1)	Sacramento	San Francisco	Washington State
Est.	May 7, 1958	Sept. 9, 1958	Sept. 25, 1958	June 10, 1963
1958	E. J. Zielbauer			
1959	R. Thomas	C. R. McClure, Jr.	R. C. Treasher	
1960	D. R. Brown	P. J. Guthrie	B. H. Marliave	
1961	H. A. Kues	H. R. Taber	J. A. Trantina	
1962	R. F. Moore	I. E. Klein	H. B. Goldman	
1963	G. A. Brown	A. B. Arnold	D. T. Snow	J. S. Fryberger
1964	J. F. Mann	W. W. Peak	R. Kachadoorian	J. S. Fryberger
1965	D. A. Evans	J. F. Poland	R. E. Goodman	R. H. Russell
1966	P. J. West	R. F. Laird	L. S. Cluff	T. E. Ward
1967	J. L. Smith	J. S. Long, Jr.	E. A. Danehy	S. D. Schwarz
1968	D. E. Moran	W. D. Fuqua	R. H. Gelnett	J. W. Robinson
1969	M. E. Johnson	M. L. McCauley	G. B. Oakeshott	H. A. Pilz
1970	C. M. Scullin	B. E. Lofgren	P. V. Burkland	W. D. Purnell
1971	J. E. Slosson	R. J. Farina	D. R. Nichols	E. F. Wallace
1972	H. A. Spellman	J. W. Mariette	P. Vardy	R. E. Anderson
1973	R. E. Lownes	G. B. Oakeshott	T. L. Brekke	R. D. Hart
1974	J. T. Eagen	A. D. Bailey	E. A. Nelson	J. W. Koloski
1975	C. A. Yelverton	G. F. Anderson	R. C. Harding	W. D. Paterson
1976	A. G. Keene	C. L. Howard	C. L. Taylor	R. W. Galster
1977	C. E. Hollon	P. C. Weidig	K. D. Weaver	T. L. Olmsted
1978	J. W. Cobarrubias	C. E. Stearns	F. C. Kresse	C. A. Ringstad
1979	D. L. Hannan	C. F. Bacon	B. A. Patterson	C. A. Ringstad
1980	R. Sydnor	C. R. Stearns	B. A. Patterson	J. B. Noble
1981	G. S. Rasmussen	C. F. Bacon	A. D. Tryhorn	J. B. Noble
1982	J. P. Krohn	C. J. Hauge	A. D. Tryhorn	D. D. Armstrong

	Denver	Texas (2)	Baltimore-Washington-Harrisburg (3)	Oregon (4)
Est.	April 18, 1964	June 11, 1964	Jan. 23, 1965	April 24, 1965
1964	W. J. Eck	A. M. Hull		D. A. Williamson
1965	W. J. Eck	A. M. Hull	P. Hart	D. A. Williamson
1966	R. M. Lindvall	F. T. Johnston	R. E. Whitla	J. L. Holland
1967	R. W. Lemke	W. J. Samuelson	R. H. Howe	H. G. Schlicker
1968	R. M. Valentine	A. D. Henley	B. C. Becker	R. J. Deacon
1969	J. B. Ivey	J. L. Hair	L. H. Heflin	R. C. Newcomb
1970	C. S. Robinson	H. H. Sampson	G. C. Johnson	A. M. Petska
1971	W. G. Owens	J. W. Murchison	R. A. Royer	R. K. Dodds
1972	E. Dobrovoly	M. G. Green	P. E. Butler	W. H. Stuart
1973	F. W. Osterwald	C. L. Sartin	T. H. Slaughter	D. H. Griswold
1974	J. L. Hamilton	R. H. Cole	A. S. Allen	P. V. Patterson
1975	D. J. Varnes	J. D. Nixon	E. G. Otton	E. G. Worth
1976	C. R. Dunrud	E. C. Nicholas	L. Baskin	G. W. Avolio
1977	W. P. Rogers	B. Dreyer	J. T. Miller	M. D. Kent
1978	D. U. Allen	P. M. Allen	C. T. Janik	J. C. Richards
1979	V. Q. Hornback	H. T. Logan	W. E. Davies	J. C. Richards
1980	J. S. Dodd	H. T. Logan	W. E. Davies	S. M. Farooqui
1981	R. G. Moek	C. C. Mathewson	J. W. Richards	S. M. Farooqui
1982	E. O. Church	C. C. Mathewson	J. W. Richards	

(1) Originally established as Los Angeles Section. Name changed in 1972.

(2) Originally Ft. Worth-Dallas Section. Name changed in 1977.

(3) Originally Washington D.C.-Baltimore Section. Name changed in 1973.

(4) Originally Portland, Oregon Section. Name changed in 1977.

## APPENDIX 4 (continued).

	New York-Philadelphia	Kansas City-Omaha (5)	United Kingdom (6)	St. Louis
Est.	Jan. 15, 1966	Jan. 1967	Feb. 1, 1969	May 3, 1969
1966	F. L. Fox			
1967	F. L. Fox	F. W. Wilson		
1968	N. M. Ravneberg	F. W. Wilson		
1969	A. J. Depman	N. W. Biegler	P. Lancaster-Jones	E. E. Lutzen
1970	H. W. Maxwell	J. E. Moylan	P. Lancaster-Jones	G. E. Cordes
1971	D. G. Parrillo	H. R. Loepp	P. Lancaster-Jones	J. H. Williams
1972	W. E. Bonini	W. F. Frederickson	R. J. G. Edwards	D. L. Ramsey
1973	C. A. Baskerville	W. R. Bryson	R. J. G. Edwards	M. J. Stegall
1974	D. A. Sommers	A. A. Kotoyantz	D. G. Price	E. E. Brucker
1975	F. L. Fox	R. E. O'Connor	D. G. Price	T. J. Dean
1976	W. J. Berk	L. L. Brady	P. R. Rankilor	A. G. Goodfield
1977	W. J. Berk	H. G. O'Connor	P. R. Rankilor	D. C. Lockmoeller
1978	H. W. Maxwell	T. J. McClain	I. R. Rodger	J. D. Rockaway
1979	H. W. Maxwell	R. K. Lehman	I. R. Rodger	G. L. Hempen
1980	H. W. Maxwell	R. J. Gentile	I. R. Rodger	G. L. Hempen
1981	A. S. Hunnewell	R. J. Gentile	M. F. Stott	M. J. Klosterman
1982	A. S. Hunnewell	W. J. Gilliland	M. F. Stott	M. J. Klosterman
	Montreal	North Central	New England	Southeastern
Est.	Aug. 16, 1969	Jan. 23, 1971	April 30, 1971	April 30, 1971
1969	H. R. Grice			
1970	H. R. Grice			
1971	P. LeComte	F. T. Wheby	R. C. Hirschfeld	C. R. Livingston
1972	J. Dumas	R. Richards	R. C. Hirschfeld	C. R. Livingston
1973	L. Lachance	R. T. Cyrier	R. C. Hirschfeld	R. L. Parker
1974	J. Berard	J. Leskiewicz	W. F. Swiger	J. W. Erwin
1975	P. L. Gauvin	A. Dolgoff	J. W. Skehan	J. K. Voorhees
1976	P. L. Gauvin	A. Dolgoff	J. W. Skehan	G. S. Grainger
1977	L. Boyer	W. W. Grimes	J. H. Peck	G. S. Grainger
1978	L. Boyer	T. R. Maynard	J. H. Peck	G. H. Fogle
1979	J. Berard	T. R. Maynard	W. T. Mallio	G. H. Fogle
1980	J. Berard	J. E. Bogner	D. Woodhouse	R. T. Dickerson
1981	P. M. Crepeau	J. E. Bogner	D. Woodhouse	R. T. Dickerson
1982	P. M. Crepeau	W. G. Dixon	F. X. Bellini	E. F. Titcomb
	South Africa	Allegheny-Ohio	Carolina	Lower Mississippi Valley
Est.	Oct. 18, 1971	Nov. 8, 1975	Feb. 18, 1976	June 27, 1980
1972	A. B. A. Brink			
1973	A. B. A. Brink			
1974	J. H. DeBeer			
1975	F. Netterberg			
1976	F. Netterberg	E. Ascenzi	R. L. Siesen	
1977	J. H. DeBeer	E. Ascenzi	R. L. Siesen	
1978	J. H. DeBeer	H. P. Oshel	R. L. Siesen	
1979	B. W. Kraft	H. P. Oshel	N. A. Tilford	
1980	B. W. Kraft	H. P. Oshel	N. A. Tilford	
1981	H. J. Olivier	G. O. Johnson	W. D. Bingham	D. C. Banks
1982	H. J. Olivier	G. O. Johnson	W. D. Bingham	D. C. Banks
	Utah	Oklahoma		
Est.	Feb. 13, 1981	Sept. 28, 1981		
1981	J. R. Keaton			
1982	W. R. Lund	J. A. Obrochta		

(5) Originally Kansas City Section. Limits extended to include Omaha in 1975.

(6) Originally London Section. Name changed in 1975.