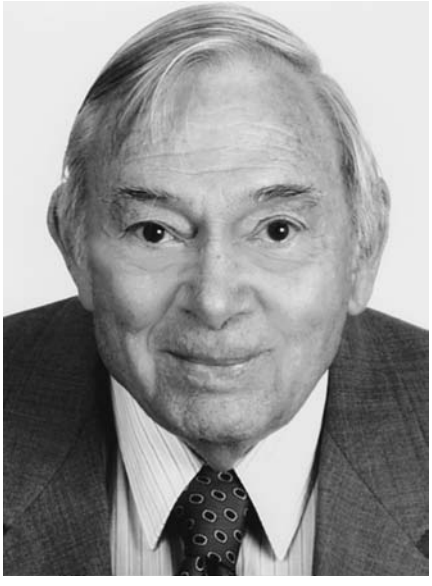
AAPG Honorees, 2002



JAMES LEE WILSON
Sidney Powers Memorial Medal Award

James Lee Wilson is recognized internationally as an authority on carbonate stratigraphy and is one of the most distinguished and well-known members of the worldwide carbonate rock fraternity. He was one of the first to recognize the meaning and usefulness of sedimentary cycles in carbonate rocks and his early work on carbonate buildup and cyclicity was the foundation for many of the principles of carbonate sequence stratigraphy. Jim gives the petroleum geologist a better understanding of the usefulness of carbonate stratigraphy. This can be an important aid in the search for oil and gas within carbonate reservoirs. Learning and recognizing these details assist in exploration by a more accurate interpretation of the systematic succession of facies and their relationship to reservoir quality within the reefs, carbonate banks, and layered limestones and dolomites. This is also true within smaller areas, such as oil and gas fields, where the direction and limits of expansion are not well established. Dry holes can be averted, especially along field boundaries, or alternatively good production can be increased by a better selection of well locations.

An important quality of Jim's work is that he not only introduces new and innovative principles useful to the petroleum geologist and others, but he gets the word out to the user. In other words, with his easy-going personality, "he makes you take the bait." During his many lectures, explanations during field trips, and through personal conversations, his results are spread.

Jim is a native Texan, born in Waxahachie and raised in Houston. At about 12 years of age, Jim began to read about geology. He also began to get early field experience in the mid and late 1930s when his father took Jim and his younger brother on fishing trips to remote parts of Texas and northern Mexico. Jim was more interested in nature than fishing and always spent time looking at the rocks.

Following high school, he attended Rice University where his interest in geology continued. After two years he transferred to the University of Texas where he received his B.A. degree in 1942, and his master's degree in 1944. Before going into the army, Jim did field work in Oklahoma and in the Rocky Mountains for Carter Oil Company during 1943–1944. Part of this field work took him to Billings, Montana, where he met Della Moore, the girl he would marry in 1944.

After two years in the U.S. Army of Engineers, Jim and Dell moved to Connecticut where Jim earned a Ph.D. in geology at Yale University. At that time his chief interests were in paleontology, with specialization in trilobite biostratigraphy. He pursued his interests in paleontology following graduation from Yale in 1949, and accepted a job as associate professor in the Geology Department at the University of Texas. During this time he spent summers in the Marathon basin of west Texas and at the University of Texas field camp in the Llano area.

In 1952, Jim went to work for a new geological research facility, the recently established Shell Development Research Laboratory in Houston. He was among the original group that accomplished innovative studies that were to make a widespread and long-lasting impact on fields of stratigraphy and sedimentation. In this job, he participated in new and exciting studies on modern and ancient carbonate sedimentation, and gradually his main interest turned from paleontology to carbonate petrology and stratigraphy.

By this time Jim and Dell had a happy family of three active boys, James Lee Jr., Burney, and Dale. In 1961 the whole family moved to the Netherlands where Jim was transferred to the Hague to help set up a research program at the newly constructed Royal Dutch Shell Exploration and Production Laboratory at Rijswijk. Most of this research centered on Mesozoic carbonates of the Middle East and involved long expeditions to the Middle East and North Africa. In 1964, following this foreign assignment, the Wilson's moved back to Houston. During this period Jim wrote company reports including some on his earlier field work in New Mexico. Later publications of this work in journals stand out today as classics in the study of cyclic sedimentation and stratigraphy in carbonate rocks. During this time, Jim also taught a few courses at Rice University.

With Jim, the urge increased for more academic involvement and in the fall of 1966, he left Shell to join the faculty at Rice University. Jim was a popular professor and always had more than his share of graduate students, most of whom studied carbonate sediments and rocks in many places around the world. He is in his element as a teacher and he has an uncanny knack for guiding without dominating, thus

allowing his students to be creative. Fortunately for his students, Jim's most exemplary trait is tolerance, and he never fails to emphasize the good in other people. During this same period, Jim pursued a career in depositional stratigraphy in which he became a widely acknowledged master. At Rice, Jim was awarded the Weiss Chair of Geology in 1972, and served as chairman of the Geology Department beginning in 1974. While on the Rice faculty, he also was a visiting professor at the University of Calgary and a Fullbright Scholar at the University of Munich.

In 1979, Jim and Dell moved to Ann Arbor, Michigan, where Jim became a member of the Geology Department at the University of Michigan. Following successful years at Michigan, Jim retired from university duties in 1985, but not from work and not from geology. Jim would find it difficult to become completely retired since he is still in demand as a leader of field trips for petroleum companies, geologic societies, and universities. He also remains active in consulting. He and Dell now live in New Braunfels, Texas.

Jim served as president of SEPM in 1975. He was awarded the Twenhofel Medal by SEPM in 1990. He is a Fellow in the Geological Society of America. His numerous honorary memberships include: AAPG, SEPM, South Texas Geological Society, the Houston Geological Society, and the Gulf Coast Association of Geological Societies. In 1995, SEPM gave him a special honor by establishing the James Lee Wilson Young Scientists Recognition Award.

Jim has dedicated his life to geology and looking out for his family. As Bill Ward has written in a citation for an award Jim received earlier, "Jim is more than a devoted husband and father. He has been a special friend to Dell and their three sons." The boys prospered in this environment of higher education, travel, dedication to work, respect for their fellow man and for the family's love for one another. Jim has always provided strong and loving support for his sons and grandchildren. In many ways, Jim shared his job with Dell. Whether during the university years, the oil company experience, or consulting, Dell was always there. She typed manuscripts, helped him schedule field trips, assisted in counseling graduate students, cut the hair of unpolished students, and generally made herself part of a team that made Jim's years in teaching, research, and field work so successful. That partnership continues today.

Jim pursued a career in depositional stratigraphy in which he became a widely acknowledged master. Dependence on interpretations in the field was a common characteristic that existed between Jim and the also famous British geologist, William Smith, who published the world's first geologic maps ever compiled and who was called the "Father of Geology." Both Smith and Wilson were field geologists. Though separated by 200 years, they engaged in never-ending field trips to observe the lithologic and paleontologic differences and similarities in the rocks they encountered. During Smith's time, geological literature was sparse. When answers were needed it meant another trip to the field to solve the problem. Similarly for Wilson, when questions on carbonate stratigraphy arose at a time when details had not been discovered, or had not been reported in the literature, it meant another trip to the field for Jim to find the answers. Unlike Smith, however, Jim's venue increasingly broadened from the domestic to the international and was enlarged and diversified by studying many of the world-famous models of carbonate stratigraphy. These included reefs, carbonate banks and layered limestones, and dolomites. This work ultimately culminated in his well-known book *Carbonate Facies in Geologic History*. In this work he described broad suites of carbonate facies and related them to specific depositional environments. The book has been translated into Chinese, Russian, and other foreign languages. The field and its geologic setting, worldwide, is Jim's laboratory. His never ending curiosity for learning has brought him back to the field time and time again and still does.

Frank Clark, in his memorial to Sidney Powers, said, "Sidney Powers will be known to future generations for his above contributions to pure and applied geology, but, important as are his scientific achievements, his character was greater, because it typified service to others." Without reservation, that same accolade and mark of acknowledgement can be bestowed upon James Lee Wilson.

Citation—Recognized for his many accomplishments and practical ideas, recipient of many prestigious awards from AAPG and affiliated societies, master of carbonate stratigraphy, devoted family leader, respected teacher, eminent researcher, competent compiler, articulate communicator, practicing humanitarian, and a friend to all.

Paul N. McDaniel

Response

Looking back is often an interesting exercise. I call your attention to Larry Sloss's acceptance speech of a few years back recounting his family's fur-trading history, and to the response last year by Gerry Friedman on receipt of this prestigious award. Nevertheless, Satchel Page's advice is worthy of recollection, "If your stomach disputes you lie down and pacify it with cool thoughts and don't never look back, something might be gaining on you."

Despite admonitions, I would like to thank my peers and to offer my gratitude for having lived long enough to witness the development of our science of sedimentary geology and its application to our search for hydrocarbons on a world wide basis. I refer you to Charlie Kerans's recent review of progress in sedimentology published as an abstract in last year's AAPG program. Here are some of the stages in our progress toward understanding sedimentary geology.

Prior to World War II, there were practically no sedimentology classes in geology departments in our country. Twenhofel stood alone as an exception.

Note also the work of Bruno Sander in Austria, and Lucien Cayeux in France.

From 1950 to 1960, we were involved in comprehending depositional environments by studies of Holocene processes and patterns. The application to ancient rocks resulted in a bewildering nomenclature of sediment types almost ad nauseum with Bob Folk's and Bob Dunham's classifications rising to the top of the pile. I remember that Jerry Lucia made a little sign for one of our sessions on carbonate nomenclature. It said, "Students use published classifications. Real professionals make up their own."

From 1960 to 1980 we emphasized, first, modern environments as models, and second, diagenesis, the mineralogy and geochemistry of lithified sediments as related to porosity and permeability. We paid particular attention to dolomitization, and the use of trace elements, cathodoluminescence, stable isotopes, and organic geochemistry of source rocks and associated oils.

The 1980s–1990s saw a return to regional stratigraphy with the use of seismic and sequence stratigraphy, and to a better comprehension of porosity and permeability in lithified sediments, pioneered by the University of Texas Bureau of Economic Geology. The concept of petroleum systems based upon source beds, reservoirs, and total geologic history of maturation and migration is a recent step forward.

I am proud to have been a part of this 50-odd years of scientific endeavor and I would like to offer specific thanks to people and institutions for this good fortune.

First, to the institutions and companies, which enabled me to travel and offered opportunities for research beyond normal academic support; for example, Fullbright, Shell, Esso, Masera, Erico, and South Carolina University.

Second, I am grateful to the academic institutions supporting both my undergraduate students and graduate studies. These are Rice, Michigan, the University of Texas at Austin, Calgary, Munich, and the University of Houston. Sherm Wengerd use to say that a professor was one who was too lazy to work and too timid to steal. I enjoyed teaching anyway!

Third, thank you to the students! Wordsworth said, "The child is father to the man." Students have questions both silly and penetrating. They should be listened to. A professor's success and reputation are often determined by his students. I have had about 30 graduate students at six universities, prominent among them were those at Rice, Michigan, and the University of Texas at Austin. Many of my former students are now in places of responsibility as departmental chairmen, directors, successful consultants, editors, lecturers, and so on. I am genuinely proud of them.

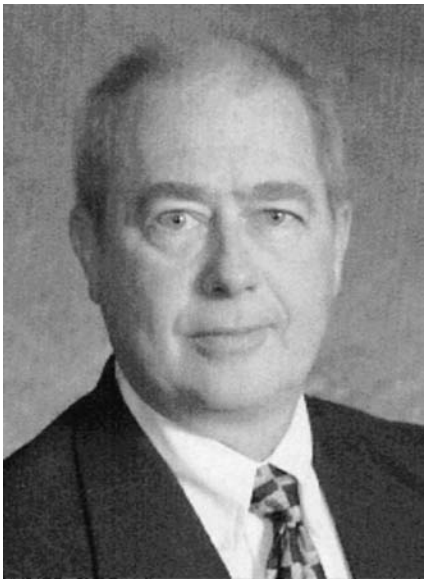
Fourth, I am grateful to colleagues along the way both in academia and research in petroleum geology. Many of them taught me more than I taught them, for example, Christina L. Balk, John Warme, Mike Brady, Wayne Ahr, Clif Jordan, Bill Ward, Bill Meyers, Scott Tinker, Rick Fritz, John Shelton, Bob Ginsburg, Neil Hurley, and Martha Lou Broussard. Apologies to those left out. It was not by design.

Fifth, lastly, I express gratitude for my family. Our family of boys has always been centered around their mother, Dell, who is a conscientious and spectacular homemaker and for 40 years has been my secretary, business manager, editor, critic, and confidant. I couldn't have done it without her.

"No man is an island, particularly when Dell is his wife!"

Thank you all for this honor, and thank you Paul McDaniel.

James Lee Wilson



RICHARD W. BEARDSLEY
Outstanding Explorer Award

For the past 32 years, the study of earth sciences has been not just a career for Dick Beardsley but his passion. While Dick has led a number of very successful oil and gas development programs, he is at heart an explorationist. Always striving to learn and discover, Dick's passion is more than a career, it is his life.

Dick is a native of Oil City, Pennsylvania. His love of science began at an early age and his study of the geosciences began in earnest at Penn State University in 1965. His academic performance was outstanding, having attained the highest grade point average in his class, and he was recognized as the Marshall of the College of Earth and Mineral Sciences when he graduated in 1969.

After graduation, he began the traditional career path, working for Chevron Geophysical in Houston, Texas, through 1972. While his stay in the southwest was brief, it was very productive as he established himself in the Chevron organization and gained a broad exposure to productive fields across the mid-continent. Dick brought his lovely new bride, June, back home to Appalachia in 1973 and began working as an exploration geophysicist for Columbia Gas. He quickly distin-

guished himself as the head of the class and became the company's chief geophysicist.

Dick was always a quick study and adept at identifying the true potential of things. In 1974, his research led him to write a paper describing what he considered to be the extraordinary potential of the Middle and Lower Ordovician carbonate sections known as the Trenton-Black River. Over the succeeding years, Dick mapped the Trenton features and some of the more pronounced graben features in the section. Finding support for drilling the exploratory tests was difficult among the traditionally conservative utilities that had dominated the Appalachian basin for a century. Eventually he would prevail. With persistence, he was able to persuade the drilling of three test wells in 1978, 1980, and 1985. Results were mixed and so commitment to the project waned, but Dick persevered.

In 1985, he was elected vice president of geology and geophysics for Columbia Natural Resources where he advanced an aggressive agenda of exploration and mapping of the Appalachian basin. He was responsible for a number of middle-depth exploration successes, including extensive definition of the Eastern Overthrust belt and advance of the Rose Run and Knox formations in Ohio. But Dick knew that the real opportunities lay even deeper in the Appalachian basin. He continued his work in studying and mapping the anomalies that defined the Trenton-Black River. Then in the mid-1990s, the project was rejuvenated and Dick's persistence was again rewarded. A series of wells were successfully drilled and the exploration test became a development project.

The result of nearly 30 years of study and dedication led to a series of extraordinary discoveries. No one would have ever imagined world-class wells being drilled in Appalachia, except for Dick Beardsley. The culmination of this lifetime of exploration results today in Dick being broadly recognized for his extraordinary vision and contribution to defining the traditionally underestimated Appalachian basin. He is responsible for the identification of each of the first four major Trenton-Black River discoveries made in recent years in Appalachia, and his average success rate in deep tests over the past five years approaches 70 percent. His persistence and exceptional success has spurred a revival in the basin that has attracted numerous new investors and expanded interest in exploration activity all across the region.

While Dick is widely known for having published numerous academic papers on the geology of the Appalachian basin, and as a frequent speaker at regional technical conferences, he is best known for his collaborative efforts. Dick's comprehensive knowledge of the eastern basins has made him a much sought after reference for those undertaking new exploration projects. His dedication to his science is only surpassed by his dedication to his peers. Dick is quick to give credit to those who have worked most closely with him over the past 30 years and have contributed to these discoveries.

As far as geoscientists are concerned, Dick holds all the standard credentials. He is a certified professional geologist and an active member of several professional associations, including AAPG, the AGS, the Society of Exploration Geophysicists, and the American Institute of Professional Geologists. But his greatest credential may be as the result of his efforts to mentor a generation of new geoscientists in the region. He has guided numerous students through research projects and advanced studies. He has also dedicated significant time and energy to the teaching of young people in primary and secondary schools, demonstrating to them the love of science and the excitement of exploring our earth's treasures.

While Dick is respected and admired by his coworkers and peers for his professional accomplishments, Dick is loved by his community for the many humanitarian acts for which he is commonly known. His devotion to family and his faith are extraordinary. In addition, Dick has also been a regular participant in projects designed to build and refurbish housing for those in his community who are in need.

After the Columbia Energy Group was sold in November 2000, Dick retired from Columbia and in March 2001, he became an officer and partner in Triana Energy, a company formed exclusively to pursue new exploration targets in the Appalachian basin. Dick and his cohorts have assembled over a half million acres of mineral rights and have begun to expand Dick's vision all across the Appalachian basin. While his energy and enthusiasm continue to drive the exploration of the Trenton-Black River formations, Dick is hardly one to sit on his laurels. He is convinced that the full potential of the Trenton-Black River has not even yet been imagined. In addition, Dick has identified still other trends that he has traced throughout his career and those of us who love him will work tirelessly to prove him right.

Dick's years of hard work were recently recognized by the Eastern Section of the AAPG when, in September, he was the recipient of their I. C. White Award, recognizing a lifetime of contribution to advancement of the geosciences and the knowledge of the Appalachian basin. Dick's influence was demonstrated as he was widely quoted in the September 2001 issue of the *Oil and Gas Investor* in the article "Trenton-Black River."

Dick now resides in Charleston, West Virginia, with his wife of 31 years, June, and their three children, Elisabeth, Andrew, and Kathryn and their two dogs.

Citation—To Richard W. Beardsley, a visionary leader in the field of geology and geophysics, in recognition of his outstanding contribution to the profession and earth science exploration by virtue of his discovery and definition of hydrocarbon production from the Trenton-Black River formations that redefined the Appalachia basin.

W. Henry Harmon

Response

Thank you so much. During my 30 years as an AAPG member, I have used

the organization for personal enrichment, and to share ideas with those I otherwise would not have been able to interface with. My thanks go out to the local Eastern Section, and to many members who have passed on to their greater geologic awards. There is nothing new under the sun, and the accumulation of data led to the discoveries in the Trenton-Black River by analogy, and the process of elimination, combined with a passion for exploration, and at some times, abstinence. From the time I started to work for Columbia, I believed that major reserves were present in the Middle Ordovician Carbonate section of the deeper basin. Using both historic geologic records, and armed with proprietary seismic data, I set out to identify the habitat of potential reservoirs. I was convinced by Leon Harris at the U.S. Geological Survey in Knoxville, that indigenous sourcing was present in the carbonate units themselves, and his wife Anita, working on Conodont alteration, showed me that the maturation of most of the basin was still in the gas window. George Davis of Sun Oil showed some examples of plays Sun had made in adjacent basins, and the play was underway. Much of the old data reviewed was in *AAPG Bulletins* dating back to 1936, and a smattering, with really nifty narratives from an 1890 publication by Orton. One quote that stuck in my mind referred to the Tiffin Pool in Seneca County, Ohio, where, addressing the Trenton discoveries Orton said, "The flares or flambeaux were so intense the chickens died from lack of sleep." The hydrothermal nature of the reservoir was unexpected. The original model of the anticipated reservoir was deemed to have been created by seepage refluxation. Many surprises and failures led up to the original discovery, and with some indication of limited reservoir on the initial discovery, I expressed concern to Gerald Friedman about the reservoir. I had been talking with Gerry for years about the exploration concept after taking his course on carbonates. Gerry said, "Dick, don't worry about it, you've proven there is gas there and it will be developed."

The honor is shared with all those who encouraged our exploration group to keep searching, and to utilize failures to enhance our knowledge of the basin. Our philosophy was to learn more from dry holes than successful wells.

I started collecting rocks in seventh grade, and was exposed to great diversity living in the terminal moraine of a glacier in northwestern Pennsylvania, and to this day encourage, mentor, and teach geology to grade school age children.

Having changed majors in college more times than I can count, I was advised to major in something I enjoyed, and although there was not a demand for geologists in 1967, I changed my major to geology and was very satisfied with the major at Penn State. The field geology portion of the major at Red Lodge Montana at Yellowstone, Big Horn Research Association field camp, was possibly the best time I've ever had in my life.

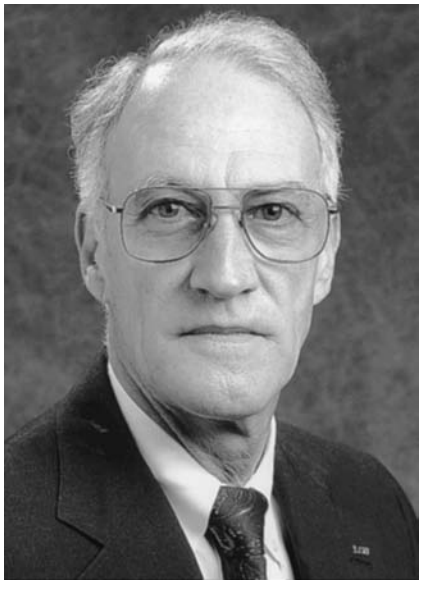
I joined Chevron Geophysical in 1970, and was trained in acquisition and processing of seismic data. I loved the concept of being able to remotely acquire data, and do structural and stratigraphic interpretations from reflection seismic. My curiosity caused me to leave Chevron, and move back to the Appalachians to interpret data with my new-found skill set. At the time I started work for Columbia, state-of-the-art geophysics was still 100 percent dynamite. As time progressed the wonderful new products in electric logging and geophysical acquisition spurred me forward, but none so much as the entrance of personal computing in the work place.

I really enjoy exploration, and its associated ups and downs, but the real value is in creating new exploration models and concepts through synergies with colleges and universities. Many master's degrees and Ph.D.s in geology were proposed and financed in part by Columbia, and the work products assisted the candidate, the university, and our company. New exploration concepts are limited only by the mind of the explorer. There always will be dry holes drilled when new concepts are tested, but we have to have the fortitude to stick with it.

Whichever part of earth sciences intrigues you, stay the course, read, inquire, participate, and love your work.

I wish to give special thanks to my biographer, W. Henry Harmon, without whose belief and encouragement, the new discoveries would not have been made.

Richard W. Beardsley



JAMES M. COLEMAN
Honorary Member

Jim's geological odyssey has taken him from the swamps and lakes of the Atchafalaya Basin of the central Louisiana coast, to modern deltas throughout the world, and ultimately as cochief scientist of the Deep Sea Drilling Program Leg 96, to the Mississippi Fan in the depths of the Gulf of Mexico. During this progressively seaward journey, his publications, which number more than 150, have provided the geological community with an enlightened understanding of ecological changes in paludal environments, cyclic sedimentation in the Mississippi River deltaic plain, diapiric structures (mudlumps) associated with the Mississippi River delta, major river systems and their deltas,

the variability of modern deltas, channel processes and sedimentation in the Brahmaputra River, sediment instability and mass movement processes in the Mississippi River delta, mass wasting on continental margins, lacustrine deltas, dynamic changes and processes in the Mississippi River delta, models for deltaic exploration, seismic responses related to sea level cycles, deltaic wetlands and wetland loss, and the Mississippi Fan. As a result, following in the footsteps and tradition of his "geologic gods" H. N. Fisk, Richard J. Russell, and James P. Morgan, Jim has greatly expanded our understanding of deltaic systems and in the process, achieved worldwide recognition for his contributions from his peers.

Born in the small town of Vinton in southwest Louisiana, Jim's love of the coastal wetlands eventually led to a career in geology. While attending Louisiana State University as a chemical engineering major, Jim took an elective course in geology that included an optional field trip to the mouth of the Mississippi River. Because of that experience, he quickly changed his major and went on to earn a bachelor's degree (1958), master's degree (1962), and doctorate (1966) in geology at Louisiana State University. As a graduate student, Jim was offered a part-time job with the Coastal Studies Institute and that opportunity subsequently led to permanent employment and a remarkable career at Louisiana State University that continues today. During his association with the Coastal Studies Institute and Louisiana State University, Jim has not only contributed as a scientist and teacher but has served as director of the Institute, head and chair of the School of Geoscience and Department of Geology and Geophysics, and executive vice chancellor of the University.

Jim is a soft-spoken, down-to-earth southern gentleman who has no airs or pretenses. He can bring order and understanding to complex problems and has the unique ability to convey his ideas and knowledge to individuals from all walks of life. Consequently, he is an excellent teacher, who, during his career, has not only been successful in stimulating and educating students, but professional geoscientists, engineers, and management personnel as well. A blind student in his introductory geology course once told Jim that she couldn't see the fossils but could visualize them from his descriptions. For many years he has contributed to AAPG's Education Program by conducting field seminars on the Mississippi River delta, making films on deltaic sand bodies and deep sea sands, and serving as a Distinguished Lecturer. And since the late 1960s, he has led annual delta seminars for many oil companies, including the delta portion of Mobil's Sandstone Seminar from 1973 to 1999.

Presently the holder of a Boyd Professorship and the LaBorde Chair of Marine Sciences, Jim's contributions also have been recognized through the many other awards bestowed upon him. These include the SEPM Shepard Award for excellence in marine geology, AAPG's A. I. Levorsen Memorial Award, the Gulf Coast Association of Geological Societies' Outstanding Educator Award, and he was named an Honorary Member of the Gulf Coast Section of SEPM. In addition, Jim has received Russia's Kapitsa Gold Medal of Honor for outstanding contributions to the field of petroleum sciences, has been elected a member of the National Academy of Engineers, has been elected a member of the Russian Academy of Sciences, has been designated an "Ocean Great" by the Office of Naval Research, has been named by President George H. W. Bush to serve on the Presidential Commission on Ocean Policy, and is a Fellow of the Geological Society of America.

Jim's success in life is not only measured by his professional achievements and the recognition he has received, but also by how he is regarded by his family and friends. In 1958 when he received his bachelor's degree, Jim married his high school sweetheart Travis Alexander. Since then, Travis has been a constant source of support, and she and Jim have provided a stimulating and nurturing environment for their son Thomas, who is an engineer, and daughter Sarah, who works in public relations. Together they have proudly shared in Jim's accomplishments. Likewise, Jim's colleagues, his friends, and the students who attended his delta seminars, all realize what a special person he is, and the moments and the camaraderie we have all shared with him, whether wading in a snake infested backswamp, struggling waist deep in the mud of a crevasse splay, seeing the magnificence of the Mississippi River delta and the Chandeleur Islands from a helicopter, walking from the distributary mouth bar at the end of South Pass to a mud lump, or listening attentively to him for a whole day in a lecture room in New Orleans while he passionately discussed deltas, will remain with us all our lives. Today all of us share in celebrating this moment and the honor that is being bestowed upon a most deserving and special person—James M. Coleman.

Citation—To James M. Coleman in appreciation of his fundamental contributions to the understanding of deltaic systems and a remarkable ability to convey his knowledge to others.

Richard J. Moiola

Response

What an honor to be recognized by AAPG , the world's largest geological society, for an honorary life membership. Forty years ago I became a student member of the AAPG, a decision I have benefited from in so many ways. In 1962, I could not have envisioned that one day I would be receiving this honor.

My education at Louisiana State University did not begin in the geological sciences. Having been raised in a very small town in southwest Louisiana (Vinton), few high school graduates attended college and those who did generally went into the engineering profession because of the large number of chemical plants nearby. I was aware of the oil industry, as one of the early oil

fields in southwest Louisiana (Ged oilfield) was only a few miles from my home. I used to wander among the old wooden derricks and miles of belt-driven pumping units following my father who was a roughneck for Gulf Oil Company. But, like some of my classmates, I wanted to become a chemical engineer, so I attended Louisiana State University to major in this discipline.

In my second semester of my sophomore year, I took Geology 1 as an elective. James P. Morgan taught this course and one day he announced to the class that he was taking a group of graduate students to the mouth of the Mississippi River delta over a weekend, and asked if anyone in the class wanted to attend. I volunteered for what would be an eye-opening trip. I was exposed to a profession where I could get out into the field—the coastal marshes—the same environment where I had enjoyed so many hunting trips with my father. I immediately changed my degree plan to major in geology even though it meant losing nearly a whole semester of course work. Little did I know at that time that I would spend the remainder of my career in these fascinating wetlands.

When I received my B.S. degree in geology in 1958, I wanted to get a job in the petroleum industry, but as fate would have it, the industry was in a slump and no jobs were available. A. E. Sandberg, chairman of the department, took me under his wing and offered me a graduate assistantship. I also had a part-time job in the Coastal Studies Institute as a sample washer, which gave me the opportunity to visit the marshes of coastal Louisiana with Jim Morgan, Richard Russell and William McIntire. These mentors, and many other faculty members such as Grover Murray (past president of AAPG), Clay Durham, H. V. Andersen, and several others were exciting to be around. I believe my relationship with these great soft-rock geologists was the foundation for my future career.

My first interaction with the AAPG was when another student and I decided to present a paper before the annual meeting in Houston, Texas. The paper outlined recent sea level changes as determined by the dating of peat deposits in the coastal marshes. We were trying to separate eustatic sea level rise from subsidence in the Gulf Coast. My colleague and I visited with Richard Russell for advice in writing our abstract. He used at least two or three red pencils to correct our 250-word abstract; this nearly shattered my ego, but was probably the best lesson I have ever had in professional writing. Our paper was accepted and I proudly presented it before the largest audience I had ever spoken to.

At the end of my presentation, a rather large man stood up at the question period and proclaimed, "Young man, I am from Esso Production Research and all of our studies on subsidence indicate that what you have presented is in gross error . . . " and went on to ask a few questions. I immediately knew that my geological career was over, for the person asking the question was H. N. Fisk, one of the founders of Gulf Coast geology. However, nearly a month later, I received a call from Fisk, and he asked if I could visit with his scientists at the Houston Research facility and discuss our findings. Thus began a long career of interaction with the petroleum industry research laboratories, one that set me upon a lifelong career of using the studies of modem sediments as analogs for ancient depositional environments.

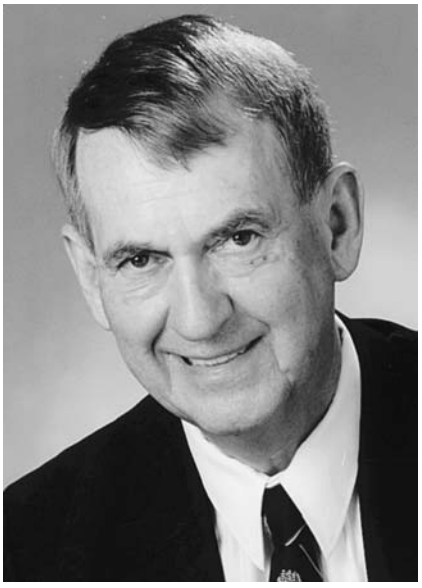
As my career progressed in the study of modem depositional environments, I became involved in running continuing education seminars for the industry. These were extremely exciting to me, as I learned from the participants the lingo of the petroleum industry and how to apply my studies to help in deciphering ancient analogs. These industry seminars led to my involvement with AAPG continuing education seminars. I don't know how many of these seminars my colleagues and I ran for AAPG, but I still have geologists come up to me to reminisce over an event that occurred during one of the seminars in the distant past. I have made life-long friends through my participation in these seminars and I know that I benefited far more from them than the participants.

I want to thank Richard Moiola for his hard work in being my biographer and for the kind words. Dick has been a trusted colleague and a good friend during my career and I have thoroughly enjoyed our interaction during the many years of running the Mobil Sandstone Seminar with him and his colleagues. All the successes I have enjoyed during my geological career I share with my coworkers at the Coastal Studies Institute; they have indeed been my foundation.

My wife, Travis, and children, Tom and Sarah, have been extremely supportive of my numerous trips that kept me away from home, often for long periods of time. I thank them for putting up with me for using our family vacations as geological excursions. I can never forget the kids' remarks, "Dad, why are you photographing that ruler again."

Finally, I thank all my friends who have made this award possible and thank AAPG for this wonderful honor.

James M. Coleman



PATRICK J. F. GRATTON
Honorary Member

Honorary membership is awarded to those members who have distinguished themselves by service and devotion to the science and profession of petroleum geology and to the Association. Patrick J. F. Gratton's career epitomizes the definition for a recipient of this most prestigious award. He has over 42 years of diligent service and devotion to both his profession and our Association. All good leaders have certain qualities that define their role. Pat's more admirable qualities include his strong dedication to lead with a communicative and open minded spirit, and an intellectual willingness to help and encourage his professional peers and the student of geology to become better.

Pat was born in Denver, Colorado, in 1933, and grew up in Roswell, New Mexico, where he graduated from high school in 1951. His father, an English instructor and head of the department at the New Mexico Military Institute, instilled in Pat a strong affinity for higher education. During his formative years, the family spent summers in Colorado, which gave Pat the opportunity to observe spectacular geological features. After attending the U.S. Coast Guard Academy for two years, Pat returned to the southwest to study geology at the University of New Mexico, where he earned a B.S. degree in 1955 and M.S. degree in 1958.

While attending the university, Pat met the wonderful Jean Marie McKinney, and upon graduation they married. Jean Marie has been an inspirational, intellectual, supportive, and globe trotting companion. She has excelled as a most gracious hostess for a multitude of geologic and business gatherings at their lovely home in Dallas. Together they have raised four children, Sara, Vivian, Lizabeth (deceased), and Patrick, and are proud grandparents of Vivian's two children who reside in California.

Pat's early career experience began with the Utah Construction and Mining Company as a minerals geologist exploring for uranium and iron ores in the Rocky Mountains while still a graduate student. Pat was employed by Shell Oil Company from 1957 to 1962 where he learned how to creatively apply his science. He received valuable training and work experience in New Mexico, west Texas, and east Texas in their Roswell, Houston, and Tyler offices. In 1962, Pat accepted the opportunity to become assistant to the exploration vice president, Norman C. Miller, of Delhi-Taylor Corporation in Dallas. With Delhi-Taylor, Pat was able to observe and learn the business side of oil and gas exploration and gained international experience working on Canadian and Australian projects. When Delhi-Taylor sold the company in 1964, Pat became a consulting geologist, and from 1966 to 1970 was an associate with Eugene E. Nearburg. During this association, Pat learned how to be independent and in 1970, struck out on his own. Due to his strong background in petroleum geology and his learned entrepreneurship, Pat has been very successful in acquiring, exploring for, and developing oil and gas properties

Pat's love for his science and profession has inspired him to become actively involved in a multitude of professional and industry related organizations, in addition to AAPG. They include the American Institute of Professional Geologists, Society of Petroleum Engineers, Texas Independent Producers and Royalty Owners Association, Independent Producers Association of New Mexico, Society of Independent Professional Earth Scientists, Sigma Gamma Epsilon, Phi Kappa Phi, Petroleum Engineers Club of Dallas, and the Dallas, Houston, Roswell, and New Mexico Geological Societies. In 1989, the University of New Mexico honored Pat as the Centennial Distinguished Alumnus in Geology, and in 1992, he was elected to the Board of Directors of the University of New Mexico Foundation. Pat is also a director of the Caswell Silver Foundation, which supports the Earth and Planetary Science Department.

Pat's dedication to the Dallas Geological Society is long and continuous, having served on several committees and currently in his fifth term as a delegate to the House. He has chaired the Continuing Education Committee, 1974–1975, the Public and Governmental Affairs Committee, 1998–1999, and the Dallas Delegates Committee, 1997–1998. Probably his most important contribution to the Dallas Geological Society is his recognition and advancement of fellow members who are actively involved in the affairs of the Society and who have the potential to become future leaders in AAPG. The Dallas Geological Society has honored Pat with the Public Service Award in 1985, the Professional Service Award in 1992, and Honorary Life Membership in 1999.

Pat's involvement in the Society of Independent Professional Earth Scientists (SIPES) has been extensive, having served on both the local and national levels as editor of the newsletter, vice president, president, director, and vice president of the SIPES Foundation. He received their Outstanding Service Award in 1990, and Honorary Member Award in 1998.

Pat joined AAPG in 1960 and has since become an active member of the Division of Professional Affairs (Certified Petroleum Geologist #162), Division of Environmental Geosciences, and

Energy Minerals Division. He initially became involved in AAPG affairs by serving as vice president of the Southwest Section in 1976–1977, and in 1978, he was elected to the House of Delegates and has been actively involved ever since. He has served on the Constitution and Bylaws Committee, 1991–1993 (chairman 1992–1993), International Participation Committee (chairman 1994–1995), Newsletter Committee, 1997–2002, and the ad hoc House Operating Efficiency Committee (chairman 1999–2000).

In 1996, Pat was elected chairman of the House of Delegates where he played a lead role in streamlining and reforming the legislative body of AAPG. Important accomplishments during his term include (1) restructuring of the House of Delegates offices and responsibilities in order to improve continuity, communications, and effectiveness; (2) creation of three new standing committees; (3) reviving the *House of Delegates Newsletter*, which, as a result, has become a vital communication tool for the delegates and other AAPG entities; (4) encouraging compilation of the history of the House of Delegates; and (5) initiating and endorsing the recommendation from the ad hoc Campaign Practices Committee to allow officer candidates to conduct a more visible and communicative campaign for the benefit of the membership. In 2000, he was greatly honored by being named the first recipient of the House of Delegates Honorary Member Award.

An early member of AAPG's Division of Professional Affairs, Pat served as president-elect, 1988–1989, and president, 1989–1990. During his tenure, he successfully advanced professionalism amongst the membership and initiated the Armistice Day meeting of the Division of Professional Affairs, American Institute of Professional Geologists, Association of Engineering Geologists, Society of Independent Professional Earth Scientists, and AAPG, which cooperative effort led to a model geoscience registration bill during 1988–1989. In 1991, Pat was honored by the Association of Engineering Geologists (AEG) for his effort in forming the alliance, with special recognition as, "A diplomat and innovator who greatly advanced the professional practice geology." Pat has remained active by serving on the Long Range Planning Committee, 1991–1996, Governmental Affairs Committee, 1992–2002, and the Coal Certification Committee Cochairman, 1993–1995. The Division of Professional Affairs awarded him Honorary Life Membership in 1993.

Probably stemming from his academic heritage, Pat has been one of the most involved participants on the Visiting Geologists Program (VGP). He volunteered in 1981 and has served on the program for 18 years. Following 25 campus visits, his commitment continues having been vice chairman from 1999 to 2000 and chairman during 2000–2002. His input to professional career planning for the student of geology has been one of his most admirable contributions to AAPG programs.

Pat has successfully served on AAPG's Advisory Council while president of the Division of Professional Affairs, and on the Executive Committee while chairman of the House of Delegates. He also served on the Division of Environmental Geosciences Advisory Board, 1993–1996. He became a Trustee Associate in 1996. In 1998, AAPG presented him with the Distinguished Service Award.

In my opinion, Pat's most challenging and deserving honor was being selected to run for president-elect of AAPG in 1998–1999. His willingness to run was a clear statement of his strong commitment to our Association, and Pat's campaign, conducted with honor and dignity, exemplified his continuous effort for open communication.

Pat is one of our most involved and dedicated members with leadership qualities of commitment, integrity, wisdom, patient ingenuity, professionalism, and strong-willed character, all of which have contributed so much to the positive evolution of AAPG during the past 42 years. He is a valued asset to the geological community and profession, and I am very proud to belong to an organization that has Patrick J. F. Gratton as an Honorary Member.

Citation—To Patrick J. F. Gratton, whose enthusiastic fervor for geology has led to a successful career in the petroleum industry, inspired his peers, enlightened students, and benefited AAPG.

Tom Mairs

Response

I appreciate this honor and I thank all those who were involved in my selection. It is a real "upper" to be named Honorary Member, but is very humbling, too.

Growing up in the Land of Enchantment and the Centennial State was very beneficial to developing geology as a strong interest. A lucky geology course taught by a petroleum engineer at Roswell High School gave me an early scientific appreciation for the incredible landscapes of New Mexico and Colorado.

Two years at the United States Coast Guard Academy with voyages on the square-rigged Eagle to Canada, Europe, Canary Islands, and Bermuda added to my geologic curiosity. The at-the-time unappreciated actions of upperclassmen and my reluctance to give up Western ways encouraged my move from the United States Coast Guard Academy to the University of New Mexico.

For me this was a very beneficial change and I became a geology major then and there! I had the mistaken impression that mining geologists and mineral explorationists did more geology than petroleum geoscientists. So, I focused more on the hard rock side of the science. As a result, I worked summers mostly for mining companies.

Field living conditions, personnel practices, and less mineral geologic research encouraged a reconsideration of career paths. Accordingly, I began interviewing oil companies. So, when I received a telegraph offer from Shell while serving in the United States Army, I was very happy to accept.

Shell cooperated while I finished my master's thesis and, as did almost all their entry geologists, I took the famous training course. Shell research was mind opening and provided a terrific second or third story to my education. Work in the Permian basin and east Texas was stimulating to this young geologist.

However, after five years with Shell, an opportunity to be closer to management attracted me to Delhi-Taylor Oil Corporation. What a change! Lots of responsibility, very little supervision, and big areas in Canada and Australia to work on. Two years later though, Delhi-Taylor was sold and I became a consultant.

This sometimes synonym for underemployed was a challenge, but opportunity was around every corner, e-log, and lease! Time spent working for Nearburg gave me more appreciation for the demands of the industry. A chance to acquire producing properties in Talco was too good to pass up. As a result, over a short time I became operator of 30 wells (mostly strippers) in that heavy oil, high-water cut field. Dealing with landowners, partners, regulatory agencies, and so on, created more challenges and learning experiences, not all positive. Being an executive roustabout, geologist, completion specialist, landman, bookkeeper, promoter, and so forth, was relieved quite a bit with the formation of home oil company. At least that was the name given my four dear children working in the office! (Two have moved on to other employment.)

With the first oil price spike in the early 1970s, there was a chance to sell out and broaden my geoeconomic activities. This resulted in my participating in quite a few wells with co-owners, mostly in east Texas, Permian basin, and mid-continent. That style of business continues today with activity in New Mexico, Texas, Oklahoma, and Colorado.

This career, which has had lots of twists, turns, and bumps, was highly dependent upon geoprofessional organizations and some awfully fine, helpful folks.

It began with Patrick H. Gratton and Lorene Johnson Gratton. One parent, a stickler for intellectual and spiritual integrity, the other an artist mother who communicated by words, drawings, costumes, and style. It was helped by friendship and unheeded counsel from Joseph Coburn and Captain Eddie Roland who assisted when he made me an offer I couldn't turn down.

Sherman A. Wengerd instilled knowledge and enthusiasm and played perhaps an unwitting nongeologic role. This was because he made me very aware that a young elementary education major was scoring higher than I was in physical geology class. Heck, if you can't beat them, join them. (I married Jean Marie McKinney in 1955.)

Vincent C. Kelley showed me how much one could see in the earth through field geology courses (and others). Bob Murphy gave me a critical summer job and opened my eyes to Magnolia's successful seismic pursuit of the Silurian-Devonian.

Will Green and Fred Meissner were Shell mentors par excellence. Gerry Rolf (then Shell, too) helped me understand the Smackover, as did Steve Collins later when I needed a refresher. Bill LeMay got me an absolutely critical job and coauthored San Andres papers with me. Gene Nearburg put me on a long leash with his money. Don Hook and Jerry Ingles caused me to be more involved in AAPG. Charles C. "Sonny" Bankhead mentored and partnered me in the Society of Independent Professional Earth Scientists and deals.

John Howard provided excellent geologic counsel, put me in good deals, and joined me in others! Jim Gibbs was a repeated help in every facet of my life. Jim Bryant, who enjoyed United States Army basic training with me, gave me consulting jobs and almost turned me into a gas processing guy. Tom Mairs has been a reliable and supportive person in my career with our overlapping geological interests. To Tom and Kay, my thanks also for preparing the biography.

In AAPG there are too many more friends and associates to list whom I owe a debt of gratitude. The Association has been a critical factor in my career and frankly it is hard to imagine my geological and growing social development without AAPG. Thanks!

Patrick J. F. Gratton

RAUL MOSMANN
Honorary Member

Raul Mosmann has had a remarkable career as a petroleum geologist in teaching, in research and practice, and in corporate executive leadership. He was born on March 4, 1941, in Porto Alegre, Rio Grande do Sul, Brazil. Raul received his B.S. degree in geology from the Federal University of Rio Grande do Sul in 1962, and then went to Bahia as a geology instructor at the University of Bahia in Salvador. In 1964, he joined Petrobras and began an impressive ascent through the ranks of that important and great company. Raul is a consummate oil finder. Much of the considerable exploration success Brazil has achieved over the past 30 years was due to his substantial talents as a geologist and his ability to stimulate the best thinking and analysis from those associated with him.

From 1964 to 1971, Raul was a professor at the Petrobras Training Center in Bahia. During that time, he took

leave to pursue an M.S. degree in geology at the University of Texas at Austin, under the tutelage of professor Robert L. Folk. I first met him in my graduate class in depositional systems in 1968, and knew then he was an extraordinary fellow and scientist, a natural leader.

From 1971 to 1974 Raul took leave from Petrobras to be the Coordinator of Mineral Production of Bahia for the Secretariat of Mines and Energy, and in 1973 and 1974 he was president and technical director of Companhia Baiana de Pesquisa Mineral (CBPM) in Bahia. On his return to Petrobras in 1974, he joined the company's international unit, Braspetro, as general manager in Libya, where he served until 1977. He returned to Rio de Janeiro as a geologist in the Exploration and Production Division, but shortly was named general manager of Petrobras' Northern Exploration District, in Belem. In 1979, at 38 years of age, he assumed the number one position in exploration at Petrobras as general manager of the Exploration Department in Rio, serving in that position until 1985. Discovery of the two supergiant fields—Albacora and Marlim—were posted under his watch.

Raul returned to Braspetro in 1985 as assistant to the exploration and production director of Braspetro in Rio, and in 1987 was named general manager of Petrobras Norge A. S. in Stavanger, Norway. On his return to Brazil in 1990, Raul joined the Board of Braspetro, where he also served as exploration and production director and later as executive vice president of Braspetro. In 1991, he was appointed to the Board of Petrobras, serving as the exploration and production director on the Board and also serving on the Administrative Council of Petrobras. In 1997, he retired from Petrobras, winding up a most distinguished career with the company. Raul worked for a while as a consultant in Rio, but in 2000 he joined Esso Brasileira de Petroleo Ltda., E & P Division, as manager of Regulatory Affairs.

Raul has published several papers and internal company reports on the stratigraphy and petrography of sedimentary rocks in the Brazilian petroleum basins. He coauthored "Oil and gas potential of the Amazon Paleozoic Basins" in AAPG Memoir 40, and also a paper, "Foz do Amazonas areas—the last frontier for elephant hydrocarbon accumulations in the South Atlantic realm" at the second AAPG Pratt Conference.

Raul Mosmann has long believed that professional development and active involvement in professional scientific societies are important and fundamental to an effective explorationist. Not only is he a long time member of AAPG, but he has always encouraged explorationists working for him to be members and to be involved in professional affairs. He was a mover in organizing the Brazilian Association of Petroleum Geologists (ABGP) and its affiliation with AAPG. He was a member of the Executive Committee of ABGP from 1996 to 1999 and is the ABGP representative to the exploration and production technical committee of the Instituto Brasileiro de Petroleo (IBP) in which he has long been active. He is also a member of the Brazilian Society of Geology and the Rio de Janeiro Association of Professional Geologists.

In this Association, Raul served in the House of Delegates from 1994 to 1997, where he was a member of the International Participation Committee and the International Representation Committee. He was a member of the Technical Committee for the 1998 AAPG International Conference and Exhibition in Rio and served on the Advisory Council from 1997 to 1999. In 1998, Raul was a candidate for vice president. Since 1999 he has served as president for the Latin America International Region and as a member of the International Liaison Committee. He received a Certificate of Merit Award in 1997 and was given the Association's Special Commendation Award in 1998.

During Raul's tenure with Petrobras, Brazil was to increase its oil reserves substantially and to increase its oil production nearly fourfold. Much of this accomplishment was due to Petrobras' early and sophisticated understanding of rift and passive margin basin exploration, which led to major offshore discoveries, especially in the Campos Basin. Success has a thousand fathers, the saying goes, but the insights and exploration acumen of Raul Mosmann and the exploration staff he developed were fundamental to this significant achievement.

I had the great pleasure of knowing Raul when he was a graduate student at the University of Texas at Austin 34 years ago. When he returned to Brazil he was kind enough to arrange a visit for me to that great country. I was to return many times over the next three decades with the treasured experience of working with Raul and his associates at Petrobras and gaining firsthand knowledge of his outstanding intellect, his tremendous energies, and his complete dedication to the science and business of oil and natural gas exploration and development.

Raul has two sons, Paulo and Carlos, living in Rio, and one daughter, Ana Luiza, living in Dublin, Ireland. His family is enlarged by two stepsons, Pedro Henrique and Paulo Henrique. He is married to a delightful and thoroughly engaging lady, Marilda Rosado, who currently serves as general counsel to Repsol YPF in Brazil.

With Raul Mosmann's keen respect for AAPG, I know his election to Honorary Member is a source of high honor and pride to him, I also know the Association credits itself mightily by honoring a dedicated member and an outstanding geologist like Raul Mosmann.

Citation—To Raul Mosmann, for his exceptional contributions to the science and practice of petroleum geology, for his distinguished leadership as a corporate executive, and for his unstinting dedication to the profession of geology.

William L. Fisher

Response

When I learned that AAPG decided to name me an Honorary Member, my first reaction was of sincere surprise. I

had never expected such a high distinction that will include me in a selected group of persons who are part of the history of this association. I am greatly honored and humbled with this award, and wish to express my gratitude to the Honors and Awards Committee and to the Executive Committee.

My career as a petroleum geologist started in 1964, when I joined Petrobras, the Brazilian oil company. For 33 years this company offered me great opportunities to develop my experience, working both as an explorationist and as a manager, in Brazil and abroad, allowing me to get acquainted with different cultures and geological settings.

Some remarkable events had a strong influence in my professional life. After four years working in northeastern Brazil, I was selected to attend graduate courses in geology at the University of Texas at Austin, working with Robert Folk. It was a turning point to attend Folk's sedimentary petrography courses, where all his concepts were brilliantly exposed. Moreover, he helped me to develop my observation skills, so important to interpreting the history recorded in the rocks.

It was also during my stay in Austin that I attended William Fisher's graduate class in depositional systems. It was the beginning of a long-lasting friendship and of a fruitful relationship between the University of Texas, the Bureau of Economic Geology, and Petrobras. During the 1970s and the 1980s, many Brazilian geologists and geophysicists attended graduate courses at the University of Texas, and also worked in joint research projects involving the Bureau of Economic Geology and Petrobras, to study the petroleum geology of Brazilian sedimentary basins.

After returning from Libya, my first working assignment abroad, I started to work under the leadership of Carlos Walter Marinho Campos, one of the greatest Brazilian geologists, and an AAPG Honorary Member. It was the end of 1979, immediately after the second oil shock, and crude oil prices had increased to unthinkable levels. Exploration of offshore Brazil had been successful after five years, and some oil fields had been found. However, they needed to be developed. Brazilian oil production was barely at 150,000 barrels per day, coming mostly from mature onshore fields. At the same time, the country was importing huge amounts of crude oil to supply the 1,000,000 barrels needed for daily consumption. Brazilian hard currency reserves were being depleted rapidly to pay the crude oil imports. Petrobras, with the support of the Brazilian government, decided to implement a plan to increase domestic oil production to 500,000 barrels per day in five years. Someone has said that to be successful you need to be at the right place and at the right moment. I was lucky to be there at that opportunity. Carlos Walter appointed me the general manager for exploration in Brazil. From 1980 to 1985, Petrobras performed one of the largest exploration work programs in its history, while developing at the same time, known reserves. To reach the production goal, it was necessary to find new reserves in order to increase and sustain the intended output levels. Many new oil and gas fields were discovered both onshore and offshore in several sedimentary basins, although most of the reserves were found offshore in Campos Basin. In 1984, before the end of the five-year plan, Brazil was producing more than 500,000 barrels per day. More than that, one large (Albacora) and one giant (Marlim) oil field were discovered in deep waters in 1984–1985, opening a new promising exploration frontier.

This accomplishment was the result of teamwork, in which I took part together with many other devoted explorationists. I wish to share this honor with them.

An active member of AAPG for more than 20 years, I have served both at the House of Delegates and the Advisory Council, as well as participating in several AAPG committees. For the last two years I have been the president of AAPG's Latin America International Region. While managing Petrobras exploration, I had the opportunity to advise younger geoscientists, working under my supervision, to join AAPG. I have also given them support and encouragement to participate intensively in the activities organized by the Association, making technical presentations at the conventions and publishing papers in the *Bulletin*. Active participation of membership is rewarding for any one.

AAPG has given me back a lot. Through my activities in AAPG, I have made good friends, established valuable professional contacts, and met some of the finest men and women in our profession.

I need to thank also my professional mentors. To avoid any omission I will not name them, but they certainly know who they are. My AAPG mentor is William Fisher, one of my best friends, who has been supporting and advising me for many years. I am honored and grateful that he agreed to be my biographer.

The final and most special thanks go to my family for their continuous support during the ups and downs of my career.

There is still a lot to be done. I hope to continue serving AAPG for many years, to try to give back a part of what it has given me.

Raul Mosmann

EDWARD B. PICOU, JR.
Honorary Member

Edward B. Picou, Jr., consulting micropaleontologist, has a long and distinguished career in Gulf Coast exploration and production activities. During that career he has been, and continues to be, an active and supportive member of AAPG.

Ed was born in Baton Rouge, Louisiana. He received a B.S. degree in geology from Louisiana State University in 1955 and in that year joined AAPG. On his discharge from the army after service in Korea, Ed planned to pursue a master's degree, but his plans were sidelined by an encounter with Shell Oil Company recruiters on the Louisiana State University campus. During the 1960s, Ed was active in developing and applying local biostratigraphic zonations for Cenozoic exploration and development in south Louisiana and the offshore Gulf of Mexico. Ed's prodigious memory for fossils and their stratigraphic context are legendary at Shell. He played an active role in the development of the offshore Pleistocene play during the 1970s. Within Shell, and in the geologic community at large, Ed is a champion for the application of paleontology to hydrocarbon exploration and exploitation efforts. Ed was promoted in 1989, to exploration consultant, Shell Exploration's highest technical rank. Despite his supervisory responsibilities, Ed always carved out time to analyze well samples at the microscope. This allowed Ed to retire from Shell in 1991 after 34 years and yet remain active in consulting for Gulf Coast exploration and production companies.

In the 1978 *Transactions* of the Gulf Coast Association of Geological Societies (GCAGS), Ed published a much cited paper with the late Doris M. Curtis entitled "Gulf Coast Cenozoic: A Model for the Application of Stratigraphic Concepts to Exploration on Passive Margins." This paper is a modified form of an oral presentation Ed and Doris made at the 1976 AAPG Annual Meeting that was also selected as one the best of AAPG papers for presentation at the 1977 meeting of the Society of Exploration Geophysicists.

In his ongoing service to the profession, Ed has often lent his talents to AAPG. In 2002, he completes a two-year term as treasurer of our Association. He has twice served on the Convention Coordinating Committee (1975–1976 and 1984–1985) both in association with highly successful annual meetings held in New Orleans. Ed has also served three terms as a member of the House of Delegates (1980–1983, 1991–1994, and 1999–2002). In 1994 he served as chairman of the Rules and Procedures committee. His service to our society was recognized in 1999 when he received AAPG's Distinguished Service Award. A member of the Division of Professional Affairs, Energy Minerals Division, and Division of Environmental Geosciences, Ed is also a Certified Petroleum Geologist.

Ed participated in the Correlation of Stratigraphic Units of North America Project (COSUNA) from 1976 to 1982 supplying a broad knowledge of Gulf Coast stratigraphy to the effort. This expertise was again called upon in service of the profession for the Gulf Coast Section of SEPM's Taxonomic Equivalency Project. Ed coordinated the work of some 25 to 30 micropaleontologists documenting the key foraminifera used by the various companies and consultants in Oligocene through Pleistocene strata of the northern Gulf Coast basin. The 1999 publication, *Gulf of Mexico Basin Biostratigraphic Index Fossils*, is a Rosetta stone for the formerly proprietary company zonations.

A member since 1960, Ed has been very active locally in the New Orleans Geological Society (NOGS). Following many years of diligent committee work, Ed was elected president of NOGS in 1992, and director in 1996. He served as editor of the monthly NOGS LOG from 1994 to 2001, and was vice chairman-Technical for the 1997 Gulf Coast Association of Geological Societies meeting in New Orleans. Recognizing its potential, Ed became an early evangelist for the *AAPG Bulletin* on CD-ROM and now on the World Wide Web.

Ed has played a key role in Gulf Coast paleontology, serving as mentor to a whole generation of Shell micropaleontologists. Ed is highly respected for his knowledge of Gulf Coast stratigraphy within Shell and the geological community at large. In January 2001, Ed received a Meritorious Service Award from the Delta Chapter of the American Petroleum Institute. On that occasion he reflected on this often undervalued discipline in a talk entitled, "Biostratigraphy—An Old Tool Still Needed in the Oil Patch."

Ed Picou is a true gentleman, always willing to lend a hand to a good cause. At a time when many would be content to sit back and let others do the work, Ed has remained incredibly active. It is entirely fitting that he be named an Honorary Member by the AAPG.

Citation—To Edward B. Picou, Jr., in recognition of his tireless service to AAPG, the profession of petroleum geology, and the science of biostratigraphy.

Brian J. O'Neill

Response

I am both honored and humbled to be named an Honorary Member in

AAPG. First, I thank my biographer Brian O'Neill who, for a second time for AAPG, accurately captured many activities of my career. I also thank the New Orleans Geological Society for nominating me for this award and to the Executive Committee for approving my selection, of course with my abstention.

In January 1955, while a student at Louisiana State University, I joined AAPG as a Junior Member. As I recall, my sponsors were Grover E. Murray, Clarence O. Durham, and Adolph E. "Sandy" Sandberg. At that time I had little concept of what AAPG was all about, and certainly it never entered my mind that I would eventually be an officer of the Association and awarded an honorary membership.

As I fondly look back at those university years, I realize how lucky I was to have had such great teachers and mentors. When I arrived on the Louisiana State University campus in the fall of 1949, I thought I would major in chemical engineering. In that first semester I chose to take physical geology as an elective. That one course changed the direction of my life. The course was taught by Henry V. Howe, the founder of the of the geology department. If there ever was a charismatic lecturer, he was the type locality. For a youngster who grew up on the latest Pleistocene terrace just eight miles from the university, Howe had me spellbound with color slides of real rocks from exotic places. Needless to say, I changed my major in the spring semester.

A year or so little later, Clarence O. "Clay" Durham created a course identified in the curriculum catalog as Geology 61. This was a field trip course, where on suitably long weekends, Durham would plan trips to visit outcrops in neighboring states, from Texas to Alabama. He gave us a true appreciation for field geology. Clay was ably assisted both in the field and classroom by Charles I. "Ike" Smith. Ike was Clay's assistant in structural geology and was the one who showed me how to solve three-point problems swiftly. They were a great team.

In the spring semester of 1955 I enrolled in Grover E. Murray's Geology 106, which was titled Gulf Coast Geology. This was the semester Murray began work on his epic volume *Geology of the Atlantic and Gulf Coastal Province of North America*. Before he began each lecture he would place a tape recorder on the table at the front of the lecture room. Afterward, each lecture was transcribed and these formed the original basis for his long out-of-print, yet often-cited book. Grover also taught me the value of literature research, something that has helped me during my career.

The one professor who had the greatest impact on my career was Harold V. Andersen. "Doc" Andy took over teaching micropaleontology from Howe a year or so before I took the course. I seemed to excel with these tiny fossils and, before too long, Doc Andy was suggesting I pursue a career with a petroleum company in this discipline. Concurrent with receiving my B.S. degree in January 1955, I also received my orders for a two-year hitch in the United States Army. Before leaving for the army, I interviewed several companies, one of which was Shell Oil. The gentlemen from Shell who interviewed me in the fall of 1954 were Jack K. Larsen and J. Frank West. Little did I realize it then, but two years later I joined Shell on September 23, 1957 in their Baton Rouge office. At this time, Frank West, who was the New Orleans area paleontologist, was recovering from a detached retina operation. Frank set me up in his outer office and had me examine deep wildcats in which he was keenly interested. After working directly with him for almost two years I had gained a significant amount of subsurface knowledge of south Louisiana and, most importantly, learned his techniques. By 1960 I was working in the fledgling offshore exploration division in New Orleans and, as I recall, the first offshore lease sale I participated in was Sale # 10 in March of 1962. In this sale, Shell picked up over one-half-million acres. After this sale, our activities became an ever-increasing upward spiral. It was a great experience to be involved in Shell's offshore activities almost from the beginning on the shelf to the drilling of successful wildcats in the deepwater areas. After retiring from Shell in 1991, while visiting Andy, he told me his biggest disappointment in me was that I did not stay at Louisiana State University for a Ph.D. and take his place on the faculty teaching micropaleontology. I considered that quite a compliment.

Although I was always heavily involved with Shell activities, I was fortunate to have had the counsel of such wise folks as Doris Malkin Curtis, Jules Braunstein, and James A. Hartman. They convinced me that I should become active in my professional organizations. Each told me that if I chose not to do so, I would be missing an important and valuable career experience. Taking their advice, I soon took on duties with our local society and from that point on I discovered I could easily do both; for example, handle my Shell obligations and participate in many great geology related organizations. Of course, having an understanding management that actually encouraged these activities helped tremendously.

I believe the opportunity to work with so many great professionals from industry, academia, and government has clearly been the activity I will always cherish. Not only working with my fellow geologists but getting to know them as friends and colleagues. This has been an extremely enriching experience.

In closing, I again express my appreciation to the Association for naming me an Honorary Member.

Edward B. Picou, Jr.

PETER R. ROSE
Honorary Member

Early influences and decisions have shaped the man and his career. In writing this citation for Peter Rose, it is necessary to get a measure of the man.

Pete developed his love of Texas and the West as a boy in Austin, on the family ranch in Kimble County, and from four prior generations of Texian ancestors. Those roots have kept him grounded, with frontier attributes of energy and purpose, while retaining a sense of romance about the West. Love for the land and for Texas have always drawn him back. His home in Austin has allowed him to travel the globe in his consulting business, but his first love and his greatest contentment is time spent on his El Segundo Ranch near Telegraph in the Texas Hill Country. Pete is a romantic. He is deeply interested in frontier history, has written a western novel and, in many ways, combines the better qualities of Gus and Call, from Larry McMurtry's *Lonesome Dove*.

Rose's key life decisions have been: (1) his choice of the University of Texas for B.S. and M.A. degrees; (2) to work for Shell Oil Company where he was schooled in the exploration arts and sciences; (3) his choice to go back and get a Ph.D. at the University of Texas rather than take his guitar to Nashville and become a country and western singer; (4) as an independent consultant to teach at the corporate level (rather than as an academic), and hone those skills on which he has since built a very successful career; (5) to marry Alice Haldeman Reid (probably his most important decision); and (6) to create, build, and manage the industry's most prominent consulting company for integrated E & P risk management.

Pete's contributions to the profession, to the industry, and to AAPG are remarkable. He edited *Guiding Your Career as a Professional Geologist* published by AAPG's Division of Professional Affairs in 1993. Pete's advice in this publication comes from some of his own background, which exemplifies professionalism, for example, (1) to be highly accomplished in some specialized occupation; (2) to maintain high standards of knowledge, work performance and conduct; and (3) to be accountable for the work done. Another of Pete's favorite themes is mentoring—giving back to our profession in the most direct way. He has written and published on mentoring but more importantly, he has mentored numerous younger professionals throughout his career. To anyone involved as an expert witness, Pete's contribution has been to edit the Gulf Coast Association of Geological Societies publication *Geosciences in the Courtroom*.

He has over 50 publications. In the 1960s and 1970s they dealt chiefly with Lower Cretaceous carbonates of the Edwards Group of Texas, founded on his Ph.D. dissertation (University of Texas Bureau of Economic Geology Report Inv. 74), which set up the stratigraphic architecture underpinning all subsequent Edwards work, key to understanding and managing this essential regional aquifer and reservoir. Starting in the mid-1970s, his research and publications broadened to other carbonate settings in the western United States and Holocene depositional environments. In the early 1980s, Pete started to develop his career-long interest in risk assessment, which has become the dominant theme of his research and professional practice up to the present.

Pete has truly given back to his chosen profession through his work with professional societies. In addition to AAPG, he has given unstintingly of his time and energy to the Texas Section of the American Institute of Professional Geologists and was a key leader in its long but ultimately successful campaign to license geologists and geophysicists in Texas. In 1993 he received the American Institute of Professional Geologists Presidential Certificate of Merit and was the 1998 recipient of the Ben H. Parker Memorial Medal. He was chairman of the Austin Chapter of the Society of Professional Independent Earth Scientists. He was general chairman of the 1994 Annual Gulf Coast Association of Geological Societies Convention in Austin, and is the president of the Gulf Coast Association of Geological Societies in 2002.

Although it is not his natural milieu, Pete has had occasional forays into academe as a researcher and assistant professor at the State University of New York at Stony Brook, as the Les Bowling Visiting Professor at the University of Texas at Austin, and as Distinguished Visiting Professor at Kansas State University. From 1973 to 1976, during the first energy crisis, Pete organized, staffed, and managed for the U.S. Geological Survey, its first modem E & P applied research group, as chief of the Oil and Gas Branch. That group still continues in its basic mission, after nearly 30 years.

Primarily, however, Pete has worked in the E & P industry with Shell Oil Company as a staff geologist doing regional stratigraphy, and developing plays and prospects in the Gulf Coast and in the Rocky Mountains, and later as chief geologist and director of Frontier Exploration for Energy Reserves Group, he conducted exploration projects both onshore and offshore United States, plus foreign ventures in the North Sea, Taiwan, and Argentina.

Pete's greatest contribution is his persistence in the education and train-

ing of some 10,000 industry geoscientists and engineers in practical methods for objectively measuring the value of plays and prospects; this has permanently changed the way we evaluate our exploration ventures. Pete started this effort in 1984 with Bob Megill and Ed Capen. Ultimately, it resulted in the formation of Rose & Associates, LLP, devoted to integrated E & P risk management. In 2001 AAPG published his *Risk Analysis and Management of Petroleum Exploration Ventures*, expressing the principles of risk management which he has taught for 17 years. In addition, Pete recently took over a monthly column, "The Business Side of Geology," for the *AAPG Explorer* in 2001, where he is popularizing these concepts, making explorationists more efficient, stockholders more prosperous, and prospectors more professional.

Pete has already been recognized for his long AAPG service by receiving the Certificate of Merit and Distinguished Service Awards, and the Division of Professional Affairs (DPA) Distinguished Service Award. His many contributions to AAPG include (1) being a 1985 Distinguished Lecturer; (2) coconvener in 1995 of the AAPG Hedberg Conference on International Petroleum Risk Analysis; (3) president of AAPG's Division of Professional Affairs, 1996–1997; (4) Best Paper Awards at the DPA Technical Session, 1997 AAPG Annual Meeting, Dallas, at the 1997 AAPG International Conference, Vienna, Austria, and at the DPA Technical Session, 1998 AAPG Annual Meeting, Salt Lake City; and (5) Trustee Associate, AAPG Foundation.

Pete's special contribution has been his work through the Division of Professional Affairs in professionalism and mentoring. Subsequently, as an active member of the House of Delegates, he was an active player in the campaign to help expand international participation and enlarge membership influence in AAPG governance. As DPA president and later as chairman of the House Constitution and Bylaws Committee, he got some important changes made in the way DPA and AAPG conduct their business affairs.

Pete never does anything halfway, whether it's in his teaching, his research, his drive to accomplish change, his leadership in multiple professional activities or in his music. Knowing his dedication and drive, he would have been a successful balladeer (we spent a week with him in the Grand Canyon, and his nightly concerts under the stars were memorable), but the oil and gas profession would have lost one of its most vital proponents. We in the industry, in the profession, and in the AAPG are especially fortunate to have Pete as a friend and as a contributor. He is most deserving of honorary membership.

Citation—To Peter R. Rose for commitment to professionalism and mentoring; for sustained, courageous service to AAPG and the profession; and for constructively changing the way we evaluate our prospects and plays as business ventures.

M. Ray Thomasson

Response

Now, let me get this straight—you're honoring me? I should be honoring you!

You provided me a sustained framework for career learning, published my papers and books, sponsored educational venues that gave invaluable professional exposure to my short courses, organized forums where I could grow by interacting with other geoscientists, and allowed me to fulfill life roles of mentoring and leadership through participating in governance of this fine organization. Indeed, I should be honoring you.

When Robbie Gries called to tell me that I had been elected to honorary AAPG membership, my reaction was akin to many previous reactions to choice professional assignments over the past 43 years, "You're paying me to do this? I should be paying you for having so much fun."

How can anyone upright and breathing not love a geological career? Since 1959 it has provided me

- wide travel, adventure, and survivable misadventure;
- continuous fascination and learning;
- growing opportunities to contribute to the profession;
- a host of enduring friendships all over the world;
- personal and professional fulfillment, and
- recognition far more generous than I ever deserved.

What a blessing this geological career has been for me!

Like many of us, I suppose, I got into geology as a teenager. I was drawn to a geology student named Art Owen, who served as a counselor at Boy Scout camp in the summer of 1949. Art introduced me to the gleam and symmetry of mineral specimens, the mute mystery of fossils, and geology's association with the great outdoors. Who could fail to be excited by a career involved with remote wilderness, dramatic landscapes, personal adventure, and a diversity of broad themes? I am still moved whenever my life is touched by geology's archetypal appeals.

Of course, as our geological careers progress, most of us realize just how limited our early impressions of geology really were. Over time, we become exposed to many other aspects of the science—research, teaching, public sector utilizations, the extractive industries, professional consulting, and business aspects of all these. Also, as we mature as geologists and human beings, we begin to take interest in ever-widening circles of intellectual endeavor, and broader implications and applications of geoscience in our local, regional, and national communities.

At age 15, I could not have imagined the fascination I would feel at age 25, interpreting a thin section of carbonate rock. If you had told me at age 28 that I would enjoy assembling and managing a group of exploration researchers when I was 38, I would have thought you daft. And in 1967, when I was mapping Lower Cretaceous limestones in the Edwards Plateau, I would have laughed you off the outcrop if you

had predicted I would specialize in petroleum economics and exploration risk analysis from 1989 to 2002.

But we change. We grow, if we remain open to growth. Life wreaks its inevitable interaction with our DNA and implanted values, shaping us in ways we never could have foreseen, through chance and circumstance, tragedy and triumph, opportunities realized and missed. And lessons learned and unlearned, often because we simply were not ready for them yet. Or had no one to help point us toward them.

Frontier values are still valid. Faith counts, and purpose, and a sense of what is right. In 1980, when I resigned as chief geologist of Energy Reserves Group, Inc., to go on my own, several friends questioned how I could justify walking away from such a lucrative, promising corporate situation. "Well, I'm reasonably competent, have good work habits, and a lot of friends. I'm honest and my health is good. I expect it will work out okay. Besides, it's time."

It has and it was. But I do need to thank a lot of good people for all their help, patience, support, counsel (and more than a few justified come-to-Jesus talks).

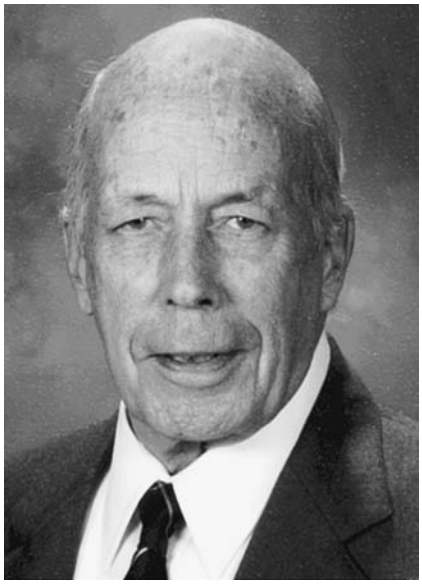
- To the Honors and Awards Committee, especially for overlooking some of my more impatient agitations regarding AAPG governance and business management;
- To Ray Thomasson, for his charitable citation and sustained, faithful friendship;
- To a long, long list of mentors, friends, bosses, partners, clients, and loyal critics—the list of such good folks quickly exceeded 250, so I gave it up—you know who you are, and I thank you all. Please know that your sustained friendly counsel served as my inspiration to transmit that mentoring tradition on to many others. The torch is passed, and I'm satisfied it will be repassed.
- To my children and stepchildren, Virginia, Cathy, Peggy, Wally, and Jennifer, and their families, who have suffered my frequent absences and distracted presences mostly without complaint, and who still provide all the love, pride, and affirmation any man could ask for. Clearly, they constitute my greatest contribution;
- To my wife, Alice, the light of my life and catalyst of our family, for her steady support, incredible patience, and insightful counsel. My only regret is that it took me 54 years to find her (but the wait was worth it!);
- Finally, to AAPG, for providing a framework by which I could put a little back into the pot.

Increasingly, I have come to trust in the biblical lesson, "Cast your bread on the waters and it will come floating back to you." (Of course, I have also learned not to wait around where you cast it in, because it probably will float back somewhere else; moreover, it is unlikely to float back looking like it did when you cast it in!) With regard to my geological career and AAPG, I have received a lot more in return than I ever put in, and it just keeps floating back.

Thank you for providing me the opportunity here to look back and share this career perspective, and for the deeply appreciated sense of affirmation that accompanies it.

Now—what's next? What interesting new geological opportunity awaits just over the horizon? We're burning daylight!

Peter R. Rose



JOHN A. REINEMUND

Michel T. Halbouty Human Needs Award

John A. Reinemund has been a participant, supervisor, and consultant in a remarkable variety of projects in many corners of the earth during a geologic career of more than 60 years. His geologic activities have resulted in significant contributions to the collection and dissemination of earth science information and to human needs for mineral and energy resources. His skill and creativity in solving management problems and needs has successfully promoted major earth science programs requiring cooperation and collaboration between academia, industry, and government in the United States and in many countries and regions of the world.

John was born in Muscatine, Iowa, on January 14, 1919, into a family with strong ties to Augustana College in Rock Island, Illinois. His father, mother, and aunt attended Augustana, and, inevitably, John enrolled there in 1936. He took an elective course in geology under Fritiof Fryxell, an outstanding geologist and teacher who inspired John to become a geologist.

John graduated from Augustana in 1940 with a B.A. degree, and he moved on to graduate studies in general geology at the University of Chicago. In 1941, he received a summer appointment as a ranger-naturalist in Grand

Teton National Park and this tried and tested his ability to translate his scientific knowledge into public understanding of geologic phenomena—a special human need. By the fall of 1941, John had focused his interest on a doctorate project in sedimentary geology, but the Pearl Harbor attack and U.S. entry into World War II interrupted those plans.

In 1942, John received a war service appointment with the U.S. Geological Survey in their strategic minerals investigations to determine the availability of domestic supplies of minerals that were increasingly difficult to obtain from overseas sources. These studies included the titaniferrous magnetite deposits of the Adirondack Mountains in New York, the lead-zinc deposits in the Pioche District in Nevada, and the lead-zinc deposits of the Goodsprings District in southern Nevada.

In 1944, John joined a U.S. Geological Survey team in San Diego, California, preparing sound-ranging and buoyancy charts for submarine operations in the western Pacific. The project was sponsored by the U.S. Office of Scientific Research and Development and utilized bottom-sediment and bathythermograph data that had been collected at Scripps Institution and the Navy Radio and Sound Laboratory. The project was completed in 1945 and later that year John joined the United States Army. After basic training at Fort Lee, Virginia, he was assigned to a technical detachment at Aberdeen Proving Ground, Maryland. There, a small staff with German language background was charged with processing documents being sent back to the U.S. from military operations in Europe to monitor German rocket development.

On November 7, 1946, the technical detachment at Aberdeen was disbanded and discharged and John returned immediately to the U.S. Geological Survey. He was assigned to mapping and assessing the reserves of the Deep River coal field in North Carolina, and to provide geologic guidance for a U.S. Bureau of Mines drilling program. In 1949 John transferred to the U.S. Geological Survey headquarters in Washington D.C. where he prepared a professional paper on the Deep River coal field, and Triassic Basin.

In August 1949, John was sent to South Korea, along with three other U.S. Geological Survey geologists, to make an assessment of South Korea's coal resources under a project funded by the U.S. Economic Cooperation Administration. This assessment was part of an effort to reactivate a thermal power industry in South Korea to replace the hydropower supply from North Korea, which had been cut off when the two parts of Korea separated.

At the end of 1949, John returned to Washington D.C. and was appointed deputy to Watson H. Monroe, chief of the Eastern Field Investigation Section of the U.S. Geological Survey Fuels Branch. In that capacity he assisted in inspecting and reviewing projects in the states east of the Mississippi River, with special attention to a large project that involved mapping and resources assessment of the Pennsylvania anthracite district. In 1954, the Fuels Branch was restructured to include four field-operating regions and John was designated regional supervisor of the mid-continent region. He moved to the Denver Federal Center to establish this new office and a central laboratory to conduct analytical and research activities in support of all Branch operations. He was responsible for all projects in the states between the Mississippi River and the Rocky Mountains. It was during this period that John become associated with many AAPG members and he joined the AAPG.

In 1956, under an agreement with the U.S. Agency for International Development (USAID), the U.S. Geological Survey assigned John to serve as Geologic Advisor to the Government of Pakistan were he arrived in August 1956. John assessed the need for an effective national geologic and mineral program that would include training and increasing the professional staff of the Geological Survey of Pakistan from 16 to 60 positions, preparing a new geological map of Pakistan, identifying and exploring known mineral deposits, mapping coal fields, and establishing engineering geology, photogrammetric, and publications programs. The proposed programs were approved by the U.S. Agency for International Development and the Government of Pakistan, and new national headquarters facilities were built in Quetta and regional facilities for East Pakistan (now Bangladesh) were established in Dacca. The U.S. advisory staff was increased to 30, including three mining engineers from the U.S. Bureau of Mines. While on assignment in Pakistan, John also collaborated with Clarence Wendel, the Regional Mineral Attaché at the U.S. Embassy in Ankara, Turkey, in organizing a Working Party on Mineral Development in the Central Treaty Organization (CENTO) countries (Turkey, Iran, Pakistan) to conduct regional training courses and seminars in geologic mapping, mineral studies, resources appraisal, and related subjects.

In 1964, John returned to Washington D.C. and was appointed chief of the Office of International Geology (OIG), succeeding William D. Johnston, Jr. who had developed the international geological assistance program at the U.S. Geological Survey. These activities were financed by funds transferred to the U.S. Geological Survey from U.S. foreign aid and other international programs, and generally involved U.S. Geological Survey personnel on assignments in 20 to 30 countries on three continents. In addition to managing OIG, John represented the U.S. in many regional organizations in Asia, Africa, and Latin America. From 1972 to 1978 he served on the Board of Directors of the International Geological Correlation Program (IGCP), sponsored by UNESCO, and, from 1978 to 1986 as treasurer of the International Union of Geological Sciences (IUGS).

In 1972, as chief of OIG, John was involved in organizing the Circum-Pacific Council and Map Project under an agreement between the U.S. Geological Survey and AAPG representatives, led by Michel T. Halbouty. John,

along with John Maher (former U.S. Geological Survey geologist and active AAPG member) visited and consulted nearly all the countries around the Pacific Rim and made arrangements for the First Circum-Pacific Conference which was held in Honolulu in 1974. At that Conference it was decided to organize a Circum-Pacific Council for Energy and Mineral Resources and plans for a Council and U.S. Geological Survey cooperative Circum-Pacific Map Project were approved. John served as executive director of the Council until 2000. Since 1974, the Council has held many major conferences and workshops throughout the Pacific Basin and published 16 books on Pacific Basin geology and resources. The Map Project has prepared and published 52 maps on the geology, geophysics, tectonics, resources, and natural hazards of the region.

In 1984, after 43 years of federal service, John retired from the U.S. Geological Survey, but continues to volunteer as U.S. Geological Survey Scientist Emeritus, and as an active member of the Circum-Pacific Council. He also is working on a synthesis of the history, achievements, and significance of Circum-Pacific Council accomplishments in the Pacific Basin and a similar report on the international activities of the U.S. Geological Survey throughout the world.

When next you visit, Bangkok, Bogota, or Bombay, look for John Reinemund, geologist to the world.

Citation—To John A. Reinemund, geologist to the world, for collecting and disseminating useful geologic information to fulfill human needs and promote collaboration between government, industry, and academia.

George Gryc

Response

It is a great honor to receive the Michel T. Halbouty Human Needs Award, and I am profoundly grateful to AAPG for selecting me for this recognition. During most of my career I have been involved in geologic programs intended to fulfill human needs, and I interpret this award as recognition of the significance of such programs in helping solve human problems.

I am grateful, also, to George Gryc for the biography he has submitted as background for this award. George has made important and widely recognized contributions through his leadership of important programs of the U.S. Geological Survey including exploration in northern Alaska and general chairman of the Circum-Pacific Map Project.

This award should, in fact, be shared by many who have guided, educated, stimulated, and assisted me toward whatever achievements I have been able to make. In the beginning it was my parents, who provided firm, but stable guidance and support into college; then it was the superb liberal arts faculty at Augustana College and the example set by Fritiof Fryxell; and finally it was the outstanding geologic faculty at the University of Chicago. Since becoming involved with the U.S. Geological Survey nearly 60 years ago, I have been impressed with the leadership, encouragement, and support I have received throughout the range of my U.S. Geological Survey activities.

Throughout my career, the greatest encouragement, guidance, and support have come from my wife, Ruth. She has endured many moves, dislocations, and redirections in our lives with unfailing understanding and accommodation, and has been a constant, reliable partner in each assignment. We met in Grand Teton National Park when I was a ranger-naturalist in the summer of 1941, and were married in 1943 while I was working in the Goodsprings District, Nevada. In the years that followed we moved 11 times, which made it necessary for her to reestablish living arrangements, and make local contacts in nine states, and two countries. It was most certainly her willing, efficient, and competent support in all these moves that made it possible for me to undertake so many varied assignments.

One of our most memorable and satisfying assignments was the eight years we spent in Pakistan. Along with the other U.S. Geological Survey families in our staff, we lived in Quetta, which is not far from the Afghanistan border and has been very much in the news recently in relation to the war on terrorism. We had an active social life and most enjoyable relationship with the Pakistani residents, and developed lasting friendships with the staff at the Geological Survey of Pakistan. Ruth added to our relationships by volunteering in the (Anglican) Mission hospital in Quetta and assisting the Pakistani woman doctor, Ruth Charles.

In assuming responsibility for the U.S. Geological Survey international geology program in 1964 from William D. (Bill) Johnston, Jr., I realized that it would be difficult for me to achieve the commanding image Bill had developed in the Department of State, United Nations, international organizations, and funding agencies, and in the countries where the U.S. Geological Survey had cooperative programs and interests. Fortunately, Bill went with me for initial contacts to most of the countries and organizations with which we were concerned, and in the process gave me valuable background and negotiating experience. Moreover, I had the benefit of many senior U.S. Geological Survey geologists who had become experienced and widely known in the regions of continuing U.S. interest, including George Ericksen and Thor Kiilsgaard in the Andean countries, Jack Dorr in Brazil, Ralph Miller in Central America, and Glen Brown in Saudi Arabia, along with George Taylor, who headed the U.S. Geological Survey Foreign Hydrology Branch and Douglas Kinney who represented the U.S. Geological Survey in the Commission for the Geologic Map of the World. I quickly became convinced that U.S. Geological Survey interests—and United States foreign policy objectives—can be most effectively served by developing and maintaining a staff of senior geoscientists who are experienced, knowledgeable, well known, and highly regarded in regions that are of continuing priority concern. AAPG's international out-

reach is, of course, contributing to this objective.

Beginning in the 1960s, changes in financing, technology, and international organizations affected the development and operation of the U.S. Geological Survey international geology projects. Prior to that time U.S. Geological Survey assistance projects had been funded mainly by nonconcessional grants from the U.S. foreign assistance program, but much of this financing was converted to host country financing and to loan (concessional) funding from international lending organizations. This required more specific definition and scheduling of projects and expected results, generally in terms of human needs. This made it necessary for the U.S. Geological Survey to enter into negotiations with funding agencies and to justify the use of U.S. Geological Survey personnel in terms of benefits to the U.S. The increasing availability of satellite imagery and the results of oceanographic research, in addition to the need for better assessment of global resources, intensified the interests and broadened the scope of U.S. Geological Survey international assistance efforts.

Finally, in 1972, when AAPG representatives led by Michel T. Halbouty introduced the concept of a Circum-Pacific Conference and Map Project, this provided a mechanism of great value for coordinating and integrating the many cooperative relationships and joint activities in which the U.S. Geological Survey and the countries around the Pacific had been involved. It was a mechanism that could be activated out of the U.S. Geological Survey contacts already in place, and which added a new dimension to those contacts, resulting in conferences, symposiums, and workshops extending from Chile and Costa Rica to China and Vietnam, and in a map series covering the entire Pacific region as well as Antarctica and the Arctic. The continuing vitality of this Circum-Pacific mechanism was demonstrated last August in the massive Crowding the Rim summit held at Stanford University to emphasize the growing urgency of natural disaster mitigation around the margins of the Pacific.

Based on my involvement in the Circum-Pacific Council and its activities, I must acknowledge that I learned a lot from Michel T. Halbouty about the benefits of irrepressible determination in advancing geosciences programs in order to fulfill human needs.

I wish also to acknowledge the excellent support I have received over many years from the U.S. Geological Survey International Geology secretarial staff and the tremendous help from the Circum-Pacific Secretariat headed by Mary Stewart.

John A. Reinemund

ZUHAIR F. AL-SHAIEB
Distinguished Educator Award

Zuhair Al-Shaieb was born in 1940 in Syria to a family of a distinguished writer/government official/diplomat. Foreign assignments resulted in Zuhair being well traveled by the time he entered the University of Damascus in 1959. After he received his B.S. degree in geology and chemistry, Zuhair continued his studies there in order to receive a Diploma in Education so that he could begin a career as a teacher. After teaching physical sciences at Shaiwk School in Kuwait, he moved to the United States in 1967 to begin his graduate studies at the University of Missouri at Rolla. While earning his M.S. degree and Ph.D., Zuhair continued his chosen career as a graduate teaching assistant. Upon completion of his formal studies in 1972, Zuhair joined the geology faculty at Oklahoma State University. In addition to teaching introductory physical geology, Zuhair taught mineralogy and optical mineralogy to geology majors. He soon earned the reputation of an outstanding teacher and keen solver of problems involving composition and interpretation of mineral and rock suites.

Zuhair's specialization at the University of Missouri at Rolla was intrusive mineral deposits; for example, gold, silver, and other minerals in the Marysville stock, Montana, and trace-element anomalies in igneous-wall rocks of hydrothermal veins. Yet soon after his arrival at Oklahoma State, he, with his graduate students, began to study Pennsylvanian and Permian copper and uranium stratiform deposits. Support for a number of students for these studies was from grants he received from Bendix Corporation. Zuhair, with his graduate students as an integral part of his research team, has studied many mid-continent problems with strong relevance to oil and gas exploration and production. Some of the topics are: hydrocarbon-induced diagenetic aureoles at Cement field, Oklahoma; secondary porosity in Pennsylvanian sandstones in the Anadarko and Arkoma basins; depositional facies and diagenesis in Hunton Group carbonates; paleokarstic and other diagenetic features in Arbuckle carbonates; pressure compartments and seals in the Anadarko basin; borehole imaging of diagenetic facies in sandstones; and sequence stratigraphic control on reservoir development in Morrowan sandstones. Additionally, some graduate students and Zuhair have studied Tertiary reservoirs in the south Texas part of the Gulf Coast basin. A significant part of these studies were sponsored by grants Zuhair received from the Gas Research Institute (now Gas Technology Institute).

In the classroom "Doc Al" has been an enthusiastic teacher, who inspired the students to develop the same attitude toward learning—even the more rigorous and difficult aspects of the science. His uncommon versatility, unusually wide range of expertise, and very strong work ethic have been reflected in his requirements that his research students be multidisciplined and that they be dedicated to their research.

Zuhair's teaching and research abilities have been made available to the profession and industry as well as to his students. He has tackled all sorts of problems, has made numerous presentations to society meetings, conventions, and workshops and courses, and has led field trips—intrusive bodies as well as to sandstone and carbonate outcrops. The topics include uranium mineralization in Permian rocks, southwestern Oklahoma; clay minerals, their diagenesis and effect on reservoir porosity; models of diagenesis in clastic reservoirs; catholuminescence in geology; geochemistry and isotopic composition of hydrocarbon-induced diagenetic aureoles; diagenetic overprints and porosity development in Pennsylvanian sandstones in Oklahoma; paleokarstic features and burial diagenesis of the Arbuckle carbonates; lithofacies and dolomitization of the Hunton Group in the Anadarko basin; chamosite in depositional and diagenetic interpretation of the Spiro Sandstone in the Arkoma basin; deep basin compartments and seals; petrophysical evaluation of the Vicksburg Sandstone in Tijerina-Canales-Blucher field, south Texas, including use of FMI; and secondary dolomite in Tertiary sand reservoir and secondary in Cretaceous sandstone reservoir in Sirte basin.

Zuhair was appointed an assistant professor at Oklahoma State in 1972, an associate professor in 1976, and professor in 1981. He served as head of the School of Geology from 1991 to 1999, adding administrative duties to his teaching and research responsibilities. In 1994, he was appointed Regents Professor, and in 1999 he was appointed V. Brown Monnett and Regents Professor of Geology.

Zuhair and Becky Al-Shaieb were married in Rolla while Zuhair was a graduate student, and they have two children, Johnny and Nicole.

In 1976, I asked Zuhair to work with me on a Sirte basin sand reservoir; I then learned firsthand of his ability to identify essentially every constituent in any rock and then to make cogent and meaningful conclusions about the sedimentary history of a rock from its composition and pore geometry. Then in 1982, I asked him to examine cores of the Hunton Group in Oklahoma, thinking that composition, texture, and pore geometry would be key to solution of the problem. Zuhair proceeded to show that sedimentary structures, as well, were very important in determining reservoir distribution from depositional and diagenetic patterns in carbonate rocks. These examples demonstrate his versatility, spectrum of expertise, and his problem-solving ability. His enthusiasm and energy are contagious to students and colleagues alike, and his competitive spirit is unmatched. It, therefore, is highly fitting and appropriate that Zuhair Al-Shaieb receive the AAPG Outstanding Educator Award.

Citation—To Zuhair Al-Shaieb, outstanding teacher and researcher, whose wide expertise, superb problem-solving ability, enthusiasm, and energy are a special inspiration to students and colleagues.

John Shelton

Response

I am extremely honored to be recognized as and selected for the Distinguished Educator Award by AAPG. Although I do not know who nominated me for this honor, I would like to express my appreciation to all my friends and former students for their confidence and generosity. Twenty-five years ago, John Shelton introduced me to the discipline of petroleum geology and hydrocarbon reservoirs, and this is where I found my niche in the geosciences domain. It has been a magnificent experience that provided me with the opportunity to fulfill my dreams in education and research. Thank you John for being an excellent friend and mentor.

My career as an educator was focused strictly on the technical and professional development of students. Positive attitude and enthusiasm are essential elements in disseminating knowledge and information in the classroom. For the past 30 years, I have enjoyed the privilege of advising a large number of students. Most of them are currently working in the oil and gas industry. They are truly goal-oriented individuals, and the common denominator of their success is a combination of their technical skills, work ethic, and positive attitude.

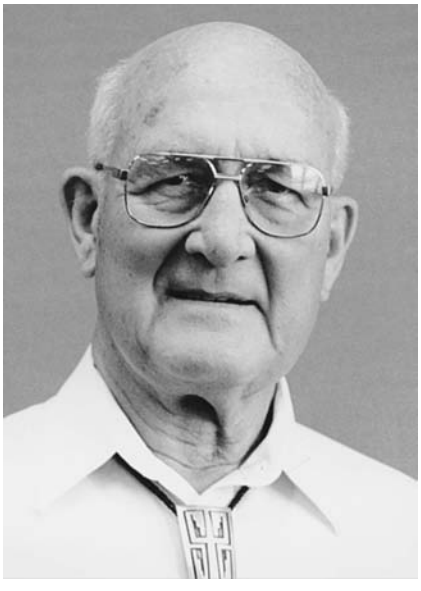
My interest in geology and, more specifically, in rocks started when I was 15 years old. My family spent the summertime in a mountainous small town north of Damascus, called Malula, where I practiced rock climbing, cave spelunking, and hunting. I enjoyed the beauty of the area and the spectacular rock formations. I firmly believe that the seeds to become a geologist were planted at that time. I completed my B.S. degree in geology from Damascus University, where George Khouri was a teacher and role model for me. Afterward, I earned a M.S. degree and Ph.D. from the University of Missouri at Rolla. During that period, I met superb geologists, such as Kerry Grant, Earnest Bolter, and Richard Hagni. Immediately after I completed my Ph.D. in the spring of 1972, I had an interview with Oklahoma State University and joined the Department of Geology in the fall of 1972. During the 1970s, John Shelton and Gary Stewart introduced me to the geology of Oklahoma and greatly influenced my conversion from a hard rock and economic geologist to a sedimentary and petroleum geologist. In the mid to late 1970s, I was involved in variety of studies on the evolution of secondary porosity in sandstone reservoirs. However, I was fascinated with the alteration patterns that occur in the Permian Rush Springs Sandstone on the faulted anticline of Cement field in

Oklahoma. After few years and several M.S. theses of graduate students, I was able to introduce the concept of HIDA, which stands for hydrocarbon-induced diagenetic aureole. It was a classic example of vertical hydrocarbon migration to the surface. The alteration aureole is capped by a unique diagenetic limestone. The isotopic composition of the carbon in this limestone indicates that the carbon was derived from a hydrocarbon source.

For the past 15 years my research projects have mainly concentrated on reservoir characterization and compartmentalization of overpressured zones in deep basins. My reservoir characterization experience was initiated in late 1970s. I have had the chance to study the Oligocene Chadra sand and the Cretaceous Sarir Sandstone in Sirte basin, the Ordovician-Devonian Hunton Group, the Pennsylvanian Morrow, and the Redfork reservoirs, to name a few. Rick Fritz and John Shelton's cooperation and contributions were essential to the success of these projects. Paul McDaniel's support and vision were invaluable. In 1989, the Gas Research Institute initiated the project entitled, Compartmentalization of Overpressured Gas in Deep Basins. Approximately six years were dedicated to investigating the Anadarko basin pressure system, and we have coined the phrase "mega compartment complex" to describe the geometrical configuration of the natural gas in the basin. David Powley, Peter Ortoleva, Ron Surdam, and Larry Cathles have offered extremely valuable counsel, comments, and suggestions. I would like also to thank Jim Puckette, who was my partner on this project for his input and contributions. For the past four years, we have examined the overpressured Oligocene Vicksburg Sandstone in the Gulf Coast area. We were able to utilize sequence stratigraphy to define second-order seals and micro-imaging logs to define the third-order seals in a shaly sandstone interval. This work could not have been accomplished without the support of people and companies in terms of cores, logs, and seismic lines. In particular, I thank Paul Chandler for his help and support. Many theses and dissertations, for which I was advisor, were supported partially or completely by oil and gas companies. The support varied from financial assistance to providing data and information. This was extremely important in the technical and professional development of my students. I would like to acknowledge the following companies for their support. I apologize if there is any inadvertent omission. They are ExxonMobil Corporation, Shell Oil Company, Phillips Petroleum Company, Kerr McGee (and Oryx) Oil and Gas Company, Amerada-Hess Corporation, Erico, Masera, Samson Resources Company, and New Dominion LLC.

Finally, more than 60 students have been involved in the projects listed above. Their friendship and dedication will stay with me forever. I am accepting this award in their names.

Zuhair F. Al-Shaieb



WILLIAM R. MUEHLBERGER
Distinguished Educator Award

William (Bill) Rudolf Muehlberger was born on September 26, 1923 in the Harlem district of New York City. His family moved to Hollywood, California, when he was six. He entered the California Institute of Technology (CalTech) in 1941, where, although twice interrupted by serving his country in the Marines, he received B.S. and M.S. degrees in geology (1949) and a Ph.D. in structural geology (1954).

Bill left CalTech to join the United States Marine Corps during World War II where he was first sent to the University of California at Berkeley to study civil engineering (1943–1944), then on to boot camp and Officer Candidate School. He received a commission in May 1945. The commissioning was followed by an assignment to Engineering Officers School from which he graduated on VJ Day. Having missed the thrill of combat, Bill departed CalTech once again and returned to the marines during the Korean conflict where he served as a groundwater geologist at Camp Pendleton.

He not only served his country during this period, but was also an outstanding scholar and athlete—recipient of the Hinrichs Memorial Award as the outstanding senior of his class at CalTech, Intramural Heavyweight Wrestling Champion while at the University of California at Berkeley, and outstanding fullback on the CalTech football team.

It was not all work and no play, however. Bill married Sally Provine on September 8, 1949, and remains married to this lovely and talented lady more than a half century later.

Upon receiving his Ph.D. in 1954, Bill joined the faculty of the University of Texas at Austin (UT) to teach beginning and structural geology, in the classroom and in the field. He was recognized as an outstanding teacher and lecturer, progressing from assistant professor to professor and becoming chairman of the Department of Geological Sciences during 1966–1970.

Structural geology and tectonics, field mapping and research, and teaching: these specialties dominated Bill's career. He retired from teaching in 1992, after 38 years, but continues as a member of the Graduate Committee at UT.

Bill is noted for his digressions (from teaching). From 1962 to 1966, he was director of the Crustal Studies Laboratory that produced the "Basement Rock Map of the United States" published by the U.S. Geological Survey. In 1982 he became project director for the Tectonic Map of North America, sponsored by the AAPG Foundation Associates. The South Sheet was published in 1992 and the North Sheet in 1996.

Not content with earth, Bill was granted leave from UT in the early 1970s to serve with the U.S. Geological Survey as principal investigator for the Field Geology Team for the last missions to the Moon, the Apollo 16 and 17 landings. He was involved in site selection, geological analysis of the landing site, traverse design, astronaut training, real-time mission support and advice, and post-mission data analysis for these missions.

He has continued with earth-oriented research from the orbital perspective using astronaut eyes, brain, and cameras. He was coinvestigator in the Visual Observations Experiment for Skylab and the Apollo-Soyuz missions with responsibility for global tectonics lectures to the astronauts, and debriefing following the missions. He continues his involvement with briefings of crews before launch and a geological field trip for the incoming classes of astronauts.

His scientific fields and areas of interest are vast. His dissertation consisted of mapping and describing the Central Sierra Pelona and Northern Soledad basin, Los Angeles County, California. Bill and his graduate students at UT have worked the geologic and tectonic complexities of the Trans-Pecos and Big Bend areas of Texas, northeast and north-central New Mexico, parts of the Caribbean, Colorado, Gulf of Mexico, Mexico, Vermont, and the North American continent. He is also considered an authority on the geological processes and tectonics of the Moon.

Bill is a member of numerous professional societies including AAPG, Honorary Member; Geological Society of America, Fellow; American Geophysical Union; American Geological Institute; Austin Geological Society, Honorary Member.

Awards and honors are received by those who have dedicated themselves to their professions and have been unusually productive and creative. Bill has distinguished himself by receiving the following:

1948	Hinrichs Memorial Award, Outstanding Senior, California Institute of Technology
1961	First Award, Series "Principles of Geology," Local Classification for College Instructional Program, The Institute for Education by Radio-Television, Ohio State University
1965	George C. Matson Award, AAPG, Best Paper presented at the 1964 Annual Meeting
1973	Medal for Exceptional Scientific Achievement, National Aeronautics and Space Administration
1978	Houston Oil and Mineral Corporation Faculty Excellence Award
1980–1982	Fred M. Bullard Professorship (2-year award for outstanding teaching)
1982–1983	Charles E. Yager Professor
1983–1985	John E. (Brick) Elliott Centennial Endowed Professor in Geological Sciences
1985–1989	William Stamps Farish Chair in Geology
1985–1992	Peter T. Flawn Centennial Chair in Geology, presently Emeritus
1992	Knebel Distinguished Teaching Award
1995	AAPG Honorary Member
1998	Best Paper Award, Structure and Tectonics Division, Geological Society of America
1999	Public Service Medal, National Aeronautics and Space Administration
2000	Austin Geological Society Honorary Member

Bill has been an active representative of his profession in numerous technical societies, serving on various committees of the AAPG, American Geophysical Union, Geological Society of America, National Research Council, NASA, and the U.S. Geodynamics Committee. These include the following:

1974–1977	Councilor, Geological Society of America (previously, member of the Annual Program Committee with responsibility to organize structure and tectonics and geophysical papers before divisions on these topics were developed)
1976–1980	U.S. Geodynamics Committee
1978–1979	Vice chairman, Panel on Geological Site Criteria for Radioactive Waste Disposal, Radioactive Waste Management Panel, National Research Council
1980–1982	Associate editor, Geophysical Research Letters
1982–1997	Research Committee, AAPG
1985–1988	Oversight Committee, National Research Council, Waste Isolation Pilot Project, Carlsbad, New Mexico
1986–1987	Associate editor, *Bulletin of the Geological Society of America*
1986–1987	Science Advisory Committee, Deep Observation and Sampling of the Earth's Continental Crust (DOSECC), Washington D.C.
1987–1989	Chairman, Astrogeology Committee, AAPG
1988–1990	Advisory Council of History of Geophysics, American Institute of Physics (American Geophysical Union), Washington, D.C.

1995–1997	Committee on Honorary Fellows, Geological Society of America (chairman, 1997)
1996–2000	Center Director's Consortium, NASA-Johnson Space Center, Houston, Texas

In addition to the many geological field trips taken with students over his 38-year teaching career, Bill led field trips for the AAPG, Geological Society of America, International Geological Congress, many oil companies, alumni groups, and the Smithsonian Associates.

As one might expect from his list of accomplishments, he also is a prolific speaker and writer. He has been author or coauthor of more than 200 technical publications, not including the many published abstracts. The list of publications is simply too lengthy to reproduce here.

He has been in demand as a Distinguished Lecturer for Sigma Xi, the American Geological Institute, and the AAPG (twice). His hundreds of talks cover structural geology and tectonics of specific areas, for example, the North American continent, the Arabian shield area, New Zealand Alpine fault zone, Dead Sea fault zone of Turkey, west Texas, lunar geology, and shuttle views of the earth from space.

Bill Muehlberger is outstanding in many areas—athlete, scholar, patriot, researcher, and lecturer. He has had more than one 15-minutes of fame.

His name is synonymous with the Basement Rock Map of the United States and the Tectonic Map of the North American Continent. He is well known for his work with the astronauts and their training; but, it is as a teacher that he will be remembered and loved by the thousands of undergraduate students he taught and 59 M.A. and 25 Ph.D. students he supervised. Nowhere is the respect and admiration earned by Bill shown more strongly than by the support and contributions given by his students and friends to the William R. Muehlberger Field Geology Scholarship at UT.

Citation—To William. R. Muehlberger for five decades of dedicated and inspired teaching to thousands of earth science students, for application of an inquisitive mind not only to the Earth around him but to the Moon above, and for being a role model for all.

Bill St. John

Response

I am delighted to be nominated for a Distinguished Educator Award. Teaching has been a great way to spend my life. Good students are always fun to be with, and I have had my share of good ones to work with, both in the field and in the office. The 84 graduate students I supervised (including my citationist, Bill St. John) and the unknown (but larger) number of students for whom I was a committee member, are indelibly engraved in my mind. Each taught me a great deal about our Earth (and the Moon). That they also learned in the process can be seen by their successful careers. My thanks also to Grover Murray and Bob Weimer for nominating me, and a heartfelt thanks to Grover and his lovely wife Sally for suggesting and supporting this award!

I would have ultimately ended up teaching late in my career, but while still finishing my Ph.D. and an offer from the University of Texas (name at that time) in hand, I approached Ian Campbell about teaching right out of college. He said that you have your summers free for field work, and you will never find out if you can teach until you try—might as well try now! I did, discovered that I liked it, and I thank Ian for talking me into it. My years at CalTech gave me a breadth that became very useful in trying to teach the spectrum of subjects involved in physical geology. I had the opportunity to take courses from a set of fabulous scientists and teachers: Ian Campbell, Dick Jahns (I spent two summers in New England with him and parts of two others in New Mexico doing field geology; he was also my supervisor for my graduate degrees and the person I have tried to emulate for my whole career.), Bob Sharp (whose ability to teach physical geology can't be beat), Al Engel, Jim Noble, and Chester Stock. My classmates were also great colleagues and challenges in their own right.

I was the first one hired at UT to deal specifically with structural geology and tectonics. What a deal. New topographic maps of the Austin area were becoming available—with these sheets it finally became possible to make structural maps of the Balcones fault zone, the details of stratigraphy were already well known.

Summers in northeastern and north-central New Mexico opened other areas for student projects. Radioactive waste disposal projects in the late 1950s between the Petroleum Engineering, Civil Engineering, and Geology Departments led to mapping the internal structures and crystal fabric of salt domes.

The American Geological Institute had a project aimed at assisting teachers in small colleges who normally are swamped with teaching with little or no time for research or library updating. I started in the Subcommittee on Visual Education (to promote new, quality teaching films or video, then in its elementary phase), and ended as chairman of the entire project, called the Council on Education in the Geological Sciences—big name for a group of motivated, dedicated teachers, mostly from the major universities, some of them have already received the Distinguished Educator Award and many have received other awards.

The AAPG Research Committee (led by Mike Halbouty and Pete Flawn) asked me to take on the project of mapping the buried basement of the United States via study of cuttings and cores from wells that penetrated the basement. That work resulted in a paper at AAPG (basement rocks at AAPG?) that won us (Rodger [Tim] Denison and Ed Lidiak, my primary collaborators on that project) the Matson Award for best paper that year (1965). Numerous mapping projects in the Big Bend and adjacent Chihuahua led to significant changes in the tectonic history of that region.

Gabriel Dengo recruited me into sending students to Honduras for geological projects. UT students made the first quadrangle maps of that country. Later, Peace Corps volunteers and other colleges and universities joined in. This brand new region, turned out to be complex, and is yet to be understood.

My career took a turn to the Moon when I became principal investigator for the Apollo Field Geology Team for Apollo Missions 16–20. Later cutbacks in the program reduced the task to the last two missions to the Moon, Apollo 16 and 17. During that time, I was an employee of the U.S. Geological Survey Astrogeology Branch, who had the contract for those missions. I worked with a superb group of dedicated people; most important were Gordon Swann (principal investigator for Apollo 14 and 15, my mentor for this job), George Ulrich, and Ed Wolfe.

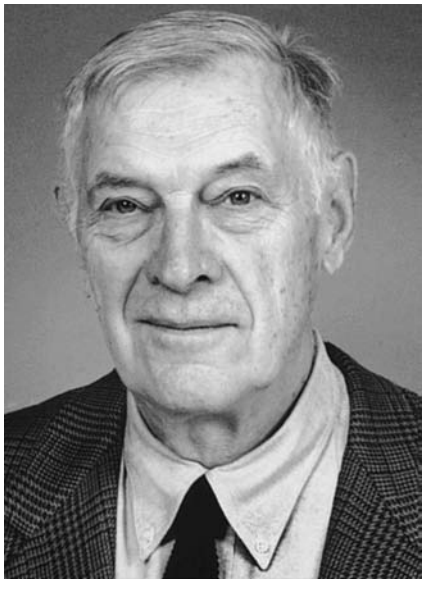
When I returned to teaching at UT, I continued my research in Honduras and began work in the Rio Grande rift near Taos, New Mexico. Simultaneously, I began advising NASA on geological projects that could be done in Earth's orbit. This has led to my continuing lectures to shuttle crews before launch on tectonic topics (primarily) and a week-long geological field trip in northern New Mexico for each incoming class of astronauts. Most had never been exposed to geology.

The AAPG Research Committee came up with another project that I took on, a Tectonic Map of North America that was funded by the AAPG Foundation Associates. It took twice as long as had been outlined in the original proposal! Adel R. Moustafa and Peter R. Tauvers, my research assistants, were invaluable for making early compilations. The map is published and won the 1998 Best Paper Award from the Structure and Tectonics Division of the Geological Society of America.

Since retirement (my wife claims I flunked retirement), I have been attempting to finish years of backlog projects, give talks to various groups (elderly, student, geologic, and so on) usually using pictures taken from the space shuttle by astronauts that, because of their ability to look in all directions, gives a perspective that the unmanned nadir-looking satellites simply can't do. Maybe the projects will get done.

The above chronology suggests that I have a supporting and tolerant wife. Yes! Sally, you're wonderful!

William R. Muehlberger



PAUL EDWIN POTTER
Distinguished Educator Award

George Bernard Shaw once wrote, "He who can, does. He who cannot, teaches!" Paul Edwin Potter's remarkable career as an educator and geoscientist stands as a bold rebuttal to Shaw. For half a century, Paul has perfectly blended the mentoring of and interaction with students with an impressive record of research and publications, including numerous benchmark studies in sedimentary geology.

Those of us who have had the opportunity to study with Paul know all too well his tireless ability to attack geological problems. The times have been many where his boundless energy to dissect the geological poser of the day (the month, semester, year, etc.) have left his graduate students, those allegedly possessing their own endless reserve, struggling to keep up. In the classroom, he has presented to his students an ideal balance of vanguard breakthroughs and a compendium of up-to-date knowledge in sedimentary geology.

While Paul's base of geological research has spanned much of the globe and the geologic column, the Paleozoic rocks of the United States Midwest have always held a special place in his heart, reflecting his Springfield, Ohio, birth roots. On completion of his Ph.D. in geology at the University of Chicago in 1952, Paul joined the Illinois Geological Survey, where he spent his first professional decade. While there, Paul began a career-long dissection of the Carboniferous of the mid-continent, highlighted by several notable publications in the *Journal of Geology* and studies published by the Illinois Survey. The Pennsylvanian of Illinois, in particular, triggered lifelong interests by Paul in the study of sedimentary structures on a small scale and provenance/basinal analysis studies on a broader one, themes that have punctuated much of his research from that point forward.

While Paul has always been an educator, whether representing a governmental body, an energy company, or academia, his teaching career truly blossomed when he joined the faculty of Indiana University in 1963. The first of a long list of graduate students influenced by Paul, either as primary advisor or committee member, left Bloomington for academia and industry with Paul's watermark during his time in the Hoosier State. The university's close relationship with the Indiana State Geological Survey offered a perfect environment to host his research and share it with his students. At Indiana he introduced the concept of the Sedimentation Seminar, where a group of graduate students collectively attacked and solved a regional geologic problem and published their findings in a professional venue under Paul's tutelage. Many of Paul's students started impressive career publication slates through participation in these projects.

During this window, the first of several cornerstone textbooks coauthored by Paul reached the geological community. In 1963, *Paleocurrents and Basin Analysis*, building in part on his Illinois-Indiana Carboniferous research, was published. The updated version (1977) remains a key component of any professional's short-list library today. A year later appeared the *Atlas and Glossary of Primary Sedimentary Structures*, another benchmark work again coauthored with F. J. Pettijohn.

In 1971, Paul moved a short distance east to the University of Cincinnati, where he became a key component of a very distinguished sedimentology/paleontology faculty that produced both an impressive roll of graduates and notable volumes of original research. His 21 years at Cincinnati offered the opportunity to work with large numbers of a new generation of students, as worldwide expansion of the energy industry attracted many to sedimentary geology. Paul's students came to Cincinnati from abroad as well as at home, and continue to build on his foundation today.

Paul quickly recognized the dramatic evolution of sedimentary geology, and particularly petroleum geology, into a truly global craft during the twentieth century's final decades. To his students' occasional chagrin, translation of important new papers from the original text language to English was a standard requirement of many of his trademark graduate level courses. While Paul taught over a dozen courses ranging from geological data analysis to geology of greater Cincinnati, signature courses included his carbonate and sandstone sedimentary petrology courses, Applied Geophysics, Basin Analysis (Magasedimentology), Mud and Shale, and Rivers. Students in sedimentary geology who matriculated to Cincinnati during the Potter years also benefited from the opportunity to learn from Paul's distinguished colleagues of that period, including Wayne A. Pryor, Kenneth E. Caster, J. Barry Maynard, and David Mayor, to mention a few. At Cincinnati, Paul continued to coauthor notable texts that brought our understanding of key concepts to new levels, including *Sand and Sandstone* (1972) and *Sedimentology of Shale* (1980).

During his Cincinnati years, Paul broadened his unending interest in international sedimentary and petroleum geology by teaching short courses in Mexico, Brazil, and Chile, and was also a visiting professor at the Universidad de Sao Paulo in Brazil. After he retired in 1992, Paul taught for seven years in Brazil, two at the Universidad Eotadual de Sao Paulo (Rio Claro) and five at the Universidad Federal de Rio Grande du Sol (Porto Alegre). During his career he consulted for energy companies ranging from Petrobras and Pauli Petro of Brazil to Total in Paris to Texas Gas Transmission, Texaco, and Orbit Gas, where he served as director for 19 years.

Paul's untiring energy as a professional researcher with a stable of capable students catalyzed grants from several institutions, ranging from the U.S. Atomic Energy Commission to the National Geographic Society. Grants from the U.S. Department of Energy and the Gas Research Institute from 1976 to 1983 triggered many prominent professional papers that opened the door to successful tight gas shale exploration in the Midwest Kinderhookian and other horizons from the mid-1980s to the present.

Paul's contributions have deservedly brought him prestigious recognition from his peers. He received the Francis J. Pettijohn Award for Excellence in Sedimentology from the SEPM in 1992, and was the 1999 recipient of the W. W. Mather Medal for contributions to Ohio geology by the Ohio Geological Survey. In 2000, the AAPG Eastern Section named Paul its Outstanding Educator.

Citation—To Paul Edwin Potter, an exceptional mentor, researcher, and harbinger of new megatrends in our science, whose contribution to sedimentology continues growing through the innovations of those he has taught.

Wayne R. Goodman

Response

News of my receiving the Distinguished Educator Award came to me as a great surprise while in Brazil. I sincerely thank the Society, the Awards Committee and its chairman for this award and the effort they, the AAPG, and my citationist, Wayne Goodman, gave to this process. My response below has two parts—first, I show some of the circumstances that have influenced my career and, second, I show how sustained contact with the petroleum industry has importantly contributed to my teaching.

My starting point is growing up on a farm in the 1930s near Cincinnati and going to a nearby two room school. On the farm I was a very minor player pumping water for cows, feeding the hogs, cleaning the chicken house, weeding the strawberry patch (absolutely the most onerous of all the chores that came my way), and putting hay in a wagon with a pitchfork. But with time to play in the creek in our pasture, I developed an early interest in running water, soil, slabby Ordovician limestones, landscapes, and looking in newly dug ditches. And at the nearby two room school, I learned to pay attention to the teacher and do the assignments on time—grades 5 through 8 were in the same room all taught by the same man whose disciplinary techniques ranged from throwing chalk at an offender to a thorough shake-up and thrashing for boys. The same five students were in my class all those years so what we had was a kind of sustained rural tutorial. At recess boys played softball in the adjacent pasture and girls jumped rope.

In 1944 I entered the United States Army as a volunteer and went to Fort Bliss in semi and west Texas—an eye opener of a landscape and experience for an Ohio farm boy. I learned to read topographic maps and follow compass courses to rendezvous points and work in close quarters with people from all walks of life. Above all, I really enjoyed camping out on maneuvers and discovering the arid, bare, irregular, low mountains of west Texas. My latent

unrecognized interest in geology expressed itself here, when another recruit and I climbed Guadalupe Peak one weekend and returned late for Monday morning roll call. In the Philippines, I again discovered a new landscape and served as a Private First Class in forward fire control for a battalion of 155 mm howitzers. It was here that I accidentally encountered a copy of Richard Foster Flint's *Physical Geology* in a U.S. Armed Forces Self Study Edition and began to understand what I was looking at and had been enjoying. Carrying it around, I could sometimes match a picture in Flint's text with what I saw—a real tribute to Flint given the great contrast between the geology of northeastern North America and a tropical Tertiary island arc. So when I returned to Ohio, I knew what geology was, and had been exposed to two regions very different from the glaciated cratons and arches of the eastern Midwest of my boyhood.

An early important educational experience was my first course in geology with professor Bretz of the University of Chicago, who always used the question and answer method of class instruction—more elegantly known as the dialectical method of Plato and his school. Although initially painful, there is no better way to develop analytical thinking in young people than this. It has served me well in all subsequent years and so I always use and recommend it for teaching.

Another important factor has been the development of writing skills. Over the years I have greatly benefited from having had professional editors and the opportunity to collaborate with good writers. This started at the Illinois Survey where I had both the peer review of its other geologists and the help of its professional editors and discovered early that an editor is a key friend and not an enemy. Also notable, was later exposure to what I call the Pettijohn challenge—transforming a complex technical idea or term into simple language so as many as possible will understand it rather than only a few. A Guggenheim Fellowship at Johns Hopkins went far to make this possible.

A very different influence has been working with the state and federal geological surveys of the eastern Midwest. At my first job with the Illinois Geological Survey, I had an unparalleled opportunity to combine public service (Pleistocene and coal geology) with research in glacial and subsurface geology and sedimentary petrology and, at the same time, earn an M.S. degree in statistics at the University of Illinois—9 years rich in experience and learning far superior to any contemporary postdoctoral fellowship. Subsequently, I have benefited from the help and counsel of the Ohio, Indiana, and Kentucky Geological Surveys and the U.S. Geological Survey and have published with all of them. I always direct students to visit, consult, and cooperate with state and federal surveys and other public agencies and build on their knowledge rather than think of themselves as lone pioneers.

In all of this I have been chiefly funded by the American taxpayer starting with the GI Bill in 1946 to an employee of the Illinois Geological Survey followed by employment with two state universities plus some publicly funded grants. A notable exception was a year long Guggenheim Fellowship at the Johns Hopkins University. I gratefully acknowledge all this support.

Now let's turn to the petroleum industry.

My first informal contact with the petroleum industry was in 1931 as my family drove eastward on a narrow brick road from Cincinnati to Pennsylvania to visit relatives one summer day. As we entered the Appalachian Plateau and rounded a curve east of Lancaster, Ohio, a series of irregularly spaced wooden towers, each with a large wheel and shed, appeared. Some were closely clumped together, others widely spaced, and there were pipes running to tanks. It was not until much later that I realized that this oil came from the Mississippian sandstones of the Appalachian foreland basin.

Formal contact with the petroleum industry occurred in 1954 when I was invited to give an after dinner talk to about 13 members of the Illinois Geological Society at a 1920s style restaurant in Olney, Illinois. This restaurant was long and narrow and had a metal patterned ceiling with several slowly rotating fans. I talked on the only thing I knew that possibly might be of interest—paleocurrents in the basal Pennsylvanian sandstones of the basin.

From this early beginning my contact with the oil industry has always been stimulating and I have always thought of it as a great learning experience, one in which I have received far more than I have been able to give in return. I think of it in this way, because over the years, I have encountered many exploration and development problems near, at, or beyond the limits of my immediate understanding and thus forced to go home to think in new ways about new problems. How can one resolve the problem with so little information? How can one solve the problem with so few prior analogs? Surely these are questions that every teacher and researcher needs to remember and ask daily.

The other side of contact with the oil industry is its enrichment to teaching by bringing practical exploration and development problems to the classroom to show students that present knowledge, no matter how well packaged, is always incomplete, sometimes even in the presence of a full data set. To me this is the great benefit of meeting petroleum geologists everywhere—in the Powder River, Illinois and Appalachian basins, and later in Mexico, Algeria, Australia, Indonesia, and South America. For me teaching courses to professionals in the Society is a way of acquiring a broad second hand geological experience that can be passed on to university students in class, or even better, as a source of counter examples to what may seem at the time to be universal truths. And of course, research problems result. My experience is, "teach a course to petroleum professionals and you always come away enriched in both ideas and knowledge."

So to sum it up, my lifetime contact with the oil industry in the Americas, Africa, Asia, Australia, and Europe has been a strong tailwind pushing me ever forward. Today I say thank you to the oil industry and its geologists and engineers for this opportunity to learn and be challenged and to pass on to students this experience. Thank you.

Paul Edwin Potter

EMMANUEL V. TAMESIS
Special Award

The beginning of this new century and millennium are golden years for Emmanuel "Tammy" V. Tamesis, geology teacher par excellence and a pioneer in petroleum exploration in the Philippines. In 2001, Tammy celebrated his 50 years as a geologist, and by 2003, he will be celebrating his 50th wedding anniversary. Having joined AAPG in 1958, he is now in his fifth decade as a member.

Born in Manila on January 15, 1928, Tammy thought of following in the footsteps of his father, Florencio Tamesis, an eminent forester. However, while pursuing his liberal education in the University of the Philippines (UP) after the Second World War, he wandered into the introductory course in geology taught with enthusiasm by Jose Ma. Feliciano, one of the first Filipinos to earn a Ph.D. in geology and the first chairman of the UP Department of Geology and Geography. Tammy received a high grade and was convinced by Feliciano to major in geology. After receiving his Bachelor of Science degree from UP in 1951, Tammy joined their geology faculty, which had only three other members, as an instructor in 1952. Soon afterward in 1953, Tammy married the lovely Angelina Raval, a librarian who has worked in the UP and the Asian Institute of Management.

In 1955, Tammy received a United States Agency for International Development (USAID) scholarship grant that supported his graduate studies at Stanford University, enabling him to study under renowned geoscientists. He received his M.S. degree in geology from Stanford in 1957 and returned to teach at the UP, where he was appointed assistant professor in 1961.

Further studies at Stanford for his doctorate in the early part of the 1960s were supported by scholarships from USAID and the Rockefeller Foundation. He majored in petroleum geology, sedimentology, and stratigraphy with William R. Dickinson as his adviser. Tammy wrote his doctoral dissertation, "Cretaceous Stratigraphy and Sedimentology in the Avenal Ridge–Reef Ridge Area, Fresno and King's Counties, California," and the Ph.D. in geology was conferred in 1967.

Upon his return to the UP in 1967, Tammy was appointed associate professor. He taught undergraduate and graduate courses in petroleum geology, stratigraphy, and geomorphology and also field courses in the Bondoc Peninsula in southern Luzon, in central Luzon, and the highlands around Baguio City. Tammy served as chairman of the Department of Geology and Geography from 1969 to 1971. He was appointed full professor in 1971. From 1971 to 1973, Tammy served as chairman of the Commission on Volcanology and worked to obtain support for the pilot program in geothermal energy.

The UP geology department was converted in 1983 into the National Institute of Geological Sciences (NIGS), a national center for excellence. Tammy served as assistant director for administration of the NIGS from 1988 to 1991. During this period, a strong earthquake occurred in 1990 and Mt. Pinatubo erupted in 1991. Tammy was active in documenting the effects of these events and coordinated the university's efforts to assist those affected by these disasters. The NIGS also provided support for the Pinatubo Lahar Task Force led by Kelvin Rodolfo.

Tammy did not contribute to the development of petroleum geology just through teaching. His considerable experience in the private sector enriched his teaching of geology and contributed directly to petroleum exploration of the Philippines. From 1970 to 1975, Tammy was the chief geologist and consultant for oil and gas exploration of Oriental Petroleum and Minerals Corporation. During this time, Oriental conducted geophysical surveys in its concessions in offshore northwest Palawan, in the southwestern Philippines. In July 1971, Oriental, as operator, drilled the Pagasa I well in its concession.

Although dry, this first well drilled in offshore northwest Palawan confirmed the existence of a thick sedimentary sequence there, although only basement cropped out in the adjoining onshore north Palawan. A follow-up campaign in the mid-1970s resulted in a number of commercial discoveries (the Nido, Matinloc, and Cadlao fields). Later on, in the late 1980s and early 1990s, the deepwater area in northwest Palawan was the site of significant gas discoveries (Camago and Malampaya). Commercial production of natural gas from the Malampaya field commenced recently.

As consulting geologist for the Philippine Oil and Development Company in 1973, Tammy, with Eduardo V. Mañalac, conducted an onshore seismic survey of the Panay Basin. After serving as chief exploration coordinator and chief geologist of the Philippine National Oil Company Exploration Corporation from 1975 to 1979, Tammy

was appointed vice president for operations of Oriental in 1979. The development of the Nido discoveries, in concessions where Oriental was a significant partner, were in full swing, with first production of oil in the Philippines taking place in the Nido field in 1979.

During his tenure, Oriental was an active upstream petroleum company with acreage in Palawan, the Sulu Sea, and central Luzon. In 1987, Oriental participated in drilling the Victoria-2 well in central Luzon. The Victoria-2 well reached a depth of 18,360 feet, the deepest onshore well in Southeast Asia at that time. Tammy was promoted to senior vice president for Exploration and Development of Oriental in 1987, a post that he held up to 1988. Afterward, he served as consulting petroleum geologist for Vulcan Industrial and Minerals Corporation, starting in June 1988.

Tammy retired from the UP in 1993. Nevertheless, he continued to teach petroleum geology courses there. From June 1993, Tammy remained active in petroleum exploration as consulting petroleum geologist for the PNOC Exploration Corporation. PNOC-EC, a leader in Philippine petroleum exploration, is operator of service contracts in offshore Palawan and Mindoro and a partner in the Malampaya gas field.

Tammy's outstanding achievements in geology have been duly recognized. Tammy was awarded the 1984 Distinguished Geology Award by the Geological Society of the Philippines. In 1988, he was appointed to the UP Golden Jubilee—Filemon Rodriguez Chair on Energy. That same year, he received the Distinguished Geologist Award from the National Research Council of the Philippines, and the Philippine Federation of Professional Associations, through the Philippine Technological Council, conferred on Tammy the Most Outstanding Technological Professional in Geology Award for 1988.

Many of Tammy's students are now leaders in the oil industry. During his 50-year career, Tammy had the satisfaction of seeing the birth of the upstream petroleum industry in the Philippines, with northwest Palawan developing as a petroleum province. The Philippines remains underexplored and continues to benefit from the geoscientific expertise of Emmanuel V. Tamesis.

Citation—To Emmanuel Tamesis, in recognition of his dedication and notable contributions to the education of geologists and his achievements in Philippine petroleum exploration.

Benjamin S. Austria

Response

It was a pleasant surprise to be informed by the president of AAPG, Robbie Gries, of my selection to receive the 2002 Special Award. This was entirely unexpected and overwhelming, and my initial reaction was to wonder who could possibly have submitted my name to the Selection Committee. I am sure that there are other individuals whose achievements are more deserving of the honor.

Nonetheless, I accept the award with all humility and wish to share the honor with my professional associates, academic colleagues, former students, and the academic institutions and organizations that played an important role in my professional career.

First, I would like to thank the Executive and Awards Committee of AAPG for bestowing this honor on me, and Richard Lorentz Jr., a former associate, for recommending me to these committees. I also thank an esteemed colleague and friend, Benjamin Austria, for the biographical sketch and citation.

I am eternally grateful to the University of the Philippines (UP), the Agency of International Development of the U.S. State Department (USAID), and the Rockefeller Foundation for making it possible for me to complete graduate studies in one of the most prestigious schools in the United States, Stanford University.

I belonged to the first batch of faculty members from the University of the Philippines sent to the United States in 1955, under a faculty development program administered by Stanford University and funded by USAID. My wife, Angelina, and I were in that group that left in the fall of 1955 and enrolled in various universities in the United States. I was assigned to study at Stanford, while my wife was sent to study for her M.S. degree in library science at the University of California, Berkley.

At Stanford, I was privileged to have as mentors such top geoscientists as Hubert G. Schenck, Siemon W. Muller, Arthur D. Howard, John W. Harbaugh, Joseph J. Graham, Hans E. Thalman, George A. Thompson, and Benjamin M. Page during the first phase of my graduate studies from 1955 to 1957, and William R. Evitt and William R. Dickinson when I returned to Stanford for my Ph.D. in 1963.

Suffice it to say, that my Stanford education not only enhanced my knowledge of the earth sciences but prepared me as well to meet the challenge of teaching students in the newly instituted professional degree course in geology at the University of the Philippines. The Stanford experience and association with other professional geologists in the United States likewise has opened doors for employment in the oil industry.

Upon completion of the academic requirements for an M.S. degree in 1957, I returned to the Philippines to resume teaching as required by the contract with the university but opted to take a three-month's leave to start an exploration program for White Eagle Overseas Oil Company, a local subsidiary of the Tulsa-based Helmerich and Payne (H&P). I felt the need to get my feet wet in the exploration business before immersing myself in a purely academic activity. We were fortunate then in having university administrators, one of whom was the past president of the United Nations Assembly, General Carlos P. Romulo, who understood the effective feedback system between teaching and the practice of one's profession and allowed the faculty to take in consultancy work in nongovernmental organizations. This

policy, which is still in effect, has made it possible for me to get involved in several oil exploration ventures in the country and has provided me the opportunity to travel to different parts of the archipelago and appreciate its geological complexities.

Of course, nothing beats the excitement that goes with drilling exploratory wells, especially when they are the very first wells drilled offshore and in a basin where no wells have been drilled before. I refer specifically to the drilling of Pagasa-l (meaning "hope" in the local dialect) and Calamian-1 in the northwest shelf of Palawan, in 1971. Although both wells had negative results as far as finding the elusive black gold, the information from these two wells was put to good use five years later, when City Services discovered the Nido field in 1976, and together with their success in drilling larger pinnacle reefs nearby eventually led to the first commercial production of oil in the Philippines in 1979. City Services's identification of the carbonate pinnacle reef play was successfully applied in discovering and producing the Matinloc, Cadlao, Libro, Pandan, and Tara fields. This exploration play subsequently paved the way in 1989 for Oxy and Shell's discovery of the giant Camago-Malampaya gas field.

Of all the professional activities I have participated in, I derived the most satisfaction teaching geology majors at the University of the Philippines. Helped by my practical experience in the petroleum industry, I have succeeded in enticing some of my former students to take their chance in the oil patch, and it is gratifying to know that many of them have pursued successful careers in this industry. Some are now occupying top management positions in oil companies both local and abroad, while others manage their own consulting firms. One former associate, who was part of my team that drilled the first offshore well in the country, has since moved up to become Phillips Petroleum's vice president for exploration in China—Eduardo V. Manalac Sr. Ed was recently honored by the Chinese government for having been instrumental in discovering the second largest oil field in China. We are all very proud of his achievement. Others who have chosen other fields of specialization in geology now hold important positions in government, such as the Department of Environmental and Natural Resources, the Department of Public Works and Highways, the Department of Energy, the Philippines Institute of Volcanology, and some government-controlled corporations involved in energy exploration and development. Those who were more academically inclined have joined the faculty of the National Institute of Geological Sciences (UP), after obtaining doctoral degrees in foreign countries, and have transformed this academic unit to one of the centers of excellence recognized nationally by the government. I am very proud of having been a part of their educational development and continue associating with them professionally and socially.

I need to acknowledge the following companies I have worked with, namely, PNOC Exploration Corporation, Oriental Petroleum and Minerals Corporation, Helmerich and Payne (H&P), and Vulcan Industrial and Mining Corporation, for their invaluable contribution to the field training and research activities of our undergraduate and graduate students.

Finally, I want to thank my wife, Angelina, for her enduring patience and support, for nearly 50 years of married life.

Emmanuel V. Tamesis

M. LEE ALLISON
Public Service Award

M. Lee Allison's career in geology has grown far past simple dedication to a profound commitment to public service. In an age of specialization, Lee has broadened his expertise and vision to deliver the benefits of scientific insight to the citizens geology is meant to serve. In so doing, he has embraced controversies and taken professional risks that would have stopped most people before they started.

Born on January 15, 1948 in Philadelphia, Pennsylvania, Lee earned a B.A. degree in geology with a geophysics option from the University of California, Riverside in l970. He earned his M.S. degree in geology from San Diego State University in 1974, and a Ph.D. in geology from the University of Massachusetts, Amherst in 1986.

Lee's early experience was in oil and gas exploration, development, and seismic interpretation. He worked five years for Chevron in San Francisco, where he was responsible for the development geology of 40 oilfields in southern California, and exploration and seismic interpretation in Alaska, including mapping of major geologic trends for Federal offshore lease sales. While completing his Ph.D., Lee worked at Jet Propulsion Laboratory and then as a consulting petroleum geologist covering

the San Joaquin Valley and Los Angeles basin. After completing his doctorate, Lee put in a three-year stint with Sohio in Dallas and Houston, where he used integrated geological and geophysical methods to generate prospects in Oklahoma, Arkansas, Texas, Nevada, and Wyoming.

In 1987, Lee moved to the University of Utah Research Institute, where he established an oil and gas research program and helped supervise a $7 million deep geothermal drilling operation on Ascension Island in the South Atlantic Ocean. During his tenure there, he helped create Western Earth Science Technologies, Inc., a nonprofit consortium of 12 universities in 6 Rocky Mountain states engaged in oil and gas research, serving as its first president.

It was during Lee's next posting, serving ten years as state geologist and director of the Utah Geological Survey, that his creative role in public service was first put to its fullest tests. A rare idea man, Lee's vision and guidance vastly widened the Survey's role and utility to the public. Building on existing programs, he expanded the Utah Geological Survey's involvement with oil and gas and created the Geologic Extension Service and the Environmental Sciences Program. Recognizing that the job was not done until the public was informed, Lee revamped Utah Geological Survey publications, making them more attractive, accessible, and intelligible to the lay readership; as a result, publication sales increased sevenfold. He further showcased Utah geology and brought his organizational skills to the forefront through the titanic feat of chairing the host committee of an annual Geological Society of America convention one October, and the Annual AAPG Convention the following May. Likewise, he used television and print media intelligently and prodigiously, and inspired journalists and even a mystery writer to extend his reach in interpreting the importance of geology to the layperson.

The depth of Lee's commitment to his mandate became fully apparent in 1996, when the Clinton administration's election year politicking abruptly created Grand Staircase Escalante National Monument. The area to be set aside contained, among other resources, 75 percent of Utah's coal, the largest undeveloped coal reserve outside Alaska, appraised at $220 billion, 10 percent of which had been dedicated under federal and state law to the school children of Utah and held in trust for them by the state. To protect the interests of these young constituents, Lee compiled an inventory of Monument resources and took the information to the School Trust, the press, and the public. These actions contributed to the largest federal-state land swap in history. The School Trust received over $60 million and large tracts of mineral resources on federal lands elsewhere in the state.

In 1998, when controversy arose regarding the expansion of the Salt Palace Convention Center over a suspected location of the Warm Springs branch of the Wasatch fault in Salt Lake City, Lee affirmed to the press the importance of geological investigation of the site to prevent potential loss of life. Politicians who placed financial investments before public safety attempted to muzzle him, but by this time, Lee's ethical stature and outspoken style were sufficiently legion that the press had only to note his silence to draw the correct conclusions. Sadly for the state of Utah, Lee resigned his position rather than be prevented from performing his job.

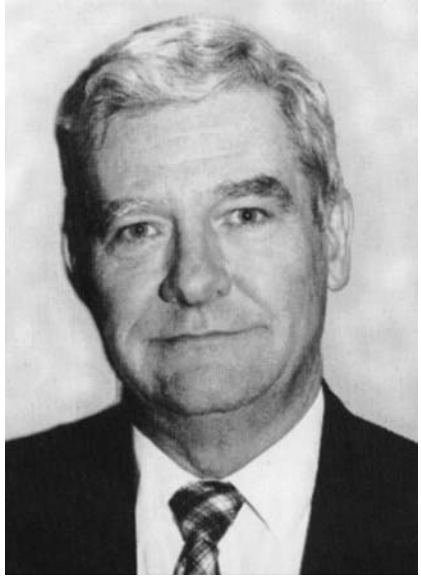
Lee then became director of the Kansas Geological Survey. Within weeks, he again found himself at that crux where science meets politics as the State Board of Education of Kansas voted to de facto prevent the teaching of evolution in the public schools. Lee testified before the Board and campaigned earnestly across the nation in support of the teaching of evolution, helping to publicize the issues sufficiently that, 18 months later, the Board overturned the influence of a highly vocal minority whose agenda was to teach religious doctrine in the place of scientific theories.

Lee's next major public service challenge followed the lethal explosion of natural gas stored underground in the area around Hutchinson, Kansas. Two people had been killed, and hundreds evacuated from their homes. Acting quickly to restore public safety, Lee successfully managed the difficult performance of on-the-fly scientific investigations, bringing essential information and a sense of hope in two politically and emotionally charged town meetings, steering the project through public disputes and animosity that had arisen between local officials and the gas storage utility.

A man of vision and integrity and a tireless public servant, Lee Allison richly deserves the AAPG Public Service Award.

Citation—To M. Lee Allison, for his creative vision, tireless service, superlative ethical conduct, and astounding success in the advancement and public administration of the geological sciences.

Sarah Andrews



LAWRENCE SKELTON
Public Service Award

Lawrence Skelton, recipient of the 2001 Public Service Award, was born in 1937 in Evansville, Indiana. After at-

tending public schools in Evansville, he attended the Indiana University where he graduated with a Bachelor of Science degree in geology in 1960. Larry had completed the Air Force ROTC program at the university and entered the United States Air Force following graduation. Eventually, he was integrated into the regular Air Force retiring in 1981 with the rank of Lieutenant Colonel. He served primarily in the United States, Greenland, and the Southeast Asian Theater. In 1976, while serving with the Headquarters Air Training Command in San Antonio, he was selected as the United States Air Force's Outstanding Senior Fuels Manager.

During the assignment in San Antonio, he completed the course work and received an MBA degree from Trinity University. It was during his tenure in the Air Force that he commenced his public service, by presenting programs on geology at public schools and also preparing and presenting displays on minerals and fossils for military base libraries.

In 1965, Larry married Mary Pearl Fuller, a teacher from Fruita, Colorado, who he had met while stationed at Edwards Air Force base in California. They have two sons, Harold and John, and three grandchildren.

Immediately after his retirement from the Air Force, Larry joined the Kansas Geological Survey as manager of the Well Sample Library in Wichita Kansas. Shortly thereafter, he met Daniel F. Merriam, chairman of the Department of Geology at Wichita State University who inspired him to return to school and obtain his M.S. degree in geology.

In his work with the Kansas Geological Survey, first as manager of the Well Sample Library and later as assistant director of the Survey in charge of Wichita operations, Larry has integrated 30,000 sets of well cuttings from other collections into the Survey's collection. He has provided a list of the library's 132,000 well collection of cuttings, which is now accessible on the Survey's Web site. Larry has authored or coauthored 34 papers of a geological or historical nature. He is in the process of preparing a new geologic map of Sedgwick County, Kansas.

Larry was among the leaders who secured legislative passage of the licensing of geologists in the state of Kansas. He is currently a licensed geologist. Other activities include service on the Kansas Corporation's Oil and Gas Advisory Committee and as a member of the City of Wichita's ad hoc Task Force on Basement Flooding.

Despite a heavy workload with the Kansas Geological Survey, Larry has found the time to serve his profession extremely well. He has been an active committee member of a number of committees of the Kansas Geological Society with service in that organization culminating in the presidency in 1997. Larry has also served as president of the Kansas Geological Foundation. Under the auspices of that organization, he has annually made a dozen or more presentations on local geological topics to local schools, civic organizations, and historical organizations. In conjunction with his presentations he has assembled fossil mineral and rock sets, each containing a dozen labeled specimens. Approximately 80 of these sets have been donated to local schools, Boy Scout troops, home schools, and so on.

Larry has coordinated the annual Road Scholar event for the Kansas Regional and State Science Olympiad since its initiation, writing the examinations and usually administering them. He has actively participated in the joint Kansas Geological Survey and Kansas Geological Society display and presentation to over 5,000 children during Earth Day.

He has organized and participated in the geologic activities associated with the Kids C.A.N. (Care about Nature), a joint effort of the Great Plains Nature Center and the Kiwanis Club of Wichita that hosts approximately 1,200 fifth graders and their teachers every year.

Besides his membership in the Kansas Geological Society and Kansas Geological Foundation, he is also a member of AAPG, the AAPG Division of Environmental Geosciences, the Society of Independent Professional Earth Scientists (associate member), the Kansas Academy of Science (where he is *Bulletin* editor and 2002 president-elect), and the Wichita Gem and Mineral Society. Larry was presented the American Federation of Gem and Mineral Foundation, Honorary Award for 2001 by the Rocky Mountain Federation of Mineralogical Societies.

Citation—This award is bestowed upon Lawrence H. Skelton who has served many different facets of the general public far in excess of the duties and responsibilities of his employment as a public servant.

Robert D. Cowdery

CRAIG FERRIS
Pioneer Award

Craig was born at 536 Soto St., Los Angeles, California, on March 22, 1913. Craig's family moved to Wichita, Kansas, in 1917. He went to Franklin Elementary, Allison Junior High School, and graduated from Wichita High School East in 1931. One event that influenced Craig's early life was the flight by Lindbergh in 1927 across the Atlantic. Lindbergh came through

Wichita on a trip across the country and influenced Craig's ambition to be an aeronautical engineer. Unfortunately, he graduated from high school in 1931 at the height of the Great Depression. He found his life savings of $130 frozen at the local bank. The banks were closed and the possibility of studying aerodynamics at the University of Kansas was killed by the depression.

Luckily Craig found a way to get his education at Friends University funded, and he graduated in 1934. Craig worked his way through Friends University carrying newspapers. For three years, rain or shine, Craig got up at 3:30 A.M. to deliver the *Wichita Eagle*. Hard work seemed to be the code of ethics for those that survived the depression, and Craig is no exception.

During the summer of 1933, Craig happened to attend the Miss Wichita contest. There he spotted "the most beautiful girl in the world," Sue Baier. She won the crown and Craig at the same time. Within a year they were married on September 9, 1934. On September 11, the couple set off for Norman, Oklahoma, where Craig had been accepted into graduate school at the University of Oklahoma (OU) to study physics.

The physics department at OU that attracted Craig had a national reputation that attracted a number of students that were going to make geophysical history. These OU classmates were later to become the who's who in early geophysics.

Sue worked for F. W. Crawford while Craig was at OU. F. W. Crawford was the brother of John Crawford who was to later become famous for his part in the development of the Vibroseis seismic source at Conoco. At this time in OU history (1934), Otto Krause, who headed the physics workshop, only had a half-time position. The rest of his time was spent working for the American Seismograph Company where George Elliot Sweet was one of the owners. It was Otto Krause who was going to change the course of Craig's life by introducing him to Sweet.

Craig worked for Otto Kraus at OU for 25 cents per hour to support himself and his new bride. Otto Krause liked the way the young man handled himself and how quickly he was learning the electronics taught there at OU. As a result, Otto Krause introduced Craig to George Elliot Sweet during one of his visits to see Krause. At this point in time, George Elliot Sweet lived in Houston.

The American Seismograph Company needed a geophone placement engineer or jug hustler as they are called today. When George Elliot Sweet offered Craig fifty cents per day, doubling his salary, Craig left OU without finishing his degree, and became a geophysicist the hard way. Apparently the little bit of training he got at OU in electronics made Sweet realize how useful Craig would be to the efforts of his company.

Craig started work in Bay City, Texas, where he had to carry some rather heavy geophones (4 inches in diameter and anywhere from 6–8 inches in height) and lived for $4 per day in a boarding house without expenses. Craig worked all over Texas, Illinois, Louisiana, and Oklahoma for the American Seismograph Company. During his latter days with the American Seismograph Company, Craig remembers seeing a strange truck while shooting near Ina, Illinois. This truck turned out to be with a Gulf Gravity Meter crew; it was Craig's first time to ever see a gravity meter crew but it was certainly not his last. In February 1938, there was a depression in the seismic business and his crew was laid off.

When Craig was laid off by the American Seismograph Company, he was hired immediately in 1938 by a Rice University professor, L. M. Mott-Smith, who had invented a Mott-Smith gravimeter. In order to teach Craig how to make gravity measurements, Mott-Smith sent Craig out into the field with one of his students, Sam Worden. This student was going to later have a famous gravity meter named after him. The Mott-Smith gravimeter weighed 150 pounds while the Worden gravimeter weighed 5–6 pounds. You can imagine the impact this had upon gravity exploration.

Craig's supervisor at Mott-Smith was E. V. (Mack) McCollum. In 1943, Craig and McCollum set up a new company in which Craig had a one-third interest. The company was the E. V. McCollum Company. Their first crew went to work for the Tidewater Oil Company. The second crew went to work for The California Company, which is known as Chevron today. The third crew went to work for Conoco and the fourth went to work for the Atlantic Refining Company. Craig worked with McCollum until 1980 when the partnership was terminated and Craig founded GraviMetrics.

Craig has more awards and honors than most people. He is an honorary member of the Society of Exploration Geophysicists (1987) and a previous president of the Geophysical Society of Tulsa. He is also a founding member of the Canadian Society of Exploration Geophysicists. He has been given a distinguished alumni award from Friends University as well as a Doctor of Laws degree. He has been awarded the distinguished Eagle Scout award, which is one of his most treasured. Craig is also very proud of his work associated with the creation of the Society of Exploration Geophysicists Museum in Tulsa, where Craig served as the inaugural chairman of this fine museum. Craig had a long career and has more experiences than many people could have in several lifetimes; for example, being a part of the discovery of a 100 million barrel oilfield in Bolivia.

Craig is well known for his lapidary and faceting skills. There are more than a few Craig Ferris clocks hanging on our walls. Craig, aside from being a good husband and father, is a man of intellect and vision. He truly is a pioneer.

Citation—To Craig Ferris for his efforts as one of our founding fathers in several disciplines, which were critical to the advancement of petroleum exploration.

Ray Brown

THOMAS S. AHLBRANDT
Distinguished Service Award

Thomas Ahlbrandt has had a remarkable career in petroleum geology as an oil and gas explorer, resource assessor, author, teacher, and leader.

Tom was raised in Veteran, Wyoming, and attended the University of Wyoming where he received a B.A. degree in 1969 and Ph.D. in 1973 in the field of sedimentary geology. His dissertation was on the Killpecker Dune field in Sweetwater County, Wyoming. Tom became interested in geology as a result of his outdoor interests being raised on a farm in Wyoming, a state where both geology and petroleum resources are prominent.

He began his career working three summers for Pan American Petroleum (now BP-Amoco) in Denver, Colorado (1966–1968), and one summer for Amerada in Durango, Colorado (1969), as an undergraduate. Following completion of his Ph.D. in January 1973, he joined Exxon Production Research in Houston, Texas. At Exxon, he studied deep marine deposits; particularly their reservoir quality and seismic definition including work in Wilmington field, California, offshore Japan, and Europe. He left Exxon in 1974 to join the U.S. Geological Survey's Branch of Oil and Gas Resources. At the U.S. Geological Survey, he was the project chief for the study of the Lower Cretaceous Nanushuk Group on the North Slope of Alaska and ran field parties there in 1977–1978. He also organized, with E. D. McKee, an eolian sand research program for the Saudi Arabian government. In 1978, he joined MRO and Associates, an exploration company in Denver, where he served as the play manager for the Powder River basin and Denver basin, principally exploring for the Minnelusa, Lyons, and other Paleozoic horizons utilizing high resolution seismic data. In 1981, he formed a consulting company, Petrostrat Consultants, with two partners who consulted on behalf of clients exploring in the Rocky Mountain basins. He successfully established petroleum production in seven formations in four basins.

In 1988, he rejoined the U.S. Geological Survey at their national center in Reston, Virginia, serving as the Associate Office Chief for Energy Programs where he had oversight responsibilities for six energy programs employing 350 people with an annual budget of $27 million. In 1991, he became the chief of the branch of Petroleum Geology in Denver, Colorado, which is a national branch employing 85 people. In this position, he had an annual budget of about $9 million and directly managed the Onshore Oil and Gas Program and the World Energy Program of the U.S. Geological Survey. From 1995 to February 1966, he served as the Chief Scientist for the Energy Program in Denver. He currently is the World Energy Project Chief for the U.S. Geological Survey and supervised the recently completed world petroleum assessment.

His research interests include clastic diagenesis, clastic sedimentology, Alaskan geology, world energy resource assessment utilizing integrated interdisciplinary teams, and identification of bypassed low resistivity hydrocarbon pays using petrophysical techniques. He has published over 165 articles or abstracts on these subjects. The excellence of his research has earned him many honors including the Best Paper and Outstanding Scientist awards from the Rocky Mountain Association of Geologists.

He is an active member of Rocky Mountain Association of Geologists (second vice president 1997), and SEPM, and is a registered Wyoming Geologist (#912).

Tom has been an outstanding contributor to AAPG. He served as chairman of the House of Delegates from 1995 to 1996. He was the foundation of the technical program for the 2001 Annual Convention in Denver where he served as Technical Program Coordinator. In addition, he has been the AAPG Representative to the American Association for the Advancement of Science Council (1997–2000), and served on the Technical Program Committee (1995–1998), Convention Committee (1999–2002), Geophysical Integration Committee (1992–1994), and Resource Evaluation Committee (1998–2001). It is widely know in AAPG circles that if you want something done with excellence, ask Tom to do it.

Not only does he get involved in all the scientific groups he affiliates with, he is also active in community and civic affairs. He is active on Our Lady of Pines Men's Club, homeowners associations and is actively involved in the Wyoming family farms. He enjoys motorcycles, bridge, arrowhead hunting, Corvairs, and yoga. His wife, Mary Jane, is a college teacher, marketing manager, yoga instructor, and a delightful companion. He has two daughters, Elizabeth and Wendy, and one grandson, Austin.

Perhaps one of the highest honors one can receive is to be recognized by one's alma mater. Tom received the Distinguished Alumnus Award from the University of Wyoming in 2000.

Tom Ahlbrandt is a keen and dedicated scientist, stellar professional, and outstanding community leader. His is, as he likes to joke, 100 percent all bran.

Citation—To Thomas S. Ahlbrandt, a dedicated scientist and outstanding leader, for his exemplary and long-term

service to AAPG and the geologic profession.

Stephen A. Sonnenberg

JEFFREY ALDRICH
Distinguished Service Award

Jeff has been a real force behind the internationalization of AAPG. He has worked projects on nearly every continent, and has contributed greatly and shown leadership on various committees, in the House of Delegates, and to his local societies. He was a key player in Asia Pacific's regionalization process.

Jeff was born on February 18, 1955 in Charleston, West Virginia, but his family soon moved to south Florida. At Vanderbilt University, Jeff became fascinated in the geosciences and switched from majoring in physics to geology, in which he took a Bachelor of Science degree in 1977. Jeff then headed to College Station, Texas, for his master's degree (Texas A&M, 1983), which included working for the University of Texas's Marine Geophysics Lab. This particular project was rather unique, being done way up in the high hills of west Texas about as far as you can get from the shoreline. No Aggie jokes please; he was working out of the McDonald Observatory as part of an effort surveying intra-plate tectonic movements, which are of critical importance with Lunar Laser ranging projects.

Jeff started his career with Pennzoil in 1979. His first job was sitting wells in the Gulf of Mexico, where he thoroughly enjoyed the hands-on aspects and responsibilities. Even today, he stills tries to get out to the rig when his wells get close to the target zones. He received a solid grounding in using geophysics for direct hydrocarbon indicators, and started to apply these skills in various frontier basins including all the East Coast basins, west Florida, California, the Aleutians, the Chuckchi Sea, the Arctic Ocean, and the deep Arbuckle trend of the Arkoma and Anadarko basins. His manager and mentor, vice president of Exploration, Jim Milliken (another Aggie), saw to it that Jeff also gained international experience in the North Sea, South America, and the Mediterranean.

Maxus Energy recruited Jeff in 1990, and used his international experience to work up prospects in the Rocky Mountains (Nevada, Wyoming, and Utah). Maxus formed true multidiscipline task forces to do rapid studies and evaluations of the Anadarko basin, where he was team leader of a somewhat controversial, but ultimately successful exploration program. Jeff was then moved to International, working in Africa, developing plays in Tunisia, Egypt, Africa's west coast, and Madagascar. In one four-week period in Ethiopia, he went from lead geologist to seismic bird dog, chief negotiator with Somali chieftains to interim country manager.

In 1993, Jeff moved with Maxus to Jakarta, where he worked on a highly successful team exploring in the Sunda Basin. He also contributed expertise to some multidisciplinary asset teams doing various field developments, providing expertise on special projects for stranded reserves, a gas commercialization project and a very successful marginal fields effort.

Jeff moved to Forest Oil International in 1998 as chief geologist and exploration manager, where he has worked up more than 30 concessions and licenses in 10 different countries in Europe, Africa, and South-East Asia.

Jeff has been very active with AAPG. From 1987 to 1993 he was an alternate or delegate in the House of Delegates for the Houston Geological Society, and in 2000 and 2001 an international delegate. He has sat on standing committees since 1989 including the International Liaison Committee, the Headquarters Management Committee, Geological Computing, the 21st Century Committee, and the Membership Committee (of which he was international vice chair from 1999 to 2001). Jeff was also one of the founding members of the brain trust that helped kickoff the regionalization effort in Asia and the Pacific. He has twice been awarded a certificate of merit. Currently he is part of the AAPG mentor program.

Jeff was very active organizing technical programs with the Indonesian Petroleum Association. He was an initiator of the International APG/Indonesian Petroleum Association Bali 2000 conference. Despite ongoing political uncertainties through that time in Indonesia, that conference was very successful from both a technical and financial perspective. Jeff managed the almost unimaginable task of making a convincing case to the Executive Committee to hold an international convention in that country. He made his presentation to them at exactly the same time that the problems there erupted, and CNN was showing Jakarta, Indonesia's capital, in flames and rioting engulfing the city, and his family was being evacuated. None of us are really still quite sure how he pulled this off!

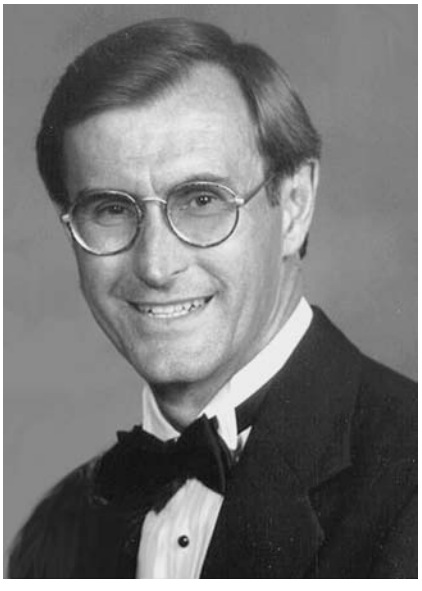
Growing up in Florida, Jeff developed two of his great interests, sailing and camping. Though his sailing has slowed down quite a bit with family and business responsibilities, he regularly enjoyed his GEO-SAIL racing experience from 1985 to 1990 when he crewed for an all-geologist crew of Ed McFarlans Ensign sailboat "Loch Slough" with Brian Shaw and Mary Page at the Houston Yacht Club. Boy Scouts and Sea Explorers filled his need for camping and Jeff obtained his Eagle Scout in Boca Raton. Later, he would

use his experience as an assistant scoutmaster of the Boy Scout Troop in Jakarta. That troop has a world wide reputation for the wettest camping trips every year.

Jeff met Elaine Duke while at Vanderbilt, and they were married in 1978. They have two children, Leigh, a sophomore at Denison University, and David, a high school senior in Houston. Jeff remains active in his local church, having been an officer at First Presbyterian Church in Houston, and now a teacher at Memorial Drive Presbyterian Church. Always thought to be the square when growing up, his family now finds him to be one of their more adventuresome offspring. Jeff and Elaine love to travel and have instilled that love of multiple cultures in their children.

Citation—To Jeffrey Aldrich, for his professional leadership, dedication, and ceaseless efforts on behalf of the AAPG's international membership.

Peter Lloyd



DONALD DEAN CLARKE
Distinguished Service Award

Don Clarke is a rarity occasionally found in California; he's a native, in fact a third generation Californian. Born in 1949 in Los Angeles, one of four children of Don and Betty Clarke, he was raised in the nearby San Fernando Valley suburbs where Don's father worked as an engineer testing rocket engines for Rocketdyne.

The son of a rocket scientist, Don grew up intensely curious about both planetary and terrestrial geology with a childhood dream to be the first geologist on the Moon. Astronomy continues to be one of Don's hobbies. Sterling Pryor, Don's Junior High School science teacher, introduced Don to geology and pointed him down his professional path. Don graduated in 1972 with a B.S. degree in geology from California State University Northridge (CSUN), and continued taking postgraduate courses at CSUN, California State University Long Beach, and California State University Los Angeles. CSUN has played a central part in Don's life and Don counts many of his fellow students, as well as the faculty, as lifelong friends. In 1972, while at CSUN, Don met his wife, Cynthia, and field trips became an integral part of their courtship. They married in 1975 and continue to visit the outcrops while travelling on vacations. Their daughter, Holly, occasionally accompanies Don on his professional travels and knows many AAPG luminaries.

Don began his professional life in 1974 with the California State Lands Commission to work on the California offshore focusing on the Wilmington Oil field in Long Beach, California. He progressed through that organization until 1981 when he joined the City of Long Beach's Department of Oil Properties where he is currently the City's Division Engineer of Geology, Environment, and Safety, overseeing a professional staff that works with the State Lands Commission and the field's contractors. Don is an expert on the Wilmington field, sequence stratigraphy, computer mapping techniques, and geological hazards with more than 50 papers on these subjects to his credit. He has led field trips and held short courses for both AAPG and the Pacific Section AAPG and has presented papers internationally.

Don is extensively involved with AAPG at all levels. As president of the Los Angeles Basin Geological Society from 1996 to 2001, Don singlehandedly kept it alive through the industry downturn as majors left the Los Angeles basin. At the Pacific Section, Don has served on committees, stood for office, and chaired two very successful Pacific Section AAPG conventions in 1993 and in 2000. The latter was an exceptional challenge as for the first time the Society of Petroleum Engineers and AAPG cohosted a convention, which required exceptional diplomacy and negotiation skills to ensure the convention's success. Don is currently the Pacific Section AAPG's councilor on the Advisory Committee, has served in the House of Delegates since 1988, on the Reservoir Development Committee since 1998 (vice chair 1999–2001), on the Budget Review Committee (1999–2000), on the Division of Environmental Geology Advisory Board (2001–2004), and has stood for office as a candidate for AAPG treasurer and House of Delegates chair.

Don's devotion to his community has been equally extensive. He has served as vice president and director of the Thomas Dibblee Geological Foundation, director for Studies of Los Angeles Basin Subsurface Geology, member of the National Research Council Committee on Preservation of Geoscience Data and Collections, vice president of the Orange County Engineering Council, president of the Science and Math Associates at Long Beach Community College, Science Advisory Board at Milliken High School, and on the Earth Science Curriculum Review Board at CSUN. Don gives lectures, has brought in speakers for numerous community organizations, has led oil field tours for local schools and community groups, and teaches geoscience classes at Compton Community College, where his infectious enthusiasm has introduced geology to many inner city youths for the first time. He was also active in the Long Beach Grand Prix Race Management for 17 years.

Those of us who know him, treasure Don's vision, drive, energy, leadership,

creativity, energy, intensity, and lastly, energy. His vision and leadership have restored the Los Angeles Basin Geological Society to its current robust state and have broken barriers between the Society of Petroleum Engineers and AAPG. He has served AAPG with distinction at all levels. He has introduced geology to students and his community while firing their imaginations with his love of geology. He does the same for us old tired and jaded geologists when he waxes enthusiastically about the latest on dinosaurs, gems, astronomy, grand prix racing, and even tsunami's (an inside story best shared one on one). His accomplishments have helped earn him this honor but it's his flair and personality that makes it such a pleasure for our society to present him this award.

Citation—To Donald D. Clarke, in recognition for his visionary leadership, creativity, and accomplishments in representing AAPG at all levels and for introducing earth science to general public.

Robert L. Countryman

JOHN R. HOGG
Distinguished Service Award

John Richard Hogg was born to Christine and Melvin Hogg in Hamilton, Ontario, Canada on October 30, 1958. Growing up in the Canadian equivalent of Pittsburgh, a blue collar steel town was a good place to learn about rocks. As a youngster he was intrigued by the many fossils he found on the Niagara escarpment which divides the north and south parts of the city of Hamilton.

In high school, John concentrated on math, sciences, and music. While excelling in the natural sciences, he also had an intense passion for music and played guitar, saxophone, and base trombone as well as singing in the high school choir. John also enjoyed sports and was a member of tennis and badminton teams and participated on the track and field team throwing javelin, discus, and shot put. He learned leadership when elected student president of the Music Department and in his senior year learned defeat when he finished second in the race for Student Council president.

Entering McMaster University, John planned to become a chemist. In his first year his elective was a year-long course in geology and by the end of 1977, he knew that his career path would be rocky (pun intended). By his senior year, John was dedicated to the field of geology and was president of the Geology Club.

After graduation in 1981, John moved to Calgary to work for Gulf Canada Resources Ltd. John was very fortunate in the booming early 1980s to work high-risk exploration. John worked in the high arctic, Sverdrup Basin, in the Canadian Queen Elizabeth Islands, north of 80° latitude. During this time, John married Amy Arnold. Amy had graduated from college and was starting work at a local hospital in the medical laboratory field. By the end of his third year, he had proposed two locations for drilling in the Arctic Ocean. Both wells were drilled, one subeconomic and one dry.

In 1984, John moved to gain expertise in other offshore basins of Canada. Working for Husky Oil Operations Ltd. allowed John his first look at the exciting world of Atlantic Canada exploration. In his four years with Husky, John drilled or was involved with drilling a dozen wells on the Scotian Shelf including two significant discoveries. During this time, John became involved with the Canadian Society of Petroleum Geologists and was elected to his first of many terms in the House of Delegates.

John left Husky in 1988 to prospect the Grand Banks of Newfoundland for Petro-Canada. As a senior geologist, John was instrumental in the establishment of new exploration trends in the Jeanne d'Arc Basin. By this time John was working in AAPG on the Membership Committee. In 1990, John participated in the Technical Program Committee followed by chairman of the Field Trip Committee for the AAPG Annual Meeting in 1992. Four years later, John was general chairman of a Canadian Society of Petroleum Geologists Annual Convention that raised close to $300,000. In 1994, John was asked to replace the Canadian representative on the AAPG Advisory Council. John was elected recording secretary of the AAPG House of Delegates in 1994–1995.

In 1997, John joined PanCanadian Energy where he is currently exploration manager of Atlantic Canada Exploration. In late 1998, John was involved in the most significant discovery of his exploration career in drilling a Jurassic carbonate beneath a depleted light gravity oil field. Deep Panuke is estimated to contain recoverable reserves in excess of one trillion cubic feet!

John has been actively involved in increasing PanCanadian's asset base in Atlantic Canada and today PanCanadian is one of the leading exploration players on Canada's Atlantic Margin.

John was voted chairman-elect of the House of Delegates in 1998 and served as chairman of the House of Delegates and a member of the AAPG Executive Committee in 1999–2000. As past chairman of the House, John served again on the AAPG Advisory Council for a one-year term.

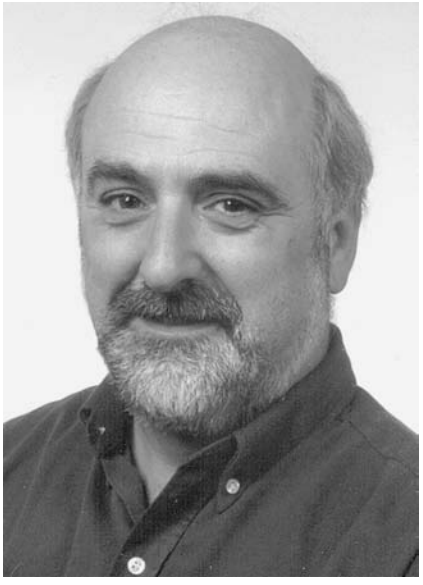
John's contributions to the Canadian Society of Petroleum Geologists and AAPG are large and have been recognized with numerous awards. However, John's signature accomplishments that mean so much to so many of us are in the field of reorganization and improved representation. He was a willing and very active supporter of initiatives in the House to make that body work better. But, his major product was the five-year effort to make the Advisory Council a more open and representative body. This culminated with the bylaws change effective in 1999, which created International Regions (in addition to U.S. Sections). Part of that change was the requirement that councilors from the regions and sections be elected by the widest process available and subjected voting councilors to population standards.

Today, John, Amy, daughter Sarah, and son Logan still live in Calgary and enjoy spending time in the Canadian Rocky Mountains. John and Amy play tennis together and travel to the deep South of the United States to enjoy the hot humid summer climate of their childhoods. Sarah is a strong dancer and excels in ballet, Pointe, and jazz and is an accomplished piano player. Logan is a Little League Baseball player and also likes tennis, rock climbing, and computer games.

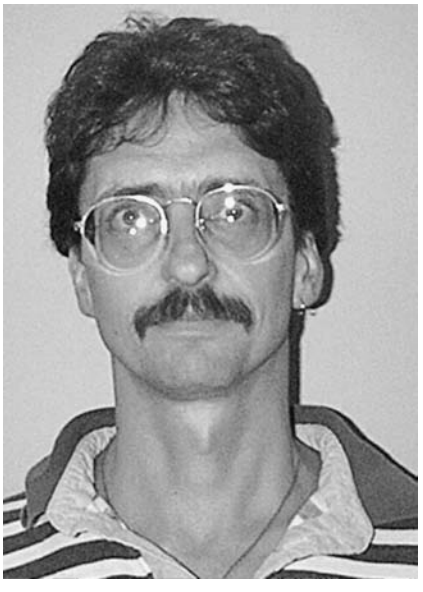
It is an honor for me to prepare this all-too-brief summary. John Hogg is a person of honor, integrity, and intellect. He is caring, understanding, and epitomizes good will. He richly deserves this Distinguished Service Award.

Citation—To John R. Hogg, intrepid geologist, who seeking challenges, encountered problems; who found solutions and provided remedies greatly benefiting industry, science, and the Association.

Patrick J. F. Gratton



JOHN S. BRIDGE
Wallace E. Pratt Memorial Award



ROBERT S. TYE
Wallace E. Pratt Memorial Award

The Wallace E. Pratt Memorial Award for the best paper published in the 2000 *AAPG Bulletin* goes to John S. Bridge and Robert S. Tye for "Interpreting the Dimensions of Ancient Fluvial Channel Bars, Channels, and Channel Belts from Wireline-Logs and Cores" (v. 84, no. 8, pp. 1205–1228).

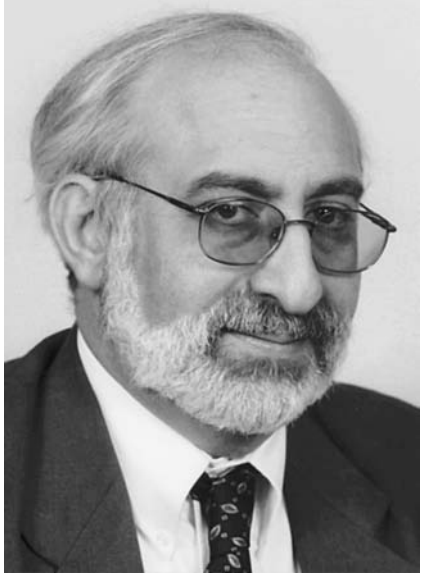
The authors report that they first met in Anchorage, Alaska, in 1992. Their professional relationship developed from the needs of academia and industry. After several episodes of looking at cores and well logs together, the same questions always came up: How laterally extensive are the fluvial channel-belt deposits, and what is the best way to correlate well logs in fluvial deposits? The authors knew that there were many problems associated with existing methods of interpreting and predicting the nature of fluvial deposits. Moreover, the problems of subsurface interpretation are exacerbated by having few, widely spaced wells and rare cores to work with. Answers to these questions are still not clear, but collaborative work on Prudhoe Bay field and Hamaca in the Venezuelan tar belt, combined with research conducted by John and his students at Binghamton University, culminated in the approach presented in their paper. Their interpretation and correlation methods are based on countless measurements and observations of sedimentary processes in modern rivers (e.g., Brahmaputra, Calamus, South Esk) and laboratory channels and on theoretical modeling. According to the authors, this paper is really only the beginning of efforts to interpret and predict the character of subsurface fluvial deposits rationally.

John Bridge is a professor of geological sciences at Binghamton University, New York State, where he has been employed since 1979. He gained a B.Sc. degree in geology from Reading University, England, in 1970, and a Ph.D. from St. Andrew's University, Scotland, in 1973. He was a lecturer in geology at Queen's University of Belfast, Northern Ireland, from 1974 to 1979. His teaching and research interests are in sedimentology, earth-surface physical processes, rivers and floodplains, and ancient fluvial and coastal sedimentary environments and deposits.

A physical geology field trip to a barrier island near Robert (Bo) Tye's hometown of Charleston, South Carolina, kicked off his career in geology. He holds degrees in geology, marine

sciences, and environmental sciences from the College of Charleston, the University of South Carolina, Louisiana State University, and the University of Alaska–Anchorage. Presently, Bo is a senior geological specialist in the Basin Evaluation Group at Phillips Petroleum Company, Bartlesville, Oklahoma. His previous employers include Cities Service Company, the Texas Bureau of Economic Geology, and ARCO. Bo has exploration and development experience in Alaska, Algeria, Brazil, Ecuador, Indonesia, Mozambique, Myanmar, Turkey, and Venezuela. He is keenly interested in the application of stratigraphy and depositional systems analysis to reservoir characterization. Bo is a member of AAPG, SEPM, and the International Association of Sedimentologists.

MARCIO ROCHA MELLO
Robert H. Dott Sr., Memorial Award



BARRY J. KATZ
Robert H. Dott Sr., Memorial Award

The Robert H. Dott Sr., Memorial Award for the best special publication during 2000 is presented to Marcio R. Mello and Barry J. Katz for *Petroleum Systems of South Atlantic Margins*.

The authors report that the idea to create the book arose from the success of the 1997 Hedberg Conference held in Rio de Janeiro, Brazil, at a time when the Brazilian petroleum industry was opening its doors to the world. The conference was organized because of the surge in exploratory interest along both the eastern and western South Atlantic continental margins. This rise in interest developed as a consequence of changes in the political climate along the margins, the end of governmental monopolies, the extension of petroleum provinces into deep and ultra-deep water, and the confirmation of a number of giant oil field discoveries. The book was assembled including a series of overview papers dealing with petroleum system elements and processes, including detailed descriptions of more than a dozen petroleum basins along the two margins.

Marcio Rocha Mello started his career in 1976 working for Petrobras as a well-site geologist in Brazil. In 1978, he completed a specialization course in petroleum geology, and from 1979 to 1983 he was part of a special study and basin analysis group. In 1983 Marcio was promoted to head of the geochemistry group of Petrobras (SEGEQ), considered one of Petrobras' biggest and best laboratories. In 1985 at Bristol University in England, he completed a Ph.D. course in molecular geochemistry applied to petroleum exploration. In 1988, he returned to the position of head of the Petrobras geochemistry group and coordinator of the petroleum systems of several basins within and outside of Brazil. In addition to his duties at Petrobras, Marcio was a lecturer in the geology and chemistry departments of several universities in Brazil and the U.S.A. He has more than 400 publications. Throughout the years, in conjunction with his work commitments, Marcio has also held the positions of general secretary of IGCP 381 (South Atlantic Mesozoic Correlation), member of the AAPG Research Committee, first president of the Brazilian Association of Petroleum Geologists (ABGP), and associate editor of Latin American Association on Organic Geochemistry (ALAGO), *Journal of Petroleum Science and Engineering*, and Brazilian Geochemistry Association, among others. He also organized one of

the most important petroleum geology conferences held in Latin America—Rio 1998. Marcio has received many awards, including the 1998 International Distinguished Achievement Award from AAPG and the 2000 Distinguished Lecturer award from the Department of Geological Sciences at the University of Texas at Austin. Marcio is currently director of Analytical Solution, considered one of the most advanced analytical laboratories in Latin America.

Barry Katz is a ChevronTexaco Fellow in ChevronTexaco's Energy, Research and Technology Company located in Bellaire, Texas. Katz received his B.S. degree in geology from Brooklyn College and his Ph.D. in marine geology and geophysics from the Rosenstiel School of Marine and Atmospheric Sciences, University of Miami, in 1979. He joined Texaco in 1979 and has held various positions within Texaco's research organization. Texaco's chairman named him a Texaco Fellow in May 1998 for his achievements in the applications of geochemistry to petroleum exploration. The major themes of his research have been related to the processes controlling the deposition of sedimentary organic matter and the characterization of organic facies and how this information may be applied to petroleum exploration. Over the past decade much of this work has focused on lacustrine systems.

LESLI J. WOOD

J. C. "Cam" Sproule Memorial Award

The J. C. "Cam" Sproule Memorial Award, presented to the AAPG member 35 years old or younger (at the time of submittal) who authors the best paper published during the year by the association or any affiliated society, is awarded to Lesli J. Wood for "Chronostratigraphy and Tectonostratigraphy of the Columbus Basin, Eastern Offshore Trinidad" (AAPG Bulletin, v. 84, no. 12, p. 1905).

According to Wood, the southeastern Caribbean region is a fascinating mix of tectonics and sedimentation. Many excellent scientists have been working in the region for nearly a century. Wood reports that she was just lucky enough to fall into the right mix of coworkers and data that stimulated an opportunity to look at the basin from a chronostratigraphic perspective unafforded previous workers. The opportunity to work with geoscientists and biostratigraphers patient enough to explain their science to a greenhorn explorationist enabled her to understand the various types of data and thus unravel a picture of interactive tectonics and sedimentation. The Columbus Basin is located at the crossroads of three major tectonic plates—the Caribbean, South American, and the Atlantic plates—and its fill is sourced by two of the largest rivers in the world, the Orinoco and the Amazon. The complexities of the basin's chronostratigraphic evolution and its implications for hydrocarbon prospectivity could not have been understood without the data compiled by the industry over years of successful exploration and development. Wood believes the successful application of the work by Amoco and now BP is a testament to the value of intergrating biostratigraphy, geophysics, and geology into a comprehensive evolutionary understanding of hydrocarbon basins. She feels privileged to have worked such an exciting area, immediately following her graduation. Wood says she is sure there is more exciting earth science to be unraveled by present and future geoscientists working in the region.

Wood would like to gratefully acknowledge Lawrence Tiezzi, who recognized the scientific interest of the Trinidad region and granted permission from Amoco Trinidad Energy (now BP Trinidad and Tobago) to publish the results of this work to the benefit of the larger geoscience community. She would also like to thank her coworkers who have worked on related Trinidad projects for many insightful conversations regarding the region: Maria Henry, Ken Ortmann, David Pocknall, Peter Bentham, Nancy Englehardt-Moore, Paul Belanger, Linda Kinslow, Bruce Eggertson, Jonas Bailey, and many others. She would also like to thank her many Trinidadian and Venezuelan friends for numerous interesting conversations regarding their own work in the region.

Lesli J. Wood is currently a research scientist at the University of Texas at Austin, Bureau of Economic Geology. Prior to her current position, she worked for six years in the hydrocarbon industry, first as an intern with ARCO, and then with Amoco Production Company. Her initial assignment was to Amoco's worldwide exploration organization, then with the E & P technology division, where her duties included applied exploration and development projects in Trinidad, Venezuela, Argen-

tina, Egypt, Brazil, and the U.S.; and research in the development and interpretation of seismic attribute technologies. Her current research interests include hydrocarbon basins and Tertiary evolution of northern South America, mud diapirism, gas hydrates, clastic sequence stratigraphy and reservoir architecture, and seismic geomorphology and sedimentology. Wood received her M.S. degree from the University of Arkansas and her Ph.D. in earth resources from Colorado State University. Her dissertation research, done with Frank G. Ethridge and Stanley A. Schumm, involved modeling the impact of base-level changes on coastal plain fluvial, shelf, and deep marine systems.

HENRY W. POSAMENTIER
George C. Matson Award

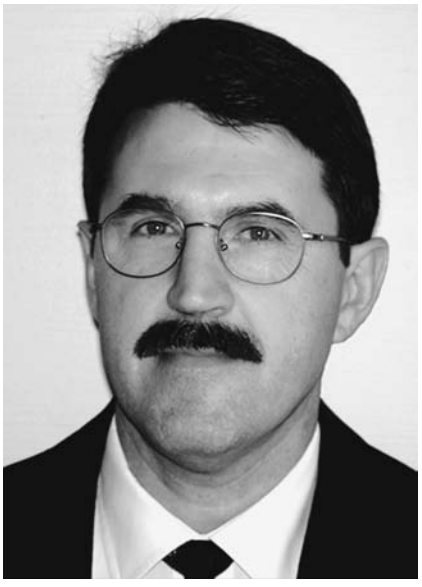
The George C. Matson Memorial Award for the best paper presented during an AAPG oral technical session at the 2001 AAPG Annual Meeting in Denver, Colorado, is presented to Henry W. Posamentier for "Seismic Geomorphology and Depositional Systems of Deep-Water Environments: Observations from Offshore Nigeria, Gulf of Mexico, and Indonesia."

The author reports that the understanding of deep-water systems has experienced a quantum leap during the past few years with the study of these deposits imaged on 3-D seismic data. Plan view images of near sea-floor as well as deeply buried deposits created from such 3-D volumes allow geoscientists to interpret paleogeomorphology. These images can, in some instances, afford geoscientists with unambiguous snapshots of the lay of the land that existed when these sediments were deposited. Study of these plan view images through what can be referred to as seismic geomorphology can then be integrated with more conventional seismic stratigraphy, commonly based on cross section views, as well as with borehole and production data to provide powerful insights as to the lithology and reservoir architecture of deep-water deposits. Images derived from near-surface analogs are highly relevant to more deeply buried, deep-water exploration targets.

This study presented the results of such paleo-geomorphological analyses from a number of different deep-water locations. The author in this way was able to compare and contrast common features to each of these settings and develop a framework for the analysis of deep-water depositional elements, including leveed channels, frontal splays (also referred to as distributary channel complexes), and debris flow sheets, lobes, and channels.

Henry W. Posamentier is the manager of geology for Anadarko Canada. Prior to joining Anadarko in 2001, he was with Veritas Exploration Services (2000–2001), the Atlantic Richfield Company (1991–2000), Exxon Production Research Company and Esso Resources Canada Ltd. (1979–1991), and at Rider University as assistant professor of geology (1974–1979).

Posamentier's research interests have been in the fields of sequence stratigraphy and depositional systems analysis, where he has published widely. He has employed an interdisciplinary approach using 3-D seismic data integrated with borehole data to interpret depositional systems and develop basin fill histories. Recently he has focused his efforts on deep-water depositional settings. In 1971–1972, Posamentier was a Fulbright Fellow to Austria. He has served as an AAPG Distinguished Lecturer to the United States (1991–1992) and an AAPG Distinguished Lecturer to the Middle East (1998–1999).



MARTIN K. DUBOIS
Jules Braunstein Memorial Award

ALAN P. BYRNES
Jules Braunstein Memorial Award

W. LYNN WATNEY
Jules Braunstein Memorial Award

The Jules Braunstein Memorial Award for the best AAPG poster presentation at the 2001 Annual Convention in Denver, Colorado, is presented to Martin K. Dubois, Alan P. Byrnes, and W. Lynn Watney for "Field Development and Renewed Reservoir Characterization for CO_2 Flooding of the Hall-Gurney field, central Kansas."

The authors report that their research is part of the initial phase of a U.S. Department of Energy-sponsored Class II carbon dioxide miscible flood demonstration project that is scheduled to begin CO_2 injection in 2002. The demonstration, located in the largest Lansing-Kansas City Group reservoir in central Kansas, the Hall Gurney field, targets oil remaining after primary production in the 1940s–1950s and secondary waterflooding in the 1960s in an ooid reservoir of the Pennsylvanian Lansing-Kansas City Group. This remaining oil represents a significant resource for CO_2 miscible flooding, a third development phase.

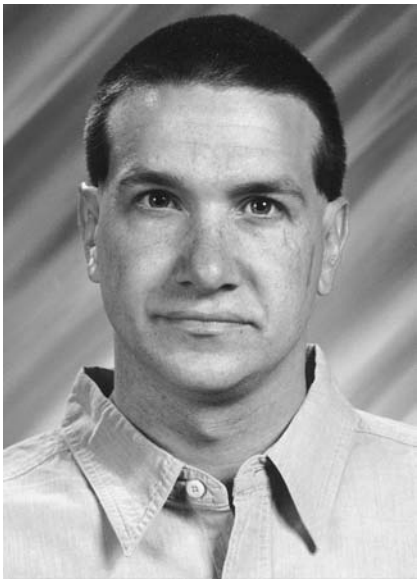
Detailed reservoir characterization of the 12–18-foot CO_2 target zone indicates the presence of up to three stacked, shallowing-upward cycles contained within a single, higher-order shallowing-upward sequence that exhibits vertically increasing porosity and permeability. Similar oomoldic grainstone reservoirs have yielded most of the 600 million barrels of oil produced from the L-KC oil fields of central Kansas that are poised for their third phase of development. The CO_2 miscible flood demonstration project represents the first use of CO_2 for enhanced oil recovery in Kansas, and the goal is to demonstrate the technical and economic feasibility of the process in a major Kansas reservoir.

The authors wish to acknowledge their partners in the project, the U.S. Department of Energy, MV Energy LLC, Kinder-Morgan CO_2 Company, ICM Inc., the University of Kansas (Kansas Geological Survey and Tertiary Oil Recovery Project), and the Kansas Department of Commerce.

Martin Dubois holds a B.S. degree in geophysics from Kansas State University and an M.S. degree in geology from the University of Kansas. He joined the petroleum research section at the Kansas Geological Survey in 1999 after more than 20 years in the industry, first with Cities Service Oil Company, then as a consultant and, later, as exploration manager for John O. Farmer Inc., a Kansas independent oil company.

Alan Byrnes holds a B.S. degree from the University of Illinois at Chicago and an M.S. degree from the University of Chicago. He joined the Kansas Geological Survey in 1997 as a research geologist-petrophysicist and is project manager of the first phase of the DOE demonstration project. Prior to joining the Kansas Geological Survey, he owned a special core analysis laboratory in Colorado for 15 years and worked at Marathon Oil Research Center, Xytel Corporation, and PRC Corporation as a geologist and geologic engineer.

Lynn Watney holds B.S and M.S. degrees from Iowa State University and a Ph.D. from the University of Kansas. He is a senior scientist of the Kansas Geological Survey, having served 25 years with the organization. He is also the executive director of the University of Kansas Energy Research Center. Prior to coming to Lawrence, he was employed with Chevron, in New Orleans for three years.



KEVIN LEINEWEBER
Teacher of the Year

Kevin Leineweber, an earth science teacher at McCutcheon High School in Lafayette, Indiana, has been selected as AAPG's Earth Science Teacher of the Year. Leineweber will receive his award in March 2002 at the AAPG Annual Meeting in Houston.

The award includes a $5,000 prize, funded by the AAPG Foundation. Half of the award money is designated for use under Leineweber's supervision for education purposes at McCutcheon High School; the other half is for his own personal use.

A native of Chicago, Illinois, Leineweber received a bachelor's degree in physical science and earth science from Indiana University, and is currently working on his master's degree in geoscience education through Mississippi State University.

He currently is in his ninth year of teaching science—his sixth year at McCutcheon—and although he has taught several subdisciplines within the science realm, he enjoys "earth science, geology, and meteorology the most. I especially appreciate teaching earth science and the Earth Science II class at McCutcheon High."

"I am so excited about this honor and the opportunities that it can generate for promoting earth science in my area," he said when told of the award.

His teaching philosophy: "I believe that students must first understand what are our natural resources, and how nature provides these," he wrote. "Once they understand this, then we can study how man discovered, extracted and used these resources."

In addition to his teaching duties, Leineweber is the High School Corporation Department chairperson for science for the Tippecanoe School Corporation, and boy's head varsity cross-country and track and field coach.