AAPG Honorees, 2000

ROBERT M. SNEIDER
Sidney Powers Memorial Award

It is entirely fitting and appropriate that the AAPG recognize the outstanding and distinguished contributions to petroleum geology of Robert M. Sneider by awarding him its highest honor, the Sidney Powers Memorial Award. As a colleague, former business partner, and personal friend, it is an honor to review and chronicle such a distinguished career. The facts speak for themselves.

Three defining characteristics have recurred throughout Bob's career, each resulting in major contributions to the petroleum community. One is the recognition that careful calibration of rock, fluid, log, and engineering data is a necessity in evaluating subsurface problems at both the exploration and production levels. Second is that the best way to accomplish this integration is through the strength of multidisciplinary teams who can bring their combined talents to bear on the problem. The third is the wonderful ability and desire to transfer these ideas and the accompanying strategy to the rest of us via publications, lectures, short courses, training classes, and symposia. His work in these areas has touched virtually every facet of our business. Let's take a brief look at some of the more notable of these accomplishments.

Bob is a thorough researcher who carefully documents his findings. Most notably, perhaps, he compiled industry catalogues of geological, petrophysical, and engineering properties for both reservoirs and seals. He began work on Shell's Reservoir Rock Catalogue with E. C. Thomas in 1968. Later, he constructed an industry catalogue for both sandstone and carbonate reservoirs with Reservoirs, Inc. Then, as a partner with PetroTech Associates, he developed the complimentary volume on seal and flow barrier rock types. These have become the industry yardsticks for understanding the characteristics of all the rocks we typically work with in the subsurface.

Second, Bob advocates a multidisciplinary approach to solving geologic problems. He pioneered the practice of integrating information from geology, petrophysics, and engineering to best understand a given situation. Using this approach, Bob helped build two financially successful oil and gas companies (Canadian Hunter Exploration Limited and Greenhill Petroleum Company) and two consulting companies (Sneider and Meckel Associates Inc. and Robert M. Sneider Exploration Inc.). He guided each organization into using a broad combination of information to address both exploration and production problems. He directly organized and led the multidisciplinary teams in these organizations that have found several billion barrels of oil (equivalent) through new discoveries and in establishing "hidden" reserves in existing fields both in North America and overseas. Sneider and Meckel Associates working together with Canadian Hunter discovered the giant Elmworth deep basin gas area of western Canada, which helped propel Hunter to its position as one of the largest gas producers in western Canada. Later, as president of Robert M. Sneider Exploration Inc., working in conjunction with Greenhill and other companies, he acquired and rejuvenated 46 economically marginal fields in the United States, mostly in the Permian and Gulf Coast basins. He appreciated that these fields still had large unrecognized reserves waiting to be identified. His integrated multidisciplinary approach has added more than 600 million barrels of new reserves at an incredible average cost of only $2.69 per barrel. At both the exploration and production levels nothing extraordinary was done—just the application of sound principles by an interdisciplinary team.

Bob is by nature an outstanding teacher. He feels that it is his responsibility to share his observations with others. Over the years he has trained several thousand geologists, geophysicists, petrophysicists, log analysts, petroleum engineers, managers, and students around the world. Equally impressive is the breadth of subjects taught: exploration and development of sandstone and carbonate reservoirs; application of petrophysics in the finding of new reserves in dry holes or in older, now marginal, fields; the value of integrating concepts and methods from geology, geophysics, petrophysics, and reservoir engineering; and methods of organizing and managing multidisciplinary teams. He has taught more than 20 courses on these subjects, each one many times. Those who have attended can testify to his dynamic, focused, and practical way of communicating. In addition he has published more than 55 papers in various domestic and international journals and books.

I think one of his more recent endeavors summarizes his philosophy well. Last year he and son John presented a paper entitled "New Oil in Old Places" at the Pratt II Conference in San Diego. This paper first lays out the necessary steps and technology required to find large volumes of low-risk reserves in old fields. It then shows many successful case histories he was involved in to show how it can actually be done. Again, that successful blend of "what you need to know" with "here's how you actually do it" . . . a recipe for success.

These accomplishments didn't come instantly, but were the product of hard work, a series of smaller successful steps, and the association with a number of very capable mentors and colleagues who have significantly helped to shape the person we are honoring. Bob was born and grew up in Asbury Park, New Jersey, the son of Rose and William Sneider. As an undergraduate at Rutgers University, pointed toward a career in metallurgical engineering, Bob crossed paths with two geologists who had a major influence in his eventual shift to geology. One was John Prucha, his mineralogical instructor, and the other was Benjamin Leonard, a U.S. Geological Survey geologist who Bob worked with on summer projects in upstate New York. They were in fact his first mentors and inspired in him a genuine excitement for geology. Following undergraduate studies, he was called to active duty in Korea and served as a frontline combat engineering officer. It is remarkable that while in the Army he found time to complete two graduate-level correspondence courses in economic geology from Penn State University; obviously the geology bug had bitten. After discharge from the Army, he entered graduate school at the University of Wisconsin. Then another very significant change occurred; in 1953 he met Ramona Meyer, and they were married three years later.

Those of us close to Bob recognize that Ramona, his wife of 45 years, has been a firm support to his remarkable career. Ramona's continuous encouragement of Bob's work has been a very important and essential element in this success story. The Sneiders' three children—Linda, Timothy, and John—have been or are currently involved in the oil business, an element of pride in the family. Linda retired from the family business to rear her two children. Timothy works for an international service company (MI) specializing in the design and implementation of drilling mud equipment for land and offshore drilling rigs. John is president of Sneider Exploration, Inc., an international exploration and property acquisition company and co-teaches industry courses with his father. Most of us who interface with Bob primarily on technical and business levels might be surprised to know that in addition to liking classical and traditional big band music, he very commonly chooses to listen to country western. And that he is an accomplished social dancer.

Bob's doctoral dissertation dealt with an igneous ultramafic complex in southeastern New York, not exactly the typical subject one would associate with a renowned petroleum geologist. This did not discourage Gus Archie, a research manager at Shell Development Company, who was to become the person who most influenced the direction of Bob's career. Gus recruited Bob at the University of Wisconsin for Shell, and Bob joined Shell because of Gus. Gus was a teacher and a mentor, shaping Bob's career and the way he would come to think about subsurface problems. He challenged Bob to use the newly emerging depositional models from Shell's research programs to evaluate where and how to conduct supplemental recovery projects. One of his first assignments was the huge Elk City field in the Anadarko basin. Using these new tools, Bob argued for a pilot program, based on geology, that was significantly different from that proposed by the engineers. That approach is no surprise to us now, but certainly was a significant departure from conventional wisdom at that time. The resulting experiment by the manager in Oklahoma City (let's use both locations and see which in fact works best) clearly proved Bob's location based on sound geology to be the best. Imagine the positive reinforcement this would have on a young geologist.

During the next 15 years, Bob took on a wide variety of assignments for Shell Oil and Shell Development that took him to Houston, Odessa, Snyder, Abilene, Midland, Oklahoma City, New Orleans, Bakersfield, and Los Angeles. Each was different; each was a new challenge; each provided new insight into the subsurface. Together they gave Bob a comprehensive subsurface background: knowledge of various rock types, pressure regimes, and familiarity with well-performance histories of various reservoir types, a direct legacy from Gus Archie. He also recognized the need and value of the interdisciplinary team approach. By 1971, now as supervisor of Shell's Production Geology Research Group, he was in a position to act and direct, not just recommend. He would redirect various disciplines to solve new problems, cuffing across both traditional E & P disciplinary boundaries, an accomplishment of which he is justifiably proud. This is known today as the "multidisciplinary team" approach; back then it was just called common sense. This would, in part, reshape how Shell conducted its business and would be transplanted later into many other companies that Bob became associated with as a consultant, He had become, preeminently, the complete subsurface geologist.

Now it was the time to apply the new-found technical and managerial skills in a different context. In 1974 he and a longtime colleague from Shell Exploration, Larry Meckel, formed a small consulting firm, Sneider and Meckel Associates, Inc. They assembled that multidisciplinary team: geologists, a geophysicist, a log analyst, a reservoir engineer, and of course, a landman. Those next seven years were filled with exciting and challenging new projects, some of which resulted in the discovery of more than a dozen new fields, including the previously mentioned Elmworth, and significant redevelopment

opportunities in older Anadarko basin fields.

In 1981 Bob formed Robert M. Sneider Exploration, Inc., a move that took him to new international areas and back to his roots, the detailed evaluation of old fields for new potential. The new company helped acquire marginal producing properties and significantly increased production through better reservoir recovery methods and application of sound geology and the calibration of well logs to rock types. He was also a partner and co-founder, with two retired Exxon colleagues, of Richardson, Sangree, and Sneider, a geoscience and engineering consulting group. He also became a partner and co-founder of PetroTech Associates, specializing in the characterization of rock properties of both reservoir and seal rocks. He was not one to shy away from forming a new group to accomplish specific tasks requiring a combination of unique talents essential to the petroleum industry.

He is currently involved in exploration programs with his son John, mainly overseas in Europe, Asia, and South America, and is part of a U.S. property acquisition program.

Bob has devoted a generous portion of his time and talent to support a number of professional societies, both as volunteer and in appointed positions. He is a member of the AAPG, Society of Petroleum Engineers (SPE), Society of Professional Well Log Analysts (SPWLA), Society of Exploration Geophysicists (SEG), SEPM, Houston Geological Society (HGS), the New York Academy of Sciences, and the National Academy of Engineering.

For the AAPG, Bob has been a Foundation Trustee Associate, has served on the Continuing Education Committee, and has chaired the Development Geology Committee. He was a Distinguished Lecturer for the AAPG in 1988, for the AAPG–Petroleum Society of Australia in 1992, for the AAPG Middle East in 1996, and was the Esso Distinguished Lecturer for Australia in 1997. On behalf of the AAPG/SEG/SPE/SPWLA he convened the first annual Archie Conference on "Reservoir Delineation, Description, and Management." It was enormously successful and inspired an internationally recognized series of conferences that continue today.

Bob was instrumental in establishing and generously supports the Gus Archie Fund within the AAPG. This fund provides four grants each year to graduate students in petrophysics and development geology.

For the SPE, Bob chaired the Reprint Committee of Geology and Geological Engineers, and has been a member and chairman of the Geological Engineering Committee (1975–1984). In 1978 he was a Distinguished Lecturer for the SPE and has been a short-course lecturer for this organization.

He was a committee member for the joint Houston Geological Society–New Orleans Geological Society (NOGS) project on "Productive Low Resistivity Well Logs of the Gulf of Mexico." He co-authored two chapters in this landmark volume and has given numerous short courses and lectures on the subject for the AAPG, HGS, and NOGS as well as numerous companies.

His advice and experience are always valued. He has served on the advisory boards for the AAPG Treatise of Petroleum Geology (1988–2000), the Colorado School of Mines Department of Geology (1994–1997), the University of Wisconsin Department of Geology and Geophysics (1997–1999), and Strike Oil and Strike Energy Ltd. of Australia (1997–present).

These professional achievements and society contributions have not gone unrecognized. In 1991, the AAPG honored him with the Distinguished Service Award and in 1994 made him an Honorary Member. In October of 2000 he was inducted into the prestigious National Academy of Engineers, a rare distinction for a geologist: a fitting recognition for all those years of bringing geology and engineering together. This group serves as an important advisory function to the President, Congress, and government agencies.

And now, in consideration of all his many accomplishments, the AAPG has selected Bob to receive its highest honor for distinguished professional service and contributions. Certainly those who have experienced the breadth and keenness of Bob Sneider's knowledge of petroleum geology can attest to the merits of this recognition. As a personal friend and colleague for these many years, I again salute you.

Citation—To Robert M. Sneider, in recognition of your outstanding and distinguished contributions to petroleum geology, your achievements in the oil business, your dedicated service to many professional societies and universities, and your continued guidance and inspiration for all of us; a career that has truly touched all aspects of our business.

Larry Meckel

Response

President Downey, members of the AAPG, friends, and family, I am most grateful to the Association for awarding me the Sidney Powers Medal for 2001. This award is a great honor that I shall cherish my entire life. I cannot adequately express my gratitude to the AAPG, the Executive and Advisory Committees, and the colleagues that supported my nomination, but I thank you all. I never dreamed I would be selected for this high honor, especially when I think about the many outstanding geologists who deserve this recognition. Thank you AAPG for bestowing this prestigious award on me. I humbly accept this medal with a deep appreciation of everything it stands for. Also thanks to each of you, especially my special friends and family, for being here to share this moment.

As I stand here today, I vividly remember the September 2000 telephone call from President Marlan Downey with the award announcement and his congratulations. At the time I did not accept his telephone call because I was engrossed with two Pemex geologists looking for bypassed pays. John Sneider came into the room and said I had to "accept Mr. Downey's call now!" As you can imagine I was over-

whelmed then with his message that I would receive the Powers Medal, and I am still somewhat in a state of disbelief. The facts are that there are many colleagues and coworkers who have helped me achieve what success I have had, and then there is Ramona, my wonderful wife, who deserves at least half of this medal.

Many thanks to Larry Meckel, a longtime colleague, friend, and business partner. He probably was overly generous with his remarks, but I hope that you believe every word he said. Larry and I were colleagues at Shell for several years. We left Shell in 1974 and shared the birth and growth of Sneider and Meckel Associates, Inc., a very exciting and successful exploration and consulting venture in the United States and Canada for more than seven years.

In the time between Marlan's telephone call and the preparation of this response, I have had time to think about the wonderful adventures I have had since I entered the field of geology. Some of you know that I started at Rutgers University in 1946 as an engineering student with the hope of becoming a metallurgist. In my junior year, my roommate was a geology major, excited about his courses, especially mineralogy. I attended his mineralogy labs and studied the ore-producing minerals. I too became excited about mineralogy and geology. Then I faced the difficult task of telling my parents that I wanted to switch to geology. They knew that I could make a living as an engineer, but how could I answer their question in 1948: "Can you make a decent living as a geologist?" With reluctance, they let me switch!

The Rutgers Geology Department in 1948 had about two dozen undergraduate and graduate students, quite a contrast with the large engineering department. While in geology, I met two gentlemen who had a major influence on my career and appreciation of earth science. One was my mineralogy instructor John Prucha, and the other was Benjamin Leonard, a U.S. Geological Survey geologist at Princeton University. Prucha arranged a part-time job with Leonard as a field assistant mapping Precambrian iron ore bodies. Later, I would spend four summers in New York and Connecticut with Prucha field mapping while working on my Ph.D. Both Prucha and Leonard were excellent teachers and exhibited a passion for geology that was infectious. They taught me the value of detailed structural and stratigraphic mapping and the importance of understanding rock petrology in regional exploration. They were my models for how dedicated earth scientists apply theory to the search for mineral wealth. Prucha and Leonard were my first mentors.

At the same time I received my geology degree, the Army called me to active duty, eventually sending me to Korea as a frontline combat engineering officer. In Korea, my engineering and geological backgrounds were useful in picking locations for bridges and mine fields and building roads as well as blowing up bridges and roads and clearing mine fields. My military experience with explosives also proved useful later in my geological career. I knew how to make fresh outcrops where none existed and to blast out large rock samples in the field.

After my military service, I went to the University of Wisconsin at Madison to continue my education in economic geology and mining engineering. The talented faculty and graduate students contributed to an excellent education. With lots of practical knowledge in igneous and metamorphic rocks and mining engineering, I was ready in 1956 for a job in mineral exploration.

The year 1956 was a bad year for jobs in mineral exploration. Lucky for me, a classmate, Ray Murray, had taken a job with Shell Development in Houston the previous year. Ray called me to say that his boss, Gus Archie, was coming to Madison to recruit for Shell Development. A promise of a free dinner was enough for me to arrange an interview. Archie had graduated from Wisconsin with degrees in electrical engineering and geology. When we met and discussed opportunities with Shell, I had no notion of the important contributions Archie had made to the petroleum industry with his pioneering work in well-log evaluation and petrophysics.

Meeting Archie and accepting a job to work for him was the pivotal event of my professional career. This modest, unassuming genius was an inspiring teacher. He inspired me to pursue rock-fluid studies on both E & P scales. His quiet leadership style, creative spirit, and ability to plant seeds so you thought you were the one making the "discovery" set standards for me to emulate. Going to work for Archie was the luckiest break I ever had in my professional career.

The 17 plus years with Shell gave me marvelous opportunities to work on a broad variety of exciting assignments in operations and research. I was very fortunate to work with many outstanding and creative geologists, geophysicists, petrophysicists and petroleum engineers. Archie, Rufus LeBlanc, Sr., and Hugh Bernard were my early mentors, but I was privileged to work with and learn from literally hundreds of Shell professionals. I cannot mention all of the valued colleagues but a few close associates were Tom Bay, Charles Blackburn, Robert Ginsburg, Clarence Hottman, Ken Hsu, Don Lindsay, Dennis Loren, Jerry Lucia, Charles McCollough, Larry Meckel, Raymond Murray, Bob Purcell, Frank Richardson, Donald Russell, B. F. Swanson, E C. Thomas, C. N. (Tom) Tinker, Monroe Waxman, Konrad Weber, and Richard Wyman. Working on exploration and development projects including lease sales and supplemental recovery floods, I learned the value and power of multidisciplinary teams.

The year 1974 was another milestone year for me. In May, Larry Meckel and I left Shell to form a small multidisciplinary group to explore for hydrocarbons and to offer consulting services. Within our first three weeks, Bob Weimer introduced us to two geologists, John Masters and Jim Gray, who had just started Canadian Hunter Exploration. This incredible opportunity and in association with Masters and Gray allowed us to grow and add our

first associates: Leon Wells, John Farina, and Lloyd Fons. We later added more geologists, geophysicists and a landman. What exciting times! We generated prospects in the Gulf Coast and worked with Masters and Gray in virtually every aspect of building their company. Hydrocarbons were discovered in the Alberta deep basin, in many of our Gulf Coast and Mid-continent prospects; we also drilled some dry holes (we called them now aquifer delineation wells). This seven-year venture was the most exciting and unforgettable experience one could imagine.

The past 20 years have been equally as exciting as the Sneider-Meckel years. I have had a chance to teach, lecture, consult, explore, and acquire old fields around the world, and to help build several companies, including Greenhill Petroleum.

I have had many outstanding colleagues and partners in these ventures, including Simon Ashton, Robert Beardsley, Larry Cochran, Donald Harris, James Hartman, John Kulha, Andrew Lydyard, Dennis Loren, Robert Mitchum, Joseph Richardson, John Sangree, John Sneider, Roy Woodall, and many of the Sneider-Meckel associates. One of the highlights is working with my son John and helping him build his exploration company.

I had a chance to work in more than 75 basins in the United States, Canada, and Mexico as well as Africa, Asia, Australia, Europe, the Middle East, Southeast Asia, and South America. What wonderful geological, geophysical, and petroleum engineering talent exists throughout the world, and I learned much from these professionals.

My consulting and teaching worldwide has had two major objectives: (1) to pass on the valuable lessons I learned from Archie—that is to evaluate hydrocarbon opportunities properly one needs to tie rock and fluid properties to well-log response to seismic and to production tests and performance, and (2) demonstrate the need for early integration of geoscience and engineering to efficiently find and develop hydrocarbon accumulations. I am fearful that with the great advancements in technology and use of computers/visualization that we will forget hydrocarbons are found within rocks and trapped by rocks (seals). In this regard, the December 2000 *Explorer's* special issue "A Century," Michel T. Halbouty's remarks are worth repeating again:

> The heritage left us by the early petroleum geologists has been ignored and practically forgotten. Those geologists should be remembered not only for their achievements, but also for having been well-rounded, true geologists who applied all facets of our science to their endeavors.
>
> Their methods and contributions should be "dusted off" and restudied, and once again used as guideposts for our future thinking.

Also, we cannot forget the wise words of Wallace Pratt, the first Sidney Powers medallist: " . . . oil is first found in the minds of men . . . " and women!

Throughout my career, AAPG has played an important role in helping me learn through meetings, publications, continuing education courses, and the *Explorer.* I am very proud to be an AAPG member and to have served the Association on committees, as committee chairman, short course instructor, and three times as a Distinguished Lecturer. The AAPG headquarters staff has been great to work with, and I thank them for the professional job they do for our Association.

Whatever success I have had, I attribute in a large part to Ramona, my wife of almost 45 years. We met within 10 days after I arrived in Madison. She had moved to Madison to become a second grade teacher. She had all the skills a geologist needed—she could type, draft, and had a full-time job! Ramona has been totally dedicated to my work and career. She continues to be my best friend, business partner, and constant companion in our travels around the world. We are blessed with three children, Linda, Tim, and John, who all work or have worked in the petroleum industry. Our son-in-law Charles works as a system engineer for a marine construction company that builds deep-water production facilities. John's wife Dorothy Ballentine is a geologist for an independent company. June, Tim's wife, teaches future petroleum students.

My 44 years in the petroleum industry have been a truly exciting and incredible journey. I am privileged to have had inspiring mentors, superb colleagues, and a very supportive family. With sincerity and humility, I thank all of you who have helped me throughout my career. To AAPG, my thanks and appreciation for the Sidney Powers Medal. I am proud and humbled to be placed in the distinguished company of the previous Sidney Powers recipients.

Robert M. Sneider

BRENDA K. CUNNINGHAM
Honorary Member

For the past 24 years, Brenda Cunningham has dedicated her talents and efforts to the science of geology and the geological profession. She has been eminently successful in both endeavors, having succeeded in hydrocarbon exploration and development ventures and having been intimately involved in earth science societies at the local, regional, and national levels.

Fittingly, Brenda was born on Valentine's Day in Great Bend, Kansas. While in Great Bend, she developed an interest in natural sciences. It seems that the family would go fishing on the Arkansas River, and while they were fishing, Brenda would spend her time looking for fossils in the piles of dredged sand from the river. She also hunted arrowheads in the freshly plowed fields of neighboring wheat farms. Here also, she first developed her love for music. Brenda says that it is an inherited trait, but the fact that her father managed a music store and played trombone and sang in the Shrine dance band must have had something to do with it also.

The family moved to Oklahoma City in 1966 when Brenda was in the sixth grade. Her father continued to manage a music store and play in a dance band. Brenda continued her love of music and of the natural sciences. She took every natural science course offered in high school. All of her aptitude tests showed a very high tendency toward the natural sciences. After graduating from John Marshall High School she attended Oberlin Conservatory of Music in Ohio on a full scholarship.

Although she was committed to being a musician, her plans changed when she went on a blind date with Bob Cunningham in Oklahoma City. As she tells it, they had to drag him from the golf course "kicking and screaming" because he didn't want to go on the date. They were married in June 1974 and came to Midland the next day because Bob had accepted an engineering position there. There was a terrible sandstorm that day, but even that didn't deter them as they have lived in, prospered, enjoyed, and contributed to life in Midland, Texas for the past 26 years.

Coming back to Midland from visiting family later that year, they drove through an outstanding road cut. Upon seeing the beautiful layered strata, Brenda said to Bob, "I'm going to become a geologist." Bob paid her little attention, but three years later, she received her Bachelor's degree in geology from the University of Texas of the Permian Basin (UTPB). During the time that she was a student at UTPB, Bob was an engineer for Unocal. He would take her on wells with him and explain the mechanics of oil field operations.

Subsequent to graduating from UTPB in 1977, she was employed by Enserch Exploration in Midland, Texas and later became senior geologist for American Trading and Production Corporation. Other employers included Cotton Petroleum, Stone Petroleum Corporation, and McDonnold Companies. In 1988 she cofounded West Texas Digital, Inc. and was its president until joining ARCO Permian in 1995. She stayed with ARCO Permian through 2000, at which time she left in order to stay in Midland rather than take a transfer to Houston with BP, which had by that time acquired ARCO. She is now back where she was in 1988, operating West Texas Digital, but with five years of great experience added to her credentials. In addition to operating again as an independent, Brenda and Bob also tend to 14 rental properties that they own in Midland.

Brenda has been very active in geological societies at all levels. Locally she has been president of the West Texas Geological Society (WTGS) and the Permian Basin Section SEPM. She has been on the Board of Directors of the Midland Energy Library and Chairman of the West Texas Geology Foundation. In addition, she has served the WTGS as an elected delegate to AAPG's House of Delegates since 1987.

Regionally, she has been secretary of the Southwest Section of AAPG and chairman of the Awards Committee for that section.

Brenda is an active member of AAPG and is also a certified petroleum geologist with the Division of Professional Affairs. She has been heavily involved in the House of Delegates, having served on numerous committees and also having served as chairman in 1989–1990. Brenda showed organizational skills, fairness, and most importantly tact in her term as chairman of the House of Delegates. She led the House through one of its more difficult sessions with great skill and judgment. During her term as chairman of the House of Delegates, she also served with distinction on the AAPG Executive Committee. In 1999, Brenda was asked to chair a committee on a very controversial matter in which I was very involved. I made a presentation to her committee and had no idea where she stood on the issue. She was fair and outwardly impartial. I came away feeling that I had gotten a fair shake, as I am sure the people on the other side of the issue felt.

In her "spare time," Brenda has taught geology on an adjunct basis at both Midland College and the Permian Basin Graduate Center. She also is a talented musician (saxophone, flute, and clarinet) and plays with a classic rock and roll band, which performs locally, and often to appreciative audiences. She admits to being a "geologist by day and a musician by night."

In recognition of her dedication as demonstrated by these activities, Brenda has received numerous well-deserved honors. These include AAPG's Distinguished Service Award in 1995 and their Distinguished Member of the House of Delegates Award in 2000 (the first time it was given). She was also named an Honorary Life Member in the West Texas Geological Society in 1997 and received the SEPM Permian Basin Section's first Dedicated Service Award in 1988.

Now, in recognition of her many past and present contributions to her profession and her professional societies, it is only fitting that she be named an AAPG Honorary Member.

Citation—To Brenda K. Cunningham for dedicated service to the geoscience profession and earth science societies and for her outstanding contributions as an explorationist, teacher, administrator, and entrepreneur.

A. T. (Toby) Carleton

Response

To be named an AAPG Honorary Member is a tremendous honor by

which I am truly humbled, and for which I will always be grateful. Please accept my deepest thanks for this recognition.

I believe that each individual is shaped largely by environment. Many people and organizations have in this way contributed to whatever degree of success I may have achieved. Rather than repeat what my biographer, fellow Midlander and AAPG Past President Toby Carleton has so ably chronicled, I would like to recognize those individuals and organizations that have become so much a part of who and what I am.

The vast majority of my career has been devoted to exploring the Permian basin of west Texas and southeast New Mexico—one of the greatest petroleum provinces in the world. I am fortunate to have gained my geological maturity in this complex and wonderful basin. From the world-class outcrops of the Guadalupe Mountains to the world's first miscible flood in the Block 31 Devonian field, these reservoirs, and the scientists that have studied them, have contributed an immense amount of knowledge to our industry that reaches far beyond the Permian basin's geographic limits. I have learned so much, and yet I have so much more to learn.

I joined AAPG in 1977 at the urging of fellow geologists at my very first job. Needless to say, the Association has been of great importance to me during these first 23 years of my career. It is impossible to recount how much I have learned from the technical presentations, short courses, and conventions sponsored by the AAPG, let alone how many wonderful people I have met and grown to know and respect.

Along with the AAPG, the West Texas Geological Society (WTGS) has played an important part in my development as a geoscientist. The able leadership of Marie Bellomy and Paula Mitchell as executive directors has assured that short courses, symposia, technical publications, and field trips are available to all of us, in addition to an occasional sympathetic ear and judicious doses of wise counsel.

The Society has supported me throughout my career, and for this I am indebted.

Many AAPG and WTGS members have left a deep and lasting impression upon me. I learned about generosity from Bruce Pearson, who quietly and anonymously paid many under- and unemployed geologists' field trip and symposium registration fees during the industry downturn of the mid-1980s so that they could continue their professional development. Ed Matchus patiently discussed Permian basin time-stratigraphic correlations with me, whether he had time to or not. My love of oil industry history and my belief in the importance of data preservation were reinforced by Hugh Frenzel. Sal Mazzullo was my beloved first sedimentology professor. I entered the profession just in time to overlap for an all-too-short period with Permian basin experts such as John Hills, Mary Louise Rhodes, Ted Jones, and Ross Maxwell. Although I am too young to have met them, I wish I had had the opportunity to thank John Emery Adams and Phillip and Robert King for all that I have gained from them.

I arrived in Midland, Texas the day after marrying Bob, a reservoir engineer and my husband of almost 27 years. I have him to thank for many things, including his willingness to allow me to accompany him to drilling rigs and to logging, perforating, and frac jobs while I was still a geology student at the university. Not many people are lucky enough to gain exposure to and understanding of field operations, the ultimate source of every piece of information we work with, so very early in their professional development. His personal and professional integrity remains an ideal that I hope someday to achieve. He has loved and supported me along every step of our path in more ways than I can describe.

I have been blessed with the gifts of love for the earth and the love of music: they will play in my heart and head for as long as I live.

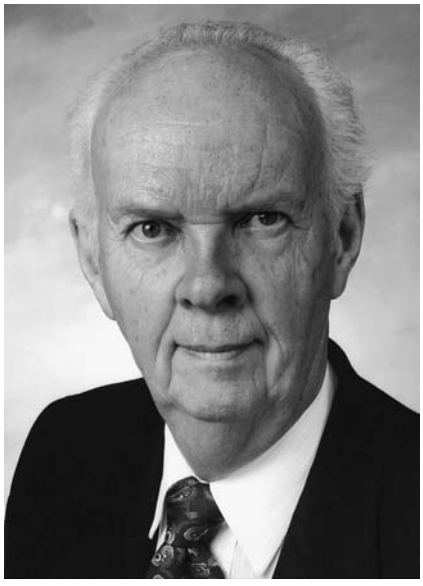
I count so many of you as friends. Thank you for what each of you has shared with me.

During my year on the AAPG Executive Committee, I received newsletters from various geological societies around the world. The following was published in one of them, and hangs on my office wall as a constant reminder of what I hope to accomplish in my lifetime:

> That person is a success who lives well, laughs often and loves much; who has earned the respect of intelligent women and men and the love of children; who never lacks appreciation of the earth's beauty or fails to express it; who follows his dreams and pursues excellence in each task; who brings out the very best in others and who gives only the best of himself.

For me, there's no better definition of success. To all of you, and to my parents, thank you for what you have helped me to become and for your patience with what I have yet to achieve.

Brenda K. Cunningham



E. E. "NED" GILBERT
Honorary Member

E. E. "Ned" Gilbert was born in Madison, Wisconsin on May 3, 1922. He enrolled at the University of Wisconsin in 1940, but the World War II interrupted his studies. He finally

graduated in 1947 with a B.A. in geology and moved to Canada the same year. After field geology in Nova Scotia and well-site work in Indiana, Ned moved to Calgary, where he has lived ever since. In 1947 he married Lyn Johnston and they raised two offspring (Mervyn and Shauna). Ned became a Canadian citizen in 1971.

Ned has had a long and successful career in Canada's oil and gas industry and played a pioneering role in the initial development of Alberta's oil sands. He has held senior technical and management positions in the petroleum industry, and worked as a consultant to numerous companies. In addition, Ned has contributed to the education of new generations of petroleum professionals through his leading role in the Petroleum Land Management program at the University of Calgary.

In his early oil-patch years, following World War II, he was Sun Oil Company's sole employee in Calgary. As the company's presence in western Canada grew, the home office in Philadelphia staffed up the office and Ned was appointed land manager. He assembled a considerable land position in conventional oil and gas plays of 1 million acres of Alberta Crown and 1.5 million acres of Canadian Pacific Railway leases, as well as acquiring a large position in the Arctic offshore.

At that time he was excited by the potential for nonconventional oil development. He continued to lead Sun's land acquisition program, pressing particularly to acquire permits in the Athabasca oil-sands deposits north of Fort McMurray in northern Alberta.

His foresight in acquiring land for his company in the area helped to put the present-day Suncor Energy, the successor company to Sun, in its currently highly profitable position where the major part of its production is from the oil sands. The lands that Sun held became the site of the first successful oil-sands mining operation—Great Canadian Oil Sands (GCOS)—and is still one of the major assets of Suncor Energy. In addition to pushing the future of oil sands within Sun, Ned was instrumental in the development of the first provincial regulations governing these massive nonconventional petroleum resources.

Subsequently, Ned became fascinated by the potential of oil shales in the neighboring provinces of Saskatchewan and Manitoba. When he first learned of this oil-shale potential he recommended and acquired 2 million acres in Saskatchewan and 1.5 million acres in Manitoba for Sun. After extensive research, core-hole drilling, and evaluation it was determined, despite the magnitude of the resources, that the costs of development were too high and the prevailing oil price—about US $2.75 per barrel—too low for commercial exploitation. Not to be discouraged Ned and an associate, having left Sun in 1972 to pursue a career in the consulting sector, bought land, conducted tests, and even persuaded the Alberta government to back them in drilling exploratory research core holes to further evaluate the resource.

When most of the men who were instrumental in the birth of the modern Canadian oil and gas industry had gone to the great oil field in the sky, or were at least long since retired, Ned embarked on a new career. Ned Gilbert has played a significant role in the education of petroleum professionals. He was the codirector of the Petroleum Land Management program at the University of Calgary in 1986, part of the Bachelor of Commerce program in the Faculty of Management, where he lectured for six years. The program has helped create several more generations of landmen and educate numerous geoscience and engineering professionals in the field of land management.

Ned holds active membership in several other professional organizations besides the AAPG (1945). Among them are the Canadian Society of Petroleum Geologists (CSPG, 1945), the Association of Professional Engineers, Geologists and Geophysicists of Alberta (APEGGA, 1948), the Canadian Association of Petroleum Landmen (CAPL, 1948), and the American Association of Petroleum Landmen (AAPL, 1956).

Service to his various Associations has been a major ethic of Ned's throughout his professional career. He has served AAPG widely: Convention Coordinating Committee (1967–1970 and 1991–1992); EMD founding member (1977); Committee on Conventions (1990–1993); Membership Committee (1991–1994); EMD Convention Committee (1992), and Councilor (1989–1993); and represented his colleagues as a House Delegate or Alternate (1994–present). He was also general chairman of the Banff meeting of the AAPL (1962) and general chairman of the CSPG Offshore Symposium (1974).

Ned's Canadian peers have honored him twice recently. He was elected an Honorary Member of the CSPG in 1995, because of his "steady persistent pursuit of visionary endeavors that contributed to the well being of petroleum exploration and production in Canada." In 1999 the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) awarded him the prestigious J. C. Sproule Memorial Plaque in recognition of his achievements and contributions in the exploration and development of mineral resources in northern Canada.

In 1945 Ned joined the Calgary Junior Chamber of Commerce and served on numerous committees for it as well as the Board of Stewards of the Riverview United Church in Calgary. He has given selflessly of his time to many other organizations, including the Boy Scouts, the Calgary Boys' Clubs, (and was instrumental in establishing the equivalent Calgary Girls' Clubs—Lyn expected no less), the John Howard Society, United Way, and Operation Eyesight.

E. E. "Ned" Gilbert is a shining example and ever-present reminder to all his colleagues that giving 100% all the time is not only possible but also necessary. Giving back to your community and to society more than you have received—with grace, charm, and wit—is the honorable thing to do. Thank you, Ned, and congratulations on being named an Honorary Member in the AAPG.

Citation—To E. E. "Ned" Gilbert, for far-sightedness in recognizing potential, determination in its pursuit, and the charm, grace, and longevity to see it through—an enduring example to younger colleagues.

George Eynon

Response

I was so pleased to be named as president of the newly formed Canada region last year that I did not think anything better could happen. Now, being named an Honorary Member of AAPG is really great. I give my heartfelt thanks to George Eynon and John Hogg as well as all of the other members of the House of Delegates from the Canada region who supported me as president in our first year and who recommended me for this prestigious award. I have been a member of AAPG longer than most of those with whom I have been working have been alive. I joined in 1945, more than 55 years ago.

My father was chairman of the Botany Department of the University of Wisconsin, and one of his closest friends was Earnest Bean who was State Geologist. He was my first contact with geology, and my love of collecting agates and discussions with him about how they were made probably was the cause of my initial desire to study geology.

My career with Sun Oil Company (now Suncor in Canada) started in 1944 after the Air Force said I was too tall and the Army said they did not like the results of my recent bouts with pneumonia. W. H. Twenhofel said to me one day "Ned, you're the only geology major we have and we think you should get a job so we can devote ourselves to research." I filled out two applications and in due course both Standard Oil and Sun Oil offered me a job. Twenhofel recommended Sun Oil, which I accepted. My first job was in Nova Scotia, where I worked with L. W. Storm and several members of the Tulsa and Philadelphia offices. We did surface geology along the north part of Nova Scotia. Following that summer's work I was transferred to the Evansville, Indiana office where Don Sutton taught me to sit on wells, one of these being a cable tool drilling rig. At the end of 1944 I was transferred to Calgary, Alberta, Canada at the request of L. W. Storm, who had been sent there to open an office.

I arrived in Calgary just after the new year in January 1945. I joined the Alberta Society of Petroleum Geologists, predecessor to the Canadian Society of Petroleum Geologists. There were only about 40 of us then where there are now more than 4000. There were almost no office buildings in Calgary and my room in the C.P.R. Palliser Hotel became "our" office. My expense account was nearly three times as large as my salary. We were unable to persuade any secretary to work for two men in a hotel so I soon became a secretary as well as draftsman and geologist. Sun Oil had acquired one-quarter million acres of Canadian Pacific Railroad lands in one block. During the coming summer we added a further one-half million acres of CPR land as well as 187,000 acres of Indian lands, and during the summer we had a Sun Oil seismograph crew that came from Beaumont, Texas to work for us. The seismograph equipment was not winterized so with the first sign of cold weather it went back to Texas. Storm also left for warmer climes while I remained as the sole representative of a company, which at that time had 27,000 employees.

Since Sun Oil was a really large company in relation to most of the companies in Calgary, I was invited to the parties and celebrations of the various oil and supply companies even though I was only 23 years old. Christmas 1945 was a very busy time. That year I joined AAPG. I believe that Fred Lahee, L. W. Storm, and my boss in Philadelphia, Herb Weeks, were my sponsors when I joined. As a sole employee I developed my own geological prospects, drafted the maps, typed the letters, and sent my prospects off to the head office in Philadelphia. When they were approved, I obtained the land, which was largely either CPR or Alberta government crown land but with a small amount of freehold lands. In this manner I acquired one million acres of crown land in two half-million acre blocks in Alberta as well as 1.3 million acres of CPR land in Saskatchewan. I negotiated a farm out and got 13 holes drilled in Saskatchewan.

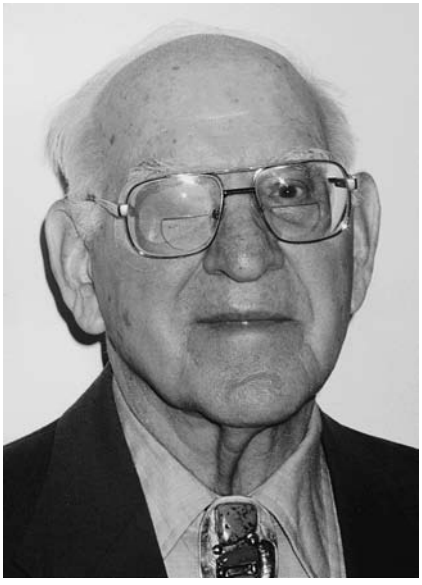
By spring when Storm and our seismograph crew returned, we had all of this new acreage to work on. In subsequent years we found several gas fields, including Sibbald, Superba, Hamilton Lake, and Bulwark, on those Alberta lands. In the fall of 1946 I returned to the University of Wisconsin to complete my degree in geology. When winter came in 1946 our seismograph crew and Storm once more returned to the United States and our office was closed. In the spring of 1947, I returned to Calgary and married Evelyn Johnston. After a short honeymoon I returned to Calgary to reopen the office and commence hiring a staff because "Leduc" oil field had been discovered during my absence, and the great Alberta boom was on.

With the war just over and drilling equipment in short supply, I hired an engineer to locate a drilling rig for me, and a legend was created about my having bought this large steam rig from Shell oil with a check written on my expense account, which was the only account I had.

Throughout my life as a geologist I have been interested in pioneering sources of energy such as the Alberta oil sands, the Saskatchewan oil shales, and in future years I anticipate pursuing gas hydrates. I may be nearly 80 but God willing I intend to remain active in pursuing these new sources of energy.

Thank you again to all of the many people who have made my long career possible.

Ned Gilbert



WILLIAM B. HEROY, JR.
Honorary Member

Bill Heroy has had, almost literally, a lifelong association with geology, having grown up in a household headed by a geologist father, William B. Heroy, himself a past president of AAPG and a Sidney Powers Medalist. Bill's youth was spent largely in White Plains, New York, where he graduated from high school in 1933. That fall, Bill entered Dartmouth, where he majored in geology, graduating in 1937. He married Dorothy that summer, and that fall he entered graduate school at Princeton. His doctoral dissertation was done out of Princeton's Field Geology Base (what is now the YBRA Field Station) in Red Lodge, Montana. The dissertation subject was "The Geology of the Shell Canyon Area, Bighorn Mountains, Wyoming," and the work was completed in 1941.

Bill went to work immediately for Texaco in Midland, Texas and spent all of the World War II years with Texaco. Then he transferred from west Texas to Dallas, where he joined the Geotechnical Corporation, at that time one of the leading geophysical exploration companies. His first position there was as geologist, but Bill rose rapidly to a position as supervisor, vice president, and ultimately, president. During the latter part of his "Geotech" days the company was heavily involved in producing the instruments and establishing the network necessary to monitor the nation's nuclear treaties. In 1965, when Geotech merged with the Teledyne Corporation, Bill became group executive and assistant to the president of Teledyne. In 1970 Bill joined Southern Methodist University (SMU) as vice president–treasurer and professor of geology. He left the SMU vice presidency in 1978 when he became president of the Institute for the Study of Earth and Man (ISEM), an independent research institute on the SMU campus, but retained the professorship of geology until 1981 when he retired as professor emeritus and president emeritus of ISEM.

At the same time he was carrying the very active professional life just described, Bill was active in civic and professional scientific society affairs. His civic involvements included a long association with the Boy Scouts of America. There he served as scoutmaster and Explorer leader as well as being a member of the local Council's board. Additionally, he earned the Woodbadge—a high recognition for adult leaders. He served on the Dallas Chamber of Commerce, where he was vice chairman of the Chamber and chaired its Educational Committee (which initiated the County Junior College program that now has five campuses). Additionally, he served as a member of several civic and business boards, notable among them that of being a trustee of the Hockaday School for nine years, a board member, vice president, and president of the Dallas–Fort Worth Council of Scientific Societies, and a member and president of the Dallas Philosophical Society. He was also a trustee of the SMU Foundation for Science and Industry, was secretary of the Association for Graduate Education and Research for North Texas, and was a member of the Advisory Boards for the geological sciences programs at Stanford, the University of Texas, Princeton, and Syracuse.

Never one to shirk civic or professional responsibilities, Bill was also very active in both local and national scientific societies, including certainly the AAPG. He was a member both of the Dallas Geological Society and the Dallas Geophysical Society and was treasurer and president of the latter. As a member of the Society of Exploration Geophysicists he served as treasurer of two of the Society's national meetings (held in Dallas). Bill was a charter member of the American Institute of Professional Geologists and was president of the Texas section. He was, of course, additionally a Certified Professional Geologist. As member of the Society of Economic Geologists (SEG) he served as trustee and was president of the SEG Foundation. The American Geophysical Union also used his experience and knowledge as a councilor. In addition, Bill was quite active in the Geological Society of America where, over an extended period, he held a number of positions and offices. He was councilor and treasurer for six years. He was treasurer of two national GSA meetings in Dallas, was a member of the Society's Investment Committee, and was a trustee and vice president of the GSA Foundation. He was also a member of the Space Applications Board of the National Academy of Engineering for six years. And finally, of note is the fact that he has been active in the American Geological Institute, as treasurer, vice president, and president of the AGI Foundation.

Bill's service to AAPG is equally distinguished. He has been a member of the Association since January 1941. He served as a member of the Association's Boy Scout Committee for three years, and as a member of the Convention Coordinating Committee for two national meetings held in Dallas (1968–1969 and 1974–1975) and was the Finance chairman for each of those meetings. Bill then held membership on the Convention Policy Committee and was the Association's treasurer from 1970 through 1972.

Bill's contributions have been recognized by a number of the organizations that he has served. He has received the Distinguished Service Award of the Geological Society of America, the Ian

Campbell Medal of the American Geological Institute, and has been named Honorary Life Member in both the Dallas Geological and Geophysical Societies. He was elected to the Society of the Sigma Xi at Princeton, as an alumni member of Phi Beta Kappa at Dartmouth, and is listed in both *Who's Who in America* and *American Men and Women of Science*.

Bill has had a long and happy marriage (64 years) to Dorothy. They have four children, seven grandchildren, and two great-grandchildren. The Heroys have, as is the case with many geologists, lived in a number of places. Currently they reside in The Forest at Duke, a retirement community in Durham, North Carolina. They continue to enjoy travel and, Bill points out, have together and for fun visited all seven continents. He also maintains his interest in stamp collecting and history and together they enjoy bridge and classical music.

In view of Bill's long and distinguished career as a geologist, scientific and technologic administrator, educator, and supporter of research in the national interest, being named an Honorary Member in AAPG would be well merited. When one views Bill's many additional contributions, over and above those associated with his employment, and notes how widely they are distributed across numerous societies and worthy nongeological activities, this recognition is indeed compelling.

C*itation*—To William B. Heroy Jr., for his significant contributions to the geologic profession, the scientific community, and the nation's security, and for his devoted service to the Association.

James E. Brooks

Response

Thank you for honoring me at this time. I have been retired for almost 20 years. In looking back, I can say wholeheartedly that it has been a great trip. There have been some ups and downs and this occasion is a great big up.

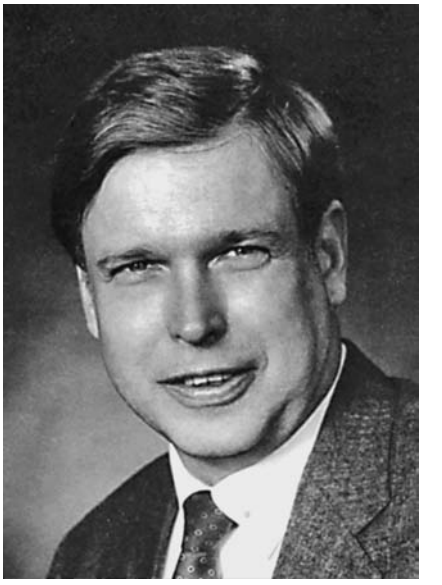
When I finished graduate school in 1941, I went job hunting, mostly in New York, Houston, and Dallas. It was very discouraging. I had a wife and child and needed a job very badly. A chief geologist in Houston made two things very clear to me, one, that his company had more oil than it would ever sell, and two, that there wasn't anything about my Ivy League education that had any value to his company. In my second run in New York, I hit Texaco the same day the chief geologist received a wire that a man on a surface party had been drafted. He said, "if you can be in Fort Worth next Monday morning, there will be a job waiting for you." I said, "I'll be there." He never told me what the pay was or offered to pay my way. When I got there, I learned that the pay was the legal minimum wage. I worked for several months, first as a plane table operator and then alone. Shortly after WW II started I was moved to Midland.

In the next three years, Texaco had about ten geologists, four that were well qualified, three mediocre, and three completely unqualified. Two were killed on the job (fell asleep at the wheel), two were fired for drinking, one had a nervous breakdown, and I have been the lone survivor for more than 20 years.

In 1942, we had 15–20 rigs working, mostly field wells, and a few wildcats. This increased to more than 50 in 1943–1945. It can be said that the war was won by the oil in Texas. One clear night, I climbed a rig and counted the lights of more than 100 rigs. I believe that there were more than 100 geologists in Midland, and it was the same for all of us, driving hundreds of miles, sleeping in the back seats of our cars (no radios or air conditioning), grabbing a meal when possible, and fighting sleep desperately. I went from 175 to 155 lbs.

The plus side was that we made decisions on the job. My boss didn't want me to call him at two in the morning to get permission to take a core or run a drill-stem test. It was a great opportunity to show you were good. Another wonderful thing was that we traded information with our competitors and friends for the benefit of the country. It was magnificent and our profession should take great pride for what it did and how. I have been proud to be one of you. I am proud to receive this award.

William B. Heroy, Jr.



FRED F. MEISSNER
Honorary Member

Fred Meissner's extraordinary leadership eminently qualifies him for AAPG Honorary Member. Major contributions have been in advancing and transferring knowledge about the origin, migration, and accumulation of petroleum, methods of identifying source rocks and their maturity, and in understanding abnormal fluid pressures.

A native of Denver, Fred's early interest in geology was expanded by mineral-collecting trips in the Rockies that led to enrollment at the Colorado School of Mines for a geological engineer degree (l953) and a master's degree (1954). Following graduation, he served as a lieutenant in the U.S. Corps of Engineers for two years during the Korean War.

Fred's enormous intellectual curiosity and creativity stimulated as a Mines

student, was nurtured during 17 years with the Shell Oil and Development companies. In Shell, Fred worked with many leading petroleum geoscientists and with emerging concepts in modern exploration. He developed the background and ability to integrate basic science, engineering, petroleum geology, geophysics, and geochemistry in exploration and research. Because of these attributes, he was a valued lecturer in training courses at Shell. The work led to stratigraphic, source rock, and petroleum system analyses in many United States oil basins.

When Shell consolidated their divisions into a Houston center in 1973, Fred chose to stay in Denver, which has been his base to this day. He used his dedication and skills in domestic and foreign exploration by joining independent companies, first Trend Minerals (1973), and later Filon Exploration (1974–1979) as a senior geologist and vice president, and then managerial positions for Webb Resources (1979), Sohio Oil (1980), and Bird Oil (1980–1991). The work, domestic and foreign, for each company, over the period of 18 years, resulted in discovery of oil and gas fields. For the past decade, Fred has been an Independent Petroleum Geologist and Worldwide Consultant.

In his career with independents, Fred found the incentives and time to share his vast knowledge of principles and concepts in petroleum geology with others by publications, short courses, lectures, and field trips under the sponsorship of AAPG, Rocky Mountain Association of Geologists (RMAG), and other organizations. A highlight in his inspiring and successful teaching has been employment, since l986, as an adjunct professor at the Colorado School of Mines to offer an advanced course in petroleum geology. The course is widely acclaimed and has attracted numerous graduate students and geologists from industry.

The numerous publications, short course notes, and lecture abstracts reflect broad interests in tracing oil and gas in basins from source to trap. Who can forget Fred's "cooking pot" designation for basin-center petroleum generation, or using test tubes and heat to distill oil from source rocks to estimate grade and maturity? As one of the early proponents of the petroleum system concept, he has influenced the exploration thinking of thousands of geologists. Current areas of activity are applied geochemistry, subsurface fluid systems (including mechanics, pressures, and hydrodynamics), influence of stress and fluid pressures on rock failure, fractured reservoirs, and coalbed methane. Landmark publications describe cyclic sedimentation and hydrocarbon accumulations, Permian basin; Bakken Formation, Williston basin; hydrocarbon source rocks of the Greater Rocky Mountain area; and Cretaceous and Tertiary coals and the conditions necessary to achieve their potential for large coalbed methane reserves.

Fred has a long record of service to and has received honors from professional organizations. Most notable from AAPG are Continuing Education Committee (1976–1979); Associate Editor of the *Bulletin* (1978–1985); Petroleum Treatise Committee; House of Delegates; field trip leader and lecturer in schools and conferences in the United States and abroad; technical program chairman 1980 AAPG Annual Meeting and Rocky Mountain Section meeting (1977). His honors include AAPG Distinguished Lecturer (1981–1982), A. I. Levorsen Award (Rocky Mountain Section 1975), Service Award (1980), and Energy Minerals Division Best Paper Award (1984). For RMAG, Fred served on many committees and as vice president (1986), and president (1997). He was honored as Scientist of the Year (1976) and with the Distinguished Service Award (1991). From the Colorado School of Mines, Fred received the Distinguished Achievement Medal (1986), presented to alumni for recognized accomplishments by peers, and the Mines Medal (2000) for "unusual and exemplary service to the School."

Fred has been supported and encouraged by his wife Jackie, who has been active in the RMAG Auxiliary and has chaired many spouse activities related to Denver conventions. They have 3 married children and 8 grandchildren.

I join the family, friends, and colleagues in saluting Fred for this career recognition of his accomplishments by AAPG.

Citation—To Fred F. Meissner, creative oil-finder, scientific and professional leader, inspiring teacher, for pioneer work on the petroleum system as a diligent researcher and integrator of concepts from geology, geophysics, engineering, and geochemistry.

Robert J. Weimer

Response

I wish to thank the AAPG and all people responsible for this great honor. I also want to thank my good friend Bob Weimer for taking the time to write my biography. I have had a checkered career involving a number of different pathways. He has done an excellent job of piecing things together.

I keep wondering what I have done that merits this recognition. I must accept it very humbly. I have only tried to be the best professional geologist that I could be. Many people have helped me along the way: my family (especially my understanding wife), my teachers, my colleagues, my bosses, and my partners. They are too numerous to name. I hope they know who they are.

As my biographer has summarized, I have worked for large major and small independent oil companies, both as a basic geologist and a manager. I have also been an independent geologic consultant. I have been successful in finding profitable oil and gas accumulations for my employers and investors through both individual and team effort. I have also caused them to drill a few dry holes. I believe that my overall effort has produced a net profit.

I have tried to be innovative in my application of earth science to the art of exploration and development, and I have often been out of step with some of the more accepted concepts of what controls the nature and occurrence of petroleum. In several instances, my

ideas have been "before their time" and were not widely accepted. Some of them have subsequently proven to be correct.

The petroleum business has given me great opportunity to practice my profession. It has provided a good living for my family and myself. I have done things, been places, and seen things that most people have never thought or dreamed of. My career as a petroleum geologist has, in many respects, been more along the line of a hobby rather than a job. I have loved doing most of the things I have done. I can't believe that I've actually received monetary reward for doing them.

I was fortunate in being a child of the west. My Utah grandparents were pioneer homemakers, miners, merchants, railroad people, and investors in natural resource businesses. My mother was a teacher and homemaker. My father was a civil engineer. They were unusually good and nurturing parents. Much of my early youth was spent camping, hiking, skiing, fishing, and hunting in the Colorado Rocky Mountains. I wanted to work in the outdoors when I grew up.

I believe that I was born to be a geologist. At the age of nine years, when I saw my first beautifully colored and crystallized mineral specimen on a Utah mine dump, I knew that I wanted to do something in later life that was connected to rocks and minerals. I have been an avid mineral specimen collector ever since. My grandparents died either before I was born or in my earliest childhood. An elderly childless couple that lived close to my parents took their place. My surrogate grandfather was a true pioneer. He had been a prospector, placer miner, homesteader, and country lawyer. He was also an outdoorsman and amateur mineralogist. His interests and sense of values greatly affected my later life.

I was fortunate to have attended Denver Public Schools through twelfth grade. At the time, this school system was arguably the finest in the United States. It gave me an excellent background for attending the Colorado School of Mines (CSM), where I enrolled in their Department of Geology and Geological Engineering. My proposed career as a geologist was somewhat of a disappointment to my parents. They wanted me to become a dentist.

My undergraduate courses at CSM qualified me as an engineer, and I believe this background has been useful to me. Although the applied geology courses I took qualified me as both a mining and petroleum geologist, I was probably more interested in pursuing the mining option. While in graduate school, I continued taking both mining- and petroleum-oriented courses to gain eventual exposure to the widest range of future employment opportunities. My thesis concerned a mining property that contained a supergene replacement zinc ore deposit in a karsted limestone. At this point I felt I was destined to be a mining geologist; however, I attended graduate school on a Shell Oil Company fellowship and they offered me a job. I ended up going to work for them as a petroleum exploration geologist. The Shell recruiter explained to me that they were more interested in a solid background in scientific fundamentals and general geology than any specific specialty.

Shell was (and probably still is) a great company to work for. Although I was exposed to a wide variety of jobs in a number of areas and basins, there were a few specific assignments that greatly influenced my career. I was sent to a three-month training course that included field studies of modern and ancient carbonate and clastic sedimentary rocks and environments. I learned about groundwater flow and its influence on petroleum migration and accumulation while working on a special study assignment with M. K. Hubbert. I studied and did research on petroleum source rocks and migration mechanisms during a one-year assignment at Shell Development Company. Much of the knowledge gained in these assignments was used in generating successful prospects both for Shell and for all of the companies I subsequently worked with. The experience also provided me with concepts and ideas of a more scientific nature that I wanted to share with others through giving papers at various society meetings, participating in research conferences and seminars, and in teaching educational courses. I sincerely hope that this has been of value. The profession has been good to me and I have tried to return something back to it through not only sharing knowledge, but also serving on committees and as an officer of various organizations I have belonged to.

I joined the AAPG in 1954 while I was in graduate school. Membership has been an important part of my career. The organization's various publications, technical meetings, continuing education courses, and field trips have provided me with knowledge and skills that I have used to build upon. Membership has also allowed me to meet people and participate in enjoyable social activities.

Thanks again to this wonderful organization for the honor they have bestowed on me.

Fred F. Meissner

LEWIS S. "STAN" PITTMAN
Honorary Member

Lewis S. "Stan" Pittman was born in Amarillo, Texas, November 27, 1932.

He graduated from high school and entered the U.S. Navy, serving a two-year "hitch" in the submarine service. He enrolled in Amarillo Junior College in 1953, transferred to Texas Tech University in 1956, and then to West Texas State University (WTSU) in 1957. He received his B.S. in geology from WTSU in 1958.

Stan began his professional career during his senior year in college, when he accepted employment as a geo-tech with the A. G. Hill Company in Amarillo, Texas. After graduation, he went full-time with Hill and worked in exploration in Kentucky, West Virginia, Michigan, Illinois, Colorado, Wyoming, and Texas. After 12 years with Hill, he moved to Dallas to begin his career with Hunt Oil Company. With Hunt, Stan worked in the Rocky Mountain Division as regional exploration/development geologist and in 1981 as exploration manager, with headquarters in Billings, Montana and Denver, Colorado. He retired from Hunt Oil Company in 1988.

In 1989, Stan was a co-founder of the Petroleum Logistics Corporation, a geocomputing firm specializing in oil and gas database management.

Stan joined the AAPG in 1965. He began his service on the Education Committee in 1968 and was chairman of that committee from 1988 to 1997. In addition to his 33-year tenure on the Education Committee, he has served on seven other AAPG committees. A survey of when most AAPG members start serving on committees after joining the organization showed that about 15 years was a good average. Stan joined the Education Committee after having been a member only three years, and just six years later he joined the Preservation of Samples and Cores and Convention Coordinating committees. He has served on three AAPG Annual Meeting Convention Committees, and was general chairman of the 1983 AAPG Annual Convention in Dallas. He has also served on the committees for Geological Computing, Geophysical Integration, and Visiting Geologists, and on the Committee on Continuing Education for the Division of Environmental Geologists. He has been a member of the House of Delegates and a Visiting Geologist. He received AAPG's Distinguished Service Award in 1990.

Stan was first vice president of the Abilene Geological Society in 1969, prior to his move to Dallas. He was a member of the Dallas Geological Society (DGS), an organization that has honored him as an Honorary Life Member and with the Outstanding Service Award, Research and Publication Award, and Public Service Award. He is a past president of DGS and has held the offices of treasurer and first vice president. He is also a member of the American Institute of Professional Geologists (AIPG), and is past president of the Texas Section of AIPG. He is past chapter chairman of the Dallas Chapter of the Society of Independent Professional Earth Scientists (SIPES). He was general chairman of the 1996 SIPES National Convention. He is currently treasurer of the American Geological Institute, and he serves on the Executive and Advisory Board of the Ellison Miles Geotechnology Institute of Brookhaven College. He has also held memberships in the Rocky Mountain Association of Geologists, the Montana Geological Society, and the Petroleum Exploration Society of Australia.

Stan married Shirley Broome on August 25, 1959, in Amarillo, Texas, and they and their three children, Edward, Charles, and Frances, live in Dallas.

Citation—To Lewis S. "Stan" Pittman, for outstanding service to the Association and the profession in national, regional, and local societies through his leadership in education and convention coordination.

Charles F. Dodge III

Response

What an honor. To be recognized by one's peers is one of great fulfillment in life, and I am very humbled and profoundly honored to be named an Honorary Member of the AAPG. Being included among the many distinguished geologists to have received this award is something I would not have dared to dream of when I first became a member of AAPG.

Born and raised in Amarillo, Texas, I can remember seeing the various activities associated in and around the greater Panhandle–Hugoton oil and gas fields in the Texas Panhandle. Being exposed to all of this as a young lad, I always thought that some day I wanted to be a petroleum geologist. After completing high school and being enrolled in college for one week, I was called to active duty in the U.S. Navy during the Korean War. After serving my rich Uncle in the submarine service during the Korean War, I returned home and worked my way through college playing trumpet in a dance band and driving ambulances for a local Amarillo funeral home. I attended Amarillo College for the better part of three years, then spent a year at Texas Tech and received my B.S. degree in geology from West Texas State College in Canyon, Texas in 1958.

While in my senior year I went to work for A. G. Hill, Oil Operator, in his Amarillo office. I was hired to construct an oil and gas well drilling active map of the Texas Panhandle, and some 31 years later I retired from Hunt Oil Company in Dallas, Texas. The 31 years included 12 years with A. G. Hill in Kentucky, West Virginia, Illinois, Colorado, Wyoming, Michigan, and Texas. In 1969 I was asked if I wanted to work for H. L. Hunt in Dallas, and of course Shirley and I picked up the two boys and headed for big "D." During the next 12 years I had the good fortune to work with many great people in the Hunt Oil Co. origination while exploring for oil and gas in the intermountain basins of the Rocky Mountain region of the United States and other areas of the world.

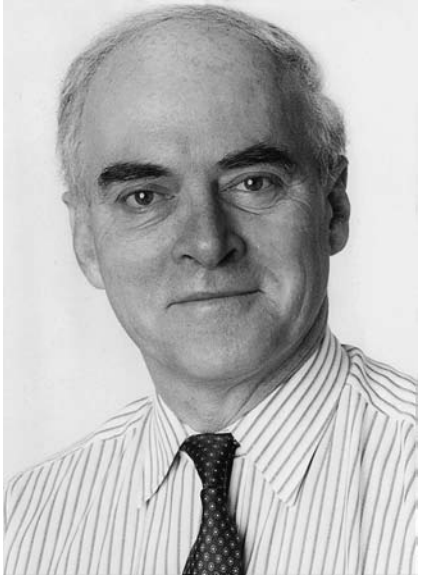
Hunt Oil supported every professional society activity that I was ever involved in from the many committees to the offices with the Dallas Geological Society and AAPG, including serving as the 1983 general chairman of the

AAPG Annual Convention held in Dallas. The one AAPG activity that I have been most involved with over the years is the Education Committee. In 1968 Frank Conselman, past president of AAPG, recruited me while in Abilene, Texas, to serve on this committee, and I am still very much involved in its work. Continuing education for the geoscience community and our membership has always been very important to me, and I have enjoyed playing a part in the development of world-class education programs for the AAPG membership. Through this involvement I have had the privilege to meet and work with many of the great people of our profession: Frank Conselman, Bob Weimer, Jack Parker, Pat Gratton, Jim Gibbs, Tom Mairs, Mark Clement, Robert L. Cash, Marcus Milling, Toby Carlton, Bill Fisher, Susan Landon, Bob Millspaugh, Marlan Downey, Eddie David, Charlie Dodge, Charlie Mankin, Lee Gerhard, Michel Habouty, Grover Murray, Robbie Gries, Pete Rose, Bill St. John, and Larry Woodfork, to name a very few of the many splendid people I have had the grand experience to have shared part of my life.

After my retirement from Hunt Oil Co. in 1988 I have continued to be quite active with the AAPG, American Institute of Professional Geologists, and Society of Independent Professional Earth Scientists. This involvement has given me an even greater understanding of the importance of the continuing need to gain new skills and keep up with the evolving technology that is ever changing our profession today. This involvement has led me to be part of a new and exciting geoscience career-training program. In February 1998, the Dallas Geological and Geophysical Societies in partnership with Brookhaven College and the Dallas County Community College District began offering geocomputer training classes on the campus of Brookhaven College. Many geoscience and engineering software vendors, along with local Dallas geoscientists and the AAPG, supported this program. As a result of all this initial support, Ellison Miles of Miles Production Company donated $3.5 million to the program, and the greater Dallas geoscience community now has a world-class training facility located on the campus of Brookhaven College.

The future looks bright and as we enter the new century I am looking forward to continuing my involvement with our science of geology. I would like to thank the Dallas Geological Society Awards Committee and the AAPG Honors and Awards Committee for granting me this very special honor. I also want to thank my bride of 42 years, Shirley Broome Pittman, for her love and support in all we have done together. I especially want to take this opportunity to thank Charles F. Dodge for being my long-time friend and biographer.

Stan Pittman



DAVID G. ROBERTS
Honorary Member

For about one-third of his professional life David Roberts was the quintessential oceanographer/geophysicist interested in solving the mysteries of continental margins. For the remainder of his career he switched to become an explorationist, accumulating an unequalled worldwide exploration perspective. He works in the worldwide exploration offices of his company, but he is equally at home and a welcome guest in the halls of academia. Service to his profession has been and still remains one of his main priorities. Let me praise the great career of my good friend David Roberts.

Born in 1943 in Llanerfel, North Wales, David is proud of his Welsh origins. He received his B.Sc. degree in 1965 and his D.Sc. in 1988 from the University of Manchester. His early work involved mapping volcanoes in the East Indies. Following graduation he joined the National Institute of Oceanography (now the Institute of Oceanographic Sciences) where his main research addressed the structural and stratigraphic evolution of continental margins. Initially he was involved with geophysical surveys that helped to describe the opening of the Red Sea and the Gulf of Aden. Together with friend Lucien Montadert of the Institut Français du Pétrole David led the teams that contributed the main database for the JOIDES/IPOD Leg 48 (1976) and Leg 81 (1981), which elucidated the origins of the Rockall Plateau and Basin and of the Gulf of Biscay. As a result, these margins that today are still studied became renowned archetypes by many scientists. In the context of this activity David also served as chairman for the IPOD Passive Margin Panel.

In 1981, i.e., about the time I decided to switch from exploration to academia, David did just the opposite when he joined BP to direct their Basin Analysis Group. His work involved the synthesis of BP's large database, the technical review of many of its worldwide activities, training programs, etc. He soon became BP's deputy chief geologist international). From 1988 to 1991 David lived in Houston, Texas, the ideal haven for "can do" geologists of his type. He had become BP's chief geologist (western hemisphere), having technical responsibilities ranging from Alaska to Latin America, with special emphasis on the Gulf of Mexico.

Because of BP's prominent position in Alaska, he also developed a great in-

terest in the geology of its North Slope. Of course we would have liked to keep David and his charming wife Robin in Houston but, alas, they had to return to London where David was appointed assistant general manager for Frontier and International Exploration, a position that in addition to the responsibility for the strategic technical development of BP's exploration involved the development of new exploration ventures and/or options.

Since 1995 David has been the global exploration advisor for BP. In this capacity he travels to all corners of the world. He is indeed one of very few remaining worldwide industry experts who in addition to his assigned duties is also entrusted by his company to be the keeper of its global geological memory.

David has been and still is serving the profession on numerous committees, including AAPG's Distinguished Lecture and Corporate Advisory Committees. He was co-chairman of the Technical Program of AAPG's Nice and Vienna International Conferences and the Hedberg Conferences on Salt Tectonics and on Exploration in Thrust Belts, as well as the deputy general chairman of the AAPG International Conference in Birmingham. David is currently AAPG's regional president for Europe.

Together with Martin Jackson and Sig Snelson he co-edited AAPG Memoir 65, the classic and spectacular volume on salt tectonics for which they received the Robert H. Dott, Sr., Memorial Award. In addition, he received the AAPG Certificate of Merit and the International Special Commendation Award. In 1999 David was awarded the Petroleum Medal of The Geological Society.

As an outstanding teacher he has taught many courses inside as well as outside his company. He now is holding visiting professorships at the Royal Holloway University, the Institut Français du Pétrole School in Rueil Malmaison, and the Southhampton Oceanography Center. David is also the founder and editor in chief of *Marine and Petroleum Geology*, one of the finest journals of our profession.

A list of all his achievements fails to describe David Roberts the person, a gentle listener but spirited debater, and his great enthusiasm for geology and exploration. He ever so swiftly recognizes and evaluates the impact of new data and new ideas to place them in their proper global context. David is an inspiring teacher and mentor. Most important, however, many of us are indeed thankful to have David and Robin as our good friends.

Citation—To David G. Roberts for celebrating regional geology and geophysics as the premier planning paradigm in the worldwide search for hydrocarbons and for his enthusiastic, always friendly and collegial, professionalism.

Albert W. Bally

Response

Late last year I received a telephone message asking me to call Marlan Downey. Inevitably I was away but on finally reaching Marlan I was totally astonished to hear that I had been named an Honorary Member. I thank the Honors and Awards Committee and Executive Committee for this very singular honor. I particularly wish to thank Bert Bally for being my biographer. Bert has been a great mentor over many years, and he and Elaine are very special friends.

I grew up in the middle of North Wales, but my parents were obliged to move to England when I was six—an experience that proved interesting for a non-English speaking boy. My first exposure to geology was at the age of 12, when I discovered a 5-pound piece of millstone grit in my rucksack after a 15-mile hike. More seriously, I became deeply interested in geology following a hiking holiday in the high Austrian Alps and subsequently read geology at Manchester University. There, I had a great fortune to take geology courses under John Dewey, Jack Zussmann, Bob Howie, and W. S. MacKenzie, who (especially John) stimulated my interest in regional geology and igneous rocks. After graduating, I spent some months mapping volcanoes in the West Indies, discovering that this is not trivial in a tropical rain forest in high-relief mountains!

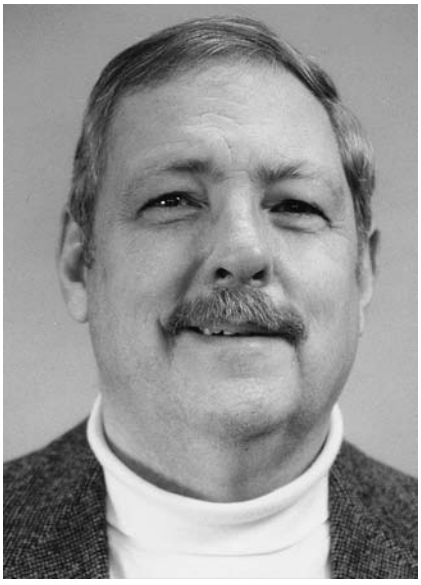
In 1965, I obtained a position at the National Institute of Oceanography (NIO), an institution lineally descended from the pre-war "Discovery" expeditions to the Antarctic. The timing was fortunate. The geophysics group at NIO worked closely with the Department of Geophysics at Cambridge University, including Fred Vine and Drummond Matthews who had just published their seminal hypothesis on oceanic magnetic anomalies. The stimulus of plate tectonics also made this an exciting time; however, continental margins were then barely understood. I was fortunate enough to be involved in several early investigations of passive margins using primitive airgun equipment (my deaf ear is not Nelsonian but is due to test firing airguns), thanks to the encouragement of the late Sir George Deacon and Henry Charnock FRS as well as Arthur Stride. I can recall presenting some of these results at the famous Geological Society of America Penrose Conference on Passive Margins on Continental Margins in 1972. There I met Bert Bally, Lucien Montadert, Sig Snelson, Pete Vail, and Joe Curray, among others, with whom I worked closely as we later developed passive margin drilling strategies through our membership of the IPOD Passive Margin Panel. Bert and Lucien have been especially great friends and colleagues since then. It was a pleasure to work with Lucien and colleagues at IFP on the Biscay and Rockall margins and not least on the first detailed seismic description of a passive margin in 1980–1981. During this period and for some years later, Marcel Lemoine and Pierre Charles de Graciansky provided tangibility to seismic images through field visits to the western Alps. Prior to leaving the Institute, I was involved in long-range sonar imaging of passive margins, which provided a first insight into the depositional processes now of importance to deep-water exploration.

I joined BP Exploration in 1981 as head of the Basin Analysis Group with the encouragement of David Jenkins then chief geologist. It was very stimulating to apply modern principles of basin analysis to frontier basin exploration. Following a spell as deputy chief geologist, I transferred to Houston in 1988. There, I had the privilege of working on the first major phase of deep-water exploration in the Gulf as well as the pleasure of regular visits to Bert at Rice and many colleagues in the United States. Since returning to England in 1991, I have been actively involved in a wide variety of exploration worldwide.

Over the period of my career in the oil industry, it has been a personal pleasure to be involved in the AAPG in several capacities. I regard it as important to return something via conferences and work with the AAPG to the community that has taught me so much. Education and training are a part of this, and I am fortunate to hold visiting professorships at Royal Holloway, IFP, and Southampton Oceanography Centre, where I can work with colleagues such as Ken McClay, Lucien Montadert, and their students. Thanks too are especially due to Elsevier Sciences for their strong support of *Marine and Petroleum Geology,* which I have the honor to edit.

I have attempted to mention some of the people who have had a significant influence on my life and career: many more are not mentioned who deserve thanks. In conclusion, I especially want to thank my wife Robin and daughter Nicola for their love and support for my enthusiasm for geology. Those who know me well will argue that both are more deserving of this award.

David G. Roberts



CARL J. SMITH
Honorary Member

Most people find it challenging to be successful in one professional career. Carl James Smith managed to do it in two—geologist and naval officer.

Carl was born in Reading, Pennsylvania on September 25, 1944. After graduating from high school in 1962, he enrolled at Albright College in Reading to study engineering, transferring the next year to Columbia University in New York City, where he received an A.B. degree in geology in 1967. That fall, he enrolled in graduate school at Indiana University, receiving an A.M. degree in economic geology (coal specialty) in 1969.

The overriding word that sets Carl apart is "honorable." In all of his endeavors, he has served as a "leader with honor." When you view his history, Carl has actually had two great and effective careers during the same time many of us have lived and worked one. More than 30 years ago he was exploring for coal and mapping iron ore deposits in the northeast while still in college. Upon receiving his master's degree, he went to work for Gulf Oil Corporation in the Gulf Coast, mapping prospects and sitting offshore wells. Having participated in the Navy Reserve Officers Training Corps program as an undergraduate at Columbia, he was commissioned an ensign upon graduation, receiving the "Admiral Milton E. Miles Memorial Sword" for outstanding leadership potential—an early recognition of things to come.

While with Gulf Oil, he was called to active duty and served more than four years, primarily in the Military Sealift Command, aboard ship and at various bases around the world. Upon his release from active duty in 1973, he remained active in the Naval Reserve until his retirement. By the time of the "Desert Storm" operation in the Middle East, Carl had attained the rank of captain. He was recalled to active duty and assigned as Commander Military Sealift Command Southwest Asia, serving in Saudi Arabia for nearly one year. He was the first reserve officer to serve in such a capacity, managing the largest sea-lift operation since WWII in returning United States war materiel from the Arabian Gulf area to the United States and Europe. He has received many decorations and citations for his service to his country, including the Legion of Merit.

In 1973, Carl joined the West Virginia Geology Survey as a coal geologist. The West Virginia Survey has a long tradition of involvement in Association affairs, beginning with its first director, I. C. White, who in 1882 promulgated the anticlinal theory of oil and gas accumulation, and continuing through the current director, Larry Woodfork. In 1919–1920, White served as AAPG's third president. Carl continued the tradition, joining AAPG in 1984. He was promoted to Associate State Geologist and Deputy Director of the Survey in 1989.

His early involvement was with the Eastern Section, where he held all elected offices, culminating in the presidency in 1988–1989. His AAPG activities were varied, but primarily centered on the Energy Minerals Division, which offered a venue for his interest in coal. He served as president in 1992–1993, having been notified of his election by fax while on active duty in the navy in Saudi Arabia. Carl was elected vice president of the Associa-

tion, serving on the executive committee in 1999–2000. One of his initiatives while on the committee was the furtherance of the pre-college earth science teachers' program referred to as K–12. His political skills, developed during his work with the West Virginia Survey, are now contributing to the efforts by the Division of Professional Affairs to convey the importance of resource development to the public and to government officials.

Carl's wife, Trudy, has been a strong sustaining partner through his remarkable career. They have two grown children—Christopher, who is a geologist working as a defense contractor in Washington, D.C. and Valerie, who is a health benefits coordinator. They also have seven godchildren scattered from England to Colorado and ranging in age from 6 to 43 years old.

He is eminently qualified to join the other distinguished Honorary Members of the American Association of Petroleum Geologists!

Citation—To Carl J. Smith, in recognition of his lifelong leadership roles, which have spanned oil, gas, and coal exploration; state geology; an outstanding military career; and dedicated service and commitment to AAPG.

C. R. Noll

Response

I want to thank my very good friend Charles "Chuck" Noll for taking the time to craft his kind words in my citation. We are both Pennsylvania expatriates and that has certainly helped cement our close friendship over the years. Yet, Chuck and I became friends because we worked side by side for the AAPG in a number of capacities. We have always hit it off because we seem to have similar motivation; i.e., a love of geology and an appreciation that AAPG has given true value to our lives. He has motivated me, honored me with his encouragement, and pleased me with his remarks. I salute him!

I was so surprised and delighted to hear that I was selected to be an AAPG Honorary Member. A simple thank you seems to be an understatement of how I feel about receiving this auspicious award, particularly as I look back at the distinguished geologists who have received honorary membership over the years. I am in awe of what those eminent scientists accomplished in both their careers and for AAPG, and needless to say, I am extremely flattered to be named an AAPG Honorary Member and be among that group. To be part of that tradition is thrilling, but also humbling.

Without a doubt I appreciate that to receive this award was only possible because many people took the time to encourage and/or mentor me over many years. First and foremost is my wife Trudy, whom I have known and loved for nearly 40 years. She and our children have put up with (actually enjoyed I think) the swerving car to help me have a better look at outcrops, the frequent stops or treks to see the interesting geology over the next hill, and my more than 20 years involvement with the AAPG. (Even during my early career, Trudy was tolerant of my geology escapades. She even had forbearance when she was with me in 1969 when I almost drove the Gulf Oil Company car into the water looking for the Baroid dock and transport to an offshore rig. That's a story she likes to remind me of now and again – something about the water lapping on the tires.) All I can say is that she is the light of my life and without her my geoscience career would not have been so rewarding. (She even took a college geology course—a good credential for an elementary school teacher—just to show that she cared about me.) She has been there since the start of my career and is so intertwined in it. I thank her for her lifelong support.

As is common, I too remember some remarkable professors along the way who initially swayed me from the idea of being an engineer to becoming a geologist—that was really a wonderful gift. Ralph Holmes, the mineralogist, and Rhodes Fairbridge, the sedimentologist, at Columbia University were the first and foremost undergraduate professors who gave me an insight into the joy of geology, even in New York City. From their first lectures, which seem like yesterday, I never looked back to any other career from the early 1960s till now. In the same way, I have to mention two graduate school professors at Indiana University, Carl Beck and Charlie Wier. From Carl Beck I learned the value of instructing and passing geology onto others—that has been an important life's lesson. From Charlie Wier I learned to appreciate geology related to fossil fuels, particularly coal and the tough fieldwork that's always required to really obtain an understanding of what the rocks are telling you. He has been and will remain my best and favorite mentor and long-term friend. I can even credit him for my current job. He pointed me in the right direction to apply for a job at the West Virginia Geological and Economic Survey as I was leaving active service with the U.S. Navy in 1973. Thanks Charlie!

At the West Virginia Geological Survey I am blessed with a cadre of great colleagues of whom I am in awe. They possess extraordinary scientific knowledge, superb geological abilities, and daily demonstrate their support for the West Virginia Geological Survey and its mission. These same colleagues over the years have supported me as I have participated in AAPG activities and in Naval Reserve matters. Without them my professional life would have been less significant and my hat is off to them for how they have enhanced me. I thank them too.

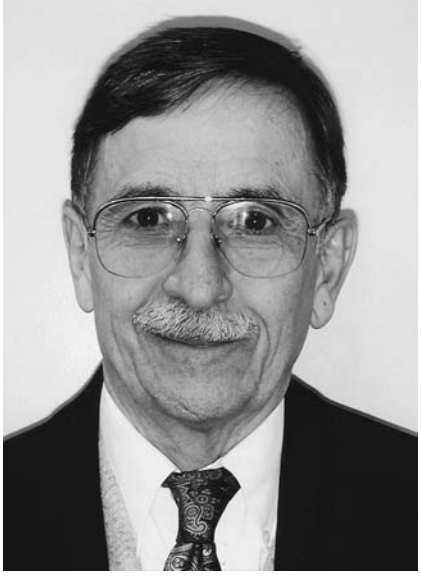
I have to give credit to Larry D. Woodfork, the West Virginia State Geologist, for opening my eyes to the value of AAPG and ever encouraging me to belong and participate in whatever way I chose. Twenty or more years ago, Larry got me started in AAPG, and I will always be grateful for his continued support.

There are numerous others I would like to thank for encouraging and helping me. Although that list is fairly long, I need to give special appreciation to the late Bruno Hanson for his good advice and counsel. I need to recognize a

true gentleman, Fred Dix, who had answers about AAPG matters whenever I needed to better understand the workings of our Association. Finally, I need to thank my good friend Sam Friedman, coal geologist from Oklahoma, who has always lightened my spirits and shown me by example how to be dedicated to coal geoscience, AAPG, and the principles of Energy Minerals Division.

These folks I cited here and the many others that are in my mind and heart gave me the wherewithal to be an active part of a dynamic science and an equally dynamic association. They all deserve my sincere gratitude and respect, and that they have, and they will always be part of whom I have become. In anyone's life there are many twists and turns that propel someone to an undetermined outcome. I was lucky that I had so many friends, mentors, and colleagues that gave of their hard-earned insight to help me get to where I am today—it's a good place to be . . . I dedicate this award to all of them. Cheers!

Carl J. Smith



ROBERT C. MILICI
Michel T. Halbouty Human Needs Award

Bob began his distinguished career in the geosciences as a geologist with the Tennessee Division of Geology (TDG), when in 1958 he began mapping the Sequatchie anticline, the westernmost Alleghanian fold of the southern Appalachians. George D. Swingle, professor at the University of Tennessee, had recommended Bob to William D. Hardeman, State Geologist, for the project. Bob completed his initial mapping of the structure in time to receive his Ph.D. from the University in 1960. Soon after, he joined the Virginia Division of Mineral Resources (DMR) in Charlottesville as head of the Stratigraphy Section, where he compiled the 1963 *Geologic Map of Virginia* and mapped low-rank metamorphic rocks in the nearby Piedmont. He returned to the Tennessee Division of Geology in 1960, where he continued his geologic mapping and studies of the stratigraphy, depositional environments, and geologic structure in the Paleozoic strata of the Cumberland Plateau and Valley and Ridge regions of eastern Tennessee.

The first Arab oil embargo of 1973 influenced Bob greatly, so that he redirected his research efforts from general studies of Appalachian geology to those that always addressed specific elements of fossil fuels—coal and oil and gas. In the mid-1970s, Bob teamed up with Leonard Harris, U.S. Geological Survey (USGS), who was working from the east Tennessee office of the USGS on regional studies of Appalachian geology. Bob joined with Len to work on the USGS Southern Appalachian Project, a regional geologic study of the hydrocarbon resources of the Appalachians. Bob and Anthony Statler (TDG) also received funding from the U.S. Department of Energy's Morgantown Energy Technology Center (METC) to participate in the Eastern Gas Shale Project. Their proposal, which was funded by METC, provided funds to shoot the first publicly available seismic data that illustrated the thin-skinned deformation of the Appalachian thrust sheets, an issue that had been long debated by John Rodgers (Yale University) and B. N. Cooper (Virginia Polytechnic Institute and State University). In addition, METC provided funds to drill and core the Devonian shale source rocks in eastern Tennessee, strata that are almost continuously covered by colluvium throughout the areas in which they would otherwise crop out. Bob wrote and managed the contracts for the seismic data gathering and for the drilling. In mid shoot, Len Harris persuaded the USGS to provide additional funds so that the seismic line could be extended entirely across the Valley and Ridge. All of this was accomplished with handshakes between Len and Bob and Bob and the contractor (GSI). Almost immediately, Amoco Production Corporation shot over the TDG-USGS lines and began working with Len and Bob to gain an understanding of the stratigraphy, potential reservoir, and source rocks of the area. Their efforts resulted in the discovery of the subthrust Swan Creek field in eastern Tennessee, a field that is under development today (1997–2001).

Bob left Tennessee in 1979 to return to Charlottesville, Virginia, this time as the Virginia Commissioner of Mineral Resources and State Geologist. As State Geologist, Bob used the dollar value of mineral resources to the Commonwealth of Virginia to develop priorities for the program, which then focused on the geology of the Commonwealth's coal and oil and gas resources. During ensuing years, the Division completely mapped all of the many geologic quadrangles in the southwestern Virginia coalfields remaining to be mapped and, in cooperation with the USGS, developed extensive digital databases for energy and mineral resource commodities. Bob became especially interested in the geology of coal-mine roof falls, when in response to mining deaths in the Commonwealth of Virginia, the Virginia press severely criticized the chief mine inspector. Bob knew that the geology peculiar to the region, not lack of inspection, was the cause of the deaths. With funds from the Appalachian Regional Commission, and with the assistance of professors and students in the Department of Mining and

Minerals Engineering at Virginia Tech, Bob and Tom Gathright (DMR) organized and trained teams of geologists to map underground coal mines and to describe and characterize the geologic features that predisposed mine roofs to be unstable. This work led to the publication of training manuals and numerous safety presentations for mining groups in southwestern Virginia. Also, while with the Division, Bob worked with Kenneth Bayer (USGS), funded by the U.S. Minerals Management Service, to interpret and publish geological interpretations of the seismic lines on the Atlantic Outer Continental Shelf offshore of Virginia. With Wallace de Witt, Jr. (USGS), Bob compiled articles on the stratigraphy and energy resources of the Appalachian basin for the Geological Society of America's Decade of North America.

Bob joined the USGS, first as chief of the Branch of Sedimentary Processes and then as chief of the Branch of Coal Geology, in Denver, Colorado. While in Denver, Bob began working with the Branch of Petroleum Geology on the 1995 oil and gas assessment of the United States, and he assisted Bob Ryder with the assessment of the Appalachian region. Jack Medlin and Christopher Wnuk introduced Bob to geological studies in south Asia, where the USGS was about to begin a multiyear cooperative study with the Geological Survey of India (GSI) on the coking coal resources of the Sohagpur coalfield in Madhya Pradesh. Bob and Peter Warwick are currently completing the final report on the project together with GSI scientists. More recently, Bob conducted an assessment of the oil and gas resources of Ganges-Brahmaputra delta in western India, Bangladesh, and a part of adjacent Myanmar for the World Energy Program, led by Tom Ahlbrandt. This assessment was based on published geological studies and proprietary databases purchased by the USGS. Subsequently, U.S. Ambassador John Holtzman offered the services of the USGS to the government of Bangladesh. Bob assumed the leadership of the project and, working with others on the USGS World Energy Team, has cooperated with Bangladeshi government scientists and engineers, as well as with interested international oil companies, to conduct a detailed assessment of the gas resources of Bangladesh. This assessment will be the cornerstone of an economic analysis that will allow the government of Bangladesh to formulate government policy on the export of gas to international markets in south Asia.

Citation—To Robert C. Milici for a career of selfless service to the geosciences, including assisting countries of the Indian subcontinent in the rational development of coal, oil and gas reserves.

Harold Gluskoter

Response

I would like to thank my friends, associates, and peers at AAPG for honoring me with the Michel T. Halbouty Human Needs Award. In my career as a geologist, I have had the opportunity to spend many years as a field geologist for the Tennessee Division of Geology, then in management as the Virginia Commissioner of Mineral Resources and State Geologist, and currently as a research geologist with the U.S. Geological Survey. Each of these assignments has provided me with unique opportunities to work as a geologist in areas that were not only intellectually interesting and challenging but provided me the opportunity to apply my geological efforts to the needs of our society. I am basically an Appalachian stratigrapher, and as a field geologist I quickly became a jack-of-all-trades and master of none. My interests have ranged from tectonics to physiography, from geophysics to mineral resources.

The reality of the oil embargo of 1973 forced me to accept the idea that for evermore there would be a significant need for energy resource studies. I turned my mapping efforts toward the quadrangles of the Tennessee coalfields, where there was at least a little oil and gas. I developed interests in the stratigraphy and depositional environments of coal-bearing Carboniferous rocks and had the opportunity of working with John Ferm and his students who were at the several universities where John was employed. Len Harris, Wally de Witt, and John Roen provided me the opportunity to work cooperatively with the U.S. Geological Survey on regional studies related to the hydrocarbon resources of the Appalachian basin.

I had the happy opportunity to join the USGS in 1992, first as the chief of the Branch of Sedimentary Processes, then as the chief of the Branch of Coal Geology in Denver, Colorado, and more recently as a research geologist in the Energy Resources Program in Reston, Virginia. While in Denver as a branch chief, I worked with Bob Ryder, then in the USGS Branch of Oil and Gas Resources, as a contributor to the Appalachian part of the 1995 oil and gas assessment. Next, under the leadership of Doug Patchen and John Roen, I contributed to the DOE-funded *Appalachian Gas Atlas*. With this additional background in coal geology and hydrocarbon assessment, I first began to work in south Asia with our counterparts in the Coal Wing of the Geological Survey of India (GSI) as part of a team to study the geology and coking coal resources of the Soghapur coal field in Madhya Pradesh, central India. The purpose of the Sohagpur coalfield project, which was subsequently joined by Peter Warwick, was to determine the geological conditions that controlled the distribution of coking coal within the coalfield. The project involved regional geological mapping and stratigraphic studies within the coalfield, as well as studies of the coal beds and depositional environments of the Gondwana (Permian) stratigraphic units. Basic geological data were combined with analytical data from coal beds in the Sohagpur coalfield to determine the geothermal history of the basin, and ultimately to devise an exploration rational for coking coal, which is in short supply in India. In addition, we provided basic information on exploration methods for coalbed methane to our associates within GSI.

In the meantime, I had been working on a hydrocarbon assessment of Bangladesh with Craig Wandrey for Tom Ahlbrandt's World Energy Project, when the then U.S. Ambassador to Bangladesh, John Holtzman, offered the services of the USGS to the government of Bangladesh to conduct a gas assessment of the country. My earlier study had been general in nature and based upon the published geological literature and a proprietary database that the USGS had purchased from Petroconsultants. The new study was to be in much more detail, with proprietary data and consultations supplied by the international oil companies and the national oil company of Bangladesh, Petrobangla. The project was to be funded by the U.S. Agency for International Development through the U.S. Department of Energy to several subcontractors, including USGS. As a prelude to the assessment, I was invited to Dhaka, Bangladesh, in May 1999 to participate in the Second Petroleum Engineering conference, sponsored by Bangladesh University of Engineering and Technology, where, under the tutelage of Emil Attanasi, I made a presentation on the phenomenon of field growth. The following year the government of Bangladesh organized a team of geologists, geochemists, and an engineer to work with the USGS's World Energy Program to conduct a gas assessment of Bangladesh. Craig Wandrey and I have traveled together with the Bangladeshis in the United States, where they received training in Reston and Denver on world energy methodology, and in Houston, where we had the opportunity to view the latest in exploration and drilling technology, presented by Unocal, Halliburton, and Shell. Later in the year, we returned to Bangladesh for several weeks to work with the Bangladesh team and to educate ourselves on the geology and hydrocarbon potential of the region. The team returned to the USGS in January 2001 to conduct the assessment with USGS World Energy personnel. The project is ongoing, and when completed will provide the government of Bangladesh a basis for developing policy on the utilization of Bangladesh natural gas.

My first visit to south Asia was in 1994, to both India and Bangladesh, where we developed our contacts and personal relationships with scientists in the Geological Survey of India and the Geological Survey of Bangladesh. These gentlemen have become our friends as well as our professional associates, and my only regret is that I had not traveled to that part of the world many years before. My view of the world has changed greatly because of these experiences. As those of you who travel internationally know, the United States is a fantasyland when compared to the realities of other countries where resources are limited and people are abundant.

Robert C. Milici

JOHN WARVELLE HARBAUGH
Distinguished Educator Award

John Warvelle Harbaugh was born August 6, 1926, in Madison, Wisconsin, the eldest of five children; John's mother was an artist and his father a mining engineer. His early childhood was spent in Wisconsin, Oklahoma, and Ohio. John graduated from Hudson (Ohio) High School in 1944, entered the U.S. Navy's V-12 program, and was assigned to Denison University, later being transferred to the University of Kansas (KU). Trips with his father during his adolescence to places of geological interest kindled a desire to know more about these features and combined with a love of the outdoors naturally led to his eventual decision to become a geologist.

This love of nature and the outdoors was reinforced after taking a beginning geology course from Lowell Laudon, the geology spellbinder, in the spring semester of 1946. On discharge from the Navy in that year, he declared a major of geology and that summer attended the KU geology field camp at Canon City, Colorado. Graduating from KU in 1948, and because of his interest in botany and chemistry and familiarity with the tri-state mining district, he elected to work on a geobotanical project with Bob Dreyer for his master's thesis. This work resulted in his first publication "Biogeochemical Prospecting in the Tri-State Zinc and Lead District," which appeared in *Economic Geology* in 1950.

Upon receiving his master's degree in the early winter of 1950, he accepted a position with the U.S. Geological Survey (USGS) in Denver, where he was to work in the Geochemical Prospecting Section on uranium occurrences in western Colorado and eastern Utah. After a short stint with the USGS, John resigned and sought a job in industry. He obtained a position with Carter Oil Company and was promptly sent to Shreveport, Louisiana, later to be transferred to Tulsa, Oklahoma. While with Carter, John became interested in carbonates.

John took a leave from Carter to obtain a Ph.D. at the University of Wisconsin, where Lowell Laudon had migrated from KU. After a reconnaissance of the Klamath region of northern California, he decided to work on the Permian McCloud Limestone. John obtained his Ph.D. in the spring of 1955 with a dissertation on the "Geology of the Shasta Lake Area of Northern California" and accepted a temporary

teaching position at Stanford University, resigning his position with Carter Oil Company. In 1958 John accepted an offer to study the Pennsylvanian marine banks in southeastern Kansas for the Kansas Geological Survey; this started his a longtime association with the Survey. Three classic papers on the marine banks resulted from this work and the now famous Kansas Geological Society's 27th Field Conference of 1962 and follow-up trip for GSA in 1965. In the meantime, John had been given tenure at Stanford and promoted to associate professor in 1961 and full professor in 1965.

Teachers are unique; they have to combine curiosity and know-how with patience, persistence, and perseverance; they lead by example; they have to motivate. John Harbaugh is one of these unique and special people. Through the years his teaching interests changed from petroleum geology and historical geology to risk analysis in oil exploration and computer applications in geology. He explored teaching cross-disciplinary courses—one with a lawyer and another with an archeologist—and his courses all had a practical bent. He insisted his students be grounded not only in the fundamentals of their discipline but have expertise in mathematics, statistics, and computer science and especially be able to express themselves orally and in writing. He is understanding and knowledgeable—a great combination for a teacher.

Students were attracted to his program from all over the world and in turn John ventured all over the world in search of new ideas, visiting, lecturing, and consulting in 55 countries on the 7 continents. He has supervised 55 master's and Ph.D. candidates, many who have gone on to receive recognition in their own right and, in addition, hosted numerous postdoctoral students and visitors. He was successful in attracting outside support for his research into process simulation and modeling, both from the petroleum industry and government agencies. He has published more than 75 scientific articles and books. His latest interests are in chaotic behavior and returning to the field for a study of the geomorphic evolution of the present topographic surface in Kansas.

In addition to his teaching responsibilities and research, John tried several administrative positions including the chairmanship of the Geology Department (1968–1972) and chairman of the American Geological Institute geology curriculum program. He was active in service work as well, especially for the AAPG. He chaired the Membership Committee for several years and later the Computer Applications Committee. He served on the editorial boards of the *AAPG Bulletin* and *Geobyte*. He ran successfully for vice president of AAPG in 1989–1990, and was a candidate for president-elect in 1996–1997. For three years he was chairman of the U.S. National Committee for the International Geological Correlation Program. He served in several capacities for the International Association for Mathematical Geology, SEPM, and Geological Society of America, on numerous government boards and panels, and many university committees.

John has been active in consulting (including Petroleos Mexicanos, Southern California Edison, Petrobras, ARCO, Humble, and the U.S. Department of Energy, Bureau of Land Management, and Interior as well as the Norwegian Institute of Technology), served as an expert witness, taught short courses, and explored for oil and gas.

For his contributions, he has been recognized by his alma mater with the Haworth Distinguished Alumni Award (1968), the A. I. Levorsen Memorial Award of the AAPG Pacific Section (1971), the William Christian Krumbein Medal from the International Association for Mathematical Geology (1986), the AAPG Distinguished Service Award (1987), the Stanford Associates Award (1995), and the AAPG Pacific Section Outstanding Teaching Award (1999).

In 1951, John married Josephine Taylor in Nowata, Oklahoma, and they had three sons: Robert, a neurologist in Santa Barbara, California; Dwight, a geologist in Reno, Nevada; and Richard, a contractor in Redwood City, California. He has three grandchildren. Josephine died of lupus in 1985 and last year in 2000, John married Audrey Wegst in Fairway, Kansas. Audrey shares John's interest in nature and travel, and together they have been seeing the world.

Outstanding teachers are few, but John's ideals and philosophy are promulgated by and through his students. This recognition, by the AAPG, of its Distinguished Educator Award to John Harbaugh, is a well-deserved honor to a dedicated scientist and educator.

Citation—To John W. Harbaugh, a dedicated and inspirational teacher with vision to the future, a champion of higher education, and a pioneer in process simulation and modeler deluxe.

Dan Merriam

Response

I deeply appreciate receiving the AAPG Distinguished Educator Award, and I also appreciate the citation prepared by my old friend and geological colleague, Dan Merriam.

Looking back over my career in education and geology, it has been an interesting half-century of experience that is still unfolding. When I began as a geology student in 1946 at the University of Kansas, I didn't have a specific vocation within geology in mind, although I liked field geology and working in the Rocky Mountain west in particular. For a while I thought I'd like to work in mining exploration, and I did work in "biogeochemical" prospecting for lead and zinc, and then for uranium, in the late 1940s and in 1950.

Soon after that I went to work in the oil industry, for the old Carter Oil Company, whose headquarters were in Tulsa. Initially I worked in Shreveport, where I worked on several prospects in Louisiana and Mississippi, and even did some field mapping involving coal-seam elevations as a guide to subsurface structure in Alabama. While in Shreveport, I had the good fortune to have

Tom Philpott as a boss. He was very enthusiastic and I learned a great deal from him about using geology in oil exploration. One shrewd bit of advice sticks in my mind. He said, "John, when you present your prospect to management, make a big cross section and color it red." It worked, and I've followed his advice ever since.

After several years with Carter, I decided to take leave from the company to pursue a Ph.D. I'd been transferred to Tulsa in the meantime, and the Tulsa staff granted my request. I'd been in contact with Lowell Laudon at the University of Wisconsin, whom I knew from KU days, and he offered me a scholarship at Wisconsin (in Madison). I accepted it and with my wife Josephine and one-year-old son Robert moved to Madison. It was a good experience at Madison, and Lowell was a fine man to work with.

While still in Madison, another faculty member that I also knew well, Lewis Cline, told me of an academic position at Stanford University, and suggested that I apply for it. I hadn't thought much about an academic career, because after all I was an "industry type." But I applied anyway, and got the job, beginning in the fall of 1955. Initially it was a one-year appointment as an acting assistant professor, which is about as tenuous as it gets, but we decided to take the risk and I accepted, resigning from Carter.

Stanford was a new world for me. We enjoyed living in the vicinity, and while Stanford was big-league academically, it was also a "soft-shoe" cordial place as well. They liked field geology also at Stanford. When I arrived at Stanford, I had the good fortune to take on some consulting work for Humble Oil and Refining Company that involved field geology in the Klamath region in northern California as well as in eastern Oregon. In the mid-1950s academics had to find support in industry—there wasn't yet a National Science Foundation. Of course I also taught courses at Stanford. Happily, I could involve some of my students in fieldwork for Humble. It was a good admixture of academia and industry.

In those early years at Stanford, and for that matter all through the nearly 46 years I've been at Stanford, the greatest benefit that I've had as an educator has been to have so many excellent students. Of the 55 or so for whom I've supervised their master's or Ph.D. dissertations, the opportunity to work closely with many of them has been a source of immense satisfaction for me. Hopefully, it's been a mutually beneficial experience. I know that I've learned a great deal from them, and in the process, collectively we produced many publications in which we shared the authorship.

In fact, getting students involved in research has been an element in virtually all my academic work, including the courses I've taught. Most students like to be involved. They often become very enthusiastic about their individual projects—even small research projects undertaken as a part of an introductory class.

In 1958, Dan Merriam invited me to work as an intermittent consultant at the Kansas Geological Survey, initially doing fieldwork on Pennsylvanian carbonates in southeast Kansas. While the pay wasn't all that grand, it was great opportunity to work with Dan and his colleagues. It was exciting and rewarding work, and it led to some key publications for me. The affiliation with the Kansas Survey has gone on for years, and continues even today. Many of my Stanford students got to know the Survey well, and participated in various joint research projects that linked Stanford and the Kansas Survey.

In dealing with my students, I've always stressed that they need to express themselves clearly in writing. I guess I'm old fashioned, but this has led to a great deal of one-on-one interaction in which we would pass manuscripts back and forth in various stages of editorial improvement. I know that some found the seemingly interminable writing and rewriting to be very tedious, but many have told me afterward that the training in writing was one of the most valuable experiences they had as students.

Now that I'm emeritus, I reflect on my academic years with considerable satisfaction, and I appreciate to an even greater degree that what really counts are the students. And, oh yes, I still tell them to make big graphic presentations and color their prospects red!

John W. Harbaugh

CLYDE H. MOORE
Distinguished Educator Award

Widely renowned as a leading authority on the sedimentology and diagenesis of carbonates, Clyde H. Moore, Jr. is better known to a generation of students as an inspiring teacher, a skillful interpreter and transmitter of geological concepts, an enthusiastic coresearcher, an occasional stern taskmaster, a wise counselor, and a valued friend.

Born in Jacksonville, Florida, but most assuredly a native of New Orleans, Clyde gravitated toward geology from an early age. He majored in geology at Louisiana State University (LSU) in Baton Rouge, later to become his home for much of his career. After graduating from LSU in 1955, Clyde rounded out his formal geological education with admirable dispatch, earning both M.S. and Ph.D. degrees from the University of Texas within four years. By contrast, his informal geologic edu-

cation has taken slightly longer, inasmuch as it continues to the present. For example, Clyde's dissertation research formed the beginning of a long and fruitful investigation of the Cretaceous carbonates of central Texas, which he has continued to this day.

The ink had scarcely dried on his Ph.D. diploma before Clyde plunged into his professional career, accepting a position as a research geologist with Shell Development in Houston in 1961. In five years with Shell, Clyde demonstrated his flair for fieldwork, for rapid assimilation of large data sets, and for conceptualizing in diverse geologic fields, from central Texas to the Atlantic and Pacific coasts. And to top it off, he showed an aptitude and developed a desire for teaching.

Consequently—and happily for the next generation of geology students—in 1966 Clyde left Shell to accept an invitation to return to his first alma mater as an assistant professor of geology. Early on, young Dr. Moore's students appreciated that their new professor possessed a remarkable ability to transmit his own infectious enthusiasm for his subject matter, garnering their rapt attention. Clyde's encyclopedic knowledge of his subject matter combined with his encouragement of student participation to produce a bumper crop of budding young geologists. His efforts earned Clyde a full professorship in 1975, a position he held for the next 21 years.

For his lectures, Clyde's preparations are meticulous and his presentation skills finely honed. Clyde never delivers the same lecture twice: his talks are always extemporaneously tailored to elicit the optimum degree of audience participation. Still, that deceptively easy-going style can turn in a flash to an intimidating authoritative presence if a class has shirked its assignments. Clyde's courses have always had the dual reputation of being simultaneously the most demanding and the most popular in the department. As an advisor, Clyde deftly steers his students toward a fuller understanding of their subjects by careful and thoughtful review, and standing ready to lend a hand through dialogue. No mentor could be more demanding and helpful simultaneously, or set a better example of rigorous pursuit of research.

In 1995, Clyde accepted a research professorship with the Department of Geology and Geological Engineering at the Colorado School of Mines, and shortly thereafter became a professor emeritus at LSU. Evidently, judging from Clyde's current activity level, emeritus status carries no connotations of retirement or even slowing down.

The majority of the graduate students who have studied under Clyde's tutelage have concentrated on aspects of carbonate deposition or diagenesis. They have explored and expanded the range of Clyde's own interests, which have encompassed modern carbonate depositional environments, ancient and modern reefs, diagenetic realms and porosity evolution in carbonates, dolomitization, the geochemistry of subsurface fluids, sequence stratigraphy, and other subjects. At LSU and Mines, Clyde has served as major advisor to 44 master's degree recipients and 15 doctoral graduates. He continues to serve on several Ph.D. committees at both universities.

During his teaching tenure, Clyde's researches have become inextricably woven into the fabric of his teaching, and vice versa. His research record is formidable both for its quantity—9 books authored, co-authored or edited; more than 50 professional publications authored or co-authored; plus innumerable presentations and invited papers at universities, symposia, geologic societies, and research laboratories—and for the breadth of its subject matters. Since 1967, he has served as principal investigator for numerous grants and contracts and as chief scientist on four research cruises. While at LSU Clyde initiated the establishment of the Basin Research Institute and founded the Applied Carbonate Research Program, serving as first director of each. Both programs promote the research efforts of promising young geoscientists and graduate students through stable funding and interaction with professional affiliates.

Clyde's dedication to teaching has extended well beyond the standard university setting. For the benefit of AAPG, other geological societies, and industrial associates, Clyde has conducted field trips and field seminars in Texas, Louisiana, Florida and the Caribbean, and Wyoming, plus short courses and workshops on a wide spectrum of geologic topics, across the country and around the globe.

Moreover, his devotion to teaching has been paralleled by exemplary service to our profession. Within the AAPG, Clyde has served on the Education Committee (1975–1983, including one term as chairman), as well as the committees on membership (1976–1978) and research (1980–1983). He has also been an AAPG Distinguished Lecturer. He contributed in great measure as a member of the LSU faculty, serving on numerous councils, committees, and advisory boards.

In the wake of such an illustrious career, it should come as no surprise that Clyde has garnered his share of well-deserved recognition. In 1992, the Gulf Coast Association of Geological Societies named him an Outstanding Educator. In 1994, LSU's College of Science cited him for Excellence in Graduate Teaching, and the following year, Clyde had the signal honor of being named recipient of LSU's Distinguished Teaching Award for 1995.

At LSU, at Mines, on field trips, and in seminars around the world, thousands of students and professional geologists have experienced and benefited from Clyde's instructional skills and broad expertise over the course of his distinguished career. To those of us fortunate enough to have had Clyde as our advisor, he has been more than a teacher or even a mentor; Clyde Moore has been an example to be emulated and a trusted friend.

Citation—To Clyde H. Moore, for his successful cultivation of understanding and appreciation of geology in students and colleagues, through his dedication to excellence in teaching.

Bill Wade

Response

I am deeply honored and appreciative to be named an AAPG Distinguished Educator in this first year of the new millennium. Special thanks to John Haun for the nomination, and to Bill Wade for his kind, but somewhat exaggerated, biography.

It is particularly sweet for me because this award was first proposed and continues to be funded by Grover E. Murray, a longtime hero of mine from my Louisiana State University (LSU) student days—regardless of the fact that he gave me my first and only "C" in geology! We've come a long way, Grover.

How does a New Orleans boy become obsessed with geology, rocks, and most particularly carbonates? I spent my early childhood on a gravel street in the blue-collar suburbs of Jefferson Parish. That gravel came from Arkansas and had a beautiful suite of Ordovician fossils imbedded in limestones, dolomites, and cherts—I was hooked and didn't even know it!

Anyone who has read the *Confederacy of Dunces* would know how I felt during that first trip up to Baton Rouge and LSU—a stranger in a foreign land. As I was signing up for the usual hash of freshman courses designed to separate the wheat from the chaff, I was told that I should take geology since I was interested in petroleum engineering (honestly).

In that first week of classes, when I took a seat in the geology auditorium in a building built by FDR's WPA and was mesmerized by H. V. Howe talking about the geology of an obscure island in the Russian arctic, I knew that I had found a home. Little did I realize that most of my professional career would be happily spent in an office less than 10 yards from that dusty old auditorium and that I would teach literally thousands of students from that same podium.

During my undergraduate years at LSU, C. O. Durham introduced me to stratigraphy, the joys of fieldwork and most particularly the Cretaceous of Texas. Later, Clarence was responsible for my returning to LSU as a staff member. I am in your debt, Clay.

My graduate tenure at the University of Texas was the most exciting and influential period of my early professional life. The faculty led by Sam Ellison was a positive, cohesive force that demanded excellence and hard work from their students in an atmosphere of mutual respect, support, and family. That faculty, and particularly the genius of Bob Folk, as a scientist and as the best teacher that I have ever encountered, has long been the unattainable standard that I have set in my own teaching career.

I was particularly fortunate to spend five years with Shell Development just out of graduate school during that organization's "golden era." For me, it was an opportunity for growth as a scientist in an unbelievably stimulating atmosphere. Bob Ginsburg taught me about vision and passion for science while Frank Lozo gave me a work ethic and passion for excellence. Those lessons have stood me in good stead throughout my career.

Although these individuals and institutions had a tremendous influence on my early development as a scientist and teacher, there is no doubt that the students that I have had the privilege to teach, supervise, and in some cases adopt as family have had an enormous impact on me personally and professionally.

There was an early Cretaceous phase during which we cleaned up unfinished business from my Texas and Shell days. I showed the students a few outcrops, some places for good barbecue and cold beer, and they ultimately led me to the best outcrops and new approaches to this classic carbonate sequence. Their efforts were ultimately responsible for my AAPG field seminar in central Texas, which has seen some 27 iterations.

This was followed by a long, intense, but happy immersion in the warm seas of the Caribbean and Florida Keys. Together with my students, we learned something of the impact that organisms had on sediments, sedimentation, and diagenesis. We learned about submarines, dive tables, and explosives; I earned the moniker "Clyde Clionid;" and we invented the killer rum punch of Discovery Bay. Here we realized that we were dealing with a chemically reactive system that could entrap an unsuspecting geologist in beach rock if he didn't walk fast enough. There followed observation wells, artificial substrates, and long hours in the geochemistry, isotope, and microprobe labs interspersed with quick but pleasant collecting trips to palm-fringed beaches.

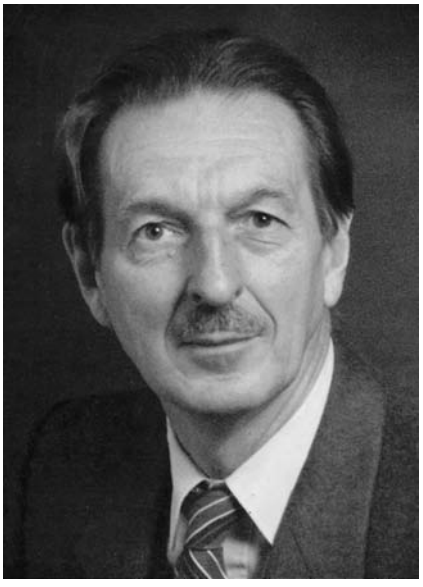
My personal epiphany came when Cal Badon wanted to start a subsurface study of the Jurassic Smackover for his dissertation. What followed were some 15 years of agony and ecstasy in the company of a group of great students, a number of consummate characters, some directly from the pages of *Confederacy of Dunces*, and a long-term relationship with the oil industry that continues today. We all learned about science, teaching, crawfish, good champagne, bad beer, politics, sponging for petrobucks, and most of all about ourselves—we were, and remain, family. This early industrial associates program funded the research of dozens of top-notch students and helped equip the labs of LSU with modern equipment. But best of all, it brought some of the brightest minds of the petroleum industry into contact with students during their formative years and showed them how it was done.

Today, my teaching continues in the arena of industrial education. The podium is different and is often located in unusual and exotic places. Although the students are a bit older and often have strange accents, as do I, the intellectual and social exchanges and opportunity for personal growth are every bit as stimulating.

I can truthfully say that if I had the opportunity to start again as a fresh Ph.D. just out of school that I would do it all over again and not change a thing—it has been and continues to be a blast!

I accept this award humbly, but with great joy knowing that each and every student of mine shares in this great honor.

Clyde H. Moore



CHARLES R. STELCK
Distinguished Educator Award

The AAPG Distinguished Educator Award is given in recognition of distinguished and outstanding contributions to geological education. The recipient of the 2001 award is Charles Richard Stelck of the Department of Earth and Atmospheric Sciences, University of Alberta, a renowned Canadian paleontologist and stratigrapher, who has served the petroleum industry with distinction throughout his long professional career. The award is in recognition of his dedication and passion for the teaching of geology and his pioneering work on unraveling the stratigraphy of the Western Canada sedimentary basin.

Charlie began his association with the University of Alberta in 1934, where he received his B.Sc. degree in 1937 and his M.Sc. degree in 1941. Here he came in contact with Percival S. Warren, who became his role model and dear friend until Warren's death in 1970. For the next 15 years Charlie was involved in detailed mapping and exploration for a number of agencies: the Geological Survey of Canada (upper Peace River area); the Mining Corporation (in the Yellowknife area); Benedum and Trees (in the Pouce Coupe area); the British Columbia Department of Mines (the Pine River area); the United States Government (the wartime Canol project in the Mackenzie district and North Yukon); Imperial Oil (as an explorationist in the Foothills area), and as a consultant (in the Fort St. John area). Shortly after marrying Frances (nee MacDowell) in 1945, Charlie went to Stanford to write a dissertation on micropaleontology, as megafossils seemed lacking in critical Cretaceous strata in Alberta. He graduated with his Ph.D. from Stanford in 1950 and returned to the University of Alberta, where he had been hired as a lecturer in 1946. Charlie has remained at the University ever since rising through the ranks to his present rank as emeritus professor. Counting his undergraduate years, Charlie has been associated with the University of Alberta since 1934, some 65 years of dedicated service.

Charlie Stelck represents a near ideal fusion of teacher, researcher, and professional geologist, and for the past 50 years he has stood as the perfect role model for the generations of students who have had the honor of being taught by him. Charlie possesses all the attributes of an outstanding teacher. He is well spoken and animated, knowledgeable and well prepared, patient and understanding. He represents a true mentor to the many undergraduate and graduate students that he has come in contact with. The list of the 44 M.Sc. and nine Ph.D. students he has supervised reads like a Who's Who of the petroleum industry. He encouraged high standards of performance from his students, but his door has always been open and he is always available for advice. The quality of their work was a subject that Charlie took quiet pride in. He got particular pleasure in seeing his students grow not only as scientists but also as individuals. Charlie Stelck is noted for his humanity, integrity, enthusiasm, and accessibility. His students know him as a dynamic and colorful lecturer and a compassionate counselor. For many years he has been the chief steward of the Earth Science Ring Group and was the author of their moving initiation ritual.

Charlie also displays all the outstanding attributes of a research scientist. He is careful and critical in his observations, accurate and meticulous in his descriptions, and perceptive in his interpretations. Along with his greatly respected mentor, Percival S. Warren, he was the first to bring stratigraphic order to the Devonian system in western Canada. He introduced systematic study of sequential benthic foraminiferal faunas in the Cretaceous and demonstrated their value not only in biostratigraphy but also in paleoecology. He introduced palynology to western Canada and saw it develop into one of the most successful and widely used branches of paleontology in elucidating stratigraphic relationships among Cretaceous rocks of nonmarine origin. These studies provided numerous oil companies with a sound biostratigraphic basis for exploration programs and established the geological setting of some of the most important oil fields in Alberta.

His personal success as an oil and gas discoverer bears witness to his broadly based approach to the prospecting for fossil fuels. From his pioneering fieldwork on the wartime Canol Project in the Norman Wells and Upper Peel River areas of the Northwest Territories to his discovery of the Fort St. John gas field and the Pouce Coupe gas field, Charlie has demonstrated the value of a thorough investigation of stratigrahic facies, paleogeography, and biostratigraphy in hydrocarbon exploration and exploitation. As a consulting professional geologist Charlie has been registered with APEGGA (Association of Professional Engineers, Geologists and Geophysicists of Alberta) since 1942 and has been one of its most staunch supporters.

Since his retirement in 1982, Charlie has remained extremely active in the geologic profession, especially in his role as professor emeritus in the Department of Earth and Atmospheric Science. He provides his time and invaluable advice and expertise willingly, even joyfully, to numerous graduate students and junior professors on a regular basis and presently serves on several M.Sc. and Ph.D. thesis research committees. Students of sedimentology and stratigraphy eagerly seek his advice and involvement in biostratigraphy zonations while ascertaining the sequence stratigraphic framework of their study area. He still publishes and it is my honor to be a co-author on his latest two papers. I value our collaborations and look forward to seeing him come into my office with a smile, a reprint, and some profound thought. The only trouble is that he assumes I know as much as he does; the truth is he has forgotten more than I have ever known. He has a remarkable memory and I love it when he pulls one of his stratigraphic gems out and dumbfounds one of my graduate students.

The stature of his past work was recognized by his election to the Royal Society of Canada in 1960, his election as an Honorary Member of the Canadian Society of Petroleum Geologists in 1979, the Centennial Award of the Association of Professional Engineers, Geologists and Geophysicists of Alberta in 1980, the Logan Medal of the Geological Association of Canada (that Association's highest distinction) in 1982, a Rutherford Award for Excellence in Undergraduate Teaching by the University of Alberta in 1982, election as a Distinguished Fellow of the Geological Association of Canada in 1995, and the Douglas Medal of the Canadian Association of Petroleum Geologists in 1995. Also in 1996 he was awarded one of the highest honors given in Canada when he was introduced as an Officer of the Order of Canada. Charlie has also been blessed with the love and support of his wife of 56 years Frances and his four sons (David, Brian, Leland, and John). He is a loving husband and father who is very proud of his family.

Over 60 years have passed since Percival Warren sold the young Charlie Stelck on geology and the flame has not diminished. He continues to pass this legacy on to generations of students. Perhaps more importantly he has done it with enthusiasm, generosity, compassion, and high principles.

Citation—To Charles R. Stelck in recognition of your dedication and passion for the teaching of geology; you personify the true meaning of what it is to be a professor.

S. George Pemberton

Response

I am honored to receive the AAPG Distinguished Educator Award for 2001 and wish to thank George Pemberton for his complimentary biography, not forgetting Bob Sullivan and other Calgary alumni that took time to put my name forward. I am doubly indebted to the Executive and Awards Committee for considering me. I have been a member of the Canadian Society of Petroleum Geologists but was never a member of the AAPG. When I joined the staff at the University of Alberta some 50 years ago, there were only courses in economic geology with a slight nod toward petroleum. We had no departmental library funds in those days so each of us subscribed to a different set of journals to widen our references. My lot did not include the *AAPG Bulletin*, but I read the borrowed copies.

I was fortunate to have my undergraduate lectures from P. S. Warren, R. L. Rutherford, and J. A. Allan, who used natural rock and fossil specimens wherever possible. This practice I continued. The fossil lab became a lunchroom and evening room, with fossil trays standard decor. Conversational taxonomy whets the appetite but makes the fossils live. When R. C. Moore was visiting the Canol Project (the Truman Commission) where there were many Alberta students, he finally remarked, "Alberta students know more fossils than any from Kansas."

My first field season was spent on the upper Peace River with F. H. McLearn, the Triassic expert from the Geological Survey of Canada. He led me into the whole world of biostratigraphy. This was followed two years later by sitting the Bonanza well, in the Pouce Coupe region of Alberta, the first hole to penetrate the Triassic under the Alberta Plains . . . biostratigraphy became real.

I was fortunate enough to join the Canol Project in 1942, firstly under Sydney Paige and later under Ted Link, when the Americans were to build a road north and an east-west pipeline across the Mackenzie Mountains to meet the Japanese threat to Alaska. Here I met Desmond Boggs, who maintained that the Norman Wells field was tropical reefal (before continental drift obviously) as against the anticlinal theories of others. At this time I helped John Parker (your former Association president) unload some barges, but a dog team was my first assignment, to go into the Franklin Mountains and see if the outcrops could confirm this reefal nonsense. The outcrops did that and later became for Imperial Oil the basis of successful exploration for the "Leduc" reefs in Alberta, as most of the Canadian Canol alumni were absorbed into the Imperial exploration group in western Canada.

I had mapped in the Mackenzie Mountains in north Yukon but had also acted as paleontologist to the Canol Project and later on as paleontologist to the Imperial Oil field parties. After Leduc was discovered, the Geological Survey of Canada had to discontinue identifying, other than their own collections, so Warren and myself took on a large part of the chore for the oil companies. Fifty thousand fossils a year for a decade is an education in itself.

While mapping the Foothills, the lack of megafossils was a continuing frustration, so I went to Stanford with field assemblages to check the potential of arenaceous foraminifera as a biostratigraphic tool. They seemed to work in my thesis. Siemon Müller was there and A. I. Levorsen. One talked international correlation and the other

was talking stratigraphic pinch-outs. I wrote up Fort St. John as an exercise for Levorsen and several years later watched the first large well in northeastern British Columbia blow in, on the basis of our mapping, with Alberta students my assistants.

We didn't have money for research in those days so we would take a contract with an oil company and the student assistants would be able to get their winter fees and theses support from these endeavors. The first master's students were all veterans. We had a luncheon on their 50th anniversary of their degree, last fall. All were still around and nostalgia became real. As veterans they had used their second chance, as they called it, to become successful in their civilian careers. My boys had done well. Not many continued on in the micropaleontology field. Oil fields looked better.

In teaching, a textbook was only backup. Lectures were oriented from an Alberta viewpoint, rather than from a European or Appalachian viewpoint. The class fossils were western Canadian. The stratigraphic lectures were modified by the active drilling reports as the oil companies found new fields. Updating was a chore but the industry swept us along. From the second year on the students were treated as part of the profession and were welcomed into the geological brotherhood, and immediately entered the profession and found their own discoveries.

My parents had been teachers. P. S. Warren sold me on geology. Being a professor let me teach. After 65 years of association with geologists, academics, students, and frontier friendships, my plate has been full and running over. My wife, Frances, has been with me throughout the years and tolerant of my love of reefs and basic volcanics. Sabbaticals finally let me see my first live reefs and oceanic volcanoes, and in places like Hawaii it became easy for my family to understand.

Thank you again for the award, I accept it also for all my past students, who became my colleagues and friends.

Charles R. Stelck

JOSEPH C. "JAY" GALLAGHER
Special Award

Joseph C. "Jay" Gallagher attended the University of New Mexico from 1967 to 1971, graduating cum laude with a Bachelor of Arts degree in English-American studies. He went on to receive a Master of Arts degree (second honors) in Anglo-Irish studies at the National University of Ireland in Dublin in 1972.

After graduation, Jay worked as associate editor of the Great Western Publishing Co. in Temecula, California, editing and publishing *Angel Fire Life* and *Baca Grande Life*, the newspapers of land developer Arizona Land and Cattle Co. He subsequently returned to his home in the Moreno Valley of New Mexico in 1973 to write *The Legend of Angel Fire*. He also worked to start two newspapers, the *Moreno Valley Lantern* and the *Red River Prospector*, during this time. In June 1975 Jay merged these two newspapers into the *Sangre de Cristo Chronicle*, which is still published today.

In 1979, Jay moved to Houston, Texas to begin his long association with the oil industry. His first job was assistant editor of the "Ocean Oil Weekly Report," where he developed an expertise in the rapidly expanding mobile rig market that led to the creation and operation of several rig-related databases and information services. During this period he worked as a contributing editor for both *Offshore Magazine and Oil & Gas Journal*, while also focusing on international exploration and production activities for the "Ocean Oil Weekly Report" and was editor of the "Electronic Rig Stats/Worldwide Offshore Rigfinder."

Jay joined the Houston office of Geneva-based Petroconsultants S.A. in 1984 to establish, edit, and market the "International Oil Letter," a weekly newsletter devoted to international oil and gas exploration and production activities. During the severe downturn in the energy sector in the mid-1980s, Jay nevertheless successfully expanded the newsletter's circulation base to include virtually all oil companies active or seriously contemplating international exploration and production. That he was able to do so might have surprised some, given the circumstances, but not those who have had the pleasure of working with him on a daily basis. Week after week, year after year, nary an IOL deadline has been missed, and so legendary is Jay's focus on deadline day that not even the chairman of Petroconsultants, the late Harry Wassall, dared to come near Jay's office and be a distraction. Jay continued to head up the "International Oil Letter" throughout his career with Petroconsultants (and subsequently the IHS Energy Group, which acquired Petroconsultants in 1998) until early retirement in late 2000 due to illness. But his influence has always extended well beyond the pages of the "International Oil Letter." Jay's unflagging drive and enthusiasm, keen intellect, dedication to his craft, and professional integrity set a standard of excellence that has never failed to inspire and animate the work of all of his colleagues.

In the middle 1990s, senior Petroconsultants' officials in Geneva assigned Jay additional responsibilities as manager of Information Gathering Services and Scouting for the western hemisphere, including North America, beyond traditional producing areas. Jay

also took several other professional activities while at Petroconsultants and the IHS Energy Group. In particular, he was instrumental is establishing the Latin America Scout Group–Houston, which meets monthly at oil centers along the U.S. Gulf Coast, and served as moderator of that group until his recent retirement. Long involved in community service through numerous and sustained volunteer efforts, Jay became actively involved with AAPG in 1995 when he worked to recruit country participation in the International Pavilion. He subsequently took over as chairman of the AAPG International Pavilion in San Diego in 1996. Jay assisted Bill Dixon, chairman of the 1997 Dallas meeting, and additionally served that same year as co-chairman of AAPG's first-ever International Pavilion in Vienna. He assumed chairmanship again in 1998 at Salt Lake City and Rio de Janeiro, in 1999 at San Antonio, and in 2000 at New Orleans. He had also been appointed International Pavilion chairman of Bali 2000 but was unable to fulfill those responsibilities due to health reasons.

Those who worked with Jay on the International Pavilion speak highly of his efforts, citing that it was an absolute pleasure to work with him. Jay devoted an enormous amount of personal time and energy and an abundant amount of knowledge to make the International Pavilion the huge success it now enjoys. His efforts, along with those who worked with him, were instrumental in raising nearly $1 million of corporate funds to cover the expenses of nonprofit international groups that participated in the annual exhibitions. His tireless service and superb organization skills enabled the AAPG to bring more than 40 countries and ministries together in the International Pavilion, all the while dealing with many international guests, missed planes, lost visas, misplaced maps, and a host of other problems. He has also proved to be a valuable resource, particularly to the editorial staff of the *AAPG Explorer* in pointing out and explaining trends to the petroleum industry worldwide, and to AAPG's division heads in search of relevant data for specific organizational projects.

Citation—To Joseph C. "Jay" Gallagher for his outstanding contributions to his chosen field of petroleum journalism and his dedication to AAPG.

Note: On November 26, 2000, not too long after this biography was written, Jay succumbed to a long battle with cancer. As a long-time colleague, I know that he will be sorely missed, not just for his intelligence and contributions to the international oil and gas industry, but also for his genuine friendship and support. I, for one, cannot imagine being unable to walk down the hall and ask him a question—he invariably knew the answer and on the few occasions he did not, he could point me to someone else I could ask.

Sherri Cooley

Response

I was truly surprised to receive the award for my involvement in building the international aspects of AAPG. My work to increase foreign membership, to expose AAPG to the student community, and to work with the international division in whatever way possible to ensure successful conferences, workshops, and seminars at international venues was very important to me. AAPG stood behind me the whole time.

My work with the organization began concurrently with the collapse of the Soviet Union and the fall of the Iron Curtain—one of the most exciting times to be involved in the oil and gas industry. Suddenly the world stage included more countries and governments, many of which had relatively unexplored sedimentary basins with potentially some of the most significant finds outside the Middle East. Examples that come to mind are Azerbaijan, Kazakhstan, Russia itself, Romania, Poland, and also to some extent Hungary.

Through one of the annual conferences of the AAPG at The Hague my company and others of similar interests chose to hold an informal social gathering with representatives of the state oil companies, oil and energy ministries, and their equivalents for what proved to be an ongoing series of discussions on the status of the industry in various regions and to promote ongoing growth and cooperation.

Susan Morrice deserves special note for the success of our work. As first chair of the new committee, she secured a significant amount of exhibit space on the main floor to bring in ministers and representatives to promote and highlight investment and exploration opportunities in their countries.

I don't recall what the original target was, but now we have 40 or 50 countries exhibiting, including many of the major producing countries: Algeria, Nigeria, Venezuela, Indonesia, Egypt, Brazil, Angola, the United Kingdom, Poland, Romania, the Ukraine, Azerbaijan, Turkmenistan, China, Thailand, Malaysia, Australia, and New Zealand.

We also encourage lesser explored countries to participate in AAPG conferences, making every effort to secure financial assistance for them when exhibiting what would otherwise be prohibitive. Funding support is derived solely from oil and gas companies actively engaged in exploration outside North America.

I have been chairman of this committee for five years and a member for an additional two. It was a natural involvement for me since one of the major aspects of my job at Petroconsultants (now IHS Energy) involved keeping up with countries that were actively promoting exploration. I also tracked companies actively considering specific geologic plays and the countries in which those opportunities were known or thought to exist. My work had given me at least a passing familiarity with foreign representatives. The combination of my name, the name of my country, and the reputation of the AAPG came to say to these foreign powers that this is an activity worth pursuing. The same holds true with oil and gas companies. Our project carries the weight of recognition when budget time comes around.

I'm delighted to say that both oil countries and exploration firms find this a win-win situation. The ministers seem convinced that AAPG conferences are one of the best ways for them to reach a large number of investors. For companies looking to go international, it gives them one-stop shopping to get a good idea of what's going on at minimal costs. It's much more cost-effective than sending geologists to 10 or 20 countries.

After our last exposition in New Orleans, a number of countries expressed how pleased they were with the results. In particular, Malaysia, whose offshore gas makes up a large part of the GNP, commented that they had stayed away much too long.

There's another aspect to the work I was privileged enough to do with the AAPG, that is, it gives the United States industry and its primary geologic organization an opportunity to blow our own horn, proving that we're not just the Ugly Americans on foreign soil to strip a country's resources.

These AAPG conferences also highlight the environmental awareness and scenic beauty of our country. We don't emphasize just the oil industry. Just look at the oil centers in which we've convened: New Orleans, Dallas, Salt Lake City, and Denver. We use these conferences to introduce our international friends to the cultural diversity of the United States.

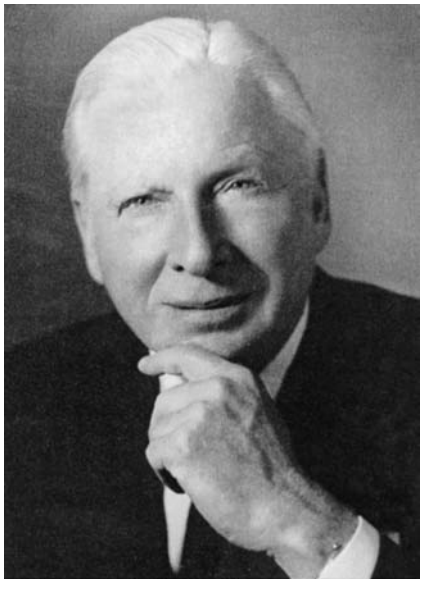
There are a few people, in particular, I'd like to thank for their help and for making my work possible. Thanks to the convention committee in general, both past and present. Thanks also to each of the regional committees for each year's conference. Also, I give a very special thanks to Bruce Lemmon for his leadership and direction during my first years of involvement with AAPG.

I came to the oil industry after having been founding editor and publisher of the *Sangre de Cristo Chronicle* in New Mexico, a weekly newspaper of record for a two-county area in the mountains of northern New Mexico. I started working at PennWell Publishing in 1979, recognizing an opportunity to combine a writing job with a technical angle. At the time, I was enthusiastic about learning a new industry.

Over the years, what kept me in the field? Well, during the downturn it was largely luck! But more, I thoroughly enjoyed the challenge of my work, appreciated the high degree of professionalism among a number of my colleagues, and delighted in the opportunity to be involved in the international arena of a growing industry.

In closing, I'd like to say that this is a special, but odd, award to receive, and I'm just the odd duck to know how lucky I am to be singled out.

Jay Gallagher



KENNETH DALE OWEN
Special Award

Kenneth Dale Owen followed in the footsteps of his forebears, studying geology and using his knowledge to pioneer new techniques for oil exploration in Texas. The great-great-grandson of Robert Owen, who established an intellectual and utopian community in New Harmony in 1825, Kenneth Owen spent his youth in New Harmony, but later moved to Memphis, Tennessee, where he graduated from high school and excelled in both academic and athletic pursuits.

Owen earned an A.B. degree at Cornell University in 1926 and worked as a field geologist in Texas during the 1920s, when the oil industry was beginning to use scientific tools in exploration. He worked for Humble Oil and a subsidiary of Standard Oil Company of Indiana before working with independent oil producers. In the late 1920s and 1930s, he had the opportunity to acquire oil leases of his own and to build his own business as a consulting geologist. By combining his expertise with that of two geophysicists, he was able to discover a highly productive oil field that became the financial basis for his formation of two successful companies, Gulfshore Oil Company and Trans-Tex Production Company. Owen still maintains his business office in Houston, the city where he first opened an office as a consulting geologist.

Owen's entrepreneurial success allowed him to pursue other lifetime interests. He retained his family property in Indiana in addition to his home in Houston. Owen acquired Indian Mound Farm along the Wabash River south of New Harmony and began to raise beef cattle. His herd of purebred Herefords was internationally known and won many International Livestock Show honors. He exported cattle to Argentina, Paraguay, Uruguay, Spain, and Hungary. When his herd was dispersed in 1981, the auction drew bidders from around the world. For many years, he was also involved in the harness racing business, and owned farms in both Kentucky and Pennsylvania, where he raised standard-bred horses that won many of the country's most prestigious races.

Owen has taken an active interest in restoring property originally owned by his family in New Harmony. The house in which he was born and the only property that has been in continuous ownership by his family since 1825, the David Dale Owen Fourth Laboratory, is his present New Harmony home. It is located in the Rapp-Maclure-Owen block, where he has restored the Rapp-Maclure-Owen mansion, donated

the Neef-Lesueur home to the University of Southern Indiana for restoration, and established the Rapp Granary–Owen Foundation, which made the restoration of the Rapp Granary possible. The Granary was headquarters for pioneer geologic investigations during the Owen community endeavors from 1826 to 1860. He has been a member of the New Harmony Memorial Commission, serving as its vice chair. In addition, he is one of the seven founding members of the New Lanark Association, Ltd. in Scotland, an organization restoring the original Owen industrial properties that Robert Owen left when he came to America and New Harmony in 1825.

Owen is a member of the AAPG, the American Petroleum Institute, and the Houston Geological Society; a Legion of Honor member of the Society of Petroleum Engineers of the American Institute of Mining Engineers; and an emeritus member of the Cornell University Council. He holds an honorary Doctor of Science degree from the University of Southern Indiana. Owen is a director of the Hambletonian Society Board, a member of the Equine Advisory Council of the New York State College of Veterinary Medicine, and a member of the Trotting Horse Hall of Fame Museum. He was inducted into the United States Harness Writers Hall of Fame and received the American Hereford Association Honor Gallery Award.

The descendents of Kenneth Dale Owen and his wife, the former Jane Blaffer of Houston, include three daughters, Jane Dale, Anne Dale, and the late Caroline Campbell; four grandchildren; and one great-grandchild. The Owens have retained an active interest in the life and heritage of New Harmony.

C*itation*—To Kenneth Dale Owen for distinguished achievements as a geologist, oil producer, internationally renowned purebred Hereford cattleman, standard-bred horseman, and preservationist of historic buildings.

Sherrianne Standley

DAVID L. RICE
Special Award

University of Southern Indiana President Emeritus David L. Rice was appointed in 1967 as the first administrative head of the newly established campus. Under his leadership the University evolved into a comprehensive state university regarded for its excellent educational programs and its innovative projects responsive to regional and state needs. When he retired in 1994, more than 7500 students were enrolled in the University located on a 1400-acre campus with a $42 million physical plant. The University manages tourism and preservation efforts in nearby New Harmony, Indiana, where the University enjoys a mutually beneficial relationship with this community rich in intellectual and cultural heritage.

Committed to community development, Rice encouraged University faculty members to nurture the resources of historic southern Indiana and to participate in community and regional developments such as leadership programs, public radio and television, youth and community development, cultural and quality of life activities. Under Rice's leadership, the University sought to unite southern Indiana's natural and historic sites through the Historic Southern Indiana Program and undertook production of summer musicals at Lincoln Amphitheater and professional theater at New Harmony.

After his retirement from the University presidency, Rice moved to New Harmony, where he and his wife Betty restored a historic Harmonist home. He made his office in another Harmonist structure—the Neef-Lesueur home—located in the historic Rapp-Owen-Maclure block and donated by Kenneth Dale Owen, great-great-grandson of Robert Owen, who founded a utopian community there in 1825.

Rice volunteered to coordinate the restoration of the 1818 Rappite Granary, which had been headquarters for pioneer geologic investigations during the Owen community endeavors from 1826 to 1860. Many volunteers also served as advisors for the Granary project. The state geologists from Kentucky, Indiana, and Illinois—Donald Haney, Norman Hester, and William Shilts—served as advisors and called upon leadership from the Association of American State Geologists (which has scheduled its 2002 national meeting in the Granary) to support the restoration. Chris Nix, a retired contractor, joined them as construction coordinator.

The restoration of the Rapp Granary (1997–1999), the Neef-Lesueur home (1993–1994), and the nearby Rapp-Maclure-Owen mansion (1991–1993) fulfilled a lifelong ambition of Kenneth Dale Owen to restore all the structures in the Rapp-Maclure-Owen block, listed in the National Historic Registry. Kenneth Dale Owen was born in the David Dale Owen Fourth Laboratory, also located in the block, and has maintained it as his residence. This is the only property in New Harmony among those originally purchased by Robert Owen in 1825 that has been under continuous ownership by a member of the Owen family.

University of Chicago geologist Markes E. Johnson notes that from 1825 to 1860, New Harmony was one of the nation's two most successful training centers for students in field geology. William Maclure, known as the father

of American geology and Robert Owen's partner in the utopian experiment, used the Granary as a museum and laboratory. David Dale Owen, Robert Owen's son, later used the Granary for his third geologic laboratory. He eventually conducted state, federal, and independent surveys in 12 states in beginning days of geologic surveys. David Dale Owen made New Harmony a significant center of education for other field geologists. He was named state geologist in Indiana in 1837, Kentucky in 1854, and Arkansas in 1857.

Another Owen son, Richard, took part in many of his brother's surveys and later became the first president of Purdue University.

Kenneth Dale Owen established the Rapp Granary–Owen Foundation to restore and operate the Granary. The exterior of the building reflects the 1818 Granary with David Dale Owen's 1840 adaptations of large windows on the second and third levels to flood his laboratories, lecture hall, and specimen collections with light. The second floor of the Granary is intended to preserve the pioneering geologic investigations, the legacy of William Maclure, David Dale Owen, and their protégés.

During its use as the third geologic laboratory of David Dale Owen, some 85,000 scientific artifacts were displayed behind glass doors in cabinets in the Granary. After David Dale Owen's death (1860), Richard Owen moved the collections to Indiana University and the Smithsonian Institution. Many of the Indiana University specimens were lost in an 1883 fire. A few remain at Indiana University, and it is believed that some may be in the collection of the Smithsonian, which Owen family members had a role in founding.

Rice has given leadership to numerous organizations. He is past president of the Evansville Housing Authority and Leadership Evansville, and served on the Board of Evansville Museum of Arts and Science. He presently serves on the Board of The Villages, Inc., Indiana Public Broadcasting, USI Foundation, USI–New Harmony Foundation, Indiana Rural Development Council, and Southern Indiana Higher Education, Inc. He was general chairman for United Way of Southwestern Indiana, past president of Indiana Public Broadcasting Society, Indiana Conference for Higher Education, and State Advisory Committee for Social Services of the Board of WNIN Public Television. Rice is a member of Rotary International and serves as chairperson for the Southern Indiana Rural Development Project, and treasurer, trustee, and volunteer coordinator for the Rapp Granary–Owen Foundation.

Rice is a veteran of the Korean conflict. He was the recipient of the Salvation Army's Service to Others Award, the Civitan Citizen of the Year Award, the ABWA Boss of the Year Award, the National Association of Community Leadership Conference Leadership Alumni Award, the Daughters of the American Revolution Medal of Honor for community service, the Rotary Civic Award, and the Boy Scouts Distinguished Citizen of the Year Award. He has received the Sagamore of the Wabash (Indiana), Honorary Mountaineer (West Virginia), and Kentucky Colonel by the respective governors of those states. He is listed in *Men of Achievement*, *National Registry of Education Researchers*, *Leaders in Education*, *Contemporary Notables*, *Dictionary of International Biography*, and *Who's Who in the Midwest*.

The University of Southern Indiana Library was named in his honor and the Rice Plaza was created on campus in recognition of his and his wife's exemplary service. He was honored by Indiana's Vocational Technical Community College with the Distinguished Service Award, and with honorary doctorate degree conferrals by the University of Evansville and the University of Southern Indiana.

Rice was on the Ball State University (BSU) faculty and served as director of research. While on leave from BSU, he served as vice president with the Cooperative Education Research Laboratory and as research coordinator in the Bureau of Research in the U.S. Office of Education, Washington, D.C.

Rice earned his baccalaureate degree (1951), M.S. degree (1956), and Ph.D (1958) at Purdue University. A native of New Market, Indiana, Rice and his wife Betty have two children, Denise Dawson of York, Pennsylvania, and Michael Rice of Indianapolis, Indiana, and six grandchildren.

Citation—To David L. Rice, for contributions toward preserving, restoring, and furthering the 1826–1860 pioneer geological investigations of William Maclure, David Dale Owen, and their protégés in New Harmony.

Sherrianne M. Standley

Response

I am honored by the nomination and selection to receive the 2001 AAPG Special Award for helping preserve, restore, and further the 1826–1860 pioneering geological investigations of William Maclure, David Dale Owen, and their protégés.

In his writings about astronauts, Tom Wolfe points out that our development is a seemingly infinite series of tests of opportunities and experiences. Many pushing and pulling forces or vectors brought us to this moment, and I am indebted to numerous individuals who contributed to, and who truly deserve to share, this honor. I am appreciative to my wife Betty and our children for their patience and understanding as we migrated toward New Harmony—a historic community permeated with a residual ambience from the Owen-Maclure era.

Credit is also due for the experiences and lessons shared by University colleagues, citizens, and civic leaders committed to community development. They toiled to enhance community resources and to develop much needed higher public education opportunities in a region characterized as a "metropolitan island in a rural area." I give Sherrianne Standley, Judy Goen, and Carol Grannan each a special note of thanks for their able help as biographer and assistants throughout the years of developing the University of

Southern Indiana and volunteer projects in New Harmony.

Willis Stanley Blatchley, the sixth state geologist of Indiana (1895–1910), was the favorite uncle of Rudolph Fordice, my father-in-law. "Uncle Willis" camped in the woods on the Fordice family farm near Russellville and did much of his writing in that setting. He was a mentor of field sciences to young Rudolph and shared with him his knowledge of David Dale Owen and New Harmony scientists. Rudolph's family wanted him to be a college professor, but he was determined to farm after attending Indiana University and graduating from Purdue University. When I was considering enrolling in a doctoral program, he was adamant that if I didn't do so I could stop coming to see him. Years later as we were moving to the fledgling Indiana State University campus near Evansville, Rudolph proclaimed "I don't know what you can do, but you need to do something with New Harmony." Shortly thereafter Edna Folz, reporter for *The Evansville Press*, stepped into my office and stated, "There is a couple in New Harmony I'm going to take you and Betty to meet!" That couple was Josephine Mirabella Elliott and her husband John. Josephine was with the Workingmen's Institute, established by William Maclure, and later became University archivist. She transcribed and edited the correspondence between William Maclure and Marie Fretageot, which was published by the Indiana Historical Society in 1994. This publication is called *Partnership for Posterity—The Correspondence of William Maclure and Marie Duclos Fretageot, 1820–1833*. Josephine is considered the definitive historian of the Maclure period at New Harmony. She and Jane Thompson Johansen recently (1999) authored *Charles Alexandre Lesueur: Premier Naturalist and Artist*. John, a farmer, taught archaeology for the University and conducted field studies in New Harmony. I always considered Helen Elliott, his first cousin, as resident first lady of New Harmony (she was born in the New Harmony home, which we restored as our residence).

Frank Stanonis, a geologist, joined the faculty in 1968 and became Dean of the School of Science and Engineering Technology. State geologist Norman Hester (1986–1998) and Frank were persistent forces pulling for New Harmony. When Kenneth Dale Owen established the Rapp Granary–Owen Foundation "to own, decide its use, raise the money to restore, restore, and operate" the David Dale Owen Third Laboratory, it was Stanonis and Hester who expressed the need to restore the Granary to reflect its geologic heritage. Don Haney, Kentucky State Geologist; William Shilts, Illinois State Geologist; Jane Blaffer Owen, daughter of Robert Lee and Sarah Campbell Blaffer; James R. Harris, geologist; Victor Gallagher and William Mitchell, oil producers; joined Kenneth Dale Owen, geologist, as members of a 33-member advisory group to work with the architects and contractors, to raise funds, restore the sandstone, and renovate the majestic structure.

More than 400 individuals, companies, and organizations have donated over $2.6 million to the project and continue with help to amortize the small remaining construction note.

At the October 9, 1999 dedication, the Division of Historic Preservation and Archaeology of the Indiana Department of Natural Resources announced that the Rapp Granary–David Dale Owen Laboratory project was the recipient of the Outstanding Preservation Award for 1999 in Indiana. At the October 14, 2000 Joint Convention and Annual Meeting for AIA Indiana and AIA Kentucky Awards Banquet, the Rapp Granary–David Dale Owen Laboratory project received the Year 2000 AIA Indiana Design Honor Award in Preservation.

The stellar AAPG Special Award is a fitting tribute to Kenneth Dale Owen, geologist, and his wife Jane Blaffer Owen and the team they pulled together to join in their efforts to preserve a significant part of the history of the American frontier. I salute these stewards of the project as well as the craftsmen who performed the miracle of reshaping the 1818 Rapp Granary with the large window adaptations of the 1840s by David Dale Owen.

Thank you for the honor. I invite you to visit the Rapp Granary–David Dale Owen Laboratory.

David L. Rice

RICHARD WARREN
Special Award

Richard Warren started his life in the oil industry as so many have, via the apprenticeship of mudlogging. After working in the United Kingdom and Algeria for Core Laboratories for a year, Richard joined Gaffney Cline and Associates as a geologist. Initially working in the United Kingdom and overseeing the Sibsey 1 well in Lincolnshire, he quickly moved on to Singapore, where he was involved in Gaffney Cline's Indonesian Exploration Program.

From Gaffney Cline, Richard moved on to Ball and Collins Ltd., where he was engaged as a staff geologist. With Ball and Collins he set up the nucleus of the company's Exploration Department. In developing this unit, he gained experience in the seismic, prospect chasing, trading, and other techniques essential to the well-rounded

explorationist. This post also afforded him the opportunity of involvement with the political aspects of international exploration. Richard's duties required him to liase with the Sudanese government to enable Ball and Collins to fulfil their obligations on licenses held in that country.

Richard's career in international exploration was further developed by his next move—to Norcen International, (previously Canadian Industrial Oil and Gas). As one of a three-man exploration team, he worked on international exploration projects to evaluate partner-operated permits. He was involved in exploration in Tunisia, Oman, the Seychelles, Australia, and Brazil. His work on U.K. Sixth Round acreage, particularly the Outer Moray Firth–Peterhead Basin blocks, convinced management of the importance of involvement in the area.

A turning point in Richard's career came in 1979 when he joined Monsanto Oil Company. Starting as a senior geologist, he became chief geologist in 1981. During his time with Monsanto, Richard oversaw the development of the company from a small group of explorationists to a full-fledged exploration company with an active drilling program. Probably his most significant accomplishment as chief geologist for Monsanto was the discovery of the Ivanhoe and Robroy oil fields in UK Block 15/21. He was also responsible for taking up licenses that included Blocks 29/1 (Bittern–1980) and 204/25 (Schiehallion–1985). His decision to extend a competitor 3-D seismic survey provided the data that would later reveal the existence and extent of the Scott and Telford fields.

When Amerada Hess absorbed Monsanto in 1986, Richard was transferred to Amerada, along with the other valuable assets.

At the age of 15, Richard had been diagnosed as suffering from neurofibromatosis. This condition of the spine results in a progressive constriction of the spinal cord, leading to deterioration in mobility. At the time, his doctor told him that it would only be a problem if he allowed it to be. The condition began to show its first insidious effects on his spine when he was captaining the cricket team at London University, but he played on. Fifteen major spinal operations later Richard is still heeding his doctor's words and resolutely refuses to let the illness get the better of him.

On becoming part of the Amerada Hess Exploration Department, Richard took up the position of area supervisor, with responsibility for Amerada's licenses in the North Sea and Atlantic margins. His group encouraged the company to take up license 20/4b, within which the Goldeneye field was later found. His international experience was further developed with secondment to Amerada's Oslo office and involvement in applications for licenses in Danish waters. Time spent in surgery and recuperation, however, prevented him from continuing his active roll as a hands-on prospect-finding geologist. He overcame what must have been an intensely frustrating situation by throwing himself wholeheartedly into a new roll as the Amerada Scout. He has been performing this roll, despite the inexorable progress of his illness, for more than 13 years. In later years Richard has become wheelchair bound and largely lost the use of his limbs. This has not prevented him from travelling extensively to fulfil his role, attending field trips and other company functions.

Rather than retreat from his affliction, Richard has tackled it head on. He has become somewhat of a personality in the working disabled community, being featured in press and radio articles and becoming actively involved with groups championing the cause of those who are disadvantaged by their health. He has worked particularly hard at raising money for such causes as the Leonard Cheshire Fund. This charitable foundation, established by Leonard Chesire, V.C., largely as a consequence of his experience as an observer of the Nagasaki atomic bomb explosion, specializes in rehabilitating disabled people. The foundation's beneficiaries are encouraged to take every opportunity afforded them to become integrated into society as fully as possible. Aside from his fundraising activities for this group, Richard has championed their cause in his media appearances. He has also acted as a judge for their "Enabled" awards, where people like him receive recognition for their achievements in overcoming the difficulties of disablement and living life to the fullest.

Richard initiated a novel feature in the 1998 London Marathon when, with the help of relays of colleague Amerada Hess "pushers," his was the first assisted wheelchair to cross the finish line in the event's history. Since then he has appeared in three more London Marathons and in 1999 took his wheelchair and cohorts to New York, where he established another first when he crossed the finish line in the New York Marathon.

On Sunday, November 5, 2000, Richard completed the New York City Marathon, being pushed by one man and completing the race in 3 hours 38 minutes, which is testimony to an ability to both overcome personal problems and imbue enthusiasm in his colleagues and his helpers. The aim this year is to raise his cumulative fund contributed to the Leonard Cheshire Fund over the £50,000 mark—a truly remarkable achievement by a truly remarkable man.

Citation—To Richard Warren, in recognition of more than 30 years' commitment to the oil industry and displaying fortitude in the face of personal affliction.

Christopher Floyd

Response

I now understand how an unknown actor feels when called to the stage having been surprisingly awarded an Oscar for what he feels was a modest performance, indeed something that is expected of him as a professional. I am very rarely caught short for words, as humility is not my strong point, but must admit to having been dumbfounded when I received the call from

the newly appointed AAPG president advising me that I had been recommended for a Special Award. I can now say that this surprise has evolved to a great pleasure in accepting on behalf of the disabled community.

Having worked in the oil industry for more than 30 years, I have seen tremendous change in geological perspective as well as an evolution of offshore exploration in my favored theater—the North Sea. When I graduated with my B.Sc. degree from Sir John Cass College, London University, in the summer of 1967, the opportunities for a career in oil exploration were somewhat limited in the United Kingdom, and so I decided to continue with an M.Sc. at Imperial College, London. This qualification in petroleum reservoir engineering focused my attention on geology, as I had no wish to pursue a career as a mathematician. The career timing was much better, as by now the North Sea was evolving at an unexpected pace following agreement by the European countries to divide the offshore area and legislate to attract the oil and gas exploration industry to a new area where success would be rewarded by immediate access to a demanding energy market. This gave me an opportunity to find out whether I really wanted a career in the oil industry, as graduate geologists could work as mudloggers earning a healthy salary working two weeks offshore followed by a one-week break. Well-site experience has proved invaluable as I progressed in my career into exploration and the generation of prospects, and retains its appeal of being at the sharp end viewing drilling cuttings through the lens of a microscope.

I certainly was in the right place, and the timing was perfect for an Englishman to join a predominantly American profession. Exploration in the North Sea grew to meet demand and drilling technology expanded to meet the challenge of water depths that were initially prohibitive. Although the Southern Gas Province could be explored with jack-up rigs, the areas north of 56° were greater than 350 feet of water and required semi-submersible vessels of a new generation. My career progressed with well-site experience in Algeria, and I was given the opportunity to see yet another aspect of the industry by consulting in the Far East, in particular Java and Sumatra, which had seen the birth of the industry at the turn of the century with considerable success onshore whereas in the early 1970s the principal focus was offshore.

Oil exploration in Europe became very exciting in the early 1970s with the discovery of Ekofisk field in Norway, and the Brent complex in the United Kingdom. I therefore returned to focus my career on the North Sea and have worked as an exploration geologist for several small companies. I have enjoyed success in expanding them by taking ideas through to license award, persuasion of consortium partners to participate in high-risk ventures through to the drilling of wildcat wells that tested for oil and gas—a very satisfying experience.

This career has been interrupted rather too frequently by the need for spinal surgery, but a positive attitude has allowed me to cope with gradual loss of the use of arms and legs. My employers have been persuaded to retain my services despite the reduction of physical capacity, primarily by my need to survive but also by my ability to persuade them that it was my intellect they had hired and that my tenacity was as applicable to oil exploration as it was to post-operative recovery. I have only been wheelchair bound since 1996, but an adjustment of both personal and professional expectations has led to a rewarding new chapter, and communication with charities focusing on the disabled community. Personal satisfaction has been through the contact in London with the Leonard Cheshire Foundation and in New York with the Achilles Track Club; both seek to integrate disabled people with the professional community. Persuading my colleagues and friends to form a team of "pushers" to take part in the London Marathon and so doing raise sponsorship capital for charity has been a surprisingly pleasurable experience, as was participation in two New York City Marathons. I can recommend this mode of transport to obtain a tourist's view of the Big Apple.

I must conclude by thanking those who recommended me for this award but in particular for the tolerance of my colleagues during what I have regarded to be a wonderful way to earn a living and see the world. Exploration really has lived up to its name, and I am thoroughly enjoying the challenge and geological adventure.

Richard Warren

PATTY HOLYFIELD
Public Service Award

Patty Holyfield was born in Dallas, Texas in 1952, just ahead of a twin brother. Destined to be a geologist, this need to be preeminent was mostly an asset, despite what came up in later therapy sessions. In 1969 the National Science Foundation hosted summer classes to encourage talented high school students to pursue careers in math and science. Patty spent six weeks at Texas A&M studying geology, and learned the difference between archaeology and paleontology. Her high school offered a geology class in the fall, which she took for the easy "A."

The track coach in charge of the class was delighted and relieved to have someone that could pronounce schist and gneiss. This is the earliest example of Patty's support efforts on behalf of earth science teachers. She graduated valedictorian of her class.

Although graduating first in her class, academic scholarships were initially lacking. Patty attended Texas Tech. The Dallas Geological Society awarded her a newly created scholarship and continued their support through graduate school. After her sophomore year she transferred to Texas A&M. She received a summer internship in the "awl bidnes" in Houston. She spent the summer learning to map salt domes and sleeping in a mosquito-infested car during logging runs. She graduated summa cum laude from Texas A&M and again spent the summer learning more of the geologist's role in the pursuit of finding oil and gas. As one of 10 Presidential Fellows, Patty returned to study structural geology at Texas A&M with Dave Stearns. Her M.S. thesis was entitled "Mesozoic Sedimentary Rock Features Resulting from Volume Movements Required in Drape Folds at Corners of Basement Blocks, Casper Mountain, Wyoming," or "It's Not Nice to Fold the Basement in the Rocky Mountains."

Could a geologist find happiness with a geophysicist? Patty, believing that love conquers all, ignored warnings about mixed marriages. A promising interview turned sour when it was learned that her husband worked for a competing oil company. As was typical in those days, Patty's first job was as a junior geologist where she earned less than her male counterparts. In addition, her office was located several floors below the Dallas Petroleum Club, where women were restricted to specific rooms and used certain elevators to avoid frightening the men in other areas of the club.

Suffice to say that Patty does not miss the good old days. Despite the blows to her ego, Patty has always loved the endless opportunities for adventure that geology and the oil business provided. She was the first woman to give expert testimony before the North Dakota Oil and Gas Commission in the late 1970s. She has worked on both production and exploration projects and spent many weekends on the drill site.

Experiences that made lifelong impressions came to Patty at the oddest times during her career. She was eating a predawn breakfast, one of two women on a geology field trip. The ancient waitress shuffled around and asked "You girls having fun?" After an affirmative response the waitress continued "That's what it's all about. Get it while you can." Patty lives by this conviction to this day.

In the early 1990s Patty taught summer earth science classes to elementary children, and geology and geography classes at a junior college. This experience enabled her to develop material that became the wildly successful, industry-friendly teacher workshop called Rocks in Your Head. "Tell me, I forget. Show me, I remember. Involve me, I understand," is the underlying basis for the course.

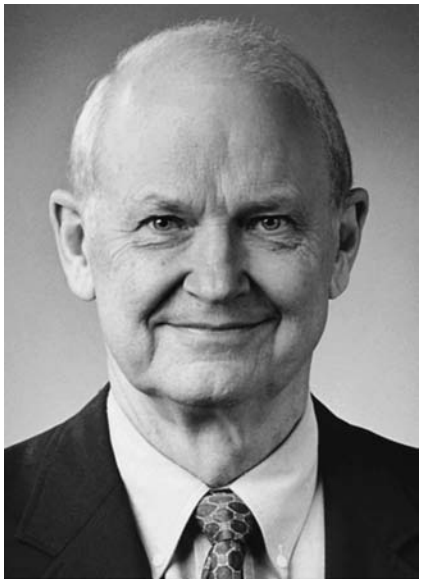
Patty's deep respect for teachers, sense of humor, and passion for geology have resulted in national acclaim. More than 1500 kindergarten through 12th grade teachers have attended the program since 1995. They serve 75,000 students each year. The success of Rocks in Your Head is also due to the generous support of the energy industry. A total of 30,000 rock samples and 300,000 pages of classroom materials have been distributed in more than 20 classes around the country. Improved public perception of the energy industry, and increased interest in geoscience careers are legacies of Patty's work.

Patty also uses her bully pulpit and bald head to educate her audience about the advantages of early cancer detection. A monthly breast exam led to early detection of her breast cancer in 1998. She is currently undergoing chemotherapy for metastatic breast cancer.

Patty's publications include *Rocks in Your Head; The Hunt for Fossil Fuels; Rocks, Minerals, & You; and Petroleum Exploration for Non-Geologists: The Beverly Hillbillies Guide to Finding Black Gold*. She received the 1998 Public Service Award and the 2000 Outstanding Service Award from the Dallas Geological Society, and a 1998 Teaching Award from the Division of Environmental Geosciences. She is AAPG Certified Petroleum Geologist no. 5272.

Citation—To Patty Holyfield, for the development of *Rocks in Your Head*, an earth science workshop for teachers. Presentations nationwide have positively impacted public perception of the energy industry.

Christy Reed



H. LEIGHTON STEWARD
Public Service Award

Leighton Steward was born in Fairfield, Texas in 1934, where as a boy he remembers seeing the red glow of the gas flares of the Cayuga oil field in the eastern sky. He always thought there should be a better way to make a living than bagging groceries, shining shoes, milking cows, bailing hay, delivering newspapers, or working at the canning factory or the Texas Highway Department. His break came following an active sports and scouting program in

Fairfield where he was All-District in track, basketball, and baseball and an All-State high school quarterback. Leighton was recruited by Southern Methodist University (SMU) to play football, which allowed him to pursue two degrees in geology.

Following three years as an officer in the United States Air Force, Shell Oil offered a $635 per month enticement to work in the oil patch, quite a change from the $223 per month military salary or the wages of Fairfield's briar patch! Leighton was fortunate to rub elbows and work with many very bright people at Shell. One of the earliest and most memorable was Rufus LeBlanc, a Sidney Powers Medal recipient. Rufus had an uncommon combination of academic and common sense plus a legendary litany of Cajun homilies that he used to describe his knowledge of deltas! That knowledge of the deltaic systems of the world rubbed off and served Leighton well as he pursued the deeply buried sediments of ancient clastic depocenters.

Following assignments at the Shell Research Lab from 1964 to 1966, where he was a party chief on Shell's EUREKA continental shelf coring program that took cores in 600 to 4000 feet of water, Leighton became Shell's offshore leader for lease sales in the Gulf of Mexico, MAFLA, and Baltimore Canyon. Although he does not talk much about the MAFLA and Baltimore Canyon sales, his team's negative reports saved Shell hundreds of millions of dollars while others lost money on the marginal tracts then being offered.

One career highlight occurred about 9:30 one night when Mike Forrest, the geophysical leader for the 1970 GOM sale, called Leighton in to look at an armful of seismic profiles that contained bright spots. After about an hour examining the seismic lines and well logs and comparing them with Leighton's logs from the South Marsh Island 141 and the Vermilion 76 fields, Mike's observations and suspicions were confirmed. "Bright spot" technology for finding hydrocarbons was born and, as they say, the rest is history.

The next challenge for Leighton was at the Louisiana Land and Exploration Company (LL&E). Following a huge discovery at Jay field in 1970 under Ford Graham's leadership, LL&Es reserves and production began to drop precipitously during the early 1980s. After years of exploration effort and property acquisition, under Leighton's leadership, LL&Es reserves and production returned to historic highs. The company's success attracted merger interest from 16 different companies and ultimately led to a merger with Burlington Resources in 1997.

LL&E with its vast wetlands holdings provided Leighton with a platform to became a national spokesman for common sense land-use regulations and, in particular, wetlands protection. He was the major proponent for using mitigation banks to achieve no net loss of wetlands while speeding the approvals for legitimate development needs. He led the effort that encouraged Congress to pass legislation allowing the leasing of oil to fill the country's Strategic Petroleum Reserve. Leighton served as chairman of the Natural Gas Supply Association, the U.S. Oil & Gas Association, and the National Wetlands Coalition.

More recently, Leighton led the Year 2000 study by the National Petroleum Council on the nation's future natural gas supply, a study that pointed out the imminent merging of the supply and demand curves and the key steps needed to ensure adequate long-term gas supplies.

Leighton's innate interests in geology, nature, and human history on Earth were factors in his becoming chairman of the Institute for the Study of Earth and Man at SMU, chairman of the Earth Science Resource Center at the University of South Carolina, chairman of the Audubon Institute in New Orleans and advisory director of the Lamont Doherty Earth Observatory at Columbia University.

Interest in human history and his observation that only rarely do doctors study nutrition and less rarely do nutritionists study medical textbooks, caused Leighton to study the benefits of the French-Mediterranean diet. This study led him to ultimately become the lead author of a book on nutrition and health titled *Sugarbusters! Cut Sugar to Trim Fat*. The book instantly became a No. 1 New York Times best seller and has now sold more than two million copies, a feat Random House publishing says may be the all-time record for hardcover sales of a book on diet and health. We could all benefit by following the diet; I lost 10 pounds after one month.

Citation—For H. Leighton Steward, whose outstanding public service and wise management have benefited our industry, institutions, and the environment.

Eugene A. Shinn

JOHN S. WOLD
Public Service Award

John S. Wold is honored with the Public Service Award for his lifelong and wide-ranging contributions to educational, political, and industry activities.

As a longtime trustee of Union College, Schenectady, New York, and former president of Casper College Board of Trustees, he and his wife, Jane, have endowed a geology chair at Union as

well as the first fully endowed chair at the University of Wyoming, the Wold Centennial Chair of Energy. Their concern for science in college academics made possible the Wold Science Hall at Casper College.

John Wold is the first professional geologist ever to serve in the U.S. Congress. As the "member from Wyoming," Congressman Wold served on the House Interior Committee and was the original sponsor in the House of Representatives of the "National Mining and Minerals Policy Act of 1970."

The American Heritage Foundation of the University of Wyoming elected Wold in 1999 as Wyoming's "Oil/Gas and Mineral Man of the 20th Century," a singular honor for which the career appraisals included all mineral personnel at every industry level.

He holds a B.A. degree from Union College, an M.S. degree in geology from Cornell University, and an honorary LLD from the University of Wyoming.

His oilfield career started in 1939 with Socony Vacuum's Magnolia Petroleum Company in Oklahoma and Texas. He was an early 1941 World War II volunteer officer with the Navy Bureau of Ordnance, later serving as Gunnery and Executive Officer of a destroyer escort in the Atlantic and Pacific Theaters. In 1946, he returned to the oilfields with Barnsdall Oil Company's Gulf Coast operations, moving to Wyoming as Rocky Mountain Division geologist, and became an independent oil and gas producer in 1950. Wold Oil and Gas has been a significant exploration and production operation in the Rocky Mountains for 50 years. It is now headed by sons Peter and Jack, with continuing operations in the Rocky Mountain states as well as exploration activities in southeast Asia.

In the late 1960s and early 1970s, John added joint venture coal exploration and acquisition programs, on a nationwide basis with Peabody and Consolidation Coal Companies. He is reputed to have assembled more coal properties than any entity in the country, introducing Exxon, Mobil, Sun, Mapco, and other major players to the coal resources of the Rocky Mountains

In 1973 he founded Wold Nuclear Company and with Page T. Jenkins was co-discoverer and developer of Wyoming's Christensen Ranch major uranium ore body. He was a principal in the development in Converse County, Wyoming, of the Highland Uranium Mine, which became the largest uranium solution mine in the world.

Today, John heads Wold Trona Company in Casper, Wyoming, which is developing the sixth mine and soda ash plant in the Green River basin. The program involves new technologies developed by Wold Trona at Hazen Research of Golden, Colorado. The processes have the potential of revolutionizing Green River operations, which currently produce one-third of the world's soda ash. Wold family ventures, with his sons, include operation of the 30,000 acre Hole-in-the-Wall Cattle Ranch of southern Johnson County, Wyoming, a locale renowned in the annals of Butch Cassidy and the Sundance Kid.

This spectrum of interests has given John's business activities an exposure that may be unique.

John is a founder and first president of the Wyoming Heritage Foundation, a 1200 member, nonprofit organization dedicated to the education of Wyoming citizens on the benefits of the free-enterprise system.

In a parallel political career, he has served in the Wyoming Legislature as chairman of the House Labor Committee. He is a two-term Wyoming Republican state chairman, Republican State Finance chairman, member of the Republican National Committee, and the executive committee of that group. He was chairman of the Western Republican State Chairmen's Association and Wyoming Republican candidate for the U.S. Senate in 1964 and 1970.

He is a member of the American Association for the Advancement of Science, the Council of the American Geographical Society, Sigma Xi, AAPG, Independent Petroleum Association of America, American Petroleum Institute, Sigma Gamma Epsilon, and Geological Society of America, Wyoming Mining Association.

In 1968, he was chosen by the Associated Press and United Press as Wyoming Man of the Year, and in 1978 was picked as Wyoming Mineral Man of the Year.

He is a past director of K-N Energy; Empire State Oil Company; Midland Energy Company; National Association of Manufacturers; past chairman and CEO of Nuclear Exploration & Development Company; and director of Sierra Madre Foundation for Geological Research sponsored by Cornell, Harvard, and Yale; as well as chairman of the Wyoming Natural Gas Pipeline Authority.

Citation—John Wold is honored for his outstanding public service as the first geologist in the U.S. Congress and for his generous endowments for geologic education.

William H. Curry III

ELIZABETH B. CAMPEN
Distinguished Service Award

"It all begins with attitude" is a saying known and accepted by many but consistently practiced by few. Betsy Campen is one of those few.

Betsy's tangible contributions have enriched the Association in many ways,

but her most important contribution is intangible: it is the many members Betsy has inspired to become participating members. She does so with the infectious enthusiasm she brings to everything she does. In so doing, she is a role model to all who work with her. She not only brings an attitude of "this is really important, and we have to do a great job," but she creates in her coworkers the realization that "it's going to be a lot of fun!" When a job is done, her attitude is simply that she was lucky to work on that committee because good things come from AAPG contributions. You can perhaps see why I take such great pride and pleasure in recognizing Elizabeth B. Campen as a recipient of the AAPG Distinguished Service Award.

Elizabeth B. Campen was born a Yankee in Boston, Massachusetts, and received her formal education in geology at Smith College, where she was advised "women do not get jobs in geology." Taking this unfortunate advice seriously, but still loving the subject, Betsy moved to Montana straight out of college and put her roots deeply into the Rockies. There she wound up spending 20 years in ranching, real estate, and even nursing before returning to the profession and beginning her practice.

Starting her career later than most, Betsy learned the true meaning and value of the word "association," and she joined the AAPG only 20 years after graduation. As her experience grew from small to large company (Benson Minerals, Montana Power, Helton Engineering, Infinity Oil) to consulting (Campen Consultants), Betsy immersed herself in the professional activities of her local society, regional section, and national AAPG.

She has served in almost every capacity a volunteer could serve for the Montana Geological Society, including president, 1985–1986. She has also been president of the AAPG Rocky Mountain Section and co-chaired the annual Section meeting (1997). She has led field trips, authored oral and written papers on Rocky Mountain geology, and been a pioneer in coalbed methane exploration in Montana. Betsy has also been a member of the AAPG House of Delegates for 14 years. This is a job she takes very seriously, as shown by her lively and healthy debates at every annual meeting. She is also a Councilor for the AAPG Energy Minerals Division and served the Association as secretary from 1997 to 1999. During this time she was very influential in coordinating the growth of computer applications and was very successful at getting the right people involved in the project and in touch with one another. In addition to her duties as an officer, she also contributed a paper to the work of the Global Warming Committee and was local liaison to help launch the technology center in Denver.

Betsy and husband Ted are the principals in Campen Consulting, Inc. in Billings, Montana, where they are recognized for their early and continuing development of coalbed methane deposits. Betsy has three grown children, twins Chris and Gordon and daughter Wendy.

Knowing Betsy means one enjoys her twinkling eyes, her infectious smile, her optimistic approach and, best of all, one is rejuvenated with the love of geology.

Citation—To Elizabeth B. Campen, a dedicated and enthusiastic exploration geologist, in recognition of her longstanding and diverse service to the Association as officer, author, committee member, and example for all of us.

Dick Bishop

CHARLES A. CAUGHEY
Distinguished Service Award

Charles A. (Chuck) Caughey was born in San Diego, California in 1946. He was the second of six children and raised predominantly in Houston, where he achieved scholastic honors in high school. His life's fascination was revealed to him through a summer job exploring for minerals in 1965, thus beginning his career in geology. He attended the University of Texas at Austin (UT) and received a Bachelor of Science degree (honors) in geology in 1969. Following a tour of duty with the U.S. Army, Chuck returned to UT and completed his master's degree in 1973.

Moving into the business world, Chuck quickly found his place in the cutting edge research of the day with Conoco in Ponca City, Oklahoma. His work included the modeling of "bright spots," exploring computer mapping, and developing early concepts of seismic stratigraphy. While studying abnormal subsurface pressure, Chuck patented an ingenious concept for diverting high-pressured subsurface water, laden with hydrocarbons, into a shallow low-pressure formation to allow phase separation. The hydrocarbons could then be recovered from shallow wells.

Moving from a major oil company to a small independent, Chuck generated productive oil and gas prospects and advanced to division manager with Inexco Oil Company. Through the mid 1980s he supervised successful exploration in the East Texas and Permian basins as well as the onshore and offshore Gulf Coast. A highlight of that time period was acquisition of the company's first 3-D seismic survey at Southeast Humble City field, New Mexico, in 1984. Chuck described the success of this venture in a later AAPG paper. Following LL&Es buy-out of Inexco in 1986, Chuck managed the former Inexco properties for a brief period and consulted for an oil and gas acquisition company. He then realized a longstanding ambition of working overseas, taking a job in Jakarta with Asamera (now Gulf Indonesia Resources) in 1989.

Indonesia provided a broad landscape for Chuck as he directed a geological staff in detailed field studies to expand the productive life of older fields. He organized an exploration program with surface, subsurface, and seismic data to probe seemingly inaccessible areas of mountainous rainforest in Sumatra, upgrading large gas prospects in reefal carbonates and adding insight into the stratigraphy of the North Sumatra basin. Chuck subsequently directed successful exploration and development projects in other areas and advanced to offshore exploration manager in 1999. His business success, however, did not compromise his efforts to expand new horizons for himself and other geoscientists. He has written numerous papers for a broad array of forums to report his geologic work to others and has actively participated in AAPG and local geological societies throughout his career.

The southeast Asia geological community found Chuck to be a leader and stimulus for advancement. He convened the International Symposium on Sequence Stratigraphy in Jakarta, Indonesia in 1995, helped organize the 2000 AAPG International Conference and Exhibition in Bali, and assisted with numerous other technical meetings and field trips. Chuck has been very active with the Indonesian Petroleum Association (IPA), and he is a significant contributor to IPA events and publications.

Working with friends and associates, Chuck has labored to improve AAPG services and increase membership and visibility throughout southeast Asia. This effort assisted visits by distinguished lecturers and helped mold ideas for the AAPG-Asia Pacific International Region. He served as the first treasurer for this Region and on the AAPG International Liaison Committee.

Chuck's interaction with students of geology is noteworthy. He is their constant mentor and advisor. Even their professors are known to count on Chuck as a model for professionalism. Throughout his career, he made time to teach and pass on a love for geology to students at all levels. He participates as a Visiting Petroleum Geologist on university campuses and has helped establish several AAPG student chapters. His words and actions are just as meaningful for the youthful mind as they are for the accomplished professional.

Chuck Caughey the geologist has been strengthened by his role as a husband and father. His two sons now attend college in the United States, and they have benefited from a fully involved father who took time to enjoy activities together, ranging from umpiring baseball to diving tropical reefs and maintaining an ancient army jeep. Chuck's longstanding interest in aviation brought further adventure to his family's life. His personal achievements in raising a family and becoming an accomplished geologist and a talented pilot bring a sense of meaning to his life that serves as an inspiration for others.

Citation—To Chuck Caughey, a successful explorationist who exemplifies dedication to his profession, commitment to innovation, and leadership in technology transfer for fellow geoscientists.

Edward M. Norwood

IAN DEREK COLLINS
Distinguished Service Award

Ian Collins was born in Edinburgh, Scotland, to English parents and educated in the High Peak District of Derbyshire, England. Both areas are redolent with spectacular geological scenery, and this early geological emersion may have set Ian on his lifelong direction. Exotic glacial erratics exposed in the local streambed, combined with minerals and fossils from nearby Roman lead and zinc mines, provided the initial catalyst for his later rock mania.

After graduating from Aberdeen in 1977 with a B.Sc. degree (hons) in geology, he spent two years as a consultant well-site geologist with Exploration Logging Inc. His love affair with Asia began with an initial six-month posting in Japan followed rapidly by numerous and exotic well-site locations spread all across southeast Asia and coordinated out of Singapore.

In 1979 he transferred to the Houston office and soon after on to Colombia. In early 1980 he and an associate, Pete Evans, left ExLog (as it was then known) and formed their own well-site geological supervision company.

He then proposed over the phone to the young lady, Esther, he'd left a year previously in Singapore. They set up their home in Cartagena and had an exciting year and a half, with more

work than the three of them could handle. Unfortunately, personal security became an issue after a kidnap threat was received and it was time to move on.

Ian and Esther then joined Union Oil of Indonesia and moved to Balikpapan, where Ian worked as a contract supervisor and mentor for well-site operations as these slowly began to be nationalized. This was an exciting time when recognition of low-resistivity oil pays within the deeper, early middle Miocene prodelta fine sands doubled oil and gas production.

Ian officially joined Union Oil Corporation in October 1982. In 1985 he was transferred to Union Oil of Thailand, where he was immersed into a very hectic period of development gas-well planning and drilling, as drilling-time records crumbled and production targets continued to rise.

The oil-price crash of 1986 precipitated a sudden transfer back to Unocal's London office and a job computerizing the aging Heather field database. Back in contact with academia and applied research, Ian's fascination with petroleum generation and migration was given full reign as he coordinated Unocal's first multidisciplinary field reevaluation study on the new Heather database. Success here led to coordinator for a large team put together to evaluate the remaining prospectivity of the northern North Sea as a part of the United Kingdom Offshore 11th Licensing Round.

In late 1989, Ian was chosen by his old ExLog and Unocal associate Barry O'Donnell to accompany him to Yangon and become chief geologist for Unocal Myanmar's onshore Block F operations. This was definitely the most hectic and exciting period of his career to date although sadly, ultimately disappointing. As with the other nine international companies, it soon became apparent that the original wild optimism that had swept the industry when Burma (now Myanmar) opened its doors was badly misplaced and within 36 months all had left with their tails between their legs. During this time Ian developed his ability to gain the trust and admiration of the national geoscientists by working with them to fully evaluate the remaining potential of the Central Burma basin through a joint MOGE-Unocal multidisciplinary stratigraphic sequence study. This study was a combination of seismic, well, and outcrop data provided by MOGE, analyzed at Unocal's Brea Research Laboratory, but coordinated and pulled together by Ian in Yangon.

This was also the period when MOGE made data available to Unocal for the offshore Mottama gas field upon which Unocal successfully bid for and became nonoperating partners with Total in the renamed giant Yadana gas field.

After transferring to Unocal's new central exploration headquarters in Sugar Land, Texas, in late 1992, Ian was charged with pulling together a northern Malay basin regional study in the event that the Malaysia Thailand overlapping claims area (JDA) might become available to outside participation. In May 1993 Ian and Bill Mueller (Unocal's most senior domestic geophysicist newly transferred to International New Ventures) traveled to Hanoi to evaluate Blocks A, B, and C offshore southwest Vietnam close to the Thai and Cambodian borders. Ian's previous Pattani Basin experience allowed him to recognize and then champion the evaluation to a successful conclusion. Recent drilling has confirmed the original analysis, and substantial gas resources have been located.

In 1995 Unocal went into a phase of rapid expansion and created a separate Growth Division, including the opening of a New Ventures representative office in Singapore. Ian was appointed exploration coordinator/upstream advisor to the senior management located there and thus became trailblazer and first-pass opportunity screener. During the next 4 years he screened more than 120 different opportunities, covering an area from India to New Zealand and traveling away from home as much as 260 days a year. Even with this punishing schedule, the ultra-efficient Singapore support from his secretary Angie and understanding of his wife Esther allowed him to become an officer of the Southeast Asia Petroleum Exploration Society (SEAPEX), an AAPG affiliated society.

Rising quickly from secretary to president in 1997, the Society under his charge initiated bimonthly talks, a newsletter, a Web page, a highly successful International Exploration Conference in 1998 with some 250 delegates (just when the oil price hit $9/barrel), and an anecdotal commemorative volume of personal exploration histories from the 1960s and 1970s to mark the Society's 25th anniversary.

The combination of low product prices, high Singapore rents, and an already significantly expanded acreage position in southeast Asia inclined Unocal to close their New Ventures Group in Singapore. Ian was relocated to Unocal Thailand's operational office in Bangkok, where he quickly founded a SEAPEX Bangkok chapter and took on the role of AAPG House of Delegates representative for southeast Asia. In February 2001 Ian resigned from Unocal and joined Genting Oil & Gas based in Kuala Lumpur to manage their upstream business development. He is also helping to organize the SEAPEX Kuala Lumpur bimonthly meetings and promote both affiliated societies in a continuing effort to promote the advancement and understanding of petroleum geological sciences across the region.

Citation—To Ian D. Collins in recognition of his continuing efforts to promote geological and geophysical earth science during his career in southeast Asia. In particular, while president of the Southeast Asia Exploration Society, he revitalized and molded the society into a premier professional organization.

Richard A. Lorentz

ROBERT L. COUNTRYMAN
Distinguished Service Award

The Distinguished Service Award is presented to AAPG members in recognition of long-term, meaningful service to their Association. Robert L. Countryman certainly meets these criteria. Before I summarize his many contributions, I would like to provide you with a summary of his rather interesting geologic background.

Bob began his career in geology as a student at California State University, Northridge. Interesting to note is that while at Northridge, he first expressed an interest in giving something back to his chosen field of endeavor by becoming president of the geology club. After graduating in 1973 with a B.S. degree in geology, Bob accepted a job with Tenneco Oil Company and was assigned to Death Valley, where he and his team successfully extended Tenneco's borate reserves from 5 to 25 years. His success essentially put him out of a job at that point.

In 1976, after the borate opportunity ended, he returned to college to work on his master's degree at the University of California, Los Angeles (UCLA), which he completed in 1977. Following his graduation, he was given another unique opportunity: living and working in Antarctica to gather data and maintain UCLA's microgravimeters. Thus, he wintered over Amundsen/Scott Station at the South Pole during 1978. Returning from the South Pole to the warmer climate of southern California, Bob accepted a position with Gulf Oil Company as a development geologist in Bakersfield, where he has lived ever since. In 1984, when Chevron acquired Gulf, the new company gave him an overseas assignment, and he spent the next three years as a stratigrapher for a joint COPI/PDVSA Venezuela Task Force that studied a portion of the Orinoco tar belt. In 1979, Bob transferred back to Chevron USA and began to work field development/EOR projects, a job that continued until 1998. In 1999, Bob left Chevron to compete in the world of consulting geologists.

Soon after returning from Antarctica to California, Bob began to actively participate in the local San Joaquin Geologic Society (SJGS). He served as editor of the SJGS Selected Papers, Volume 7, moved on to vice president in 1983–1984, then served as president-elect and president from 1984 to 1986. Although he has since enlarged his service sphere to include a more active role in the Pacific Section as well as at the national level, Bob remains active with the SJGS today.

Bob began his service with the Pacific Section of AAPG by serving as a member or co-chair of numerous committees, conventions, and other activities. He also entered the officer ranks and served as secretary (1990–1991), vice president (1992–1993) and president-elect/president (1993–1995). Since 1995, he has chaired the section's Directory and Membership committees, and has served as a trustee and secretary of the Pacific Section AAPG Foundation since its creation in 1998.

A natural progression for Bob was to move from active involvement in his local society, beginning in the 1980s, to his AAPG section, and then on to the national arena in the 1990s. Bob has represented the Pacific Section in the House of Delegates (HOD) since 1991, and has served as the SJGS delegate chair since 1992. Bob has held several positions within the HOD, including the position of vice chair (1996–1997), as well as serving on several committees. Among these are the Ad-hoc Committee on Membership, the Resolutions Committee (1999–2000), the Credentials Committee (1995–1996), and the HOD Nominations and Election Committee (1993–1994).

Outside the HOD, Bob has served on several standing and ad-hoc committees, including being a member (since 1996), vice chair (1998–2000) and chair (2000–present) of the Membership Committee. At the same time, Bob represented the Pacific Section on the Advisory Council from 1997 to 2000.

I first met Bob when he joined the Advisory Council in 1997, and soon found him to be a quiet voice of reason on a variety of issues. This quality did not go unobserved by the past AAPG presidents who chair the council and the important Nominations and Honors and Awards committees within it, and I soon found myself working with Bob on several ad-hoc committees. Among these were the investigations of several grievance issues, as well as the more enjoyable tasks of making recommendations to improve the grievance procedure and elevate the best poster awards at section meetings to national status, comparable to the Levorsen awards. I have always found him to be thoughtful, honest, and fair, and to have the best interests of the Association as his main agenda. I enjoyed working with him for three years, and missed him when he rotated off, leaving me with another year to serve. That additional year, however, gave me the opportunity to endorse, without reservation, Bob's nomination for the Distinguished Service Award.

For his various earlier contributions, Bob received AAPG's Certificate of Merit in 1995 and again in 1999. For his continued contributions, Bob is a very deserving recipient of AAPG's Distinguished Service Award in 2001.

Citation—To Robert L. Countryman, in recognition of productive, long-term, concurrent service to his

local affiliated society, Pacific Section, and at the national level on various committees, in the House of Delegates, and on the Advisory Council.

Douglas G. Patchen

BEN D. HARE
Distinguished Service Award

Ben Hare is receiving the Distinguished Service Award for his commitment to the profession of petroleum geology and for his dedicated long-term service to the AAPG. Ben is known in the AAPG for the value of his advice and for his ability to complete the projects he volunteers to do. He has been serving as the chairman of the Committee on Resource Evaluation (CORE). In this capacity, he has sought to build bridges with the government agencies that help set the national policy on oil and gas. Some of the agencies that have become involved with CORE are the Minerals Management Service, U.S. Geological Survey (USGS), and the Energy Information Agency, among others. Through his effective leadership, AAPG has been asked to review and endorse the assessment methodology used by the USGS. Because of this "behind-the-scenes" effort, by the time the final numbers for undiscovered oil and gas resources for various basins in the United States and the world are released, AAPG's input has already been sought and provided. Ben has also worked tirelessly to build effective relationships with the Society of Petroleum Engineers (SPE). Last year, CORE participated in a joint effort among the WPC (World Petroleum Congress), SPE, and AAPG. This effort led to the first-ever joint publication of *Petroleum Resource Classification and Definitions*. This scheme is expected to become the industry standard.

A tribute to Ben's leadership is that up to six current and past presidents of AAPG have been known to attend the committee meetings. Also a tribute to his diplomacy is that he has been able to get results by building consensus among so many opinionated (and distinguished) members of his committee.

I met Ben Hare almost 25 years ago when I joined Atlantic Richfield Company (ARCO) in Dallas, where he had already been working for some time. From the beginning, his care and concern for others impressed me, and we initiated a friendship that has only strengthened over the years.

Ben earned his B.S. degree in geology from Lamar University and his M.S. degree and Ph.D. from the University of Oklahoma. After working for Amerada Hess for a couple of years, he joined ARCO in 1973 in Los Angeles. Initially, he worked international new ventures throughout the world; subsequently he worked in the Wyoming overthrust belt, Alaska, and California. In 1981, he left ARCO to work with several independent oil companies involved in exploration in various provinces in the United States.

In 1989, he rejoined ARCO Alaska as manager of South Alaska Exploration. I was manager of North Alaska Exploration at that time. Between the two of us, we oversaw some of the most exciting exploration drilling projects in Alaska. Only those who have worked in Alaska can appreciate the challenges of managing the logistics, government and public scrutiny, and the high cost of operations in Alaska. He encouraged his exploration team to take the multiple-hypothesis approach rather than try to find a single answer. Ben always looked at the big picture, and although under a lot of pressure, always collaborated with his peers. Despite being extremely busy in his job, he devoted time to professional activities. Ben served as president of the Alaska Geological Society during this period.

When Vastar Resources was spun off from ARCO in 1994, he helped organize the new company and was later named its chief geologist. Ben left Vastar upon its purchase by BP Amoco and became president of Cazador Enterprises, which he formed last year. His company is actively engaged in prospect generation in various United States basins. He also consults on technical and management issues related to resource assessment, play selection, and portfolio management.

Ben is a Certified Petroleum Geologist. In addition to acting as the chairman of the Committee on Resource Evaluation, Ben is also a member of the AAPG Education Committee. He is the past chairman and current director of the Alumni Advisory Council of the School of Geology and Geophysics at the University of Oklahoma. In addition, he is a member of the Society of Professional Well Log Analysts and the Society of Independent Professional Earth Scientists.

Ben's dedication to his profession is second only to his dedication to his family. His wife Carol and son Chris have also been part of our close circle for many years, and we look forward to this joyous association for years to come. Ben and I have played golf together in 36° weather in Alaska and in 106° weather in Texas. His company is always pleasant, no matter what.

Citation—To Ben D. Hare, in recognition of his vision and judgment in building effective bridges among AAPG, government agencies, and sister societies and for his exemplary committee leadership.

Naresh Kumar

JEAN R. LEMMON
Distinguished Service Award

While Jean Lemmon is an asset to the field of geology, her true contribution comes as a dedicated and inspired leader of the Association. She has demonstrated the ability and desire to serve in a variety of leadership positions and makes a valuable contribution wherever she serves. She has led the Tulsa Geological Society and Mid-Continent Section through almost every possible avenue and continues to elevate the Association and those around her. She leads through example.

Jean was born in Boulder, Colorado, on September 4, 1955, and grew up in Raton, New Mexico. Her early interests were molded by the rich heritage of the area, and she developed an early interest in Indian rock art. She especially enjoyed the fieldwork. As a young adult, she spent much of her time mapping rock art sites in northeast New Mexico. Her activities earned her the 1972 National Exploration Award sponsored by the Boy Scouts of America, the Explorer's Club of New York, and Union Carbide. She was among the first female recipients of this award. One of the privileges of winning this award included a summer in St. Kitts on an archeological dig in 1974. She was active in Explorer Scouting and was the first female backcountry staff member at Philmont Scout Ranch in New Mexico.

Jean enrolled at Colorado College anticipating pursuing a degree in anthropology; however, after her first field course in geology, she was won over and her career began. She was also active in music during college, an avocation she continues to pursue. She graduated from Colorado College in 1977.

Jean joined AAPG in 1981 and is a charter member of DEG. Her professional career began as an exploration geologist with Nortex Gas & Oil/Bel-North/InterNorth/Enron from 1981 to 1986. She performed various geological consulting jobs with emphasis on data management from 1986 to 1992. She was the director of a Tulsa-area year-round church camp/retreat center from 1992 to 1995, and is currently quality assurance officer for the Blue Thumb Program of the Water Quality Division of the Oklahoma Conservation Commission.

Jean's service includes a rotation of offices in the Tulsa Geological Society starting in 1986 and culminating with her presidency in 1991–1992. She also served in each office of the Mid-Continent Section from 1987 to 1995, including president for 1994–1995 and general chairman of the Mid-Continent Section meeting held in Tulsa in 1995. She represented the Mid-Continent Section as their councilor on the DEG Advisory Board from 1997 to 2000. She was a member of the AAPG House of Delegates from 1987 to 2000, serving as group chair from 1988 to 1990 and again from 1994 to 1995; she was on the Constitution and Bylaws Committee (1993–1995), Future of Earth Sciences Committee (1996–1997), Resolutions Committee (1999–2001) and was secretary/editor (1998–1999). She served as co-chair of the Summit on Sections in 1997 and 2000.

In recognition of Jean's service, she has been awarded AAPG Certificates of Merit (1991, 1995, and 2000), the Mid-Continent Section Distinguished Service Award (1999), and the DEG Certificate of Merit (2001).

Jean balances her professional activities with her home life. Her husband, Bruce Lemmon, spent 16 years with AAPG in conventions and international new venture development, recently leaving this position. They have two sons, 12 and 15. Jean also finds time to enjoy her musical abilities and she is active in church government. She enjoys backpacking and hiking and other scouting activities with the family.

Jean has also found time to write. She has authored several papers on rock art and has been cited as an authority in articles concerning water quality issues. She has also served as an expert witness on watersheds, erosion, and non-point source pollution for court cases.

Jean is truly the model for future leaders of the AAPG, and undoubtedly will continue to serve and direct the AAPG to new levels of excellence.

Citation—To Jean Lemmon, in recognition of her devotion to the Association through outstanding leadership and unceasing commitment to serve in any position requiring a person of dedication and loyalty.

Jerry Andersen

TOM MAIRS
Distinguished Service Award

Competence and goodwill, positive but objective, willing, fair, firm, and

balanced; these are ingredients of Tom Mairs' character and intellect. AAPG has greatly benefited from all these talents of Tom's during recent years.

Thomas Mairs was born in Newton, Kansas in 1937, but attended public school in El Dorado where he graduated from high school in 1955. Growing up on the giant El Dorado oil field contributed strongly to Tom's career focus, so he headed south to earn a B.S. degree (1959) and an M.S. degree (1962) in geology from the University of Oklahoma.

From 1962 to 1973 Tom worked for Humble Oil and Refining Co. and Exxon Co., USA (now ExxonMobil) as an exploration and development geologist in east Texas and the Gulf Coast. His geologic and managerial experience was substantially broadened with employment as vice president of exploration for Alamo Petroleum Co. in Dallas. In this capacity, he had direct responsibility for all Rosario Resources Corporation subsidiaries' United States petroleum exploration and development plus evaluation/review of similar activity in Canada, Africa, and Central America.

In 1980, when Rosario sold to Amax Corporation, Tom became senior vice president of Carlson Petroleum Co., which focused on United States prospects. Again, a sale precipitated a change, and in 1985 Tom became a consulting geologist specializing in geoeconomic evaluation of exploration and development projects and expert opinion work. Over the last 15 years he has participated and consulted on numerous Gulf Coast prospects, primarily in the Cretaceous–Jurassic trend.

Tom has found time to be a very active member of AAPG (since 1960), DPA (no. 5603), Society of Independent Professional Earth Scientists, Dallas Geophysical Society, Dallas Petroleum Engineers Club, and the Dallas, East Texas, Oklahoma City, and Houston geological societies. He served as treasurer, vice president, and president of the Dallas Geological Society and has been a repeated delegate from Dallas. He was general chairman of the 1997 AAPG national convention, the success of which was not only beneficial to the Association but organizationally and financially very helpful to the Dallas Geological Society. Tom's recent work as chairman-elect and chairman of the House of Delegates was particularly important. These positions, coupled with membership on the Executive Committee and subsequently on the Advisory Council, presented substantial challenges as the governance of the Association underwent change.

As chair of the ad hoc Elected Editor Committee, Tom played an important role in resolving the elected editor issue, which required negotiation, compromise, and building support within several AAPG entities. The culmination of these efforts (which involved the assistance of many) was the bylaws change that provides for two candidates for a nonsuccessive, three-year term as editor. Thus, all members of the Executive Committee will be subject to competitive election.

Other issues in which Tom contributed substantially were resolution of international representation, a phaseout of the Junior member category, strengthening of the Code of Ethics, and establishing House of Delegates awards. Clearly, this Distinguished Service Award is richly deserved. The Association has endorsed what Tom's covolunteers in geoprofessionals groups have long appreciated: Tom's long, energetic, and effective service to all of us!

Citation—To Tom Mairs, geologist and manager, who effectively responded to the challenges of change in AAPG and the petroleum industry through negotiation and resourcefulness.

Patrick J. F. Gratton

WOLFGANG E. SCHOLLNBERGER
Distinguished Service Award

A native of Austria, Wolfgang Schollnberger earned a Ph.D. in geology from the University of Vienna in 1971. He worked for Royal Dutch/Shell in their research lab in The Hague, Netherlands and as explorationist in Spain before joining Amoco in 1979 as a senior geologist in Houston. After operational and managerial assignments in Cairo, Houston, and Chicago, he became vice president, Exploration in Amoco Production Company's Africa and Middle East Region in 1989. From 1990 to 1993 he served as Amoco's vice president for worldwide E&P New Ventures in Houston and subsequently as vice president for E&P Research in Tulsa. From 1994 to 1998 he was vice president, Exploration and Production Technology for Amoco Corporation in Houston. Since 1998 Wolfgang has been technology vice president with BP Amoco in Sunbury, England.

This very successful career in the oil industry seems to leave little room for anything else, but nothing could be further from the truth. Despite his formidable executive responsibilities, Wolfgang never let go of geology. How did he manage? Well, for one, by being a good manager of his own time and second, by being such a gifted geologist. He has an uncanny ability to quickly

grasp the essence of a geologic problem and combine diverse lines of evidence. Two other traits characterize this successful geologist and oil finder—both signaled early on by the recruiters of the Austrian Army: his patience and an almost unshakeable self confidence in difficult situations. In geology, he immediately put these talents to good use. A term paper as a sophomore student led to an important and publishable result that right away put him at variance with the established dogma. In his characteristic manner he stood by his conviction. We still remember him calmly concluding his oral presentation on the subject with the statement " . . . and thus professor X is wrong in this point" (professor X sitting in the first row, mumbling " . . . quite a brave fellow"). His dissertation and subsequent papers as an assistant professor in Vienna had a major impact on alpine geology because of the successful application of modern facies models to the palinspastic reconstruction of thrust sheets.

Wolfgang's early career in Amoco was boosted by his contribution to discoveries and production developments in West Africa, Egypt, and Sharjah. He later played a key role in Amoco's entry to Azerbaijan and was known as a relentless driver for technical innovation. Of these contributions, little is published; however, his courses on petroleum exploration and basin analysis at the Mining University Leoben, Austria, as well as thoughtful papers on measuring exploration success and on world energy supply, clearly show that his geologic horizon kept growing, in step with his ever broader outlook on industry and society.

The human touch and the concern for society is something Wolfgang inherited from his father, who for many years was head of the Human Resources Department of a major corporation, and shares with his wife Hennie. On their vagaries around the world, the Schollnbergers always lived by this principle: wherever you land, build a nest for the family. Their two daughters, as well as many of us, have enjoyed these hospitable nests in different continents.

His awareness of the human dimension in our activities and the broad view on his profession made Wolfgang particularly successful in his service to scientific societies. He serves or served in numerous capacities on AAPG committees, including the Research Committee, the Committee on Resource Evaluation, and major roles in the International Conference at Vienna in 1997 and the upcoming one at St. Petersburg (Russia). "East meets West," the motto of the Vienna Conference and the unofficial leitmotif of the one at St. Petersburg, brought out the best in Wolfgang's Austrian spirit. He also scored high on the other side of the ocean. For the past five years he has been AAPG's representative on the board of the Offshore Technology Conference (OTC), significantly boosting the society's income from the proceeds of the conference. Since 1999 he has been chairman of the OTC Board of Directors. He also is currently the chairman of the International Association of Oil and Gas Producers, which represents industry positions before international bodies such as the United Nations, World Trade Organization, International Labor Organization, and the European Union. Through these prominent functions and through his example as an enthusiastic geologist and a fair and caring man, he has become a most successful ambassador for the geologic profession and an efficient mediator in the discussions among the geologic community, industry, and society.

Citation—To Wolfgang E. Schollnberger, outstanding geologist, oil finder, and inspiring leader, for his successful service to the geologic profession between drill rig and executive suite.

Walter Gruen and Wolfgang Schlager

MOUNTAIN PRESS
Journalism Award

In 1971, two professors of geology from the University of Montana stopped in the offices of Mountain Press Publishing Company in Missoula, Montana. The professors, David Alt and Donald Hyndman, wanted to convince the publisher, David Flaccus, that a book explaining the geology of the Northern Rockies would be popular with tourists. Flaccus was skeptical, but after several visits he agreed to edit, typeset, and print 1000 copies of their manuscript, *Roadside Geology of the Northern Rockies*.

The first copies were printed in 1972 with an orange comb binding and a $3.95 price tag. Alt claims that Flaccus was sure 1000 copies would be "enough to saturate the world market for geology books." The book sold out within a month and went through at least a dozen printings before it was replaced in 1986 with individual books on each of the states previously covered in the Northern Rockies book.

Mountain Press, started in Missoula in 1948 by David Flaccus, was originally an offset printing company—printing ink impressions from plates onto paper. A Quaker from Pennsylvania and a Haverford graduate, Flaccus had landed in Missoula as a conscientious objector to World War II with orders to serve in the Forest Service as a smokejumper in lieu of active duty. He was still printing letterheads and stationery during the mid-1960s when a professor approached him with an idea for a book titled *The Psychology of Coronet and Trumpet Playing*. Flaccus agreed to share the cost and published the book, which was moderately successful and well reviewed. He published a few more books over the years, and in 1969 the printing part of the company was sold. Mountain Press reincorporated in January 1970 as a book publisher with Flaccus at the helm. With the exception of Caxton Publishing in Idaho, Mountain Press is believed to be the longest continually operating publishing company in the Northern Rockies.

Mountain Press, a regional book publisher, specializes in natural history, history, field guides, and western Americana. John Rimel, who assumed the

position of publisher after David Flaccus passed away in 1993, said in a 1996 interview, "As a western publisher, Mountain Press springs from a tradition separate from that of eastern houses. We in the West are shaped, in part, by the vast, sparsely populated space we live in. So it is no wonder that the books we publish seek to interpret this landscape, to clarify our understanding of the natural world, to see wonder in the commonplace, to reflect on times past for insight and understanding not only of those who came before, but of the land itself, and finally, to learn new approaches for exploring this landscape."

With *Roadside Geology of the Northern Rockies*, Mountain Press pioneered a geology series of more than 24 titles with plenty more under contract. Each book in the Roadside Geology® series covers the geology of an entire state, beginning with a regional geologic overview followed by road guides for the major highways in the state. Almost 30 years after their first book was published, Dave Alt and Don Hyndman continue to write new titles, as well as work on revisions of some of the earlier books in the series. In 1995, they released a topical science book, *Northwest Exposures: The Geologic Story of the Northwest*, which traverses the region through geologic time, chronicling the events that shaped the rocks and landforms.

Mountain Press continues to produce a new crop of geology titles each year. Titles released in 2001 include the *Roadside Geology of Massachusetts* by James Skehan and *Glacial Lake Missoula and Its Humongous Floods* by David Alt. Mountain Press also publishes the Geology Underfoot® series, which focuses on specific sites of geologic interest in a region. Mountain Press estimates it has sold more than one million copies of geology books over the years. Popular titles, such as the *Roadside Geology of Colorado* by Halka Chronic (currently undergoing an extensive revision), have been reprinted more than 16 times with close to 100,000 copies in print.

Each book is a cooperative effort between authors, photographers, artists, editors, and production staff at Mountain Press. "Our books are packed with information presented in a clear, usable, and understandable style. Our goal is to produce books that inform but also please the eye; that inspire your intellect, challenge your spirit of adventure, or whet your curiosity about the past," said Rimel.

The Roadside Geology® series, as well as most other books published by Mountain Press, are written for the average person. Although the books are popular with professional geologists, most of the readers are car-window, amateur geologists. "Alt and Hyndman were the first ones who took highly technical geologic information and made it palatable and understandable to the lay person," Rimel said. "Most geologists spend the majority of their professional writing careers writing for other geologists in a language that pretty much requires a four-year college degree to decipher. That's what distinguishes these books from others: their accessibility."

This year marks a new chapter for Mountain Press: John Rimel and Robin Williams, the business manager, recently purchased the company from the other shareholders. The purchase ensures that Mountain Press will remain a locally owned, independent, regional publishing house. "It is an honor to be awarded the 2001 AAPG Journalism Award. Being caught up in the midst of purchase arrangements when I received notification of the award, I took it as a good omen as we continue into the 21st century." Rimel said.

ROBERT G. LOUCKS
Wallace E. Pratt Memorial Award

The Wallace E. Pratt Memorial Award for the best paper published in the 1999 AAPG Bulletin goes to Robert G. Loucks for "Paleocave Carbonate Reservoirs: Origin, Burial-Depth Modifications, Spatial Complexity, and Reservoir Implications" (v. 83, no. 11, p. 1795–1834).

Loucks reports that paleocave systems are an important class of carbonate reservoirs that have been poorly understood relative to other types of carbonate reservoirs. The best approach to gaining insight into these reservoirs is to first investigate modern cave systems and then follow their burial evolution into the deep subsurface through studying outcrop and subsurface data. The resulting product is a complex array of rock fabrics, structures, and pore types.

Bob Loucks received his B.A. degree from the State University of New York at Binghamton in 1967 and his Ph.D. from the University of Texas at Austin in 1976. Before again joining the Texas Bureau of Economic Geology in July 2000, Bob had gained 32 years of research, reservoir characterization, and exploration experience with Texaco, the Bureau of Economic Geology, Cities Service, and ARCO. At the ARCO Technology Center, where he worked

for 17 years, he was a senior research advisor in a reservoir characterization group. He is now a senior research scientist and principal investigator conducting reservoir characterization studies. In 1997 he was appointed an Honorary Research Fellow in the School of Geological Science at Kingston University, Kingston upon Thames, Surrey, United Kingdom. His research interests include carbonate sequence stratigraphy, depositional systems, diagenesis, and reservoir characterization. Bob has worked extensively on carbonates in the Middle East, North Africa, Far East, west Texas, and Texas Gulf Coast. He has conducted research on modern cave systems and paleocave systems and reservoirs since 1978.

RICHARD A. SCHATZINGER
Robert H. Dott, Sr., Memorial Award

JOHN F. JORDAN
Robert H. Dott, Sr., Memorial Award

The Robert H. Dott Sr. Memorial Award for the best special publication during 1999 is presented to Richard A. Schatzinger and John F. Jordan, who edited Reservoir Characterization—Recent Advances (AAPG Memoir 71).

The editors report that the memoir was based on the proceedings of the Fourth International Reservoir Characterization Technical Conference, held March 2–3, 1997, in Houston, Texas. This conference was one of a series of Department of Energy–sponsored conferences, tutorials, workshops, and poster sessions that have become focal points for the discussion of new ideas in reservoir characterization ever since the first conference was held in 1985. This conference and its predecessors could not have happened without the financial and moral support of the U.S. Department of Energy (DOE)-Fossil Energy, Oil Program.

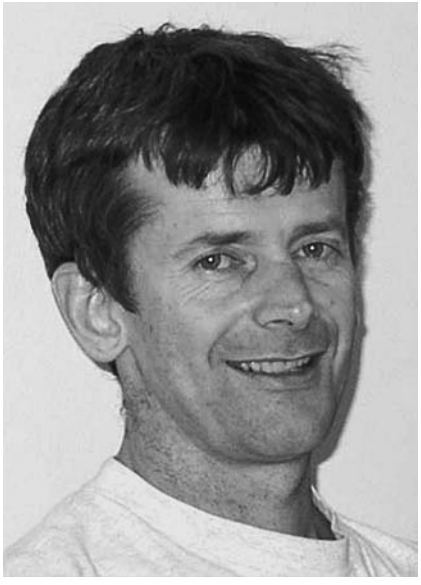
The editors express their sincere thanks to the National Petroleum Technology Office (NPTO) of the DOE and particularly to Robert Lemmon (conference project manager) for their continuous support. Early in the process of organizing the conference, Bob recognized that because reservoir characterization is such a broad and rapidly evolving multidisciplinary effort, more was necessary than just holding the conference. Therefore, from the very beginning they were concerned about bringing these concepts to the attention of academia and the industry in the form of a peer-reviewed publication.

According to the editors, the process of creating a first-rate contribution to reservoir characterization was the long-term effort of many people, of which the editors were only a small part. They express their appreciation to the efforts of the conference co-sponsors, including NPTO, BDM-Oklahoma Inc., and the AAPG. They state that they were very lucky to have such active and energetic conference co-chairmen as Thomas C. Wesson and Thomas E. Burchfield. The conference keynote speakers included Olivier Guillon (Elf Aquitaine Production), Mark McElroy (Phillips Petroleum Company), Leif Hinderaker (Norwegian Petroleum Directorate), Larry Lake (University of Texas at Austin), Ganesh Thakur (Chevron), and Betty Felber (DOE/NPTO). A workshop featuring summaries of several DOE Reservoir Class projects was co-chaired by Susan Jackson and Michael Fowler.

The editors also said that although there were too many to list individually, the Conference Steering Committee was wonderful. They give their greatest thanks to the authors and the small army of peer reviewers who burned a lot of midnight oil to pull the whole thing together. Also, the AAPG publications staff was an absolute dream to work with.

Richard A. Schatzinger co-founded Fowler, Schatzinger & Associates, a geotechnical consulting company, in December 1998. He has been associated with Seis Strat Services Inc. of Houston, Texas, since 2000. Prior to this, Schatzinger was employed as a principal geologist at TRW/BDM-Petroleum Technologies in Bartlesville, Oklahoma. At TRW he worked on reservoir characterization, sandstone, and carbonate petrology projects. Before BDM he worked for the IIT Research Institute at the National Institute for Petroleum and Energy Research (NIPER) site in Bartlesville as a geologist for seven years. Prior to that he worked for five years as a carbonate research specialist for Phillips Petroleum. He has been involved with field studies and upscaling in Wyoming reservoirs for several years, and more recently with Cretaceous carbonate platforms in the southern Gulf of Mexico. He holds B.S. and M.S. degrees in geology from San Diego State University and a Ph.D. in geology from the University of Texas at Austin. His primary research interests include geological "ground-truthing" of reservoir characterization studies, the relationships between petrographic and petrophysical properties, and high-resolution stratigraphic analysis of carbonate depositional systems.

John F. Jordan is currently an exploration and development geologist with Equitable Production in Alexandria, Virginia, focusing on the southern Appalachian basin. Prior to joining Equitable Production, he worked on basin analysis and modeling projects with the Reservoir Management and Characterization Group of BDM Petroleum Technologies, Bartlesville, Oklahoma. Jordan received Bachelor of Science (1992) and Master of Science (1997) degrees in geology from the University of Georgia. His academic background includes work in sequence stratigraphy and petrology of the southern Appalachians.



ANTONY D. REYNOLDS
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, division or section, is awarded to Antony Reynolds for "The Dimensions of Paralic Sandstone Bodies," (AAPG Bulletin, v. 83, pp. 211–229).

According to Reynolds, four strands came together to produce the paper: (1) a refocus by BP on paralic reservoirs—how to develop them rapidly and efficiently; (2) the availability of increasingly sophisticated, geocellular, object modeling routines that called for dimensional data as a key input; (3) the availability of numerous in-house reports and published studies documenting sand-body dimensional data; and (4) the advent of sequence stratigraphy, which provided a framework to compare and dissect complex sand-body architecture.

Antony Reynolds obtained a B.A. in geology (hons 1st class) from Oxford University, United Kingdom, in 1984. In 1987 he received a D.Phil. for "Syntectonic Miocene Molasse, South Pyrenean Foreland Basin, Spain" from Liverpool University, United Kingdom. In 1988 he received a postdoctorate for the Viking Formation, Alberta, McMaster University, Canada.

Since 1989 Reynolds has been a geologist with BP in various capacities, including focusing on well operations (1989); as part of the Stratigraphic Studies Group, concentrating on teaching and application of sequence stratigraphy (1990–1992); and as part of the Delta Top Group, applying geology to development and production of paralic reservoirs (1993–1994). In addition, he was part of the Integrated Reservoir Description team (1995–1997), as well as being a development geologist, Mars field, deep-water Gulf of Mexico (1998); development geologist, Crazy Horse, deep-water Gulf of Mexico (2000); and reservoir geologist, Chirag field, Azerbaijan.

WAFIK B. BEYDOUN
George C. Matson Memorial Award

The George C. Matson Memorial Award for the best paper presented during an AAPG oral technical session

at the 2000 AAPG Annual Meeting in New Orleans, Louisiana, is presented to Wafik B. Beydoun for "Exploration Challenges into Angolan Deep to Ultra Deep Waters." His co-authors were Jean-Jacques Biteau and Philippe Legrand.

The author reports that the paper highlighted several years of intense and successful exploration adventures in Angola deep waters performed by succeeding teams. Petroleum systems key issues and corresponding effective geoscience techniques were presented with numerous examples. The innovative challenge for this presentation was to be able to convey, within the allotted time, a flavor of this fascinating experience with an electronic (digital) projection on one screen and a slide show on the other.

Wafik Beydoun received his M.S. degree (1982) and Ph.D. (1985) in geophysics from MIT (Massachusetts Institute of Technology). His special interests are in prospect evaluation, reservoir characterization, and monitoring. His employment includes ARCO Research and Technical Services in Dallas; Elf Geoscience Research Centre in London; Elf Exploration Production in Pau, France; and Elf Exploration Angola in Luanda, Angola (first as chief geophysicist and then as Blocks 17 and 33 Exploration Team leader). He is currently the geophysical operations and technology manager at Total Fina Elf, France.

JOSEPH STRACCIA
Jules Braunstein Memorial Award

BRAD PRATHER
Jules Braunstein Memorial Award

The Jules Braunstein Memorial Award for the best AAPG poster presentation at the 2000 Annual Convention in New Orleans, Louisiana, is presented to Joseph Straccia and Brad Prather for "Stratigraphic Traps in Deep-Water Turbidite Reservoirs at the Base of Depositional Slope."

According to the authors, the toe-of-slope turbidite project was initiated in early 1998 in Shell's Research Centre in Holland. The primary drive of the study was to identify trapping parameters for large stratigraphic traps at the base of depositional slopes in turbidite reservoirs. The study was exploration focused, and the aim was to identify large hydrocarbon-volume potential in traps without major structural overprint. The work consisted of building an understanding of subsurface field examples and outcrop fieldwork. Outcrop examples were crucial for identifying possible trapping and sealing mechanisms for these stratigraphic traps.

Joe Straccia holds B.S. and M.S. degrees in geology from Boston College and Texas A&M, respectively. He was hired by Shell Oil in Houston in 1980 and worked in the Rocky Mountain region until 1983. From 1984 to 1988 he worked the Michigan basin, primarily in the Silurian Pinnacle reef trend as lead geologist. In 1989 he was assigned to work special carbonate projects in the Paradox basin and in south Florida. At the end of 1989, he transferred to Shell UK (Expro) London to work as a seismic interpreter in the North Sea—Western Platform area and on 3-D visualization. He returned to the United States (New Orleans) in 1992 and worked until 1995 as an exploration geologist in the Gulf of Mexico shelf. In 1995 Joe became the exploration manager for the Western Shelf region of the Gulf of Mexico for Shell Offshore. He returned overseas in 1998 to work in Shell International's research labs in Rijswijk, where he worked in the deep-water turbidite research team on stratigraphic traps. In 2000 he became the corporate technology manager for Petroleum Development of Oman (a Shell affiliate) in Muscat, Oman, and is currently employed there.

Brad Prather holds degrees in geology from the University of Kansas and the University of New Orleans. He was hired by Shell in 1981 as an exploration geologist. He served Shell in various exploration roles in the U.S. Gulf Coast, U.S. North Atlantic continental margin, and Gulf of Mexico exploration projects prior to moving to Shell's

head office in The Hague, Netherlands, in 1995. He later moved to Shell's research facility in Rijswijk, Netherlands, in 1998. He currently leads Shell's turbidite research program in Houston, Texas. His experience ranges from regional exploration projects in offshore and onshore basins of North America, lease sale coordination, and special studies, including turbidite rock properties, carbonate deposition and diagenesis, sequence stratigraphy, slope and base-of-slope characterization, and turbidite reservoir characterization and production. Prather is also the recipient of the AAPG 1993 and 1994 J. C. "Cam" Sproule Memorial Awards.

The authors acknowledge the significant contributions of Dave Steele and Steve Tennant (of Shell) to these posters. Dave and Steve contributed numerous ideas, expertise in the field, and subsurface examples to the final product. The authors are most grateful for their contributions.

RICHARD HILLIS
Ziad Beydoun Memorial Award

The Ziad Beydoun Award for the best poster presentation at the 2000 International Conference and Exhibition in Bali, Indonesia, is presented to Richard Hillis for "Coupled Changes in Pore Pressure and Stress in Oil Fields and Sedimentary Basins."

The author reports that the poster summarizes the coupled nature of changes in pore pressure and stress at both the oil field and sedimentary basin scale. At the oil field scale, depletion-related pore pressure reduction leads to a reduction in total minimum horizontal stress. At the sedimentary basin scale, minimum horizontal stress increases from shallow, normally pressured sequences into deeper, overpressured sequences. In field development, pore pressure/stress coupling controls whether faulting/fracturing and seismicity accompanies depletion and controls wellbore stability and sand production throughout field development. At the sedimentary basin scale, pore pressure/stress coupling results in a greater increase of pore pressure being sustained prior to rock failure than would be conventionally predicted. Hence, for example, the common assumption that hydrocarbon columns can only exert a buoyancy pressure equal to the difference between pore pressure and the minimum horizontal stress may significantly underestimate the height of columns that can be retained. The nature of pore pressure/stress coupling also influences the mode of failure (shear vs. tensile vs. hybrid) that develops with overpressure.

The author thanks Aaron Cummings and Scott Reynolds (NCPGG) for their assistance in producing the poster, Dick Swarbrick (Durham University) and Dave Dewhurst (CSIRO) for their input on the concepts presented, and Hans van Eekelen for pressure data from the Gannet/Guillemot fields.

Richard Hillis holds the State of South Australia Chair in Petroleum Reservoir Properties/Petrophysics at the National Centre for Petroleum Geology and Geophysics (NCPGG), Adelaide University. He leads a group of 12 researchers at the NCPGG, working on petroleum geomechanics, in-situ stresses, pore pressures, and sedimentary basin tectonics. The group is one of several at the NCPGG that work closely with the oil industry, and he has consulted to numerous Australian and international oil companies.

Richard graduated with a B.Sc. degree (hons) from Imperial College (1985) and a Ph.D. from the University of Edinburgh (1989). After seven years at Adelaide University's Department of Geology and Geophysics, he joined the NCPGG in 1999. He has in excess of 50 published papers and is currently South Australian Branch president of the ASEG (Australian SEG) and co-chair for the ASEG 16th Conference and Exhibition (Adelaide, 2003). Richard is also a member of the AAPG, American Geophysical Union, Australian Society of Exploration Geophysicists, European Association of Geoscientists and Engineers, Geological Society of Australia, Geological Society of London, Petroleum Exploration Society of Australia, and Society of Exploration Geophysicists.

ALFREDO E. PRELAT
Gabriel Dengo Memorial Award

The Gabriel Dengo Award for the best oral paper presented at the 2000 International Conference and Exhibition in Bali, Indonesia, is presented to Alfredo E. Prelat for "Hyperspectral Remote Sensing Project of Riau Province, Sumatra, Indonesia." His co-authors are Anthoni Tang and Iwan Gunawan.

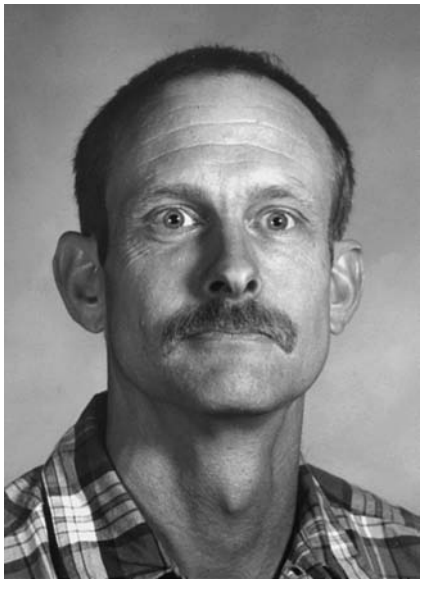
The authors report that the paper is based on the success in the application

of hyperspectral remote sensing in the Riau Province, Sumatra, using the proprietary technology of Alto Technology Resources. Alto Technology Resources has developed this technology for airborne data acquisition for the exploration and environmental assessment of natural resources. The optical and radar data acquired by the Alto Technology hyperspectral sensor in Sumatra was processed and interpreted to generate a geographic information system for the community development of the province. Alto's hyperspectral technology allows us to explore and evaluate the surface conditions of the Earth in an efficient, fast, and low-cost method. The technology has been used successfully in the United States, Middle East, Asia, and South America.

Alfredo E. Prelat, president and CEO at Alto Technology Resources, received his master's degree and Ph.D. (1973, Stanford University, California) in geology. His doctoral dissertation was concerned with an oil exploration decision-making system, with emphasis on designing methods to estimate oil discovery probabilities. While earning his degree he was a research assistant in computer applications in geology at the Kansas Geological Survey. He spent two years in Norway as a research fellow for the Royal Norwegian Scientific and Industrial Research Academy, working on remote sensing and geomathematics and teaching oil exploration decision making.

He spent six years at Stanford University as a postdoctoral student, research associate, and lecturer. At the Stanford University Remote Sensing Laboratory he designed and applied image-processing techniques to analyze satellite digital data for exploration of natural resources. He worked as a technical advisor for the United Nations in Asia and South America from 1977 to 1982. He also worked for Bechtel and Unocal Corporation from 1982 to 1989.

Prelat joined Texaco in December 1989 as a principal scientist and Texaco fellow. He set up a remote sensing laboratory based on a Sun workstation as a platform with an image analysis and geographic information system. The system was primarily designed to define prospecting areas for various exploration groups in the company. In 1994 he designed and implemented the development of an airborne hyperspectral sensor for exploration of natural resources and environmental assessment. The hyperspectral sensor known as TEEMS was flown over several areas in the United States, Colombia, Kuwait, Saudi Arabia, and Indonesia. Currently, he is a member of the board of directors of the Geosat Committee and a member of the NASA/JPL LightSAR team and the ERIM Remote Sensing Committee. He is a former member of the National Research Council at the National Academy of Sciences.



JOHN MCKINNEY
Teacher of the Year Award

The Teacher of the Year Award, given for excellence in the teaching of natural resources in the earth sciences (K–12), is presented to John McKinney, an eighth-grade earth science teacher in Castle Rock, Colorado. The AAPG Foundation sponsors the Teacher of the Year Award, of which the $5000 prize is shared equally by the teacher (for personal use) and the teacher's school (for support of the earth science curriculum). AAPG sections and affiliated societies submit candidates for the award.

John McKinney was born in Los Angeles. After graduating from high school, he migrated northward to attend the University of Oregon. In 1979 he moved to Colorado to live near the mountains he loves. After working for 10 years in the construction business, he decided to become a teacher and returned to school in 1990 to get his teaching certification and master's degree in earth sciences.

In 1992 McKinney was hired by Douglas County Schools to teach earth science at Castle Rock Middle School. Over the past nine years he has enjoyed a productive career in education. His primary focus has been developing interesting classroom activities that motivate students to learn. He has written a 180-page textbook to match the curriculum he teaches during the course of the year. His work implementing academic standards in the classroom has gained national attention.

In addition to his teaching duties, McKinney has also worked several leadership roles at the district level. He has taught various staff development classes and travels around the country giving presentations on implementing academic standards into the classroom. He is presently working on the performance-pay design team for his district.

Outside school, McKinney's family keeps him busy. He has been married 15 years and has two sons, ages 6 and 9. He lives in the foothills of the Colorado Rockies in a small town of 100 people and likes to spend time mountaineering and camping. Two years ago in January he achieved a life goal by reaching the summit of Cerro Aconcagua, the highest point in the western hemisphere.

In addition to his family, McKinney also finds time to operate a small business on the side. Four years ago he started selling fossil reproductions, which he makes from plaster. This hobby turned into a business that complements his work as a teacher of earth science. He presently constructs fossil reproductions for a local national monument and a variety of other customers.