AAPG Honorees, 2018

MICHAEL C. FORREST
Sidney Powers Memorial Award

Citation—To Mike Forrest – An outstanding explorer who had a major impact on exploration by transforming geophysics from "mapping the structure of the subsurface" to "mapping the reservoir and fluid content of the subsurface."

Michael C. (Mike) Forrest is an outstanding explorer who had a major impact on exploration by transforming geophysics from "mapping the structure of the subsurface" to "mapping the reservoir and fluid content of the subsurface." Because of this early work, Mike has affectionately been called the "Father of Bright Spots." It is difficult to overstate the importance of a technology that predicts presence, thickness, and sometimes the type of hydrocarbons, as well as inferences as to reservoir porosity.

Mike grew up in St. Louis and attended St. Louis University, graduating with a B.S. in geophysical engineering in 1955. Geophysics appealed to him because of the science and math content, although he remarked "I did not really know what geophysics was at the time." At the end of his sophomore year he sent letters to several companies and chose Shell Oil Company for the summers of 1953 and 1954. Shell then hired him full time upon graduation in 1955 on a South Louisiana seismic crew. Shell transferred Mike to the New Orleans Marine Division in 1959 where he quickly learned seismic interpretation and Gulf of Mexico geology.

In the late 1960s, after noting very shallow gas pays appeared to be related to strong seismic reflections, Mike mapped prospects in the undrilled Pleistocene Province in the Gulf of Mexico and observed strong amplitude reflections often matched structural closures. Reading a Russian journal, he found theoretical justification to relating changes in reflection characteristics to changes in reservoir fluid content. Also, he reviewed Shell's proprietary seismic along with petrophysical data on several Pliocene and Miocene Gulf of Mexico oil and gas fields where he observed a coincidence of increased seismic amplitude corresponding to oil/gas pays—thus, the "proof of concept." Shell's researchers later confirmed the theoretical relationships.

While many others subsequently made important improvements in the field of direct hydrocarbon indicators (DHIs), Mike was the originator for Shell to bet heavily (and successfully) on its application. He was on the team to convince Shell senior management to rely on seismic amplitudes to make major purchases of offshore leases that resulted in many discoveries, initially in shallow water, then in deep water where reservoirs and hydrocarbon charge had not yet been demonstrated.

In the late 70s and 80s Mike led United States exploration campaigns in the onshore Gulf Coast, Mid-Continent, California, and Alaska. Then from 1984 to 1987, as Shell's general manager of Gulf of Mexico exploration, he helped convinced Shell to bet big on deep-water OCS leasing, which began Shell's early dominance of deep-water E&P. Most of these early prospects were partially dependent on stratigraphic trapping and thus probably could not have been found without the DHI technology Mike pioneered. Under his leadership, Shell drilled Ram-Powell, Tahoe, Popeye, Mensa, and Auger, while picking up leases for Mars, Ursa, Europa, Io, Herschel/Kepler/Ariel and

Coulomb—all producing fields that today total several BBOE, and heralded the GOM's first tension leg platforms as production hubs. He finished his Shell career as president of Pecten International, following his colleague Marlan Downey (a fellow Powers Award recipient) who had used the bright spot technology to make a series of valuable discoveries in Cameroon.

After retiring from Shell in 1992, Mike joined Maxus Energy, as COO and senior VP of business development/technology. During Mike's tenure, Maxus pursued several successful ventures in South America and Indonesia. Two years after the takeover of Maxus by YPF, Mike retired in 1997.

In 2001, Peter Rose approached Mike to lead the Rose & Associates DHI Consortium, to share learnings from each other's wells, and to score DHI quality based on the learnings. Roger Holeywell was the software expert and Rocky Roden later joined as geophysical consultant. Under Mike's leadership, the consortium has grown dramatically during the past 17 years as more than 60 E&P companies have participated through chapters in both the United States and Europe, with more than 300 drilled DHI prospects reviewed and documented. The consortium results have significantly advanced our understanding of DHI technology and its impact on risking and determining volumes for exploration prospects. Perhaps more important, member companies have demonstrated improved exploration performance since joining the consortium. One of the most valuable aspects of the consortium are the exploration experiences Mike relates from all around the globe—being gifted with an incredible memory, he is able to call up countless salient details that provide critical lessons.

Mike is famous for the statements "show me the data" and "it's all about the geology". The first speaks to his curiosity and relentless pursuit to unlock the earth's secrets, the latter to his rare appreciation of how quantitative geophysics interacts with the rocks, and must serve as an integrated piece of the geological story.

Mike's impact on the business of hydrocarbon exploration is enormous. In fact, of the 100+ BBOE found globally in deep water to date, about two-thirds were found by DHI technology, in basins across six continents. Beyond this gift to industry and global economic development, Mike's most lasting impact may be in the generations of geoscientists that followed him, that benefitted from his direct mentorship and/or his many other interactions within our community. He is a very humble person who enjoys practicing his craft alongside all kinds of people. Many of us could not have led our companies to the level of success in oil and gas discoveries had we not benefitted from personal association and learnings from Mike and his followers. For over 50 years, he has been an inspiration to all those around him who enjoy the pursuit of excellence and exploration.

Henry Pettingill

Michael C. (Mike) Forrest changed the entire global oil and gas industry. Mike's education in geophysics coupled with a curiosity and then a command of geology led to an understanding where commercial deposits of oil and gas are most likely to occur. Mike's maps of the trapping geometries were extremely accurate, and he had the reputation within Shell of never forgetting any seismic line he had ever seen. This allowed him to make some key observations that might not be obvious to other seismic interpreters.

Mike was my geophysicist partner in the 1970 Gulf of Mexico (GOM) lease for Shell. Late one night while preparing for the big lease sale, Mike showed me very interesting observations he was making about the coincidence of stronger or anomalous reflections (bright spots) he observed on seismic lines that crossed several producing fields, including a South Marsh Island gas field at 4000 feet depth. It became evident that the reflections got stronger over the production area and dimmed as they went off-structure. We also reviewed seismic lines over other producing fields that, while not as obvious as this very shallow producing horizon, the seismic did demonstrate anomalous intensity or phase change characteristics.

It did not take me long to realize Mike was looking at hydrocarbons in the ground and the value of this observation in the evaluation of lease tracts or at least the value order of tracts up for sale. I was going to stand before the president of Shell Oil and tell him how many millions of dollars should be spent on lease sale tracts in the GOM, and bright spots was a major factor. Shell had a very successful sale that resulted in good oil and discoveries. And for the other companies who proclaimed, after the fact, that they could also "see" the hydrocarbon in the ground, they certainly did not bid it!

Shell had a two-year jump on recognizing the value of using the bright spots, phase changes or other DHIs in evaluating prospects for gas or oil, pay thickness, the pitfalls of low saturation gas, and especially where we should not bid on otherwise geometrically attractive structures in the Gulf of Mexico and other basins.

Mike Forrest is a worldwide industry changer of the highest order!

Leighton Steward

Response

I am very honored to receive the AAPG Sidney Powers Memorial Award. Thank you very much. I especially express my appreciation to many team members with Shell Oil Company, Maxus Energy and Rose & Associates who participated in exploration projects with me around the world during the past 50+ years. It's all about ideas, innovation, applying technology, and dedication to our profession.

Applied geophysics is used to help understand the geology of the earth for oil and gas exploration. Interpretation requires a knowledge of geology along with detail studies of all geophysical data for success.

Many thanks to Shell Oil geophysicists, geologists, and petrophysicists who contributed to the technology development and success of the Bright Spot technology in the early 70's. I made the observation of amplitude changes may be directly related to oil and gas pay and was persistent it could be a major factor in exploration – persistence is a key word. After skepticism during several months, the Shell technical team and management were the key to our success. The work process is seismic data observations, measurements and quantitation, calibration with well data, a systematic and a consistent risk analysis work process.

I have great memories of many Gulf of Mexico lease sales and oil/gas discoveries on the Gulf of Mexico Shelf from 1970 to 1975 and deep water in 1984 to 1987. During the 1970s, Shell technical staff and management used risk analysis to estimate oil/gas volumes on mapped traps with bright spots to make bids in lease sales that resulted in many discoveries. One of the most memorable occasions was a champagne party at 5 am on a Saturday morning after our Prospect Cognac discovery, a 300 BOE field in 1000 feet water in the Gulf of Mexico. Shell management always favored expanding exploration into deeper water.

In the mid-1980s, lease sale bids and the drilling portfolio in the deep-water Gulf of Mexico were based on integrating regional and prospect geology studies with the observation and mapping of bright spots. Shell "led the way" in the GOM deep water discoveries with Mars Field the most significant, and exploration expanded to many other deep-water provinces around the world.

I was fortunate to work in an exploration management role in the United States onshore Gulf Coast, Mid-Continent and California basins and international, latter as president of the Shell Oil Pecten International subsidiary which had several exploration successes. Typical for many explorers, I was associated with several high potential reward exploration prospects that failed, especially in the Beaufort Sea and Bering Sea.

Finally, my career with Shell led to an association with Rose & Associates as chair of the DHI Interpretation and Risk Analysis Consortium during the past 17 years. Thanks to Roger Holeywell and Roger Roden for joining me on this journey. More than 60 oil companies have been members of the Consortium for at least for 1 year and 30 companies were members in 2017. Lessons from the 300 DHI prospect database study starts with understanding the geology (I like to state "geology first").

Exploration learning is a lifelong effort and teamwork leads to success. "It's all about the rocks."

Thank you again for the AAPG Sidney Powers Memorial Award.

Michael C. Forrest

HANS H. KRAUSE
Michel T. Halbouty Leadership Award

Citation—To Hans H. Krause, explorer, producer and senior manager for effective and imaginative leadership, remarkable service to the South American petroleum geosciences, and outstanding contribution in helping preserve and record the history of petroleum exploration around the world.

My brother, Hans H. Krause, was born in November 1937 and grew up in Caracas, Venezuela. From an early age he developed a deep interest in nature centered on a menagerie of animals and plants that he raised and collected. However, sometime after he realized that animals could die, he became interested in taxidermy and spent many hours dissecting and then mounting them. Once mounted on branches and logs they would end up decorating walls around our house. Mom was patient, but finally pulled the plug as Hans' frozen carcasses, of which most were birds, kept multiplying, and taking up the little space available in the little refrigerator and freezer that she proudly owned. Hans shrugged this off and switched to studying plants, focusing his energies on orchids. Quickly the yard and outer house walls became locations for a multitude of wooden baskets that Hans built and filled with fern and wood trunks graced by his orchids. On weekends Hans would be hiking the Avila and Naiguatá mountains bordering the northern margin of the Caracas valley. This pursuit resulted in him finding four orchid species that were subsequently recorded as new for Venezuela by the world-renowned orchidologist G.C.K. Dunsterville.

In 1955 Hans graduated from high school. That same year, at the age of 17, he was employed by Shell Venezuela's Servicio Shell para el Agricultor as a junior lab assistant. Other than learning a bit about chemistry while running the experiments for the senior staff, he also learned English. He also learned to drive when his English boss tossed him the keys to the company stick-shift four-speed Land Rover to run an errand in town. Of course, it goes without saying that on that occasion Hans never got out of first gear!

After a year at the lab, Shell awarded Hans a scholarship to study soils chemistry at the Imperial College of Tropical Agriculture, in Trinidad, British West Indies. One of the courses he took during his freshman year at the ICTA was physical geology, based on Arthur Holmes' classic text. Fascinated by what he read in this book, he decided that he wanted to pursue a career in geology rather than focus on tropical soils, and in mid-1957 managed to convince the company to switch his scholarship to geology. Since geology was not offered in Trinidad, finding a university to accept a geology student late in the season turned out to be a problem—luckily solved by an American Shell employee in Caracas who happened to be a good friend of the president of Montana State University! Thus, in September of that same year, Hans began his geology studies in the beautiful town of Missoula, in the Montana Rockies. It was also the year of his first encounter with cold weather, snow, and ice, somewhat of a shock to a young man who had only known the tropics!

In May of 1960 Hans graduated from Montana State University with a Bachelor of Arts in geology. He returned to Venezuela and joined a Shell field party that was studying the pre-Cretaceous outcrops in the Venezuelan Andes. After the survey was completed Shell sent him back to upgrade his geological training at a petroleum geology school. He chose to go to the University of Kansas, in Lawrence, Kansas, where he obtained a Master of Science degree.

From Kansas he once again returned to Venezuela but Shell, at the time not needing more

geologists in its exploration department, sent him to work as an operations engineer in the company's Western Venezuela oilfields. It turned out to be excellent training for somebody who went on to make a successful career in exploration and production.

While at KU Hans met Judi Scroggin and they kept up a long-distance friendship until they saw each other again and were then married in the summer of 1965. Early 1966 Hans was sent by Shell for a few weeks training to the company's training center in The Hague plus a year's work as a junior petrophysicist at their head office. The young couple enjoyed this year in Europe, visiting not only the sights in Holland, Belgium, France, Germany, and Switzerland, all reachable in a weekend's drive, but also vacationing around Scandinavia.

They returned to Venezuela in March of 1967 where for the next 8 years Hans was assigned to work in Shell's oilfields in the Lake Maracaibo area—initially as junior production geologist, later as senior production geologist. Three of Hans and Judi's four children were born while they were living in the eastern Lake Maracaibo oil field town of Lagunillas.

Mid-1975 Hans was promoted to the position of exploration manager of Compañía Shell de Venezuela (CSV), in Caracas. Even though it was a tiny department, at age 37 Hans was one of Shell's younger exploration managers worldwide.

By January 1976 Venezuela nationalized the oil industry, created PDVSA as a holding company, and CSV became Maraven, one of the 14 initial operating companies—and Hans remained as exploration manager of a department that entered a large, sudden expansion phase. That was also the year that their fourth child was born.

Within a few years PDVSA whittled down and consolidated the 14 companies into 3 fairly equal-sized operating companies, Maraven remaining as one of them. During this period Hans led Maraven's exploration campaigns in Western Venezuela and in part of the country's offshore. In early 1985 he was transferred out of exploration and put in charge of the production department. Interested in science and technology, in 1988 Hans accepted a transfer to Intevep, PDVSA's research company, as exploration and production manager. Here he worked on developing E&P technology for all three operating companies.

In 1991 he was transferred back to Maraven as their exploration and production manager. In this capacity Hans supervised hundreds of staff, had a budget of hundreds of millions of dollars and oversaw a production of close to a million barrels of oil per day. He retired from Maraven at the end of November 1997, upon reaching the Venezuelan mandatory retirement age of 60 years.

During his time and as manager, Hans acquired a reputation for spending a great deal of his time ensuring the professional development of the technical staff under his command, many of whom were sent by the company for graduate studies to Europe and North America. And he also insisted that they join and become active in the professional societies of their specialties.

In addition, as E&P manager he paid special attention to preserving the technical and historical data of the company. A visit to Calgary where I happened to be studying cores from the Pembina field in the Province of Alberta Core Research Center (CRC) left a very deep impression. The organization of the CRC captivated him and Hans set out immediately to amalgamate the drill cuttings, cores, and oil samples from western Venezuela in a model facility managed by Maraven in the La Concepción oil field, near Maracaibo. This example was later followed by others with the establishment of a second facility in eastern Venezuela, and upon his retirement the board of directors of the company renamed the western facility "La Nucleoteca Hans Krause."

Following his mandatory retirement, Hans returned in 1998 to Shell as a vice president and director of their companies in Venezuela and stayed there for the next 3 years during the private oil industry expansion phase that followed Venezuela's Apertura.

From 2001 until now he has remained active as an independent consultant, working in Venezuela and Colombia.

Over the course of his career Hans has received several accolades, including Distinguished Alumnus of the University of Kansas Geology Department, 1988; Certificate of Merit from AAPG, 1993; Distinguished

Service Medal from the President of Venezuela, 1994; the Bolivar Medal from the Asociación Colombiana de Geólogos y Geofísicos del Petróleo (ACGGP), 1997; the Distinguished Service Award from AAPG, 1998, and the Honorary Member Award, also from AAPG, in 2006.

Hans has been an active member not only of AAPG, but also of the Sociedad Venezolana de Geólogos (SVG) and the Colegio de Ingenieros de Venezuela (CIV). In AAPG he served in the House of Delegates (1995-1998 and 2016-2019) representing the Latin American and Caribbean Region, in the International Liaison Committee (1989-1994) and the Advisory Council (1994-1997). He was one of the organizers of the highly successful 1993 Joint SVG-AAPG Congress in Caracas, and the technical co-chair of the 1996 AAPG ICE, also in Caracas. He was a member of the organizing committee of the 2013 AAPG ICE in Cartagena. In addition, he was a member of the Venezuelan National Committee of the World Petroleum Congresses and a member of the organizing committees of a number of symposia on Exploration in the Sub-Andean Basins of South America.

In 1982 Otto Renz, a Cretaceous ammonites researcher at the Museum of Natural History in Basel, Switzerland, and author of the book *The Cretaceous Ammonites of Venezuela*, named an ammonite, *Hourcquia krausei*, in recognition of Hans' support of his paleontological studies.

In mid-2010 Hans was appointed chair of AAPG's History of Petroleum Geology Committee, a position he occupied until mid-2014. Over the years this committee has organized very successful annual sessions at AAPG's ACEs and ICEs. One of the changes introduced during Hans' tenure is a widely-read monthly Historical Highlights column in the *AAPG Explorer* that seeks to highlight the development and social importance of the oil and gas industry.

Throughout his long oil industry career, Hans has been an example of effective and imaginative leadership, richly deserving of the Michel T. Halbouty Outstanding Leadership Award.

Federico Fernando Krause

Response

I feel very honored to have been named the 2018 recipient of the Michel T. Halbouty Outstanding Leadership Award, and it is a privilege to join the 11 past recipients, each of whom has made significant contributions to the geosciences and to AAPG. It is also a unique privilege to write a response to the biography that my brother, Federico Fernando Krause, also a geologist and AAPG member, wrote about me.

When I graduated from high school in Caracas, Venezuela, in 1955 I was interested in a career in agronomy—perhaps to work on a coffee plantation or a cattle ranch somewhere in the country. It was G.C.K. Dunsterville, at that time vice president of Shell Venezuela and an accomplished orchidologist, who recruited me into the oil industry at the age of 17—and thanks to whom I obtained a Shell scholarship to attend university.

My first introduction to AAPG was in 1962 when, as a University of Kansas graduate student on a geological field trip from glaciated eastern Kansas to the Grand Canyon, we stopped off in Denver to attend that year's annual convention. Our KU professors insisted that we join AAPG, especially if we were interested in a career as petroleum geologists. Upon returning to Venezuela I followed their advice—in retrospect, it was one of my smartest professional decisions.

I began working in the oilfields in Venezuela in 1963, after completing my Master's studies in geology at the University of Kansas. The day after arriving at Shell's office in Lagunillas, on the eastern shore of Lake Maracaibo, I was put in charge of a land drilling rig. I tried to explain to my Scottish boss that I knew nothing about drilling, that I had never even seen a drill bit. His reply was, "Well, then you better learn quickly, laddy!" Thanks to the unstinting help of my fellow engineers and, especially, the very experienced and patient toolpushers and rig workers, I learned and came to enjoy the nonstop operational work. What followed were nearly 30 years of technical jobs in exploration and production in both Shell and in Maraven, Shell's successor company in Venezuela.

By 1991, 15 years after the Venezuelan oil industry had been nationalized, holding company PDVSA decided that the time had come for the world's oil industry to see some of what had been accomplished in those years, and that AAPG could provide an

adequate window for this. Top management appointed Alex Lorenz, PDVSA's highly respected exploration coordinator, to head a small team to go to Tulsa to discuss with AAPG the possibility of a convention in Caracas. This convention was to be a joint effort between AAPG and the Venezuelan Geological Society, SVG. Each of PDVSA's three operating companies sent a representative and I, as exploration and production manager, was chosen to represent my company, Maraven.

In Tulsa we met with Fred Dix, at the time executive director of AAPG, and with Don O'Nesky, the deputy executive director. Even though at first Fred was skeptical, concerned with the risk of AAPG losing money, discussions were cordial and effective and the broad outline of a meeting in Caracas was agreed upon. AAPG's first international meeting had been held in 1984 in Geneva, Switzerland, and more were held elsewhere but the Caracas venue would be the first one beyond the "safe" world.

The 1993 SVG/AAPG conference was a gamechanger for both societies. For AAPG the two most significant things about this particular conference were that (a) it opened AAPG's eyes to the fact that transplanting an AAPG event lock, stock, and barrel to another country could not adequately serve the Association's interest in becoming truly global; and (b) for the first time the host society played an active role in logistics, as opposed to just technical program assembly and sponsorship. SVG's insistence on being considered a true partner, as opposed to merely "host," created a new model for AAPG, one that would be used in 1996 in Caracas, in 1998 in Rio, and thereafter.

Caracas lacked—and still lacks—a convention center and both the 1993 and 1996 conventions were held at the Hilton Hotel. Nonetheless, the hotel staff bent over backwards to accommodate both events. Both conventions also enjoyed the full support of the oil industry service companies.

One unexpected incident arising from the organizational discussions between AAPG and SVG in 1993 had to do with the drinks at the Icebreaker. SVG's representative Leslie Escoffery insisted not only that whisky (Scotch, of course!) be served in addition to wine and beer but, also, that the drinks be free for the attendees. AAPG's representative had visions of the party breaking the bank, while the locals feared that the kickoff to the conference would be a social disaster! Fortunately Schlumberger generously agreed to sponsor the opening cocktail, which ensured a very successful and happy Icebreaker—and money was made for both societies.

The 1993 SVG/AAPG convention in Caracas having been a success, AAPG proposed to hold the 1996 AAPG ICE in Caracas—to which SVG and PDVSA quickly agreed. Thanks to the trust and good will gained through the previous convention, the organization of the 1996 convention went very smoothly. AAPG's man-on-the-ground in Caracas was the highly-efficient Bruce Lemmon, who kept things humming smoothly with his ability to anticipate any threat before it turned into a problem. Bolstered by the 1993 success for Venezuela's international image, PDVSA provided even more support than before and José Rafael Domínguez, a director of the company, chaired the organizing committee. As in 1993, the price for geoscience students to attend in 1996 was purposely made very low and PDVSA helped defray the attendance cost of those from outside the capital—and the students happily took massive advantage of the opportunity.

In addition to the regular convention field trips, the three Venezuelan operating companies organized VIP visits to the oil fields on the Saturday before the convention. I remember taking a group of 18 senior executives and Tulsa AAPG friends on a plane trip from Caracas to western Venezuela. They saw Maraven's heavy oil steam-soak recovery activities near Lagunillas and later the company's production operations in Lake Maracaibo. I was especially pleased when, after chugging along in a boat for about an hour past oil wells, drilling rigs, production platforms and gas injection facilities, one of the visitors commented to me that he hadn't seen the sheen of a single drop of oil in the water. (Yes, Maraven's people on the ground took great pride in being environmentally responsible operators!)

One change the organizing committee of the 1996 ICE introduced was having two technical co-chairs, one in the

United States and one in Venezuela. Nahum Schneiderman, Chevron's superbly able worldwide geological "ambassador," was the American technical co-chair, and I was the Venezuelan one. Having two co-chairs in different countries but cooperating effectively resulted in a technical program that had a good mixture of local and international papers.

From 1991 to 1997 I was Maraven's exploration and production manager at the Caracas head office. The main task we were given by the board of directors was to quickly increase the company's reserves of light and medium gravity oils. The E&P team proposed that the most effective way of doing this was by re-exploring the company's entire Lake Maracaibo producing acreage with 3-D seismic—and late that year we began recording a 3,500 km^2 survey. At that time it was one of the world's largest surveys—and very likely it was one of the most complex logistically ever, since it was carried out over producing fields, with all the complexities that hundreds of active wells and production facilities entailed.

To interpret the data we set up teams of seismic interpreters, production geologists, and reservoir engineers. In order to ensure that all were "on the same page" we sent the reservoir engineers to a week-long seismic interpretation course—and some became very adept at it. Additionally, we were not shy about hiring international consultants to help us in this task.

The interpretation of this data revealed a large number of untested traps, the drilling of which over the next few years annually added 200-300 million barrels of oil to the reserves.

I also had two additional and personal priorities to the one given to me by the board of directors as E&P manager. The first one was the training of Maraven's E&P staff, many of whom were sent by the company for graduate studies in Europe and North America. I had learned the trade because the people before me had taken the trouble to teach my generation and me; I tried to do my best to carry on with this tradition. My second priority was the preservation of the technical and historical data of the company's oilfields. This included storage of thousands of seismic tapes in Caracas, and of cores, drill cuttings and oil samples from western Venezuela in a modern facility in that part of the country.

In 2010 AAPG president Dave Rensink invited me to chair the History of Petroleum Geology Committee. Even though I had no experience in this area, I accepted the challenge—and I'm glad I did. I quickly realized that there was a "market" in AAPG for HoPG that could be better served by moving the HoPG sessions at the annual conventions from the customary Sunday afternoon to a regular weekday. We tried this first at the Istanbul ICE in 2014, at which the HoPG session was held on a Tuesday, embedded in the regular technical program. The result was that HoPG competed successfully in attendance with the other sessions that day. Even though the change was made at APG ICEs, it is something that remains to be modified at the ACEs.

The other change I introduced was a monthly Historical Highlights column in the *AAPG Explorer* magazine, the first article of which was published in February of 2011 – and I take this opportunity to thank the many writers who have contributed to make this column one of the *Explorer's* most widely read.

In closing, I have enjoyed a varied and interesting career, I have had the privilege of working with some wonderful people, participated in enlightening discussions and made many long-lasting friendships.

Thank you!

Hans H. Krause

JEFFREY B. ALDRICH
Honorary Member Award

Citation—Honorary Membership requires a strong commitment to both the Association and to the profession over a sustained period of

years, and can be measured by a significant track record of both demonstrable ability and "giving back." Jeff Aldrich is richly deserving of this prestigious award by every measure!

Jeffrey B. Aldrich is a well-deserving recipient of AAPG's Honorary Membership award. Jeff was born in Charleston West Virginia and grew up in southern Florida. He displayed a fascination and aptitude for physics at an early age, for which he credits the inspiration of his 12th grade physics teacher. Jeff liked how physics made sense and was able to "explain the world and how it worked." During high school he was influenced in his search for a career by the TV shows "Sea Hunt" and "The Undersea World of Jacques Cousteau," which interested him in being an oceanographer. Jeff's father took him to the local university where a professor of oceanography told him that it would be best if he first pursued an undergraduate degree in the basic sciences, so with his earlier favorite subject in mind, he went off to Vanderbilt University to get a physics degree. At Vanderbilt he met the two true loves of his life, his bride-to-be Elaine, and geology. As soon as Jeff met Elaine, he knew she was the one; as soon as he took his first geology course he decided that was to be his life calling! So he changed his major and graduated with a B.S. degree in geology in 1977. During college he was involved in campus politics and took on one of his first of many leadership roles, as head of Vanderbilt Undergraduates in Geology (VUGs). When it came time for graduate school, Jeff's father was not thrilled with the idea of geology but when he realized that Jeff's mind was made up, he advised him to apply to graduate programs in Texas because the "oil and gas companies like to hire from those schools." Jeff chose Texas A&M University, mainly because they offered him a full scholarship if he were to teach some labs—the first brush of the teaching and mentoring roles that were to be so much a part of Jeff's later career. After one year of missing her terribly, he proposed to Elaine, and she joined him in College Station as his wife!

With his M.S. in geology from Texas A&M in 1983 in hand, this new "Aggie" set off on his career journey. His first job was as a wellsite geologist with Pennzoil in Houston. Early on at Pennzoil he was part of the team credited with a major discovery of a large gas field off Mobile Bay. His contribution to this discovery led to his promotion within the company and to his being chosen to participate in the company's geophysical training program. Coming through the program in the top 3, he was given progressively greater and greater responsibilities, including managing leases domestically and internationally. Jeff developed the locations and targets for, what was at the time, the deepest onshore well test in the United States: the Oxy Danville Mtn 1. Jeff then went on to manage teams for various federal offshore lease sales in Alaska, California, Gulf of Mexico, and Cook Inlet.

In 1990 Jeff joined Maxus Energy, first in Dallas, where he compiled an impressive portfolio as exploration project manager for various exploration activities in Ethiopia, Ogaden Basin, Tunisia, Senegal, Cote d'Ivorie, Egypt, Morocco, and southern Nevada. In 1993, Maxus sent Jeff and Elaine, and their two children Leigh and David to Jakarta, Indonesia, where he was part of a team charged with revitalizing exploration in a mature basin and commercializing one of Indonesia's largest marginal fields. Another role that Jeff held was as a mentor and trainer of several of Maxus' bright young Indonesian geoscientists, some of whom are now leaders in their own right in the Indonesian petroleum industry.

While in Indonesia (which is where I first met him) Jeff was instrumental in the efforts to launch the new Asia Pacific Region and in bringing AAPG ICE to Indonesia for 2000. Jeff was part of the brain trust (Peter Lloyd, Chuck Caughey, and yours truly) that saw the setting up of the International Regions by lobbying to change the AAPG bylaws, which at that time had only the Sections as membership location options. Jeff was also our point man in getting the ICE recommendation accepted by the then Executive Committee. That was no easy matter, as the political situation in Indonesia was quite unstable at the time and the original location, Jakarta, was

deemed too dangerous. The brain trust devised an alternative location, still in Indonesia, resulting in the very successful Bali 2000 ICE.

The Aldriches left Indonesia in 1998 and moved to Houston, and later Denver where Jeff took a position with Forest Oil International as chief geologist in charge of most of the company's geological and drilling operation activities. He was instrumental in the Force Energy merger, whereby the company acquired a large offshore Gabon block (pre- and post-salt) and a coal bed methane (CBM) block in the Bowen Basin, Australia. One of Jeff's additional responsibilities, again, was to mentor new geoscientists in some of the state oil companies. In 2004 Jeff formed Energy Resources Advisors as president and chief geologist where he stayed until another opportunity along his career path beckoned: Jeff accepted the contract position of chief geologist for PetroSA in Cape Town, South Africa in 2005, arriving in time to find out that Cape Town had just been selected to host the 2008 ICE. It was obvious that both PetroSA and AAPG should request Jeff to be general vice-chair of this event! Moving on at the end of the contract, Jeff's next stop was in Chesterfield, England where Jeff served as vice president of exploration for Greenpark Energy, the UK's largest CBM company. Perhaps it was the British weather, perhaps it was the recurring lure of the Far East, but in 2011 Jeff joined Dart Energy in Singapore, as their portfolio manager and head of exploration. After 2 more memorable years in the tropics, Jeff was lured back "stateside," returning to Denver in 2013 as a partner in MHA Petroleum Consultants, where he is happily working at present. At MHA Jeff has the role of lead geoscientist, responsible for a milieu of International and United States domestic activities that include conventional and unconventional reserve and resource evaluations in the United States, (Rockies, California, Appalachia, Mid-Continent), Europe, Africa, Australia, New Zealand, China and Kyrgyzstan. Interestingly, in assuming this position, Jeff transitioned from working for an operator to having a consulting position, which provided him the opportunity "to teach as well as do." In this present incarnation, Jeff teaches courses around the world through the PetroSkills Consortium and mentors both within MHA and as an official mentor in the Rocky Mountain Association of Geologists (RMAG), where he shares his knowledge and experience with young geoscientists in the Denver region. When asked what he gains from mentoring his response was "energy, perspective, and I never want to stop learning."

Jeff's technical abilities have always impressed. He was at the leading edge of the integration of geophysical and geological data and in bringing the understanding of petroleum systems to Indonesia. Jeff was, and still is, a wonderful teacher and mentor to an entire upcoming generation of young professionals. He was also a pioneer in CBM exploration in the Asia Pacific, European, and African Regions and served as regional Consoler to the EMD. His more recent contributions to the Division of Environmental Geoscience (DEG), as president, are also impressive. He has contributed 5 oil and gas related papers and 12 oral or poster presentations at AAPG meetings, plus many other presentations to SPE and other affiliated societies.

Jeff has been a member of AAPG since 1979. He began his service to AAPG through the Houston chapter, Houston Geological Society. He was elected early in his career to the House of Delegates (HOD) but had to move so often during his career that he only had limited opportunity to volunteer and participate as much as he would have liked. Nevertheless, he remained involved by serving as an alternate HOD delegate and was able to stay current with topics and issues relevant to AAPG governance (such as changes to the bylaws or constitution). He has been recognized for his work in AAPG with the Distinguished Service Award (2002) and Certificates of Merit (1991; 2008). Outside of AAPG and RMAG Jeff has been a Boy Scout leader and is active in his church.

Frequent relocations: Houston, Dallas, Jakarta, Cape Town, Chesterfield UK, Singapore, Denver—Jeff has certainly had a wild whirlwind of a career. Undoubtedly, his many roles have

broadened his perspectives immensely. As he himself states "It has been a lot of work, sometimes challenging, but we have had lots of fun doing it—lots of stories!" Jeff credits his various postings as creating value in his life far greater than any monetary reward ever could, by allowing him to travel and experience different locations, cultures, foods, and most important, the opportunity to make lifelong friendships all over the world! As one such beneficiary of Jeff's friendship, it is a distinct privilege and great pleasure to provide his biography upon his receiving this prestigious award. Honorary Membership requires a strong commitment to both the Association and to the profession over a sustained period of years, and can be measured by a significant track record of both demonstrable ability and "giving back." Jeff Aldrich is richly deserving of this award by every measure!

John Kaldi

Response

There really is no greater professional honor then to be selected by your peers for Honorary Membership in an Association that you hold in such high esteem. I am truly humbled to have been selected and I thank Ms. Brandy Butler for the nomination, and Dr. John Kaldi for writing my biography. I also thank those that wrote to support my nomination and for the Nomination Committee of the Advisory Council for their consideration, and the selection of the entire Advisory Council and Executive Committee.

I joined AAPG as soon as I had a job with Pennzoil back in 1979 and AAPG, and my wife, Elaine, have been the two constants in my career ever since, both standing beside me every step of the way. I did not grow up wanting to be a geologist, growing up in South Florida does not lend one to think about rocks. Instead, as John wrote, I had my eyes on being an oceanographer. However, by getting a basic science background first I did meet my two loves, Elaine and geology. There are two individuals that I need to single out for special recognition for helping me get involved in AAPG from an early time. The first is Mrs. Martha Lou Broussard whom I met through the Houston House of Delegates. I was fortunate to be elected, very early on, into the Houston House and Martha Lou helped show me exactly what an active, responsible delegate was supposed to do. We worked on several membership issues together, back when that involved either calling someone on a rotary phone or walking to their office (no email or Internet). The second person is Nahum Schneidermann of Chevron, whom during an AAPG Annual Convention in San Francisco I happened to meet on an elevator and he graciously took me, a complete stranger, around and introduced me to the entire Executive Committee of AAPG then sat down with me and instructed me on how to get involved and how to get my company to send me to every annual meeting. He has remained a friend and mentor ever since. Through their efforts I got on many different committees, from Membership to Computing, from International Relations to the 21st Century Ad Hoc Committee. This work, not fun but often fascinating, gave me much deeper insights into the work that many other very committed members were doing.

In 1993 I was working for Maxus Energy when they posted me to Jakarta, Indonesia for a two-year rotation. I stayed 5 years but while there I met an extraordinary group of AAPG members in Peter Lloyd, John Kaldi, Chuck Caughey, Richard Lorentz, Herman Darman, Ron Noble, and more. The international regions of AAPG had not been formed at that time and there was no affiliated chapter in Indonesia so we had to work hard, through other chapters in Asia and Europe, to push through the HOD the legislation to recognize and organize international regions. We also organized the Bali 2000 International Convention while at the same time organizing the annual IPA convention and technical events. It was intense but there was a sense of comradery and working for a greater good. When I left Indonesia in 1998 I thought I would never return to live in Asia but this is a changing industry and I did return in 2011 to Singapore, just in time for the ICE in 2012. Now MHA Petroleum Consultants has brought me back to Denver and allowed me to continue my AAPG activities and for that I am ever grateful.

One of the other stops along the road, one you never expect, is

when I accepted the position of chief geologist for PetroSA in Cape Town, South Africa in 2005. I arrived to find out that Cape Town had just been selected to host the 2008 ICE and both PetroSA and AAPG requested that I organize the event. I turned out to be a great event due to a fantastic team, led by Dr. John Snedden and Jean Malan on the technical side and Tony Cessford on the operations side plus fantastic help up and down the team, a true team effort. What I did not know when I accepted was that the day after the ICE closed was to be my last day in Cape Town as my three-year contract would be up and I moved on to England to another posting. No place has ever been so hard to say goodbye to. Now, 10 years later AAPG is returning the ICE to Cape Town and K.B. Trividi, a geologist's geologist that I had the pleasure of helping recruit to PetroSA, is organizing this ICE. It looks to be another great event.

I have truly been fortunate in my career to have lived all over the world and in some very wonderful places. Through AAPG I have made some wonderful friends and had wonderful experiences. Elaine has been there with me the entire time and I could not have and would not have done it without her. To her goes my utmost thanks and gratitude. Somehow in all the chaos she managed to keep the house together and raise Leigh and David into the two greatest children of all time. Without her I could not have spent the time doing the work for AAPG that has led to this award.

Jeffrey Brooks Aldrich

EDWARD A. (TED) BEAUMONT
Honorary Member Award

Citation—To Edward A. Beaumont, in recognition of his devotion to the profession of petroleum geology and to the AAPG, especially in the application of creative thinking to enhance education, publications, service, and the exploration of new ideas and concepts.

Edward A "Ted" Beaumont is an AAPG member thoroughly immersed and devoted to the profession of petroleum geology. He is, and has been for many years, a tireless contributor through lectures, education programs, and publications and service in the governance of AAPG. This dedication to the profession and the Association, combined with his enthusiasm for the science, makes him an ideal recipient of the Honorary Membership Award—a natural choice.

Ted's passion for geology is a "natural" as well. He was born a geologist's son in Albuquerque, New Mexico, in 1951. His dad, Edward C. Beaumont, took Ted, his two brothers, younger sister, and their mother Caroline on many field trips to outcrops in the areas around Albuquerque, Gallup, and Farmington. Realizing that he was part of a captive audience regardless, Ted was inspired to seek understanding of "what the heck he was showing us."

He remembers the New Mexico outcrops as "in technicolor, barren of foliage and soil cover." Family vacations often featured trips to locations like Monument Valley and Bryce Canyon. In due course, each of the four siblings came to know the stratigraphic column in detail but Ted was the only one "bitten" by the geology bug. Ultimately these outings created in him a scientist always curious about the processes of nature. They became a key component in his innate ability to explore.

Ted earned a bachelor's degree in geology from the University of New Mexico, graduating in 1974. He then officially became a "Jayhawker" at the University of Kansas where he was awarded his master's degree in 1977.

His professional career, however, was launched a year earlier in 1976, with Cities Service Oil Company. It was there that he met geologists who had tremendous positive influence on his career—Rod Tillman and Randi Martinsen among them. While at Cities Service Ted conducted field studies throughout North America and generated many prospect models in the Powder River, Alberta, and Anadarko basins.

Having become a member of AAPG in 1974, Ted joined the

Association's professional headquarters staff in 1980. As science director he was responsible for all published aspects of petroleum geology science including generating new publications, developing new schools and field seminars, and maintaining and improving the quality of the continuing education program and the *AAPG Bulletin*.

He accomplished these duties with apparent ease and great competence, but the amazing thing is he did it while at the same time undertaking, along with co-editor Norm Foster, the mammoth project of *The Treatise of Petroleum Geology*. This thirty-volume publication, designed to celebrate AAPG's 75th anniversary in 1992, required years of research, compilation of data, editing, planning, and writing. A tremendous achievement professionally, it also afforded Ted the opportunity to work closely with Norm, who became a treasured friend and mentor. His favorite volume is the last in the series, the one he and Norm co-wrote and co-edited, *Exploring for Oil and Gas Traps*.

While at AAPG Ted also developed "Creativity in Petroleum Exploration" a timely and timeless short course which he and Norm, and later Doug Strickland, taught together across the country and in locations as far-flung as Scotland, China, and Australia. Its impact on the profession is surely far-reaching as well.

Today Ted is best known for his career as an independent consulting geologist. He has generated oil and gas drilling prospects in onshore United States, concentrating on Texas and the Mid-Continent, but also has prospected in the Rocky Mountains.

In the Mid-Continent Ted marketed oil and gas drilling prospects in Oklahoma, Arkansas, and Kansas. Prospects were in a variety of formations including Granite Wash, Cottage Grove, Red Fork, Skinner, and Bartlesville, Atoka, Morrow, Hunton, Viola, Simpson, and Arbuckle. In the Rocky Mountains he developed prospects in the Green River Basin of Wyoming and the Rio Grande Rift of New Mexico.

In addition, Ted consulted for an assortment of independent and major oil and gas companies in various capacities including generation of drilling prospects, overseeing development projects, and assessing the value of producing properties.

From 2010 to 2013 he worked as a senior geologist for SM Energy in Tulsa generating unconventional resource plays in North America.

Currently Ted is working for Cimarex Energy Company in Tulsa as a senior geologist. He is part of an exploitation team in the Delaware Basin of New Mexico looking for bypassed pay and potential exploration opportunities, mainly in the Wolfcamp and Bone Spring reservoirs. This follows assignments in southern Oklahoma and the Gulf Coast generating recompletion prospects that led to drilling programs in or near Cimarex oil and gas fields.

In addition to all this and more, Ted is a consummate volunteer for both national and local societies. He served admirably as AAPG president 2012-2013 and AAPG secretary 2007-2009. He is a Certified Petroleum Geologist of the AAPG Division of Professional Affairs. He is active in the Tulsa Geological Society where he is an honorary member and past president. He also is a member of the Houston Geological Society and an adjunct professor in the University of Tulsa Department of Geosciences.

His many honors and awards include The University of Kansas Erasmus Haworth Distinguished Alumni Award, 2012; AAPG Award of Excellence for Service to AAPG, 2009; Tulsa Geological Society Honorary Member, 2007; AAPG Distinguished Service Award, 1992; AAPG Special Award for compiling and editing the *Treatise of Petroleum Geology*, 1991; Australian Petroleum Exploration Association Distinguished Lecturer, 1991; Special Lecturer, China University of Geosciences, Beijing, Wuhan, and Chengdu, 1990.

Ted's many endeavors are supported by his wife, Carolyn, family and many friends. One of the characteristics of Ted's career I admire most is his natural mentoring ability to build long-lasting relationships with so many of the people he meets.

He is known for his mentorship of others, but he has himself been mentored by some of the best — Norman Foster, Dan Hartman, John Shelton, John Hobson, and Robert Sneider. He recognizes each of them for generously sharing their unique approaches to

geology, exploration and professionalism and credits them as being critical for to his professional development. Many of us have benefitted from Ted's good fortune because he believes in paying-it-forward and has generously passed-on knowledge throughout his career. His creativity and passion for petroleum geology is recognized by all. I am honored and grateful to know him both as a colleague and a friend.

Richard Fritz

Response

I am deeply honored to be awarded honorary membership in the AAPG. As a member for over 35 years, I have experienced the benefits of being an AAPG member and greatly appreciate the value that AAPG has to people, like me, who prospect for and develop oil and gas fields.

I joined AAPG in 1974. It was about that time that I decided to become a geologist, which made my geologist dad very happy. He handed me an AAPG student member application and said, "if you plan to be a professional you need to join." Of course, as a student, I didn't really know what AAPG was or how important it would be to me. I never dreamed that I would ever be fortunate enough to be employed at AAPG as the science director or to serve as AAPG president.

It is difficult to express what AAPG has meant to me. It was an organization where I learned, worked, and grew. The recognition that the Honorary Membership Award represents means everything.

Special thanks to my geologist dad, Edward C. Beaumont, who inspired me to become a geologist. My brothers, sister, and I were introduced to geology when we were very young. Dad gave impromptu family geology lessons when he would stop at road outcrops as we traveled in New Mexico. After a while, he expected us to recognize formations in road cuts and remember their stratigraphic position and age. This was all very tedious to me until I took physical and historical geology classes at the University of New Mexico. Then the light bulb went off and understood why he was so enthusiastic about geology. I knew then what I wanted to do for a living.

After receiving my M.S. degree from the University of Kansas, I became an actual petroleum geologist when Dick Donnelly hired me to work in a basin study team at Cities Service Oil Company. At Cities Service I was fortunate to work with great geologists like John Hobson, Randi Martinsen, Rod Tillman, Dick Scott, and many others.

Five years later, my career path took an unexpected turn when Fred Dix, the executive director of AAPG, offered me the job of science director at AAPG, It was a huge detour from my career plans but I decided to take it. While at AAPG headquarters I worked with its capable staff that included Fred Dix, Don O'Nesky, Jim Briggs, Larry Nation, Vern Stefanic, and Kathy Watson. Also, during my time at AAPG, I was fortunate to become acquainted with some of the special people that made it into such exceptional scientific organization.

Five of those people were Norm Forster, Dan Hartmann, Jim Gibbs, John Shelton, and Bob Sneider. Each of them helped me begin my career as an independent petroleum geologist. Jim Gibbs gave me the confidence to go on my own. Bob Sneider convinced me to focus on United States petroleum exploration. Dan Hartmann taught me how to apply petrophysics to exploration. John Shelton was always available to read and edit my publications. Norm Foster and I went on to do a lot together over the next 20 years.

While I was still working at AAPG, Norm Foster asked me why AAPG had never published a book on petroleum geology. I said something like, "no one was ever crazy enough to try." Next he asked me, "why don't you and I do it then?" I said "OK, let's do it!" Over the next 20 years, Norm and I worked on that book, except that book became a series of more than 30 different volumes. We had an advisory board for the Treatise that grew to over 240 petroleum geologists. We named the series the *Treatise of Petroleum Geology* after the *Treatise of Invertebrate Paleontology* published by the University of Kansas where both of us received geology degrees.

Norm and I became interested in creativity when we heard AAPG president Ted Bear speak about the importance of creativity to petroleum exploration. Ted's talk

inspired us to put a talk together on the same subject. We presented it at a meeting of the Rocky Mountain Association of Geologists. Eventually that talk evolved into an AAPG short course presented by Norm, Dick Vincelette, and me. We presented it all over the United States. Later, when Norm or Dick weren't available, I gave the course in places like China, Australia, and Scotland.

Over the 30 plus years that I was an independent, I prospected for petroleum by applying the concepts I learned from AAPG and my mentors. Those prospects were created with a lot of help from my friends and colleagues who included Norm Foster, Dan Hartmann, Rick Fritz, Ben Donegan, Pat McConn, Jeff Roberts, Michael Mann, and Paul McDaniel.

During the fiscal year 2007 to 2008 I was privileged to serve as AAPG secretary and during fiscal year 2012 to 2013 I was privileged to serve as AAPG president On those AAPG Executive Committees, I served with Paul Weimer, Lee Krystinik, Scott Tinker, Will Green, John Hogg, Marty Hewitt, Gretchen Gillis, Randi Martinson, Steve Laubach, Debra Sacrey, Stuart Harker, Tom Ewing, Marv Brittenham, Jim McGhay, Jeff Lund, and Denise Cox. Thanks to all of them for their friendships and support.

I am now working at Cimarex Energy Co. where I have been for the past 5 years. I want to thank Cimarex for all of its support.

Finally, a special thanks to my wife, Carolyn, and to my mother, Caroline. My mother for always believing in me. To Carolyn for all of her love and support. She is and will always be my inspiration.

Edward A. (Ted) Beaumont

GRETCHEN M. GILLIS
Honorary Member Award

Citation— Gretchen Gillis is an ambassador for AAPG whose leadership leverages diversity and challenges the status quo to deliver on the organizational promise of AAPG.

Born in New York and raised in Connecticut, Gretchen Gillis came to the oil patch obliquely but with determination and a unique panache. She is the daughter of the late John Gillis, a chemical engineer who worked in refining throughout his career, and the still-feisty Marcia Vogt Gillis, a former English teacher. Gretchen inherited her love of travel, international projects, and language from these two wonderful people, and she is passing her curiosity about the world on to her daughter Hazel, an art student and self-trained entomologist.

En route to Houston, Gretchen graduated from the Pre-College Division of the Juilliard School (she has played viola at a professional level although not professionally), earned a B.A. from Bryn Mawr College, and an M.A. from The University of Texas at Austin with a thesis on the Precambrian Coal Creek Serpentinite in the Llano Uplift of central Texas. After graduation, and despite her love of metamorphic rocks, she was hired by and worked for two exploration and production companies, devoting herself to learning on the job in a sink-or-swim environment.

Subsequently hired by Schlumberger, Gretchen built the Oilfield Glossary, which is among the most heavily trafficked parts of the Schlumberger website. Schlumberger encouraged Gretchen's love of the craftmanship of writing (although her husband Dave Cook, from the UK, is currently teaching her a slightly different version of the English language), and provided important opportunities to learn a broad range of technologies and global operations.

Schlumberger also supported Gretchen's considerable AAPG volunteer activities, including funding for travel and the underwriting of 50% of her office hours for the nontrivial work of the AAPG Elected Editor. Work at Schlumberger provided a springboard for her move to Aramco Services Company, the United States subsidiary of the

world's largest oil company, Saudi Aramco, which is continuing the generous company support of her volunteer work with AAPG. I have known Gretchen for several decades and have always been impressed with her insights, knowledge, and enthusiasm. She has been a strong supporter of our organization as evidenced by her service on some 25 AAPG committees, many of which she has chaired, and by her service as AAPG Elected Editor, which is probably the most demanding and time-consuming of the AAPG Executive Committee positions.

Gretchen epitomizes the ideal of the strong, well-informed, and devoted women who contribute so much to our industry and to AAPG. She is passionate about so many of the AAPG programs, including the Imperial Barrel Award student competitions, Young Professionals, PROWESS, and a variety of international programs. Following her success as Technical Program chair for the 2014 ACE, Gretchen continues to contribute to ACE and ICE programs in the background by recruiting volunteers, reviewing abstracts, and assisting with various special sessions. Gretchen has truly been an ambassador to the world for AAPG, while at the same time being a staunch supporter of AAPG internally, contributing as Trustee Associate to both the AAPG and SEG Foundations. Equally important, Gretchen has always been a strong advocate for diversity within AAPG and the strength it provides to our evolving organization. Gretchen also supports our member and sister societies, being an active member of AESE, AGU, AIPG, AWG, HGS, SEG, and SPE.

Gretchen is not without humor, introducing herself at meetings on occasion with, "Hello, I am Gretchen Gillis and I have opinions!" During her tenure as AAPG Elected Editor, she acquired and embraced the well-deserved nickname of "Chainsaw," which stuck, especially among her friends, although I don't believe it's on her business card yet. Gretchen defines "pro-active" and "diligent," and is anything but a passive contributor to petroleum-related geosciences, the petroleum industry, and to AAPG. During her career, she has proven her ability to lead and supervise people and to manage complex projects, and has developed an extensive track record of researching, synthesizing, writing, and editing technical information accurately in print and electronic media for diverse exploration and production audiences. More recently, she has devoted her efforts to instructing and mentoring in both petroleum geology and scientific writing, including teaching a short course on how to write for the *AAPG Bulletin*.

Gretchen has an enviable visibility both in the industry and within AAPG, and I had no trouble finding an international cadre of people willing, even eager to write letters of support for Gretchen's nomination for this Honorary Membership award. Throughout their letters, the words "enthusiasm," "selfless," "active," and "diligent" are common.

Both AAPG and the petroleum industry have been better for Gretchen Gillis' participation, and she is well deserving of Honorary Membership in the AAPG. I am delighted and honored to have been asked to be her biographer.

John Lorenz

Response

Active volunteers routinely attest to receiving encouragement to join and serve in AAPG. An invitation to a meeting of the Publications Committee back in the Pleistocene—when committee meetings included a free lunch—put me on a path of continuous engagement with AAPG that now exceeds 20 years. I heartily recommend volunteer service to students, young professionals, and anyone seeking opportunities to learn, network, and develop useful skills, as I will explain.

Aramco Services Company and Saudi Aramco, and previously Schlumberger, generously encourage and support my service to AAPG. This support is granted with the realization that service to AAPG benefits companies as well as individuals. For example, many things I learned as Editor and through conference program committees pay dividends as I teach others how to write strong abstracts and manuscripts. Interacting with leading scientists has made me a better geologist. Extracting work from unpaid committee volunteers is a great way to learn leadership skills. Even now, as AAPG appointee to the board of GeoScienceWorld, I am learning about broader aspects of scientific publishing.

I thank those who have supported giving me this award

and especially John Lorenz for his generous comments. In addition to John, I thank many colleagues who have helped me over the years. I would like to highlight a few, knowing that it is impossible to prepare a comprehensive list.

First are people who taught and still teach me geology. For example, the late Dan Tearpock's subsurface mapping course was rigorous and confidence-building. Geology 101 with Maria Luisa "Weecha" Crawford at Bryn Mawr College prompted me to major in geology. Lucian Platt, also at Bryn Mawr, encouraged my interest in structural geology. Weecha's advice to go to Texas was paramount when it was time to commit to a graduate program. Sharon Mosher at The University of Texas at Austin was an excellent advisor for my master's research, and I continue to look to her as a role model for thoughtful leadership. Graduate students in the university consortia I visit reveal new ideas about geology that remind me that we must continue to advance science. Now, in my dream job, I continue to learn from colleagues in Saudi Aramco about the world's largest oil fields.

People who taught me how to write have helped me find interesting ways to parlay my skills into continuous employment. They include Lisa Stewart and Rana Rottenberg at Schlumberger, and anyone whose manuscripts I have read.

Other people have inspired me and given me courage to tackle difficult jobs. Ernie Mancini told me that being AAPG Editor would be a glamorous and high-paying job. He was right—few things are more glamorous than dealing with manuscripts into the wee hours of the morning. John Lorenz reminded me that I would not be fired as Editor for making difficult and unpopular decisions. He was right, too—no one of sound mind would run off someone whose *affectionate* nickname is Chainsaw. Challenging conversations about diversity and inclusiveness with Saudi Aramco colleagues and friends like Chris Jackson, Marsha Bourque, and numerous AAPG Young Professionals are refining my sensibilities about where we need to make progress. Dear friends like Lutie Mora, Tim Diggs, and the Palace People have provided lots of encouragement.

In addition to wonderful friends, I have my family to thank for their love and support and for outstanding academic opportunities that have led to a fascinating career path. Dear Mom and Dad, along with my five siblings, ignited my passion for seeing the world. I am hoping to visit the remaining 75% of the countries in the world with my traveling companion Dave Cook, who is a great sounding board about all things AAPG. My beloved daughter, Hazel, is also a constant source of inspiration through her ability to find beauty in nature and her quest to always do her best.

I share this great honor with family, friends, and colleagues—even the engineers to whom geologists are superheroes—who have made many years of work into many years of adventure and learning. I look forward to many more.

As I consider the future of AAPG, I know that there are good days ahead. Our organization offers a wealth of applied science that is harnessed for the benefit of society. The AAPG Foundation exists for AAPG to accomplish even more as it leverages the knowledge and skills of its members worldwide. As geologists, we know it is not "us versus them," but rather "us with us" because of our ability to apply the analogs and lessons of other geologists no matter where we work or where the ideas come from. I hope that future awardees will be able to reflect on our progress as a society and as scientists in ways that bring together the diverse wealth of talent that exists worldwide.

Thank you for this Honorary Member Award.

Gretchen M. Gillis

JEFFREY W. LUND
Honorary Member Award

Citation—Jeff Lund is deserving of AAPG's "Honorary Member"

award for his extensive contributions to AAPG, focused on governance and membership issues and outreach to young professionals.

It is stated that AAPG's Honorary Member award is "bestowed upon persons who have distinguished themselves by their service and devotion…" and having the pleasure of knowing and observing Jeff Lund, he certainly meets the criteria necessary for such an award and recognition from his peers of his accomplishments within the AAPG. I have had the privilege and honor of working with Jeff on several occasions for the Houston Geological Society (HGS), Gulf Coast of Geological Societies (GCAGS), and for the AAPG and can attest that he is certainly worthy of this recognition.

Jeff is what I call "a silent worker" in that he will complete the charge he has been asked to do, but not bang his drum calling attention to what he has done and accomplished. For example, by examining his body of work for the AAPG he has served on numerous committees and received six awards/Certificates of Merit recognizing his service to the AAPG thus far and this doesn't include his time, and dedication to the HGS, GCAGS, Society of Independent Professional Earth Scientists (SIPES), and other nongeological originations. These committees have tackled everything from relative simple issues to hotly contested and controversial issues, all for the betterment and longevity of the AAPG.

Let's explore in a little more detail about Jeff's career up to the present. Jeff is a native of Jamestown, New York, born and raised on glacial drift and Devonian shale 50 miles from Drake's well.

Jeff became an AAPG Member in 1972 at the urging of his mentor at Pan American Petroleum, Chuck Noll. Chuck recruited Jeff from the geology department at Case Western Reserve University, in Cleveland, Ohio in 1969 as the result of a fortuitous friendship Chuck had with Professor Frank Stehli, chair of the Case Western Reserve University Geology Department, via the Tulsa Research Lab of Pan American (later Amoco). Chuck was the first of many important AAPG mentors he benefited from including Dan Smith, Jerry Cooley, Pete Rose, John Amoruso, Bob Ardell, Marvin Smith, Gene Mear, Paul Weimer, Robbie Gries, Milton Dobrin, Marlan Downey, and Michel Halbouty, and many other heroes and colleagues along the way.

That unexpected job offer from Pan Am led Jeff and Marti to get married in July, 1969 and they immediately drove to Houston in a unair-conditioned Chevy to start work respectively as a geologist at Pan Am and as a nurse at the Texas Medical Center. Forty-eight years later they're still in Houston and AAPG remains a constant in Jeff's career. He and Marti have become Texans over the decades. Their daughter and granddaughter live near Boston but that connection allows frequent travel to the northeast to revive memories of shoveling snow.

Truth be known, Jeff's original passion was to become an astronomer as Sputnik, the moon race and science in general were the headlines of the 1960s. Majoring in geology had numerous benefits over the astronomy route, such as actually getting a job! Incredibly fortunate though, was the great opportunity AAPG has afforded Jeff to actually become friends and get to know astronauts and fellow AAPG Members, Jim Reilly and Jack Schmitt. Mutual interest in astronomy cemented many AAPG friendships with fellow "stargazers" and "space geeks." Equally exciting was the opportunity to have both of AAPG's "real" astronauts speak and lead events for AAPG and HGS over the years.

Besides his Bachelor of Science in geology with honors from Case Western Reserve University, Jeff also holds a Master of Science in geophysics and an M.B.A. in finance, both from the University of Houston.

Jeff is currently a shareholder and manager of business development for Layline Energy LLC, a privately owned oil company based in Houston. He also consults independently and is a 50% partner in Corridor Oil and Gas LP with production in the Gulf Coast conventional and Eagle Ford horizontal plays and in his personal geologic favorite, the Permian Basin.

Previously he held positions as vice president of worldwide exploration at Kerr-McGee Oil & Gas and Ashland Exploration. Jeff was an exploration manager with Burlington Resources, and Southland Royalty Company and

a district geologist with Clark Oil Producing Company and Amoco (Pan American). He has worked international exploration and in many North American basins as well as spending 2 years in Aberdeen, Scotland as a member of Kerr-McGee's North Sea management team. Living in Aberdeen was a life experience and gives them endless stories about haggis, weather, what motivated Braveheart, and what "real" golf courses are like.

Jeff has held leadership positions as president of the HGS and president of the GCAGS. He is the recipient of numerous awards and honors from these societies, notably the Jerry Cooley Award and Honorary Life Membership from HGS. He is a board member and public relations chair of SIPES Houston chapter and leads its "Maps in Schools" outreach program to young students.

His AAPG service has included serving as vice-chair of the Foundation Trustee Associates 2017, chair of the House of Delegates and member of the AAPG Executive Committee 2011-12, committee chair of the AAPG Membership Committee, general chair of the 2002 ACE, president of the Gulf Coast Section of AAPG, DPA Board member, Gulf Coast councilor to the AAPG Advisory Council, chair of the HoD ad hoc Committee on AAPG Governance under Paul Weimer, member of the House of Delegates and member of numerous other AAPG Committees. He serves as board chair of the AAPG International Pavilion. He has received a Distinguished Service Award from AAPG and Certificate of Merit from DPA.

His passion during most of his AAPG service has been directed towards membership issues, governance, and outreach to young professionals. Perhaps Jeff's most significant current project is managing the SIPES program to place framed USGS geologic maps of the Lower 48 in Houston area secondary school and college science classrooms and make presentations about the maps and careers in the energy industry. To date, over 25 maps have been presented and some schools request annual presentations.

Larry D. Bartel

Response

I wish to thank AAPG, its staff and my many colleagues, mentors, and role models who have all become lifelong friends, for the distinction of receiving Honorary Membership in our Association.

AAPG has been the constant companion during my career journey. My first bosses and colleagues at Pan American Petroleum encouraged me to join AAPG and HGS. Taking an active role seemed natural but it didn't occur to me it would be a lifelong association that would be the professional matrix for decades as jobs and companies change, as we spent a period as ex-pats and during my experiences working with or visiting other AAPG members across the globe.

When I return to my alma mater, Case Western Reserve University, and compare career and life learnings with my fraternity brothers, I am struck with the observation that I seem to have been one of the few who truly enjoyed their professional career and continue to be active long after normal retirement. They are mostly engineers who wondered if I could ever get a job after graduating as a geology major!

Even better, the shared content of our geoscience profession's knowledge base seems to form a bond with colleagues around the globe, across generations, and without regard to gender or race. I have friends who are still college students, friends who are young professionals climbing the career ladder, friends who are industry veterans, and I had a great time bonding with Michel Halbouty and other legendary geologists and AAPG Members, late in their careers.

As members of the geological fraternity (or should I say sorority?) we went on field trips as undergraduates and drank beer to socialize. As members of the AAPG Foundation Trustee Associates, 50 years later, we go on field trips and drink beer (or wine) to socialize. Most of us have the shared experiences of field camp, well sitting, dry holes, discoveries, rock collecting, excitement over fossils or minerals and explaining Jurassic Park movies to children and grandchildren. I will always remember Scott Tinker's mind exercise in his AAPG presidential address at ACE when he had the audience stand, close their eyes, and time travel back to their favorite outcrop. We all took the trip, while our spouses and

nongeologist friends wondered if we had really twisted off! I immediately went to a specific outcrop in southwest Montana that gave me the critical clue to solve a field mapping problem in 1968.

Family vacations and trips with friends just wouldn't be the same without the elaborate narratives I try to share, whether they listen or not!

Thank you for this honor! I will keep working to help AAPG achieve its strategic goals as we face the dramatic changes the world and life throw at us.

Jeff Lund

DAVID G. RENSINK
Honorary Member Award

Citation—To David Rensink in recognition of continuous outstanding service during his career as a Gulf Coast geologist, mentor, and professional society leader at all levels.

It is an honor to present David Rensink for AAPG Honorary Membership. I have come to know Dave since our first involvement in the Houston Geological Society (2004). Dave was president-elect. After taking office, he kept everyone to "the facts" per an early mentor at ODECO, John Brown. That reminded me of Joe Friday from ancient Dragnet fame, "The facts Mam, just the facts." That has remained his philosophy in his leading of professional societies, keep to the facts.

Dave has been efficient, logical, and productive in whatever position he has held. He has been recognized for his success in those positions at all levels, locally, regionally, and nationally. AAPG recognition should not only recognize what someone has done for AAPG, but what he has done for his societies and his profession. There is no more fitting nominee for this award during my participation in AAPG than Dave Rensink. Dave has served AAPG without reservations, no task or challenge was too great.

Dave grew up on a dairy farm in Minnesota. He applied to and got accepted by the University of Minnesota with the intention of studying aeronautical engineering. Like many geologists in the association, he took an elective course in geology. This changed his career path. The course was taught by a Gulf Oil geologist on sabbatical from its research facilities in Pittsburgh. The professor created an interest in rocks rather than the sky.

Dave was completing his undergraduate education at the time of the Vietnam War and draft. Becoming eligible for the draft meant taking a physical. This is perhaps one of the few things that Dave failed at in his career. A hearing issue with high frequencies made him ineligible to serve. Not to be denied his services, the induction office tested Dave three times before they accepted that his hearing was subpar and he now was free to pursue a master's degree.

Dave sought to pursue a master's degree at UMn. However, department policy required Dave to get that degree elsewhere. Applying to USC, UT (Austin) and OU (OK, not OR), Dave went to where the money was and accepted the offer to attend the University of Oklahoma. (Dave has a story about that, later in his career when telling Bill Fisher that he did not attend UT because of finances, Bill said that "You should have called me!" Dave told Bill "Heck, I didn't even know you then!" What a difference a few years make!)

The University of Oklahoma is where Dave met his future wife, Carol. Upon getting his degree Dave then embarked upon his geological career. By virtue of $25.00 per month, Dave chose Shell Oil over Exxon. This significant choice led Dave to know Jim Hartman at Shell. Shortly after starting work, Jim showed up in Dave's office and told the "newbie" that he needed to join AAPG. The application was signed by Jim, all Dave had to do was send it in. Little did Dave know what that would mean to his professional society career.

Dave has held many managerial positions in management

throughout his career, serving as manager, general manager, and vice president. He says that it took him 16 years to learn that he was a better geologist than he was a manager. This change in direction marked a new era in his service to professional societies.

In the early 1990s Dave became involved in the American Institute of Professional Geologists (AIPG). His involvement resulted in his being elected to the position of Section president in Texas. A second significant moment in his professional society career occurred at this time. In this capacity, Dave became involved in the process of creating legislation for the licensing and registration of geologists in Texas. An AAPG member by the name of Pete Rose told Dave, "You need to get involved in this!" Dave did, heading the Task Force for the Registration of Geologists (1995-1997). This nine-year adventure (1992-2001) ultimately led to the passing of legislation in 2001. Dave was recognized for this service with the AAPG Public Service award in 1998 and by the GCAGS Distinguished Service Award in 2003 where the citation speaks much more eloquently than I am writing here.

After this adventure, Dave became more involved locally with HGS and by affiliation AAPG. Dave has served as treasurer for HGS (1998-2000), president-elect, president, and past president of HGS (2004-2007), and general chairman of the 2008 GAGS convention held in Houston with GSA and the Tri-Societies shortly after Hurricane Ike. His AAPG service has evolved since 2000 and involved serving in the House of Delegates, on 31 committees (several as liaison to the AAPG EC), president-elect, president, past president, and chairman of the Executive Committee. During Dave's term as president-elect, he was the public face of AAPG during the Macondo oil spill in the Gulf of Mexico. Dave was the general chairman for the AAPG 100th Anniversary convention held in Houston in 2017. Those who attended the dinner party should remember the interesting history that Dave presented as part of the program. Dave is still active with AAPG. He is a Foundation member, HoD member, and serves on the L. Austin Weeks Undergraduate Grant Judging Panel.

Throughout his career Dave has been a leader who has willingly donated his services to his professional societies and companies; mentoring those new to the industry and profession as well as those with experience. I asked Dave if he could be remembered for one thing, what would that be? His response was, "Trying to do the right thing for AAPG." AAPG recognizes Dave with Honorary Membership because he is greatly appreciated for having done the right things for AAPG and every professional society that he has led.

When not serving AAPG, Dave combines his interest in woodworking and rock collecting by mounting the latter upon the former, a geologist even in retirement.

Kenneth Nemeth

Response

It seems inadequate to merely say "thank you" for such an honor, but the thank you is definitely heartfelt. Certainly, I want to thank AAPG for this honor, Ken Nemeth for a truly fine citation, and the many AAPG members I have worked with over the years who helped me get to the point that this award is even a possibility.

I did not join AAPG 40+ years ago because I had an epiphany that I needed to support my profession. I joined because I had a mentor by the name of Jim Hartman who asked me why I was not a member of AAPG, and I did not have a very good answer for him. I am grateful that he "strongly encouraged" me to join. Membership does not necessarily mean involvement; so I am also grateful that Pete Rose "strongly encouraged" me to get more directly engaged with AAPG.

We seem to have an ongoing discussion of what AAPG is to its members and to society, in general. We are certainly about the science of petroleum geology; particularly disseminating it to the membership and promoting it to society. Those of you who prepare papers for publication or oral presentation are clearly an integral part of this organization and its mission. Like most of our members, I have been, primarily, on the receiving end of this process. After all, that is the primary reason I joined AAPG. Dissemination of the science became more important during my career as the responsibility for professional development shifted from my employer to me. At the time I entered the industry, it was

a reasonable expectation that you would stay with the company that hired you for your entire career. That is not how my career evolved and I am not sure it is even a reasonable expectation any more. In this environment, a professional society is not just a source of information; it is also a source of community and stability.

I made the assertion at ACE in 2011, that we petroleum geologists are a tribe. This was based on the premises that we have a common origin (we are products of schools of the geosciences), we rely on the members for support and community, we have a vested interest in its survival, and we speak a language that is not well understood outside the tribe. If AAPG did not already exist, it would be incumbent on us, as members of the tribe, to invent it. I think it may have been just such a concept that lead to the start of this organization 100 years ago.

Woody Allen is credited with the quote "We are the sum total of our choices." I do not know if it is a Woody original, but I agree with it. By extension, AAPG is the sum total of the choices made by its members. The members being honored this year and those honored in past years made a choice to become an integral part of the profession and this Association. I am honored and humbled to be considered worthy enough to join them.

This is more than a farm kid from Minnesota ever had reason to expect.

David G Rensink

PAUL WEIMER
Honorary Member Award

Citation—To Dr. Paul Weimer, for his many years of exemplary service to the AAPG and the geological community as outstanding leader, teacher, research scientist, and explorer.

Dr. Paul Weimer, recipient of Honorary Membership in AAPG, has led a distinguished dual professional career, widely recognized in both the oil and gas industry and in academia.

In spite of being spoon-fed geology in the crib, Paul still became a geologist. He received a B.A. in geology from Pomona College in 1978, an M.S. in 1980 from the University of Colorado at Boulder, and his Ph.D. from The University of Texas in Austin in 1989. He began his exploration career with Amoco in 1978, worked with Sohio-BP from 1980-1988, and continued exploring for oil and gas with Mobil from 1988-1990. While working for Sohio on North Alaskan projects including the Mukluk lease sale, field work in the Arctic National Wildlife Refuge, and initial evaluation of the KIC well north of ANWR, Paul discovered another love—working frontier geology.

In 1984, he arrived at the University of Texas at Austin to start his Ph.D. studies. After attending a research conference on the geology of the deep-water Gulf of Mexico (GOM), Paul recognized that the area was about to become very hot for research and exploration. Since then, part of Paul's career has centered on research and exploration potential of the various geologic provinces in the GOM, including the intraslope and deep basinal stratigraphy, fold belt plays, and adjacent deep-water exploration areas. It is an area of focus in his teaching, and many of his students' theses, dissertations and/or post-doctoral studies focus on the geology of the GOM.

Since joining the staff at the University of Colorado in 1990, Dr. Weimer became a full professor in 2001, and currently holds the Bruce D. Benson Endowed Chair in the Geological Sciences. He is known for the exceptional teaching and research programs that he developed to provide his students with well-rounded backgrounds in numerous fields of geology, preparing them to become teachers, research scientists or explorationists.

As a professor at CU, Paul has organized five large, industry-sponsored research consortia on the Gulf of Mexico and Piceance Basin, with topics on sequence stratigraphy, sedimentology, biostratigraphy, structural geology, tectonics, and petroleum

systems modeling. These consortia have obviously benefited industry as well as the CU students, whose theses were based on these research projects. He has supervised 4 Ph.D., 50 M.S., and 3 honor B.S. students, and done research with an additional 20 B.S. students. He has sponsored and collaborated with 20 post doc and visiting scientists.

Paul's impressive body of work is considerable. He has coauthored 3 books, co-edited 11 special volumes, and published more than 160 professional papers, including 29 papers in, and two entire issues of, the *AAPG Bulletin*. For the professional community, he has taught more than 100 short courses in 35 countries for professional societies, universities, and oil and gas companies. He continues to inspire a love of geology along with the scientific knowledge he imparts.

Dr. Weimer has also maintained a rigorous consulting schedule on the geology and exploration potential of the global deep-water play and applied sequence stratigraphy with more than 40 companies.

In 2000, Paul changed research directions and began to develop geologically accurate animations for public outreach. Paul and cohorts produced many animations illustrating the evolution of Colorado geology, including an impressive animated film on "A Brief History of Colorado through Time," shown at the opening ceremony of the AAPG Annual Convention in 2015. He is now working on a longer version titled "Hidden Landscapes: The Geologic History of Colorado."

Paul has generously contributed his time and talents to professional societies throughout his career. For the AAPG, he has served as president, treasurer, Advisory Council member, and Foundation Trustee. He has worked on numerous committees, served twice as an AAPG Distinguished Lecturer, and helped organize several conventions and many technical programs. He was president and Foundation Trustee for the Gulf Coast Section of SEPM. He has also participated actively in the NOGS, GCAGS, SEG, SEPM, AGI, and RMAG.

For the past 10 years, Paul has worked tirelessly as both member and chair of the AAPG 100th Anniversary Committee. His contributions include many hours devoted to the GeoLegends, Discovery Thinking, and 100 Papers That Made a Difference projects.

The significance of Paul's contributions to those organizations has been deservedly recognized with many honors and awards. For his extensive work with AAPG, Paul has been the recipient of the J.C. "Cam" Sproule Memorial Award, the Distinguished Service Award, and the Grover T. Murray Distinguished Educator Award.

Throughout his notable career, Paul has been recognized by colleagues and students alike as an outstanding geologist and geophysicist, who has excelled in both the oil and gas industry and in academia, serving the profession of geology and the geological community with distinction.

Edward D. Dolly

Response

I am honored and humbled to be recognized with Honorary Membership from AAPG. I thank Ed Dolly for his very kind citation. In retrospect, I was fortunate to recognize, early in my career, that active participation with professional societies would be essential to my professional and scientific development.

Accordingly, I slowly got involved, initially with the sections, and then with the national organization. I have made many lifetime friends through various AAPG activities—beginning by attending field trips, and later with extensive committee work.

At some point, I realized that I could influence the public discourse of science, so I started organizing professional programs and editing and writing books. Later, I was fortunate to meet many additional AAPG members through lecture tours all over the world. For an applied geologist like me, AAPG has been, and will continue to be, essential to the global community of geologists.

Receiving Honorary Membership in 2018 is a special treat, because the other recipients are all longtime friends and colleagues, whom I have known for many years. I met all of them (except Gretchen) through AAPG activities.

I thank the AAPG organization again for this honor – it makes my year!

Paul Weimer

SUSAN MORRICE
Norman H. Foster Outstanding Explorer Award

Citation—On meeting Susan Morrice what STRIKES you most is her boundless passion and energy to make a difference .... being the first ever oil discovery in Belize and striking on the first well ... makes you want to take a closer look at this pioneering lady with the golden key to unlock the energy within.

Susan Morrice born in Belfast and educated in Trinity College Dublin, Susan's pioneering career has taken her far away from her Belfast roots. These days she's likely to be either giving an inspiring talk to M.B.A. students in any major United States city, or signing trade agreements between countries at United Nations in New York, or bringing a foreign delegation from countries like Mexico or Columbia to explore the educational system that is at the core of the success of her company Belize Natural Energy. Or you might be lucky to find her with her five-year-old granddaughter Jace, feeding their donkey Peaches some carrots on her 17-acre Adobie ranch in Colorado. One thing for certain, you will find the same energy and passion that drives this lady on to make a difference in the world.

Susan has always shown an entrepreneurial spirit and enthusiasm for success, but she thought this just came naturally to everyone. After Susan successfully pioneered the first International Pavilion in Denver in 1994 resulting in bringing 52 countries together globally and being responsible for billions of barrels of oil being found, she was asked how she did it. She replied she didn't know you just do it. This was a revelation to Susan that made her want to explore what made one person go for it and the other not. It wasn't until then that she had become aware of the gap in people.

Susan received the Distinguished Service Award by the AAPG as global visionary due to the continued success of the International Pavilion. Susan's continued success brought her traveling around the world with Ron Browns international trade team during the Clinton administration. She was still searching for what it was that ignites a person to take the quantum leap. In 2002 she discovers what she claims made the difference to her life and indeed all our lives—the turning point.

She attended a seminar to study the Educo Holistic Business Model, an educational system which trains you to focus your whole mind and you can replicate it. The Eureka moment for Susan was not only can you learn to succeed but you can pass it on. On completing the course Susan, along with others and her Belizean partner Mike Usher, formed Belize Natural Energy (BNE). She always knew there was oil in Belize even though 50 dry wells had been drilled by respected oil companies. The company hit the first oil to be found to date in Belize on June 24, 2005, so light it could go straight into tractors and farm machinery. Sadly, Mike died on June 24, 2006.

This has been miracle after miracle. The investors she gathered were mainly 76 Irish people who had attended the same seminar and had never invested in anything before let alone a high-risk oil well (wildcat). They had raised barely enough for two wells and hit it on the first go and the second and the third!

Belize Natural Energy have become the #1 revenue generator in the country. They continue to win global awards. In 2011 they won a Green Award unheard of for an oil company. In 2012 they won the Getenergy award in Education and again in 2017 they won the Getenergy Global education award for localization and making an impact in the community. Susan attributes this to the Educo business model at the core of the company as four employees attend the seminar are and are trained up in the Educo system. Being able to replicate is what matters most to

Susan, as well as being able to ignite the energy within.

The year 2017 brought many accolades to Susan Morrice. Along with this great honor of the Norman Foster award, she also captured the last chapter in the Anomalies book about pioneering women in oil industry written by Robbie Gries. She also managed to get into the Heritage of Petroleum Geologists amongst her peers.

To date Susan is striving forward and breaking new ground. In her own words—onwards and upwards.

Patricia Fitzpatrick

Response

I am tremendously honored to be receiving this Norman Foster Outstanding Explorer Award and thank everyone involved in nominating me and Patricia Fitzpatrick for her input. I asked Patricia Fitzpatrick because she was one of the first investors and knows firsthand the positive difference that has been made in the country of Belize.

The Outstanding Explorer Award was first given in 2002 and that was a pivotal year for me in the steps towards this achievement.

I was born in Belfast, Northern Ireland right in the middle of "the Troubles" and went to Trinity to study natural science specializing in geology. I loved to be outside and climbing rocks but never dreamt it could be a career, a way to really make a difference in the world.

When I was offered a position by American/Canadian Stratigraphic upon graduation, I jumped at it as I had driven across the United States with two friends a few years before and loved Colorado where the company's headquarters was. I had understood that the pioneering spirit of America, the American Dream, meant that most people followed their dreams and became entrepreneurs! so I decided I'd better become one quickly!

I also worked for a few years for Warren Knight, who started Knight Royalty Corp. I was exposed to the fast learning curve of a young adventurous exploration company that was involved in wildcat exploration throughout America.

In the early 80s I set up S. Morrice and Associates as I wanted to explore in my home country, Ireland. I so appreciated how the oil and gas industry and the entrepreneurial attitude had fueled the backbone of the American Economy. I wanted to help back home, onshore Ireland. We discovered gas but not commercial—as yet!

At that same time, I visited Belize on the request of Sir Ian Rankin, who was asking me if there was any oil in Belize. My quick review of an open file report at the Fed center in Denver gave me the key elements I was looking for. I went to Belize believing there was oil to be found, but most importantly I fell for the people.

I met a Belizean, Mike Usher, who worked in seismic acquisition for CGG all over the world. We shared a common passion to discover the first oil, and to make a difference in his country, Belize. And for Belize to then be a beacon for "doing it right and empowering the people." Despite knowing that there were already 50 dry holes across Belize, Mike and I explored for over 15 years but were unsuccessful.

It was not until 2002 when we attended a seminar on how to use more of our mind that we understood the key phrase often quoted by Marlan Downey, "Oil is found in the minds of men," originally stated by Wallace Pratt. We applied what we had learned and laser beam focused our minds, attracting a group of like-minded people mainly from Ireland who also attended the seminar. Our vision was to discover the first oil in Belize and make a difference in the country.

In 2002 Belize Natural Energy was born, but Mike took very ill and died before we drilled the first well. We called the well Mike Usher #1 in his honor and selected a location out of 500,000 acres to drill our first wildcat. We only had enough money for two wells but on the very first well with very limited seismic we hit the first oil in Belize—so light (40° gravity), it went into the local generators without refining!

The Mike Usher #1 well hit that first Belize discovery on the 24 June 2005 exactly on the anniversary, one year later, of Mike's devastating death on 24 June 2004. And on that very same date, 11 years later the very man, Marlan Downey, who had inspired me to understand the power of the mind passed away and his memorial service was held on June 24th, 2017. Initially when I heard of the early death of Marlan, I didn't know that he had written

a recommendation letter for me for this very award. Each step of this journey of the first discovery of oil in Belize has been a series of modern miracles! Nudges from the Big Boss as my fellow director declares.

We have been the number one revenue generator in Belize for over 10 years, producing 11 million barrels of oil. We have not only survived but gained prestigious recognition winning the Global Getenergy Educational Award despite the last 4 years of lower oil prices. BNE's mission statement is "Know the Vision, No Division" Our original vision to discover the first oil and make a difference in the country has come true but much more. We, BNE/Belize, signed a global partnership with the United Arab Emirates based on this new business model to build out the entire country of Belize.

This success can all be attributed to that very same educational model that Mike and I learned in 2002 and applied to our dreams. Winning the Getenergy Award—beating 50 countries—in the localization category for the educational system, Educo, which is at the core of our company, demonstrates that BNE has made the most difference locally.

This was the fulfillment of all our original dreams outlined so clearly at that seminar in 2002. Thank you, Norm Forster and AAPG for this special honor that highlights the global recognition and thus the ability to share this story and these steps with everyone.

Susan Morrice

CARLO DOGLIONI
Robert R. Berg Outstanding Research Award

Citation—To Professor Carlo Doglioni, for inspiring generations of field geologists, crafting a unified theory of plate movement and earthquake mechanisms, and reminding us that "we are the earth."

Carlo Doglioni was born in Feltre, Italy, at the foot of the beautiful Dolomites, which influenced his geological perspective from the start. While he acquired his rigorous Liceo Classico, he also indulged his love of skiing and rose in national ranks until he was forced from competition by injury. He turned his considerable academic talents toward the study of geology at the University of Ferrara. After obtaining his doctoral degree in 1981, Carlo spent the next decade working with professors at Ferrara to publish numerous studies on the structural geology of the Dolomites, along with several sole-author papers on unifying models for thrust belts and plate tectonics. During this period, Carlo completed a post-doc at the University of Basel and served as a visiting researcher at Oxford and Rice Universities. These collaborations beyond the Italian Alps inspired him to construct an integrated and dynamic earth model from field, subsurface and geophysical observations.

In 1992, Carlo moved far from his beloved Dolomites to become associate professor at Bari University. Adding studies of the Apennines and western Mediterranean to his laboratory, he expanded on his theory that there is a polarity to global tectonics, and that a westward drift of the lithosphere relative to the underlying mantle governs plate motions and provides recognizable, coherent tectonic patterns. An eloquent summary entitled "Geological evidence for a global tectonic polarity" was published in the *Journal of the Geological Society*, London (1993). After three years as full professor at University of Basilicata (Potenza), Carlo moved to Rome in 1997 to become professor of geodynamics, Sapienza University. As a teacher, he continued to solve local and global tectonic puzzles while he supervised numerous master's theses and 14 Ph.D. dissertations. He and his students researched everything from ancient outcrops to active volcanoes to continental and deep ocean basins (as a member of ODP Leg 161 in 1995). Carlo augmented his intense knowledge of Italian rocks with field excursions throughout the northern hemisphere, from Japan to El

Salvador, and visits to Rice and Columbia Universities. In recent years he has expanded his research to address the mechanism of earthquakes.

Carlo has served in over two dozen commissions, committees, editorial boards, panels and university leadership positions, including two tours as an AAPG Distinguished Lecturer and president of the Italian Geological Society from 2009 to 2014. He has received more than a dozen major awards, including the EAGE Alfred Wegener Award, and was inducted into the Accademia dei Lincei (a prestigious academic institution founded in 1603) in 2009 and the Accademia dei XL (founded in 1782) in 2011. In 2016, Carlo was named president of the National Institute of Geophysics and Volcanology (INGV), where he has continued his fight to understand the restless earth and bring fact-based science to the public. As he looks to the future, Carlo hopes to stimulate research on the environment and new energy resources at INGV and is deeply involved in understanding Italy's recent seismicity.

I first met Carlo in 1983, when a group of American Ph.D. students descended on the Dolomites. Carlo challenged us to think beyond the obvious stratigraphic relationships and consider the impact of dynamic tectonics. He encouraged us to be a research team and supported us logistically and scientifically. His ability to create a holistic model from disparate observations served as an example that we emulated throughout our careers with Exxon, Mobil, and Amoco, and is foundational to the widely held petroleum systems concept. Anecdotes from students and colleagues indicate that his style of encouragement, collaboration, and risk-taking remains prevalent in his teaching and supervision today.

Unsatisfied with developing a fresh view of plate tectonics, Carlo has turned his attention in this millennium to new areas of research, communication, and service. Since 1982, Carlo has authored or coauthored over 200 peer-reviewed research papers—18 of these published in 2017. Google Scholar notes that his papers have been sited over 10,000 times—4500 since 2012. As head of INGV, his news interviews and open-forum discussions inform the public and positively impact seismicity research. Carlo lectures frequently on the causes, risks and impact of earthquakes, including induced seismicity. We can all enjoy these impeccable and articulate explanations, as many are preserved on YouTube. Take a few minutes to watch one of his interviews about il respiro della Terra—the breath of the earth—and learn how lucky Italians are to have the eloquent, informed, and accessible Carlo Doglioni as the voice of their geological community.

Edith Newton Wilson

MARK G. ROWAN
Robert R. Berg Outstanding Research Award

Citation— To Dr. Mark Rowan for his outstanding contributions to research on salt tectonics, fold-thrust belts, passive margins, diapirs and salt sheets, salt-sediment interaction, and cross-section restoration.

Dr. Mark Rowan is an internationally renowned structural geologist with more than 35 years' experience in petroleum exploration, structural consulting, industry training, and academic research and teaching. Mark received a B.S. in biology from CalTech in 1976, an M.S. in geology from the University of California, Berkeley, in 1982, and a Ph.D. in structural geology from the University of Colorado at Boulder in 1991. His petroleum industry work experience includes Sohio Petroleum Co. (1982 to 1985), Geo-Logic Systems (1985-1989), and Alastair Beach Associates in Glasgow, Scotland (1989-1992). His post-graduate academic

pursuits began in 1992 at the University of Colorado where he held a research assistant professorship in the Department of Geological Sciences and also became a research fellow at the Energy and Minerals Applied Research Center. Mark left the university in 1998 to found his own consulting company, where he is able to combine his love of teaching and mentoring with his desire to solve structural problems for academia and the petroleum industry.

Dr. Rowan's interests include a broad spectrum of structural topics and tectonic environments, but his primary research and consulting interests are focused on salt tectonics. He has contributed enormously to the development of conceptual models on salt-related deformation, the geometry and evolution of diapirs and salt sheets, complex salt-sediment interaction, and the application of these to petroleum exploration. He is at the forefront of investigators on the architecture and evolution of salt-bearing passive margins, the influence of salt on fold-thrust belts, and the development of cross-section restoration techniques in salt tectonic terrains. Mark is not confined to one area of expertise such as the Gulf of Mexico (where he is an expert) but has applied his skills to virtually every petroliferous basin around the world that contains salt-related deformation. His emphasis is on understanding the three-dimensional (3-D) geometry and evolution of complex salt structures using seismic interpretation (two-dimensional and 3-D), outcrop studies, structural analysis, and cross-section restoration. He is one of the most well-recognized petroleum structural geologists internationally. Contributing to this is Mark's collaboration with most other well-known figures in salt tectonics, whether in academia or the petroleum industry. His work ethic is second to none and is demonstrated by his outstanding publication record. He is author or coauthor of more than 90 papers (mostly peer-reviewed) and over 220 abstracts. This outstanding publication record is made even more incredible by the fact that Mark left academia 20 years ago.

Teaching and training are integral parts of Mark's success. He is an excellent instructor and he teaches some of the most highly attended and sought-after courses in the petroleum industry. His schools in practical salt tectonics are consistently some of the highest-rated classes presented by the geoscience training company Nautilus. He also gives this school for AAPG and other societies, and many international exploration companies, service companies, and national oil companies have engaged him for private courses to their staff. Although he has been teaching the classes for over 20 years, they remain pertinent as he constantly updates the material with new concepts, figures, and seismic examples. In the field of salt tectonics almost no one has greater visibility to the working explorationist than Mark—the number of petroleum geoscientists he has taught or otherwise trained is in the thousands.

Despite the burdens of self-employment, Dr. Rowan finds the time to advise and mentor university students in salt-related research projects, both in the United States and abroad. Since 1992 he has personally supervised or co-supervised six M.S. students, five Ph.D. students, and five post-doctoral researchers. He has also been an advisor to 30 M.S. and 12 Ph.D. students. Mark's devotion to geology and willingness to give his time for educational purposes have created a high demand for his presence. He has given over 30 invited lectures for universities and societies and been a keynote or other invited speaker at over 25 research conferences. Mark is a past recipient of the GCAGS Best Paper Award, was a Boyd Distinguished Lecturer at the University of Texas and received the GCSSEPM Doris M. Curtis Medal in 2016. He was also an AAPG Distinguished Lecturer, an AAPG International Distinguished Instructor, and an honoree in the 2nd edition of the AAPG Heritage of the Petroleum Geologist.

For all the reasons summarized above, but mostly for his research in salt tectonics, Mark Rowan is the recipient of the Robert R. Berg Outstanding Research Award in 2018. AAPG's recognition of his many contributions to our industry is well deserved.

J. Carl Fiduk

Response

It is with great pleasure and gratitude that I accept this award from AAPG. I thank AAPG president Charles Sternbach and the Executive Committee for bestowing it upon me, and of course Carl Fiduk who, with help from Thomas Hearon, not only wrote the flattering citation but also nominated me in the first place. In looking back, I must conclude that I got to this point largely by a combination of circumstance and serendipity, critical support from family, friends/colleagues, and mentors, and hopefully some contributions of talent, hard work, and dedication. I'd like to tell that story.

Upon arriving at CalTech in 1971, I had to choose a science elective. I narrowed it down to biology and geology, but when I discovered the geology course required weekend field trips—school work instead of surfing or climbing?—I took biology and completed my degree in that subject. Midway through my senior year, I was informed that I needed another freshman lab course to graduate, so it was back to the catalog. There was that geology class again, I was a little more mature and could spend some weekends on "work," and … well, it was the best class I'd taken, Gene Shoemaker was the best professor I'd had, and of course the fieldtrips were the best part. So…

I headed to Utah to ski for 3 years, but also took undergraduate classes part time at the University of Utah. Then it was off to Berkeley for graduate school. I still didn't know what I wanted to focus on but was offered Ph.D. projects by two professors: one on Quaternary deposits in California and one on carbonate turbidites in Italy and France. Tough decision! But Italy changed my life because I became more fascinated by the incredible folding I saw there. Much to the disappointment of my advisor, Walter Alvarez, I turned the project into an M.S. thesis and subsequently took a job with Sohio Petroleum in Denver. But Walter, a true renaissance geologist and wonderful mentor, understood that I had to follow my heart.

At Sohio, my growing fascination with structural geology was fueled by 5 months of helicopter-supported field work in the Wyoming-Idaho thrust belt and by co-worker Steve Boyer, who had just published his classic paper on fold-thrust belts. So I planned to apply within a few years for a Ph.D. in structural geology under the supervision of Roy Kligfield at the University of Colorado in Boulder. But the industry downturn intervened and we were told one morning that the office would be closed. After a long liquid lunch with co-workers, I arrived home and, within 5 minutes, received an out-of-the-blue call from Roy asking if I would like a job at Geo-Logic Systems, the small company he had started (along with Pete Geiser, another structural mentor) to develop and apply cross-section restoration software. Amazing timing! Needless to say, I took him up on the offer and also started on my Ph. D. the next year, working on large-scale detachment folds in the Helvetic Nappes of Switzerland, a project developed by Roy. I was also fortunate to have Bob Ratliff as a co-conspirator both at work and in our studies.

Several years later, I received another out-of-the-blue call from Alastair Beach, who asked me to come work for his small consultancy in Scotland. My life was changing in other ways at exactly that time, so … why not? I concluded my Ph.D. from a distance while further expanding my experience and skills, working projects on data from such places as the North Sea (including my first taste of salt), the Pyrenees, and the Eastern Cordillera of Colombia. But other factors had me thinking about returning to the United States, so I called up Roy Kligfield to see if he knew of any opportunities. Amazingly enough, he and Paul Weimer were starting a large research consortium at the University of Colorado, and the structural researcher who was going to work on it had just announced that morning that he was taking another job. Roy to the rescue again!

I spent the next 6 years immersing myself in Gulf of Mexico salt tectonics in the program run now solely by Paul. I was incredibly fortunate, both in terms of my exposure to companies and my timing—I was late enough to take advantage of the beginning of a revolution in how salt was understood but early enough to participate in the revolution. The talks and papers from people like Martin Jackson, Bruno Vendeville, Fred Diegel, Frank Peel, and many others were instrumental in guiding me through my attempts to study

these incredibly complex structures.

I left the university in 1998 and started working for myself as an independent consultant, teacher, and researcher. I get to work with wonderful colleagues within many companies on fantastic modern seismic data, and charge enough for consulting and training (thank you!) to pay for my hobby, namely the research. As part of that endeavor, I am lucky to work on outcropping salt structures in Mexico, Australia, China, Spain, and even Colorado with friends that include, among others, Carl Fiduk, Thomas Hearon, Josep Anton Muñoz, Eduard Roca, Tim Lawton, and especially Kate Giles. I could probably never give another talk or publish another paper, and thereby earn more through consulting and teaching, but that would take much of the fun out of it!

So why have I recounted this long story about my professional journey? There are two primary messages that I wish to convey. First, follow your passions, work hard, put yourself in a position to take advantage of serendipity and opportunity, and don't be afraid to take a chance and change your direction. Second, I couldn't have accomplished anything without the encouragement of, and collaboration with, so many mentors, colleagues, and friends. This includes, of course, my wife Ania, who has always supported me in following my heart and has put up with my spending more time working on my hobby than she would ideally prefer.

Mark G. Rowan

PETER WILLIAM BAILLIE
Distinguished Service Award

Citation—To Peter William Baillie for excellent, humble and unassuming service and leadership of AAPG as a professional petroleum geologist in the Asia Pacific Region.

Peter William Baillie commenced his geological learning at the University of Tasmania in 1967 in Hobart, Australia under the tutelage of the flamboyant and controversial late Samuel Warren Carey, who was an early advocate of continental drift and expanding earth theories, and an inspirational teacher who actively encouraged students to make close observations and question everything they were told. It was at the University of Tasmania where Peter was introduced to professional societies and commenced on a path which would become (and remain) an important facet of his life.

Tasmania is isolated and is often the forgotten island State of Australia. Tassie (as Tasmania is often called) was actually once part of another continent that is now on the other side of the planet. It has geological affinities with the Transantarctic Mountains of East Antarctica and the geology of Arizona. It is into this rich and complex geology that a newly graduated Peter found himself in 1970. For 14 years, he worked at the Tasmanian Department of Mines as a regional mapping geologist, contributing to all or part of 12 geological map sheets ranging from Upper Proterozoic to Recent rocks.

In 1983, Peter attended Macquarie University to study over a four-year period for a diploma in geoscience and a Master's of Science in sedimentology. This helped him become a petroleum geologist at the Department of Mines where he was introduced to all the intricacies of the regulatory side of petroleum business, being involved in a variety of roles from policy to technical aspects and data management. It was at this time he joined AAPG in 1986. At Macquarie University, he met and formed a working alliance with the late Chris Powell (another former Carey student), which shaped the rest of his professional life: Powell advocated the careful collection, accumulation, and interpretation of a variety of data to reconstruct sedimentary and tectonic environments.

He became manager of the Petroleum Exploration and Support Services branch of the Tasmanian Department of Mines in 1993, but soon joined the very different State of West Australia to become manager of petroleum exploration and production where he remained until 1997. In this role he was responsible for all technical matters in what was to become Australia's premier hydrocarbon

province, including assessment of applications for petroleum licenses and award of blocks and production licenses, plus production monitoring, reserve assessments, meter verifications, and compilation of sector summaries, ministerial briefs, and publications.

In 1997, he left the government to join the newly created TGS-NOPEC as a project development manager based in Perth, West Australia in which company his value as a geologist was quickly realized with his promotion to chief geologist, Asia-Pacific and later chief geologist, Africa, Middle East, and Asia-Pacific. He was involved with nonexclusive surveys throughout his area of responsibility and associated petroleum systems analysis including the prediction and "discovery" of the previously unknown Mannar Basin, offshore Sri Lanka, and during this time, he presented or contributed to more than a dozen technical papers at international conferences.

He took time during this period to participate in the science of our industry and to help spread its learning through chairing the West Australian Basins Symposium 2002 and serving as managing editor of the *Journal of the Petroleum Exploration Society of Australia* (PESA). From 2002, he took an active role in the affairs of the AAPG joining the House of Delegates in which he served for 15 years. He served as treasurer (2005 to 2008) and then vice president (2008 to 2011) of the Asia Pacific Region of AAPG.

In 2009 he joined GeoData Ventures in Singapore, leaving in 2012 to become senior vice president business development at CGG, initially based in Singapore and subsequently in Perth, Australia In Singapore, he was president of the South East Asia Petroleum Exploration Society (SEAPEX; an affiliate society of the AAPG) from 2012 to 2016 and was also president of the Asia Pacific Region of the AAPG from 2011 to 2014. In both roles, he has convened many symposia, conference and workshops including working on the Board of the International Petroleum Technology Conference (IPTC) from 2013 to 2016.

Peter has been a classic and steadfast contributor to both his profession and the AAPG, which is now recognized by this Distinguished Service Award.

Michael McWalter

RICHARD BALL
Distinguished Service Award

Citation—For passionate service to AAPG, from early career involvement with students and young professionals through enthusiastic participation in positions of greater responsibility, providing a model for professional career development.

Richard Ball was born in Dallas, Texas and spent his early career in Houston, Texas. He attended Stephen F. Austin State University (SFASU) in East Texas, majoring in geology and minoring in petroleum land management. His interest in geology was initiated by a college course he took at a Dallas Community College during a summer break, and he immediately changed his major after that experience. Although the summer course officially changed his collegiate trajectory, none of his family were shocked as, according to his father, He "always enjoyed playing in the dirt." He then earned his M.S. in geology at the University of Louisiana at Lafayette, where his desire to become a petroleum geologist was fueled by the strength and focus of the petroleum geology program. One of his final projects at the university was a project aimed to determine if any prospectivity remained in a southwestern Louisiana oil and gas field. Richard received top marks for his analysis of Fenris Field under the direction of local geologist Bryan Groves and professor Brian Lock. His thesis was completed under Gary Kinsland, and sought to understand the prospectivity of the emerging Northern Louisiana Wilcox play.

Richard's first 10 years of employment were with Chevron, developing his skills working on development, exploitation, and exploration projects. He thoroughly enjoyed his experience with the company due to the breadth of

experiences he was able to gain in a short period of time. From working onshore in the San Juan Basin, to the offshore Gulf of Mexico shelf and deep water, to offshore Angola, Richard built an impressive E&P resume as a young professional.

He joined Detring Energy Advisors in late 2016 as vice president of geology. The company focuses on advising sell and buy side clients with acquisition and divestiture opportunities for mid-cap projects ($25MM-$200MM).

Richard's involvement in AAPG began as an undergraduate, when SFASU perennially brought students to the AAPG Annual Convention (which continues to this day). He was a regular attendee on the student field trip and other student-focused seminars and workshops. He served as president of the SFASU AAPG student chapter in 2004-2005, leading the chapter to win the Best United States Student Chapter of the Year award.

His AAPG service escalated immediately after graduation by serving on the Student Chapters Committee for three years, before assuming the role as vice-chair for 2007-2010 and then chair from 2010-2013. During this time he also served as vice chair of the revitalized Young Professionals Committee (2008-2010) and on the Education Committee (2005-2008.).

Richard was the driving force of the Student Chapter Leadership Summit. In the early years (starting in 2007), this program had students from all sections and regions attend AAPG's midyear leadership meetings, and they were immersed in a structured curriculum focused on professional development, industry exposure and networking, and suggestions for volunteer roles going forward. Of particular note was a successful fundraising campaign spearheaded by Richard that can make this a sustainable program into the future. Many students who attended these meetings went on to successful industry careers, and a significant number became steadfast volunteers within AAPG. This is a testament to Richard's outstanding mentoring ability and vision for recruiting and retaining young professionals in the organization. In recognition of these contributions, Richard was awarded the AAPG Jim Hartman Service to Students Award in 2015.

Having also had exposure as a Gulf Coast (GCAGS) representative to the House of Delegates, Richard's involvement and energy were recognized with a nomination to stand for office on the Executive Committee, and he served as elected secretary (2013-2015). During and after his EC service, he was a key young professional representative to the ad hoc Committee on Governance, which examined the Association's governance structure and recommended areas for improvement. This was a much more monumental effort than it might appear, as AAPG had grown quite a bit over the years including added oversight and governing bodies and divisions, and membership remained robust under high commodity prices. One focus of the committee was sustainability under less favorable economic circumstances, and their analysis of the organization was insightful (and perhaps prophetic). The committee's recommendations will guide the AAPG with suitable governance in the coming years.

Richard's AAPG involvement continues through committee and House of Delegates service, and mentoring a new generation of students and young professionals to prepare AAPG for the "great crew change." His enthusiasm and leadership continues to make him a model as a successful young professional and respected leadership figure in AAPG. Above all else, Richard enjoys spending time with his wife, Sarah, and their three children, Katherine, Helen, and William.

Bill Houston
Jim Tucker

STEVEN BRACHMAN
Distinguished Service Award

Citation—Steve Brachman is awarded AAPG Distinguished Service to recognize his decades of leadership and tireless work for

AAPG, its Divisions and Sections, and for AAPG's largest affiliated society, HGS.

Steve Brachman was born and raised in Chicago, Illinois in an entrepreneurial family whose business was auto parts. Sensing a limited future for family owned retail business in that arena, he convinced his father that college was a good option to pursue. A high school counselor's career book gave him the critical clue that his aptitude in history and English literature (math, not so much) and a keen desire for employment might be a fit with geology.

Good test grades got Steve into Eastern Illinois University where the small, close knit geology department of three faculty and 20 undergraduates was a strong positive environment. Summer field camp convinced him that he had made the right decision about geology, and he graduated with honors. Graduate school was at Penn State partly because of his growing interest in hard rock mining. He did "real" subsurface for his structural and ore deposit M.S. thesis, scouting and mapping abandoned mine shafts in Idaho with a tape measure, Brunton, carbide miner's lamp and battered hard hat accompanied by a 15-year-old assistant who stayed 50 feet behind in case of cave-ins or Steve falling into an old mine shaft. He spent 4 months in a tent in the Salmon National Forest eating Dinty Moore beef stew and peanut butter and jelly. He left grad school before finishing his thesis but returned two years later to successfully defend and received his M.S. in geology. Not many of his colleagues can top that career start story for authenticity and love for geology!

Hoping to start a career in mining and live on a mountain top in the Rockies, he discovered only oil companies were interviewing. Expressing a passion to work in their mining subsidiaries wasn't warmly accepted. Hence, Steve's professional career in oil and gas began with Gulf Oil in 1981 working the Mid-Continent and East Texas from Oklahoma City and Kilgore.

It was in OKC that Steve met his lovely wife, Mara whose mother and father, as fate would have it, were both geologists!

He moved to Sohio/BP Exploration in1984 and began a long association with Houston, working there for Wintershall, Araxas Exploration and Southwestern Energy as a geologist through 1997. Steve joined Pogo Producing as division geologist from 1997 to 2006 and next moved to Petro-Hunt, LLC as exploration manager, until 2013. Currently he is vice president of geoscience and development for Wapiti Energy in Houston.

The Houston Geological Society (HGS) and AAPG have both benefited greatly from his long term commitment and service. He joined HGS as an active member in 1987 and chaired the Personnel Placement Committee and the Finance Committee. He was elected treasurer-elect in 1991-1992 and treasurer 1992-1993. He was elected secretary of HGS in 1993-1994. His involvement with convention leadership began with the 1990 GCAGS heading the Personnel Placement Committee, the 1995 AAPG Convention Volunteer Committee and the 2000 GCAGS Convention Academic Liaison Committee. Steve played a key role, as HGS president, in negotiating the financial sharing of the 2008 GCAGS-GSA-Tri Societies annual convention at the George R. Brown Convention Center after Hurricane Ike. Finally, he capped his convention work as general chair of the highly successful 2014 AAPG ACE.

HGS offices and roles have included numerous committee memberships and chair positions including Board Member from 1991-1994, president-elect in 2005-2006 and President 2006-2007.

HGS has honored him many times beginning with Distinguished Service in 2001 and culminating with being awarded Honorary Life Membership in 2015.

AAPG has also benefited from his service. Committee activity included the AAPG Mentor Committee, the Sections Committee, the Ad Hoc Committee on Governance, the Audit Review Committee, and the Education Committee. He has been an elected Delegate representing the Gulf Coast Section in the House of Delegates since 1999 and currently serves as the Houston Delegation's foreman and Steve also chaired the House's Nominations and Election Committee in 2016-2017.

Steve was elected vice president of Sections for a two-year term in

2014 and therefore served on the AAPG Executive Committee. He belongs to the Division of Professional Affairs (DPA) and is Certified Petroleum Geologist #4279. He also is a member of the Energy Minerals Division (DEG) and the Division of Environmental Geoscience (DEG) where he has served as a Gulf Coast Councilor.

Steve was asked to join the Datapages Board in 2016 and was invited and joined the AAPG Foundation Trustee Associates in 2017.

AAPG awards have followed all the hard work in leadership roles as well as in the trenches at AAPG. The George C. Matson Memorial Award was given to Steve in 2007 for a paper he gave on a Pogo field in South Louisiana. He received an AAPG Certificate of Merit in recognition of his service as general chair of the very successful 2014 ACE convention.

An interesting feature of Steve's life experience resulted from his mid 1990s experiences during that rough spot in the oil industry's history when he lost his Wintershall position due to a divestiture, tried consulting and even spent awhile selling windows for Sears. He learned the importance of networking through key mentors like Scott Laurent, Frank Lovett and Ken Masters with whom he crossed paths due to HGS and AAPG membership.

As you can see Steve has volunteered continuously since 1989 and continues to offer his hard-won wisdom of how to contribute in professional and volunteer roles. When volunteering, Steve attempts to (1) provide the right attitude, (2) help others think about solutions instead of dwelling on problems, (3) stay focused on the path forward, and (4) help others apply business-oriented, common sense solutions.

Steve Brachman has been and continues to be a truly Distinguished Member of AAPG!

Jeffrey Lund

CYNTHIA HUGGINS
Distinguished Service Award

Citation—To Cynthia Huggins, for her dedicated service to the geoscience community, and especially for her focus on students and fostering their professional development.

It is easy to see why Cynthia is being honored by AAPG for distinguished service to the organization. She has a long history of stepping up to volunteer, serve in leadership roles, and bring forward programs that benefit the entire geoscience community. Her efforts began nearly 20 years ago in the Pacific Section and the San Joaquin Geological Society (SJGS), holding nearly all elected positions, including president of both organizations. In fact, she was the first woman president of the SJGS in 2010. Cynthia has a gift for logistics and has contributed to Pacific Section conventions in many roles. She is the SJGS delegate to the AAPG House of Delegates.

These are important and laudable accomplishments, but Cynthia is most proud of her work with students. Here she has set the mark for involvement with the up-and-coming generation of geoscientists, particularly those with aspirations of joining the petroleum industry. She started by serving as a judge for the national Imperial Barrel Award in 2008. After seeing how the system functioned, she became IBA coordinator for the Pacific Section, and has worked hard to keep the program funded and ensure that the participants have a memorable experience. She recognized a positive experience at IBA would encourage many of the participants to consider their options in the petroleum industry, and many of the past participants are now employed in our industry.

Cynthia is a Bakersfield, California native. She worked her way through school at the local California State University and knows many of the challenges faced by students. Through her tireless efforts the Pacific Section instituted a college scholarship program for geology majors at schools served by Pacific Section affiliate societies. The scholarships match funds provided by affiliated

societies and are funded by proceeds the Section generates from conventions and other activities. Cynthia leads the standing committee for scholarships. Beyond IBA and scholarships, she has a long involvement with the West Coast Student Expo held annually at California State University, Northridge.

Cynthia has a distinguished industry technical career, focused primarily in the San Joaquin Valley, but with an exciting stint in Siberia! She began her career with Getty Oil in Bakersfield and soon found herself working for Texaco in the Kern River Field. There she honed her skills in development geology and surveillance, building full three-dimensional reservoir models and coordinating work programs that added tens of thousands of barrels per day of production. The Kern River Field was a big part of Texaco's California production, and was a testing and proving ground for many technologies utilized for enhanced recovery in heavy oil environments.

The merger wave rolled through the oil fields in the early 2000s, and this time Cynthia found herself employed by Chevron. Soon she moved to Occidental Petroleum to develop Monterey Formation shale reservoirs at Elk Hills. Oxy focused on ramping up production, and at times the small team had seven or eight rigs running simultaneously. This is where I got to know her, and I can personally attest to her quick adaptability to a very unique reservoir and fast-paced operating environment. Cynthia was a key team member, often planning wells just ahead of a rig move and modifying completion programs on the fly. All this hard work at Oxy was rewarded by an "opportunity" that Cynthia enthusiastically embraced to become the geologic supervisor of a joint venture in Nizhnevartovsk, Russia. Cynthia helped to bring new technologies to the drilling and evaluation efforts—and she can tell some great stories about trekking to the office in sub-zero weather, being a woman in a technical role in a Russian joint venture, and what "first-class" travel entails in Siberia.

All that fun had to end sometime, so in 2007 Cynthia returned to Bakersfield to thaw and to develop smaller fields for Vintage, an Oxy subsidiary. Not long after her return she accepted a position with Aera Energy, where she continues to lead the way in many of Aera's developments of diatomite, fractured chert, and clastic reservoirs. While serving in this role, she is often called upon to mentor summer interns and new hires.

AAPG has benefitted immensely from Cynthia's efforts, in the San Joaquin Geological Society, the Pacific Section, and in the national arena. She is most deserving of this Distinguished Service Award, and I am honored to have been asked to write her citation.

Jon Schwalbach

JON R. SCHWALBACH
Distinguished Service Award

Citation—To Jon R. Schwalbach, in recognition of his exemplary service, distinguished leadership, and exceptional technical skills for the benefit of AAPG and the Pacific Section.

Jon Schwalbach's list of accomplishments, dedication, and service to the AAPG make him a worthy recipient of the Distinguished Service Award. He is an amazing individual who works to further the science of geology through his technical expertise and willingness to volunteer his leadership skills.

A New Jersey native, Jon earned his bachelor's degree at Duke University and then moved to the University of Southern California (USC). He focused on sedimentary processes in the continental borderland. Jon did well—he met his wife Dina, and graduated with a master's in 1982. He joined Exxon at their Western Division office in Century City, California. After getting a taste for

development geology, Jon was assigned the task of understanding the Monterey Formation's complex interaction of fracture networks and rock properties. Jon dove in to get a handle on the structural complexities that dominated Exxon's offshore Monterey Reservoirs. He was initially teamed up with Exxon Production Research and led the charge to characterize fractures using cores and outcrops to estimate oil volumes within the fracture network. His work was revolutionary in that he demonstrated Monterey reservoirs held nearly twice as much oil as previously thought by Exxon.

Jon moved to Houston in 1987 with Exxon's Alaska Pacific Exploration department. He continued his Monterey focus, working on exploration concepts and basin studies. In 1989 Jon took an educational leave to complete his Ph.D. at USC. He commuted from Houston to measure sections and collect handheld spectral gamma-ray profiles for many of the coastal Monterey outcrops in the Santa Maria and Pismo Basins. A Monterey Formation guidebook, published in 1992 with co-editors Kevin Bohacs and Lisa White focused on sequence stratigraphy in mudstones, is still used today for field trips to the Central Coast. Coincident with this work, Jon moved to Exxon's research lab, with projects examining source-rock stratigraphy and fault and bed seal analysis—including numerous visits to "beautiful" Rock Springs, Wyoming for field work.

In 1994, Jon transferred back to Exxon's Santa Ynez Unit's production office in Thousand Oaks, California. He advanced Monterey reservoir characterization interpreting borehole images tied to cores, and even learned how to drill wells! Unfortunately, for many of us, Exxon was winding down its California presence and in 1999 closed the Thousand Oaks office. Jon took his family back to Houston, but the adjustment was difficult. After a few months, Dina found a job listing in the Houston Chronicle for a "Monterey Geologist" in California and strongly suggested Jon apply! So in 2000, Jon accepted a position with Occidental of Elk Hills. The family moved back to Thousand Oaks where they rejoined their friends and sports leagues. For 8 years Jon commuted over the Grapevine to Bakersfield, often rushing back in the evening to coach basketball or attend other activities.

In 2006, Jon accepted a job at Aera Energy. He was part of a large-scale project to look at enhanced recovery techniques from the Ventura field. This eventually evolved to a work location in the Ventura field office. This ended Jon's commute and allowed him to see his lovely wife each evening! At the end of 2016 Jon was retired from Aera and has since taken up consulting, teaching petroleum geology at Calfornia State University, Long Beach, editing papers for an SEPM volume honoring his advisor Donn Gorsline, and enjoying time with his wife and grandchildren.

Jon's career has positioned him in the Pacific Section three times. Each time Jon increased his involvement with the Coast Geological Society, Pacific Section, and AAPG. He has been involved in AAPG and Pacific Section activities for 36 years and active in leadership for 22 years. Jon served multiple times as an officer for the Pacific Section and the Coast Geological Society. He was general chair for the 1998 PSAAPG convention in Ventura, and the technical program chair for the 2007 Long Beach ACE. From 2006-2013, he was active on the AAPG Research Committee and the Technical Advisory Committee, where he served as chair. Jon was elected to the AAPG Advisory Council as the Pacific Section Representative from 2012–2015. He served as the Technical Program co-chair for the 2015 PSAAPG meeting in Oxnard and the vice-chair for the 2016 Joint Pacific and Rocky Mountain Sections Convention in Las Vegas. He has also presented posters and talks at meetings over 25 times, has led numerous field trips and short courses, and authored a number of publications.

Jon's accomplishments are exemplary, and I am excited that AAPG has chosen to recognize them with the Distinguished Service Award. I have witnessed many of these efforts over the past 36 years, and I am continually impressed and inspired by his technical work and service. It is a privilege to acknowledge Jon's achievements; they demonstrate leadership that is ours to follow.

Dalton Lockman

MICHAEL L. SWEET
Distinguished Service Award

Citation—For Mike Sweet, for his distinguished service as Elected Editor (2013-2016), and related editorial and scientific activities for the AAPG and the geo-community.

The Distinguished Service Award is given in appreciation to those members who have given substantial time to making the Association work. Mike Sweet amply fits that category.

Mike served admirably as Elected Editor from 2013-2016. These were three tumultuous years, ones in which the price of oil decreased by more than 50%, which had a cascading effect on the business of AAPG, including publications. Moreover, it was a time of rapid change in the world of scientific publication with accelerating movement towards Open Access and digital publication. Prior to his tenure as Editor, Mike had already served extensively in guiding the science and publications of AAPG, including senior associate editor and associate editor (2004 to 2013), and vice chair of the Publication Committee (2009 to 2011). He served as Field Trip co-chair for the AAPG Annual Meeting in 2011.

Mike has had a highly productive, extended career as a sedimentary geologist. Mike was born in the Territory of Alaska, immediately prior to statehood, and lived through the Good Friday Earthquake of 1964. After receiving his B.S. in geology from the University Wisconsin (1980), and an M.S. from the University of Illinois (1983), Mike worked with Getty Oil for 2 years, before matriculating in the Ph.D. program at The University of Texas at Austin. Mike's dissertation on modern eolian processes in the Algodones Dunes in southern California remains some of the best in literature. Since departing UT in 1989, Mike has worked in industry with several companies, most recently ExxonMobil for the past 16 years. During his career, Mike has worked on a variety of problems involving sedimentology and stratigraphy applied to reservoir geology in many basins. On the scientific side, he worked for several years on a collaborative research project conducted by ExxonMobil and IFREMER, the French oceanographic lab, on modern deep-water systems.

Mike has published extensively on a variety of topics: eolian and deep-water sedimentology and reservoir geology in a range of depositional settings including eolian, fluvial, lacustrine, and deep water. Mike has always felt that the most interesting problems are found at the boundaries between sedimentary geology and other fields. This has led him to work on projects with structural geologists (outcrop studies of reservoir-scale normal faults and their implications for fault zone evolution and fluid flow), reservoir engineers and geostatistics experts (reservoir connectivity) and marine geologists.

The AAPG honors Mike Sweet for his many long-term contributions. Thanks, Mike!

Paul Weimer

FRANK ETTENSOHN
Grover E. Murray Distinguished Educator Award

Citation—A life-long educator, geologist and researcher, who has worked unceasingly to spread a geologic ethic and understanding of the integrative nature of the world around us.

Frank Ettensohn attributes his geological career to his growing up in the very fossiliferous Cincinnati, Ohio, area, where at age five, he was picking up fossils in his backyard and trying to understand how they got there. Realizing that he had a serious interest, his

parents encouraged his collecting, enrolled him in mineralogy, paleontology, and lapidary courses offered by the Cincinnati Museum of Natural History and sent him on field trips offered by the Hamilton County Park District around Cincinnati. Family vacations were also planned around geologic and collecting opportunities, and more than once, he was left behind on an outcrop in the confusion that resulted when trying to get his five siblings back into the car and on their way. Although family members still joke about Frank and his geologic activities, family was central to Frank and his becoming a geologist. During high school, scouting and an opportunity to be a summer-long field assistant for a graduate student only fueled his desire to become a geologist.

Still interested in fossils, he enrolled in geology at the University of Cincinnati, where his interactions with professors Richard Durrell, Frank Koucky, and Ken Caster were instrumental in his growing knowledge of geology; he left Cincinnati 5 years later with a master's degree in glacial geology. After 2 years in the Army as a combat engineer platoon leader and a brief period as a high school math teacher in Cincinnati, he entered the graduate program at the University of Illinois at Urbana/Champaign to earn a Ph.D. in paleontology, but what he left with was something much broader—the ability to integrate diverse geologic subdisciplines. He found such an astounding array of courses, subdisciplines and expertise at Illinois that it was difficult to choose a project in any one area. He eventually chose to work on a controversial series of clastic and carbonate units in eastern Kentucky that necessitated integration of stratigraphy, sedimentology, structural geology, tectonics, and paleontology. At Illinois, professors Dan Blake, Albert Carozzi, George Klein, Ralph Langenheim, George White, and Bill Hay were critical in the evolution of the integrated, broad view of geology, around which his teaching and research developed.

In 1975, Frank came to the University of Kentucky as an assistant professor. At Kentucky, he has been a prolific researcher on the geology of Kentucky and the Appalachian area, as well as department chair, director of the University Honors Program, and a leader, member or participant in many university, departmental, and community activities.

However, what he is most proud of is his role as an educator. Frank's major goal in teaching nonmajors has been encouraging students to examine the truly integrative nature of the Earth System, including humans. He encourages an approach that looks at the fundamental unity of humanity with all life and physical systems, and he has used this approach to develop a series of innovative, field-based courses that integrate other subject areas like history and literature for nongeology majors. His geology teaching is largely field- and problem-based and recognized by students as rigorous, but beneficial for future careers. He has mentored 49 graduate students to degree completion and found that encouraging student research, public presentations, and publication is a way to build interest in geology while building student confidence in their ability to be successful geologists. He has directed his department's geology field camp in most years since 1977, led many field trips for professional organizations, and is known for his modern-analogs carbonate short course in the Bahamas.

His teaching also has an international side with Fulbright professorships in the former Soviet Union and Nepal and summer teaching at China University of Geosciences and Chengdu University of Technology since 2005. Frank's expertise in black-shale geology was the basis for his award of a Jefferson Science Fellowship in 2013 to work as a petroleum geologist in the US State Department, where he worked with State Department employees to understand shale-gas geology. At the time, shale gas had become a major political tool for the United States, and Frank worked in the Bureau of Energy Resources to help State Department employees understand shale gas and shale-gas resource analyses around the world. As a State Department petroleum geologist, he was sent to China and the Balkans and spent two months in Ukraine as an Embassy Science Fellow to help these countries understand their shale-gas potential.

Frank has also worked extensively to enhance the public's

view of geology, largely through his work with teachers, the local school district, Commonwealth and community organizations and the media. Among others, he has worked with the local school district, the local Boy Scout Council, the Appalachian Math-Science Partnership, the Lexington Summer Science Program, Kentucky Educational TV, the Standards-Based Pre-Service Elementary Science Education Project, Governors Scholars, and the Appalachian Explorers to encourage the inclusion of geology in their programs.

Frank is known nationally and internationally for his work on the geology of the Appalachian Basin, foreland-basin stratigraphic sequences, and the origin of unconventional black-shale resources. He indicates that interactions with students and colleagues have been the source of much creativity in his teaching and research. His research has produced nearly 200 publications, more than half of which were coauthored with his undergraduate and graduate students.

He says, "I would have never arrived at this point except for the learning, teaching and research opportunities offered by the Commonwealth of Kentucky, the University of Kentucky, my department, my students, and the interactions with many colleagues. My sincere thanks to all!"

Brandon C. Nuttall

Response

It is indeed a great honor to receive the Grover E. Murray Distinguished Educator Award, and I am very pleased to be associated with an organization like AAPG that very proactively acknowledges the importance of education. I am also thankful for people like Dr. Murray and his wife, who early on recognized the importance of education and sought ways to promote it. Dr. Murray was himself a prominent educator, and my accomplishments pale in comparison to what he achieved. Nonetheless, as it was for Dr. Murray and everyone in our field, education was important in my growth as a geologist and for the fact that I have received this award. My biographer has already included references to those specific people who were most important in my becoming an educator and geologist. Clearly, however, many people are responsible for my being here, most notable, parents, family, and friends; teachers at all levels; museum and park workers; faith-based workers and volunteers; youth-group volunteers; as well as professors and fellow students. People in all of these groups have largely gone unrecognized but were certainly important in my development, and I want to give thanks, in many cases posthumously, for them and their contributions. I would also like to thank colleagues in my department and elsewhere at the University of Kentucky, my colleagues at the Kentucky Geological Survey, my colleagues at several of the surrounding regional universities with whom I regularly work, and the many colleagues in the professional organizations to which I belong for their work in trying to keep me and others current in our ever-changing field. Last, but certainly not least, I owe a great debt of gratitude to the students, who help me continue to grow and for whom I work to be a better educator.

My path to becoming a geologist and educator began at the age of five in the geologically stimulating part of the country where I grew up (the very fossiliferous Cincinnati, Ohio, area) and the fact that I had access to knowledgeable and committed people in my community, who recognized my interest, kept me engaged and guided my development. My goal as an educator has been to be just like those family, friends, community members, and educators who encouraged and guided me—in other words, to be a model for my students. Once I realized how important those models were to me—and it took me some time to move away from myself and to recognize this—I really started down the path toward becoming a true educator, and I am still working my way down that path. Early on in my career, I thought that education was largely about imparting knowledge; of course, it is a fun and neat thing to tell people about the Earth. As I moved on in my career, I came to realize that knowledge by itself was not enough; students had to know how and when to use that knowledge, how to make observations, and

ultimately how to put it all together to make appropriate inferences — all aspects that we call critical thinking today. I found no better place to model these kinds of activities and thought processes than in the field both at home and abroad, and because of this I am major proponent of geological education in the field. In fact, I think that it is the for the field work I do with students in our Colorado field camp, the trips to the Bahamas to study modern carbonate analogs, and my teaching abroad that I am best known as an educator. So, even in the face of growing logistical and legal challenges to working in the field beyond campus, I wholeheartedly support the necessity of geology field camp as an integral part of geological education, and I work hard to include field components in all my major and nonmajor courses.

The major challenge for me, and perhaps for others like me, is to stay "educated" and current. However, to maintain this type of currency and growth, it is clear that we educators and our institutions will need the continued support of organizations like AAPG and the companies and individuals that it represents, as we work to understand and manage the changing needs of our science and society and to pass on this understanding to future generations. I believe that this award is a recognition of that support, and for myself and other educators in the field, I want to register my sincere thanks.

Frank R. Ettensohn

PHILIP STEVEN SIMONY
Grover E. Murray Distinguished Educator Award

Citation—For his tireless dedication to teaching, and his generous guidance of geology, geophysics and engineering students and communities at the University of Calgary during the last 55 years.

Dr. Philip Simony was and continues to be an outstanding educator who taught and influenced thousands of geology, geophysics, and engineering students at the University of Calgary in the Department of Geology and Geophysics (now the Department of Geoscience). Philip was one of the four founding professors of the Department of Geology and Geophysics when he joined in 1963. During a tenure that spanned 55 years he taught multiple undergraduate and graduate level courses and directed 43 graduate student research dissertations. Between 1967–1968 he was the department's acting head and between 1970–1974 he was head. Philip played an important role in helping to build the department into what has become the largest geoscience department in Canada and possibly North America. Since retirement and appointment as emeritus professor in 2002 he has continued to be actively involved in the academic life of the department, and without remuneration, has directly contributed to educational activities such as teaching field schools, leading field trips, and mentoring and helping to train newly hired staff.

Philip Simony was born in Vienna, Austria in 1936. He moved to Canada when he was 12 years old and became a Canadian citizen in 1954. On completion in 1958 of his Honours B.Sc. in geology at McMaster University in Hamilton, Ontario, Philip planned to join the mining industry. Unfortunately job opportunities were not to be had as there was a major economic downturn and mineral commodities were hard hit. As a result Philip enrolled in the master's program at McMaster and carried out a project, supervised by Denis Shaw. His project focused on mapping metamorphic rocks within the Grenville Province in Ontario to determine initial premetamorphism rock types.

On graduation in 1960 Philip found again that there were "still no job interviews." One of his professors at McMaster, Gerry Middleton, recommended he pursue a doctorate in Britain. He followed this advice and enrolled in the Ph.D. program at Imperial

College, in London. Here, under the supervision of Gilbert Wilson, who has been called the "father of British structural geology," he embarked on two six month field seasons mapping the complexities of multiphase deformation in the Caledonian Chain in northwestern Scottish Highlands. He obtained his Ph.D. in 1963, returned to Canada and spent a summer mapping in Ontario, before joining the University of Calgary in the fall of that year.

Philip taught a range of undergraduate and graduate level courses that included introductory geology, structural geology, tectonics, engineering geology, physical geology, petrology, Precambrian geology, and multiple field schools. Paramount to Philip's educational philosophy has been the promotion of the hands-on field geology experience so that students understand onsite general and complex geological relationships. As a result of this outlook many undergraduate and graduate students benefited from a variety of multi-day field trips into the Rocky Mountains west of Calgary, and from the challenging, but enlightening mapping exercises that he developed and conceived for the field schools and labs that he taught. This education was also practical as for many exercises he also incorporated various data from the mining and petroleum industries into labs and lectures. Even though teaching assistants were assigned to instruct the lab sessions associated with his courses, Philip selflessly attended every lab session and interacted with the students. He not only assisted lab instructors but helped students learn how to work through the complex three-dimensional geological and engineering problems that were presented in challenging and innovative exercises.

Philip's research was field-based and involved multidisciplinary investigations into structural, tectonic, stratigraphic, metamorphic, and igneous aspects of the southern Canadian Cordillera. Much of this work broke new ground in the Canadian Rocky Mountains and, because of this, he is widely recognized as one of the preeminent Canadian Cordilleran geologists. Notably, Philip always put his graduate students' research ahead of his own. He commonly chose to spend his time in the field with his students rather than abandoning them to work instead on his own projects. As a result, one of the greatest rewards for Philip has been experiencing the delight that his graduate students have felt on making their own discoveries and unraveling the geological complexities of the areas being mapped.

As noted at the outset, Philip supervised 43 graduate students during his career comprising 12 Ph.D. and 31 M.Sc. students. Of these, 38 thesis projects were field studies involved with resolving the complex geology of the southern Canadian Cordillera. Furthermore, he also generously provided guidance and support to many graduate students working with other supervisors in the department.

Between 1968 until 1988 Philip also taught evening courses in structural and field methods in exploration with the Continuing Education Department of the University of Calgary. Calgary's petroleum industry was also the beneficiary of courses in structural geology and field methods. In addition, Canada's mining industry also benefited from his knowledge through the Mineral Exploration Division of the Geological Association of Canada for whom he ran courses and field trips. Notably Philip used the proceeds from these courses to help fund the research of the graduate students that he supervised.

Over the course of his career Philip received a number of accolades including the Douglas Medal of the Canadian Society of Petroleum Geologists in 1993. This award cited his outstanding contribution to Canadian Cordilleran research and teaching. In 1998 he received the Graduate Teaching Award from the University of Calgary Graduate Student Association, and also the 1998 Teaching Award from the Faculty of Science.

Notably the most significant commendations come from the many students and staff that he interacted with, some of which we quote here. One Ph.D. graduate wrote, "I have never encountered another professor so dedicated to ensuring his students understood the concepts as well as they possibly could. In fact, my own teaching over the past 35 years is modeled on the lessons I learned watching him interact with the classroom, and some of the exercises I still use are ones I

acquired from him in the first place." Another Ph.D. graduate wrote: "Dr. Simony was without any doubt the most influential person in my professional development as a structural geologist and my subsequent career in the oil and gas industry." An M.Sc. graduate stated "Dr. Simony is a perfect example of what a geology educator should be. He dedicated his career first and foremost to teaching and took great pleasure in the development and success of his students." A colleague wrote "Professor Simony is perhaps the most beloved professor of geology in the 50-odd year history of the Department of Geoscience at University of Calgary. The feelings of affection students have for Simony go well past respect, as deep as that is. They arise from the time and effort he expends, or has expended, with them: explaining, re-explaining, encouraging, enlivening, engaging."

One of the reasons that Philip has been such a successful and effective educator may be because he still remembers the challenges that he faced when learning new skills. In conversations with Philip, he recalls laboring to try to understand complex multiphase structures in northwest Scotland: "It is like trying to find your way through a brick wall. Suddenly, one day, like magic, the bricks fall apart and you are through the wall. The difficult part is explaining to someone else how to get through the wall".

Kevin Root and Federico Krause

Response

It is a great honor for me to be awarded the Grover E. Murray Memorial Distinguished Educator Award. It seems incredible to me that I was selected. I am deeply indebted to AAPG, the AAPG Foundation, the selection committee and the far-sighted philanthropy of Dr. Grover E. Murray and Mrs. Murray in encouraging and supporting excellence in education within our profession. I must thank my many students and colleagues who wrote letters on my behalf and, in particular, I must thank Dr. Federico Krause, Dr. Kevin Root, Dr. Michael McDonough and Dr. Sharon Carr for initiating and seeing the application process through.

In my youth I got lucky again and again to have great teachers who took time to also be great mentors. It is from them that I learned, by example, to teach and to mentor. In the summer of 1956 I worked as a junior field assistant in the eastern Rocky Mountains. My party chief, John Watson, a BP geologist, was a great mentor. He made sketches for me in my notebook illustrating the arrangement of the thrust sheets to explain where we were measuring sections. I asked him what happened to the thrusts to the west beyond the edge of my notebook page. He explained that (in 1956) the answer was not known and that maybe I should work on that. He also pointed out that carefully, factually constructed cross-sections were a tool in the solution of geologic problems.

At Imperial College in London, my professors saw to it that I understood that geologic mapping, if it was carried out properly, was a powerful scientific research tool. In the mountains of northwest Scotland I had an opportunity to gain experience with the techniques of detailed mapping and how to use them in the solution of geologic problems. Then, in 1963, I got incredibly lucky and landed a real job at the University of Calgary.

My aim, on coming to Calgary, was to take the lessons I had learned in Ontario and Britain and apply them to work in the Canadian Cordillera where very little detailed work had been done. My hope was to develop projects of detailed mapping where students could find their own thesis topics with the emphasis on process-oriented solutions. I soon discovered that carrying out research projects with students was so much more satisfying and fun than doing research alone. Here again I got lucky. It turned out that all my graduate students were such great people to work with.

In my Cordilleran work, I was very fortunate to have had, from early on, the guidance and encouragement of three outstanding geologists, teachers and mentors: Dr. J. O. Wheeler of the Geological Survey of Canada, Dr. J. T. Fyles of the British Columbia Geological Survey, and Dr. R. A. Price of the Geological Survey of Canada and professor at Queen's University. Without their advice and help I would not have gotten very far.

By the 1990s the discoveries of many different researchers, including many of my students, began to fall into place. Perhaps there were answers to my naive questions of 1956. I owe a great deal of gratitude to my colleague Dr. Sharon Carr of Carleton University in Ottawa for her tireless work, pushing me and helping me so that by 2011 we were finally able to put our ideas together and publish a description of possible kinematic linkages between the motion of the great thrust sheets of the southern Canadian Rocky Mountains and the sequence of complex structures in the hinterland west of the Rocky Mountains.

Teaching geologic mapping to undergraduate students obviously became one of my prime responsibilities at the University. I soon discovered (as many other have) that a day spent with a group of students in a hands-on setting allows for effective and efficient teaching. This approach could readily be transferred to structural geology and engineering geology problem-solving sessions. I stayed in the laboratory for the duration of each session, and, together with my teaching assistants, we were able to coax most of the students to find their own way to the solution of the problems. Yes, this is time consuming, but highly effective and therefore efficient. The students appreciated the help and felt that they were really learning.

In 1960 I got very, very lucky. Vera accepted to marry me, leave the family farm, and join me on my adventure to London and the Scottish Highlands. My success with students mapping in the field would have been impossible without her strong support. She "held the fort" at home while I was away in the field. She took an interest in the students and she selflessly accepted that the many students needed my help and my time. I am indebted to her for life.

Philip S. Simony

THOMAS C. CHIDSEY, JR.
Public Service Award

Citation—To Thomas C. Chidsey, Jr., in recognition of a long career in petroleum geology that has included a dedication to the geologic education of the general public, government officials, and others in Utah and beyond.

A native of the Washington, DC metropolitan area, Tom received his B.S. in 1974 and a M.S. in 1977, both in geology from Brigham Young University (BYU). During his 40-plus year career, he has worked as a production geologist for Exxon in South Texas and an exploration geologist in the Rocky Mountains for Celsius Energy Company (Questar Corp.) before joining the Utah Geological Survey (UGS) in 1989. He has conducted research on Utah's petroleum reservoirs and plays, carbon dioxide resources and sequestration, modern and ancient microbial carbonates, and outcrop reservoir analogs. Tom has served as Rocky Mountain Section president of AAPG, president of the Utah Geological Association (UGA), UGA's delegate to the AAPG HOD (three terms), general chairman for the 2003 AAPG Annual Convention in Salt Lake City, and is currently a board member of the AAPG Rocky Mountain Section Foundation. He has been an editor/co-editor of seven UGA Publications, one AAPG Studies in Geology book on the Ferron Sandstone, three UGS Bulletins on Utah petroleum geology, is currently co-editor of UGA's online journal *Geology of the Intermountain West*. In addition, Tom has authored/coauthored over 200 technical publications and abstracts.

Besides these geologic research and society activities over his 28 years at the UGS, Tom has enthusiastically devoted his time and energy to educating the public about Utah's petroleum resources and general geology. He has served as a co-editor of *Geology of Utah's Parks and Monuments*, the UGA's bestselling guidebook, as well as coauthoring several papers therein. Tom has also published

nearly 40 nontechnical geology articles for the general public.

Tom has spoken about Utah's petroleum plays and potential to county commissioners all over the state (both in public and private settings), legislators, tribal leaders, and at the Governor's Energy Summits, the Uinta Basin Oil & Gas Collaborative Group quarterly meetings, Uinta Basin Petroleum Days, and numerous other public events sponsored by various organizations that have a vested interest. His presentations to nongeologists always include a "Geology 101" discussion to provide the basics of petroleum geology before moving on to the main topic. Tom has lectured about careers in petroleum geology to university students for years cautioning them on the need to save money during the good times and not to be discouraged during the hard times, drawing from his own experiences of multiple job offers and subsequent layoff before ultimately landing a dream job at the UGS.

Utah's spectacular geology often comes into conflict when environmentally sensitive regions are targets for exploration plays or when new national monuments (i.e., the Grand Staircase-Escalante and Bears Ears) have been created. Tom has been called upon to provide science-based information to those on all sides of the table to assist with these land management issues for the ultimate benefit of Utah and United States citizens.

In addition, Tom actively engages younger, possible future geologists. Each October the UGS invites hundreds of fourth graders to the Utah Core Research Center to participate in Earth Science Week. Tom and his daughter, Lisa (a former high school physical science teacher), team up to run the mineral testing station for a hands-on experience by the excited little students. He has also served as a Boy Scout leader, taking his charges fossil and rock collecting to many great sites in Utah, always explaining the geology along the way whether they want to hear it or not. To earn the rank of Eagle Scout, Tom "required" an additional merit badge—geology, of course.

Ever devoted to his alma mater, BYU, Tom is a member of the College of Physical and Mathematical Sciences (CMPS) Volunteer Leadership Council and has served for many years on the Geology Alumni Board (current co-chair). His duties include providing advice to the Department of Geological Sciences and its students, helping to seek job and mentoring opportunities for students, and chairing geology sessions during the CMPS annual Student Research Conference.

Throughout the years, Tom also has enjoyed conducting dozens of field trips and core workshops for geology students, professionals, and nonscientists alike. He always provides the attendees with a small bottle of Utah crude oil and borrows a line used by Humphrey Bogart in the classic movie, "The Maltese Falcon," "This is the stuff dreams are made of!"

Michael D. Vanden Berg

IAN DAVID MAYCOCK
Pioneer Award

Citation—For an exceptional career as a geoscience mentor, role model, and pioneering international explorationist responsible for discovery of well over three billion BOE.

Raised in Scotland, Ian Maycock earned a B.Sc. (Hons) from St. Andrews, Scotland, and a M.Sc. from Queens University, Ontario. After marrying wife Kathy, he gained a Ph.D. from Reading University in England. Following work for the Saskatchewan government, he joined Conoco International where he worked for several years on Middle East regional geology with field work in the Northern Oman Mountains, Iran and Turkey. Following a spell in Conoco's Princeton Group considering the implications of the fragmentation of Gondwana, he moved to London in 1973 as exploration manager for Zapata Exploration. Ian joined Hunt Oil Company in 1980, managing Hunt's international exploration office in London.

It was here that he had his greatest exploration success. Former Conoco colleague Moujib Al-Malazi contacted Ian regarding an aeromagnetic survey in Yemen indicating a significant sedimentary basin in the northeast, despite known Precambrian outcrops in the area. By early 1981 Ian had convinced Hunt management of the exploration potential of the Mar'ib/Al-Jawf basin. He led an exploration scouting team to the country and helped negotiate a PSA with the Yemeni government. He directed several field mapping and sampling expeditions, and a seismic program was shot with widely spaced lines several kilometers apart. Early seismic interpretation by Al-Malazi showed the presence of potential hydrocarbon-trapping structures.

The rank wildcat Alif-1 well was spudded on the high shot point at the intersection of two regional seismic lines. On July 4, 1984, it was tested at a rate of over 7,800 BOPB, the first oil discovery in Yemen. Ian continued to lead an exploration team that subsequently discovered several other very large oil and gas fields in the basin, including Azal, Asa'ad Al-Kamal, Al Raja, Raydan, Wadi Bana, and others.

In 1986, Ian was promoted and transferred to Dallas, and in 1989 he became vice president, international exploration, where he directed/evaluated exploration projects throughout Siberia, Uzbekistan, North, East and West Africa, Middle East, Latin America, Southeast Asia, and Australia. Throughout his career, he served as an inspirational role model for the many younger geoscientists he led and mentored along the way. He retired from Hunt in 1998.

An AAPG member for 35 years, Ian Maycock is a pioneering international explorationist responsible for Middle East discoveries of over 1 billion BO and 14 TCF gas. He has achieved every explorationist's dream, drilling the first wildcat well in a totally unexplored basin and discovering a giant oil field.

Robert E. Webster

WAYNE RANNEY
Geosciences in the Media Award

Wayne Ranney shares the joy of geologic thought with audiences worldwide and has achieved a high level of success in communicating his deeply held passion for rocks, landscapes, and time. Having forsaken a more financially secure career path in industry or academia, Ranney has accompanied hundreds of educational expeditions on ships, trains, jets, rafts, and trails to all 7 continents and nearly 90 countries. He is the author of many award-winning books including *Carving Grand Canyon, Sedona Through Time* and *Ancient Landscapes of the Colorado Plateau*. His newest book is called *Ancient Landscapes of Western North America* and is published by Springer. His popular geology and travel blog *Earthly-Musings* is read by many. He is also a two-time recipient of the Rocky Mountain Association of Geologists Geoscience in the Media Award (2014 and 2016). Ranney is a former adjunct professor of geology at Yavapai College and still works worldwide on trips with Smithsonian Journeys. In his 40-year career, Ranney has exposed literally thousands of otherwise normal people into rabid geology junkies. He lives with his wife Helen in Flagstaff Arizona, near the place that initially inspired his passion for landscapes, the Grand Canyon.

OLA ADLY FAKHRY MOHAMED
Young Professional Exemplary Service Award

Citation—For dedicated and continued support of Young Professional activities across

Egypt, and in particular for fostering enthusiastic student participation in AAPG Student Chapters and the annual Imperial Barrel Award Program.

Ola Mohamed has been an ardent supporter of both AAPG Student and Young Professional activities in Egypt. Her involvement with AAPG started in 2008 with the Cairo University Student Chapter where she helped organize many seminars and field trips. This lead to her joining in the 2010 Imperial Barrel Award (IBA) competition in which Cairo University became the first Egyptian school to ever participate in this program. The team finished third in the overall Africa Region results. That same year she helped organize the new Egypt Young Professionals Chapter and has been a leading member ever since. One of the biggest successes of the Egypt YPs was the establishment of an IBA preparatory program, referred to as the "IBA Simulation." Under Ola's leadership, industry data sets similar to those used in the official IBA Program are distributed to participating universities, and training seminars are held in which volunteer YPs and faculty members mentor the student teams in how to approach the data set evaluation. A competition between teams is then held, with industry judging comparable to the IBA event. The Simulation program has enabled a large number of students to be exposed to industry-related everyday geoscience problems and has been well received by both students and industry professionals in the Egyptian exploration community. Many of these students and their teams then go on to compete in the subsequent IBA competition. For those that can't participate in the IBA, they have at least completed a similar skill- and confidence-building experience.

After helping to form the YP chapter in Egypt, Ola became the YP North Africa coordinator in 2013. She was also involved in expanding IBA activities across the region, facilitating the participation of universities in Algeria and Tunisia. With more schools joining in the competition, it became necessary to split the Africa Region into North and South semifinals, from which selected teams go on to the region finals. Ola and the YP team have provided the organization for the northern semi-finals, and then in 2016 for the African Region finals which were held in Cairo for the first time.

Ola received her bachelor's degree in geology from Cairo University in 2009 and then entered into the master's program focusing on the sedimentology of carbonate unconventional reservoirs. As an undergraduate she completed internships at Khalda Petroleum Company, the Gulf of Suez Petroleum Company, the General Petroleum Company, and Suez Oil Company. Her first employment was as a development geologist with Oasis Petroleum Company in 2010 in Cairo. She moved from there to Pico International as a sedimentologist/paleontologist and then to Khalda Petroleum Company in 2011. Ola's work at Khalda has involved both field development in Egypt's Western Desert and regional studies integrating her knowledge of stratigraphy and micropaleontology.

Ola continues to play a leading role in YP activities in Egypt. In addition to the very critical involvement in the Egypt IBA Program, the YP's organize numerous technical and soft-skill events including the "Discover Egypt" program with Shell/BG Egypt and the "Gain and Give" seminar series. All of the Egyptian geoscience community, from students to industry professionals, has benefited from Ola's hard work and devotion to her cause, and we are very thankful to her for this.

William Bosworth

DWANDARI RALANARKO

Young Professional Exemplary Service Award

Citation—In recognition for his strong passion to be developed while developing young geoscientists. Through his personal experiences, he genuinely inspires others. Through his leadership skill, he motivates others.

Dwandari (Andar) Ralanarko has working experiences in both exploration and production sector in the petroleum industry. He is a graduate of the University of Diponegoro (Central Java, Indonesia) specializing in petroleum geology. In his final year, he got a chance to intern as a field geologist for a mining service company in East Kalimantan, Borneo. After graduation, Andar started his career as an exploration geologist for an international field mapping project in Ugljevic and several districts in Republika Srpska, Bosnia & Herzegovina.

Since 2011, Andar has worked for CNOOC, based in Jakarta, Indonesia. He joined the subsurface team as a production geologist, responsible for subsurface mapping and reservoir characterization for several projects in Southeast Asia. He has worked in maintaining the oil production from clastic reservoir and dealt with strong water drives as well as depletion drive issues. Occasionally he reviewed international projects such as those from China, Iraq, and Nigeria.

He gave numerous presentations at several conferences in Asia Pacific organized by the Indonesian Petroleum Association, AAPG, Society of Exploration Geophysicists, and Socety of Petroleum Engineers. He participates actively in professional organizations, exercising his networking while sharpening his technical skills. He is keen on teaching and sharing his knowledge and experiences through workshops and seminars for several AAPG student chapters in Asia Pacific Region.

Andar gave significant contributions to the community trough student chapter and professional organizations. He was the vice president and later as the president of the AAPG SC UNDIP from 2008 to 2009. During this period, the student chapter was acknowledged an international outstanding award, a significant achievement for a three-year-old student chapter. As a result of his energy and enthusiasm in geoscience, in 2010 he was selected to attend the AAPG Student Chapter Leadership Symposium (SCLS) and Leadership Day in Tulsa, Oklahoma. A couple years later, in 2014, he was invited to attend AAPG SCCS & Young Professional Leadership Summit (YPLS) in Salt Lake City, Utah.

After years of involvement, he believes that the time as a student is a precious moment for everyone. He often refers it as a "golden time" and this makes him remain as the chair of the Oversight Committee for Indonesian AAPG SCs, maintain SC's activities and initiate several new SC establishments. He is also the co-coordinator for the Visiting Geoscientists Program in the Asia Pacific Region, where he coordinated professional geoscientist visits to the universities.

In 2017, he was named as an Outstanding Visiting Geoscientist of the year - Gold, visiting more than 15 universities in Southeast Asia and China. He also co-convened the AAPG Geoscience Technical Workshop (GTW) Bandung 2017, accommodated more than 120 petroleum geoscientists from Asia Pacific, Europe, and the United States to deeply discuss hidden potential in mature basins.

Apart from AAPG, he is actively involved in the Indonesian Association of Geologists and currently serves as the secretary-general for 2018-2020 periods. With his strong networking and connections in the industry and professional organizations, he bridges communications and smooths over the preparation of several projects and events. His participation and activities helped the young professionals and student members to grow and thrive. His involvement is critical to the organization as he bridges the generation gap between the seniors and the fresh graduates. His role model is an icon of regeneration acceleration.

Following his passion, Andar is also involved in the Indonesian Association of Geophysicists as a board member in the Science and Technology Division. They are conducting many discussions about causes, triggers and hazard mitigations and helping people to minimize the destructive impact of geology disasters. He is also registered as a member of Society of Indonesian Petroleum Engineers and Indonesian Petroleum Association.

Andar always see the beauty of geology. In 2013 he co-founded Geotour Indonesia, which actively promotes geotourism sites in Indonesia. GeotourID is a new start-up, the first of its kind in Southeast Asia. It received the Young Entrepreneurial Award in

2016, and also Wonderful Start-Up Academy in 2017, organized by the Ministry of Tourism Republic of Indonesia. He wishes to accommodate young geoscientists to contribute to the success of geotourism development in Indonesia. His entrepreneurship is the key in developing GeotourID as well as other technical related activities. Apart from traveling, Andar also likes to play basketball, an activity which keeps himself fit and close to his mates. He also is a talented singer and he joined the band on several occasions.

By having a complete package and positive influences like this, I do believe that he is more than deserving of the AAPG Young Professional Exemplary Service Award.

Herman Darman

DAVID C. BLANCHARD
Vlastimila (Vlasta) Dvořáková International Ambassador Service Award

Citation—For enthusiastic and tireless efforts to spread AAPG ideals and objectives to the world-wide community of explorationists, disseminate cutting-edge concepts globally, grow the AAPG community and encouraging cooperation with similarly-oriented professional organizations across our planet.

David Blanchard is a worthy recipient of the inaugural Vlastimila (Vlasta) Dvořáková International Ambassador Service Award. He has lived and worked at locations around the world throughout his life and brings a true international perspective to all his professional and volunteer activities. Dave was born in Canada and then with his family immigrated to New Zealand when he was six years old. This is where his initial interest in geology began, collecting fossils, exploring the beautiful, rugged countryside, and experiencing close encounters with landslides. At the age of 12 his family moved to the San Francisco Bay area, and Dave has maintained a longtime association with California–often from afar–ever since. Dave is a talented musician, so he nearly made a career of his guitar playing but his love of geology won out and he received a B.A. degree in geology from San Francisco State University and did his M.S. in geology at San Jose State University. During this time and after graduating he was employed by Schlumberger and the US Geological Survey (NPRA), including stints in southern California and the Brooks Range of Alaska. Dave joined AAPG in 1981 and has been an active member ever since.

In 1982 Dave was hired by Marathon International Oil Company in Houston and was immediately sent to Tunisia for his first international assignment. This was followed by projects in the Sudan, Syria, Australia, Belize, and Brazil. While in Syria Dave had the opportunity to do field mapping with Prof. Ziad Beydoun, and he also met his wife Shadia. In 1994 Dave was transferred out of the Marathon international organization to its office in Cody, Wyoming. Dave and his family enjoyed this posting but he missed the international arena, so in 1997 he left Marathon to become the exploration manager for Seagull Energy in Cairo, Egypt. This truly cemented his longtime affection for Africa and the Maghreb and his involvement in AAPG international activities. In 2002 Dave was co-chair for the AAPG/EAGE/SEG International Conference and Exhibition held in Cairo, an immensely successful meeting. Seagull's interests in Egypt were purchased by Ocean/Devon, and along with them Dave. He rose to the position of vice president and general manager. Devon moved Dave back to Syria for two years starting in 2003, returning him to Egypt in 2005. Upon his return he was elected to the position of vice chairman of the Egyptian Exploration Society (EPEX), which is a longtime affiliated organization of AAPG. Dave also joined the AAPG Board of Trustees as an associate in 2005. Devon left Egypt in 2007 and Dave was quickly hired by El Paso, who recognized his contacts and expertise were essential to opening

their new office in Cairo. Tragically Dave's daughter had been killed in a pedestrian accident in 2003, and he was determined to remain in Cairo to help oversee the construction of a pedestrian footbridge over the Auto-Strad in her memory which was completed in 2011. During the El Paso years Dave co-chaired what would be AAPG's first Geotechnical Workshop (GTW), held in cooperation with EPEX in Cairo in 2009. In 2010 he joined the Board of Directors of the International Petroleum Technology Conference (IPTC), which is a collaboration between AAPG, EAGE, SEG and SPE. He was technical co-chair for Doha IPTC 2009. As IPTC Chairman he also oversaw the 2015 Doha and 2016 Bangkok conferences.

In 2012 El Paso sold its Egypt assets and Dave moved once again back to Houston, this time with Energy XXI as business development director, broadening his exploration activities to include Malaysia, Mexico, Gulf of Mexico, and the Austin Chalk. Despite leaving the African continent he continued his active involvement in AAPG Africa Region activities and became its president from 2014-2016. He helped organize another GTW in Alexandria, Egypt in 2016 and later that year he was co-chair of the Africa Region's first Africa Energy and Technology Conference in Nairobi, Kenya. Dave has also played a leading role in the philanthropic AAPG Publication Pipeline Committee, which has delivered hundreds of geoscience books to countries in sub-Saharan Africa and helped organize and promote the AAPG Visiting Geoscientist program in North Africa.

Dave is presently the Africa Region past president and co-chair of the AAPG Regions Committee, and treasurer for the IPTC Board of Directors. He remains very active in both Africa exploration and volunteer activities. Dave continues to epitomize what service to our Association means and what Vlasta Dvořáková's namesake award is intended to honor.

William Bosworth and Eric Hathon

Response

It is truly a great honor to receive this inaugural award in memory of Vlasta Dvořáková, who was not only a friend but such an inspiration to all of us involved with the Regions. Jointly receiving this award with Gilbert Odior adds an extra bonus for me since Gilbert has done so much for AAPG in Africa and was the champion for opening the Region's office in Nigeria. He also dedicated much effort and time in reaching out to students in Nigerian high schools and universities so it's my honor to be able to stand side-by-side with Gilbert to receive this award.

I thank Bill Bosworth and Eric Hathon for putting together the mosaic of my life story and what events brought me to this point. They are both good friends and colleagues from the Marathon days and each know a different facet of my life. Yet we have had adventures together exploring the Western Desert in Egypt. And there are so many others who have, along the way, greatly influenced the direction my career has taken that it's difficult to mention all of them here. A few shout-outs are in order though; to John Dolson, Samir Abdel Moaty and Nosa Omorodion who inspired and propelled me forward to volunteer with AAPG. This was sometimes to the dismay of my family but who, nonetheless, have supported me these many years. To both my old high school friend Scott Morgan, with whom I roamed the Pliocene cliffs of Northern California hunting for fossils, and my undergrad professor Raymond Sullivan for galvanizing my decision to abandon a career in music and take up geology. Irv Tallieur, George Gryc, Ken Bird, Les Magoon, and the USGS cohorts further inspired me to take that deeper dive into what makes rocks tick but to be humble when it comes to what we think we know. Through my career I've had many bosses who have been incredibly understanding and supportive of the travel and time required to make an impact for a volunteer driven society.

Approximately 15 years ago AAPG recognized that international members come from very diverse backgrounds and can't, nor should, be lumped together as one group. These geoscientists in many ways felt left out of the mainstream activities of the society so the Regions were formed to provide representation and a sense of ownership. Not too long later the position of Region's vice president was instituted

which provided representation at the Executive Committee level and further galvanized the importance that international members play in the society. Regions, like United States based Sections, are made up of affiliated local societies which in turn are comprised of geoscientists at the most local level. While many of these local society members are not AAPG members we still serve them and they depend upon AAPG for science content, data, references, educational workshops, and networking opportunities.

During my international assignments and travels in the early 1980s, to Africa, Latin America, and elsewhere, the industry was dominated by professionals mostly from the United States, United Kingdom, Europe, and Australia. Due to various reasons, including pledges from companies to support higher education in geology, geophysics, and engineering and host government requirements that certain positions transition to trained national professionals. As a result, our industry is now complemented by professional of all nationalities in positions from geoscientists through CEOs. When we say ours is a global industry, we really mean it. I remember working on, and nominally supervising, a surface mapping project in Palmyra in Syria in early 1984 and became close to the national employees and our advisor Prof. Ziad Beydoun. After spending the day mapping we would gather in a rented apartment in Homs to discuss the day's progress. I quickly realized that my field colleagues were my peers and my friends who were equal to anyone else in our profession. Was there something I could teach them, yes, but similarly they also taught me and our relationship became an exchange of ideas as a team.

Fast forward to shortly after I was co-vice chair of the 2002 AAPG ICE, jointly held between AAPG, SEG, and EAGE, I received an invitation to join the executive committee of a concept conference called the International Petroleum Technology Conference (IPTC). The concept was that the four globally dominant oil and gas professional societies, AAPG, EAGE, SEG, and SPE, join together to hold a conference in the Eastern Hemisphere. At our first ExCom meeting held in Doha, Qatar, I was pleased by the diversity of members and it quickly became clear what a timely and successful conference this would be. Just coming off a conference with three societies I was certain this IPTC event would be a success. During the following years IPTC has become a flagship event and has been held 11 times in Doha, Kuala Lumpur, Dubai, Bangkok and Beijing. It was my honor to serve as board chairman for the most recent events in Doha and Bangkok.

It's no time to rest on past accomplishment so I hope to be able to do much more for the Regions and live up to the spirit of the award and citation. Thanks to all for their support through these past 40 years.

David Blanchard

GILBERT ERELUMHE ODIOR
Vlastimila (Vlasta) Dvořáková International Ambassador Service Award

Citation—To Gilbert Erelumhe Odior for his leadership, long-term commitment, and being a tireless ambassador of AAPG promoting the ideals of the organization within and across the African Continent.

Gilbert Erelumhe Odior was born in Ogbona, Edo State, Nigeria on July 21, 1957. He had his early education in Edo State before proceeding to the University of Ibadan, Oyo State, where he graduated with a B.Sc. (Hons) in Geology in 1979 and M.Sc. Petroleum Geology in 1981.

All of Gilbert's more than 34 years in the industry was with Mobil Producing Nigeria starting in 1981 till he voluntarily retired in 2015 as geoscience coordinator. Gilbert indeed left an indelible mark in Mobil Producing Nigeria as an accomplished geologist with proven successes in finding, developing, and producing hydrocarbons in offshore Niger

Delta and the Gulf of Mexico. During his career at Mobil Producing Nigeria he worked on and led several landmark projects in Nigeria and the United States. His experience spanned exploration geology, development geology, production, wellsite geology, and management.

Gilbert Erelumhe Odior, EGO as he his fondly called by his friends and colleagues, is well respected in Nigeria Oil and Gas Industry for his innovative leadership and amiable personality. He has been in leadership roles in several professional and social organizations. He was a past president and Fellow of the Nigeria Association of Petroleum Explorationists (NAPE) (2004-2005) and a president of AAPG African Region (2012-2014).

While he was president of AAPG AR, he was instrumental in the establishment of the AAPG regional office in Lagos, Nigeria located within the NAPE office complex, and the recruitment of a program manager to manage the affairs of the region.

He also spearheaded the process of the Ghana Institution of Geoscientists to become the 6th AAPG Affiliated Society from Africa. He also led the AAPG AR to establish the AAPG Angolan Chapter. The new AAPG Angola Chapter now provide the opportunity for Geoscientists working in the country to gather and discuss technical issues and solutions.

Famous for his mentoring and long-term support for student and YP activities, Gilbert continues to provide scholarships to Nigerian Geoscience students through the NAPE University Assistance Program. He also helped to facilitate and enabled the AAPG AR host Young Professional activities across the African continent with events in Nigeria, Egypt, Gabon, and Cameroon. He was also instrumental in the AAPG Africa Region organizing the first L-SCLS outside the North American continent. To date, over 1000 student leaders from Nigeria, Ghana, Uganda, and Congo have participated in the summits.

These events have now become major networking events and continue to record increase in participation from students and YPs in the countries across the African continent.

As NAPE president and as a nonposition leader in AAPG, EGO committed to and was instrumental in promoting the gains of a regional conference—the Deep Offshore West Africa Conference and Exhibition (DOWAC). The first-of-its-kind conference was jointly hosted by AAPG and NAPE, this conference brought together participants from several Africa countries with over 1000 registration, at a maiden event.

The second DOWAC conference in 2010 again held by no coincidence, during his regime as AAPG AR president, was again hosted by the two associations. These events held during his terms as president goes a long way to show his deep commitment to serve and to provide platforms for industry growth, advancement, and creating viable networking opportunities to members.

In addition to his service to his professional organizations, Gilbert is very active in his community. He is currently the president of his community group, "The Ogbona Elites Forum." The group's Facebook page that he created now has a membership of over 1200 members with the Elite forum membership now standing at about 200 members.

Some of the community projects EGO has led or championed include hiring and payment of salaries of about 11 temporary teachers, fueling of pumping machines and provision of solar panels to power boreholes drilled for the community, purchase of books, and organizing career talk and training programs for the teachers.

Gilbert Odior is currently the managing director of Field Support Services, an oil and gas industry support services firm specializing in the provision of interface management and regulatory, project specific manpower supply, university assistant programs, and community development work.

Femi Esan

Response

I am truly honored and humbled to be one of the very first recipients of the Vlastimila (Vlasta) Dvořáková International Ambassador Service Award. I thank those colleagues who considered me worthy of nomination, the Awards Committee, and AAPG. I also thank my wife, Angela and my children, Anita,

Vivian, Bobby, Richard, and Nehemiah for their love and tolerance of my ways.

I have had the honor of working with many wonderful AAPG members in the Africa Region over the years and have learned from all of them. I was drafted to AAPG activities by my friend Nosa Omorodion and was very fortunate to have three special people Adedoja Ojelabi, Femi Esan, and Tunbosun Afolayan who helped to mentor me and supported all our activities. I must not forget my company ExxonMobil in Nigeria that supported my AAPG activities and sponsored many of our programs

I am grateful for the opportunities AAPG membership has afforded me and believe that I am a better geologist and better person for it. I hope to continue my involvement in AAPG and continue to pass along some of what I have learned to the next generation of geoscientists and to the society. I encourage everyone to be as involved in the association as you can; you will reap the benefits of your involvement many times over.

My experience covers 34 years of diversified activities across the oil and gas industry such as finding, developing, and producing hydrocarbons offshore in Nigeria and Gulf of Mexico, regional evaluations, field development and resource management, and a strong knowledge of government relations and all applicable laws and agreement in oil and gas development in Nigeria.

I have authored and coauthored several technical papers, proprietary industry papers, and reports. Amongst other notable projects, I coordinated the production of 24 lecture series on various aspects of Geoscience and soft skills that were deployed to 15 universities in 2015. I also coordinated the development of "Exciting World of Geology," a package is to help high school students in Africa understand geology and also to encourage them to join the profession. The YP and students' chapters have deployed this program to more than 200 high schools across Africa.

I joined AAPG in 1982 and *AAPG Explorer* and the *AAPG Bulletin* were my main attractions to AAPG. Though I attended several AAPG conferences but only started taking active roles in AAPG to support my friend Nosa Omorodion.

As NAPE president in 2004, was instrumental in promoting the gains of a regional conference–Deep Offshore West Africa Conference and Exhibition (DOWAC). The conference, jointly hosted by AAPG and NAPE, brought together participants from several Africa countries and other parts of the world with over 1000 registration.

The second DOWAC conference in 2010 again held by no coincidence during my regime as AAPG AR president, again was hosted by the two associations. These events held during my terms as president goes a long way to show commitment to serve and to provide platforms for industry growth, advancement, and creating viable networking opportunities to members. My greatest learning from co-organizing both conferences was the AAPG planning and organizing capabilities.

One of the major highlights of my time as president is the establishment of the African Region office after many years of planning. The office is located at the Nigerian Association of Petroleum Explorationists' (NAPE) office building.

I must confess that I have an obsession to work with YP and also mentor them for their professional growth. Young Professionals activities have grown to levels of significant advantage in the region with recorded increase in participation from YPs in more countries namely Cameroon, Egypt, Gabon, Ghana, Nigeria, South Africa, Tunisia, and Uganda.

Student Chapter activities also continue to witness significant growth both in terms of number of chapters and level of activities. Despite the language barrier, the Region now has more than 50 student chapters in Africa, with new additions from Kenya, Uganda, and Ghana.

In addition to service to professional organizations, I also play very active roles in my community. I am currently the president of the community group, "The Ogbona Elites Forum." The group's Facebook page, which I created, now has a membership of over 1200 members with the Elites forum

membership now standing at about 200 members.

Some of the community projects I have led or championed include hiring and payment of salaries of about 13 temporary teachers for over a year, fueling of pumping machines and provision of solar panels to power water boreholes for the community, purchase of books, and organizing career talk and training programs for the teachers and students. I believe in community and civil society participation and support for quality education in our schools and we are taking a leading role to make our school better.

Once more let me thank the past and present executives of AAPG Africa region for nominating me for this award and for their support during my tenure as president of the region. I pledge to continue to support their activities in Africa

Gilbert Erelumhe Odior

BENJAMIN KNELLER
Wallace E. Pratt Memorial Award

MASON DYKSTRA
Wallace E. Pratt Memorial Award

LUKE FAIRWEATHER
Wallace E. Pratt Memorial Award

JUAN PABLO MILANO
Wallace E. Pratt Memorial Award

The Wallace E. Pratt Memorial Award for the best paper published in the *AAPG Bulletin* is presented to Benjamin Kneller, Mason Dykstra, Luke Fairweather, and Juan Pablo Milana for "Mass-transport and slope accommodation: Implications for turbidite sandstone reservoirs" (*AAPG Bulletin*, v.100, p.213-235).

This paper describes the various forms of topography that are formed on the sea floor by submarine mass movements, and how this topography potentially creates accommodation for deposition of turbidite sands that may subsequently form hydrocarbon reservoirs. This is illustrated with examples from outcrop and the modern sea floor. The control that these various forms on accommodation exert on reservoir character discussed.

Benjamin Kneller received his Ph.D. from Aberdeen University

in 1988. He is a now a professor at University of Aberdeen. He was formerly at the University of California, Santa Barbara and Leeds University.

Mason Dykstra is currently the director of geoscience technology with Anadarko Petroleum Corporation and has almost two decades of experience in the oil and gas industry. Mason has worked in operations, exploration, development, EOR, research, teaching, and management roles within the E&P industry and in academia. He received his B.S. in geology (1997) from Northern Arizona University, his M.S. in geology (1999) from the University of Colorado, and his Ph.D. in geology (2205) from the University of California, Santa Barbara.

Luke Fairweather is a geologist with Dana Petroleum. Luke's passion is field geology, having worked numerous outcrops around the globe. He is also an outdoor pursuit enthusiast and has podiumed at national-level rock climbing championships. He earned his B.Sc. in geology in 2008 and his Ph.D. in deep-water clastic sedimentology in 2013, both from the University of Aberdeen.

Born in Argentina (1964), Juan Pablo Milana lived in Mendoza, and Chubut, before moving to study geology in San Juan National University (UNSJ), an outstanding place for geology as a volcanic arch (the Andes Cordillera), a fold-thrust belt (the Andes Precordillera), and the broken foreland (Sierras Pampeanas) converge in San Juan. After his geology degree, he was awarded a scholarship for doing his Ph.D. in magnetostratigraphy of the Andean foreland basin, working also in the Carboniferous basins and their glacial events. He did a postdoc funded by the Humboldt Foundation in Germany and then in the United Kingdom funded by the Royal Society. Afterwards he returned to Argentina where he is a professor at the UNSJ and principal researcher of CONICET. Besides working in sedimentology and basin dynamics, his passion for mountains lead him to study arid glaciers and glaciolithic systems, making him well known locally for his actions defending glaciers and water resources produced out of them.

CLAUDIO BARTOLINI
Robert H. Dott, Sr. Memorial Award

PAUL MANN
Robert H. Dott, Sr. Memorial Award

The Robert H. Dott, Sr. Memorial Award is presented to honor and reward the author/editor of the best special publication dealing with geology published by the Association. This year's award is presented to Claudio Bartolini and Paul Mann for *Memoir 108: Petroleum Geology and Potential of the Colombian Caribbean Margin*.

This memoir is the first international book published on the petroleum geology and hydrocarbon potential of the Colombian Caribbean margin. It consists of 27 multidisciplinary papers that include a wide range of topics, such as source rocks and petroleum systems, geochemistry, earthquake seismology and tomography, seismic stratigraphy and sedimentology, oil and gas exploration plays, carbonate and siliciclastic petrology, basement studies, regional tectonics and structural geology, fold belt structural evolution, potential methods, and studies of deep-sea

sedimentation on the Magdalena fan.

Claudio Bartolini is a senior exploration advisor at Repsol USA in The Woodlands, Texas. He is a member of Repsol's Global New Ventures Group and has more than 20 years of international experience in the oil industry. He is the principal editor of five international geology publications by the Geological Society of America and AAPG. He was also awarded the Dott Award in 2011 for *AAPG Memoir 90: Petroleum Systems in the Southern Gulf of Mexico*. Bartolini received his B.S. in 1981 from the University of Sonora, his M.S. from the University of Arizona in 1988, and a Ph.D. from the University of Texas at El Paso in 1997.

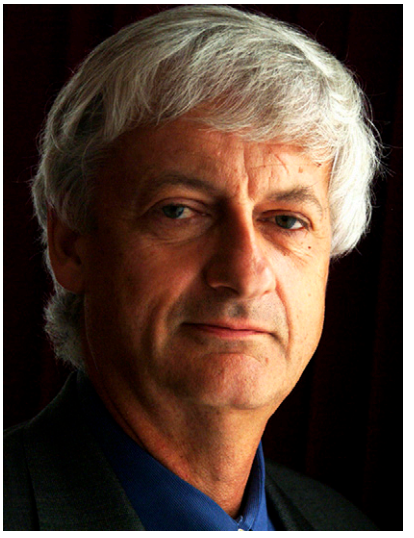
Paul Mann received a B.A. in geology from Oberlin College and a Ph.D. from the State University of New York at Albany. He worked for many years as a research scientist at the Institute for Geophysics of the University of Texas at Austin. In 2011, he became the Robert E. Sheriff Endowed Professor in geology at the Department of Earth and Atmospheric Sciences of the University of Houston. He has numerous publications and edited volumes on the tectonics, geology, geophysics, and petroleum geology of the circum-Caribbean region and southwest Pacific Ocean. He is a fellow of the Geological Society of America, is an associate editor of the journal *Marine and Petroleum Geology*, and is director of the Caribbean Basins, Tectonics, and Hydrocarbons industry consortium at the University of Houston.

JINYU ZHANG
J. C. "Cam" Sproule Memorial Award

The J. C. "Cam" Sproule Memorial Award, presented to the author(s), age 35 or younger at the time of submittal, in recognition of the best paper published by the Association or any affiliated society, division, or section, is award to Jinyu Zhang for "Greenhouse shoreline migration: Wilcox deltas" (*AAPG Bulletin*, v.100, p. 1803-1831). The coauthors of the paper are Ronald Steel and William A. Ambrose.

This paper focuses on the stratigraphic framework and depositional environments of the Wilcox Group, Gulf of Mexico. This stratigraphic succession is famous for being the textbook example of the original definition of 'depositional environments' by AAPG past president William Fisher. The Wilcox Group is also renowned for being a leading onshore oil and gas producer for many decades, as well as having recent offshore discoveries. Built on the pioneering work by William Fisher and William Galloway, this study constructed a first-ever fourth-order stratigraphic framework (tens of meters thick and hundreds of k.y. in duration) for the entire Wilcox Group. Results indicate that the Wilcox shoreline exhibits repeated long-distance shoreline regression and retreat, in fact about 37 times within an approximately 10 m.y. growth interval, a stratigraphic scenario at odds with previous hypotheses that shoreline movement in low-amplitude, low-frequency greenhouse conditions should be limited. It suggests that the Wilcox shoreline was controlled by both greenhouse eustasy and variable sediment supply, the latter likely caused by periodic climate warming from Paleogene hyperthermals. The findings of this study will help to build a model for greenhouse shoreline with high sediment supply. This study is part of an ongoing regional Wilcox study collaborated among RioMar, STARR, and QCL groups in The University of Texas at Austin.

Jinyu Zhang is currently a Ph.D. student under Ronald Steel and William Ambrose at The University of Texas at Austin. His dissertation is focused on understanding allogenic controls on the ancient shoreline and shelf margin growth from the Wilcox Group, Gulf of Mexico and numerical models, which have been published into five papers in *Geology*, *AAPG Bulletin*, and *Sedimentary Geology*. He is going to continue his Wilcox study as a postdoctoral researcher at the Bureau of Economic Geology after defending his dissertation.



ANDREW MIALL
John W. Shelton Search and Discovery Award

The John W. Shelton Search and Discovery Award for the most outstanding contribution to the AAPG Search and Discovery website is awarded to Andrew Miall for "The valuation of unconformities."

The stratigraphic record is the major repository of information about the geological history of Earth, a record stretching back for nearly 4 billion years. Stratigraphic studies fill out our planet's plate-tectonic history with the details of paleogeography, past climates, and the record of evolution, and stratigraphy is at the heart of the effort to find and exploit fossil fuel resources. Modern stratigraphic methods are now able to provide insights into past geological events and processes on time scales with unprecedented accuracy and precision, and have added much to our understanding of global tectonic and climatic processes. It has taken 200 years and a modern revolution to bring all the necessary developments together to create the modern, dynamic science that this book sets out to describe. Stratigraphy now consists of a suite of integrated concepts and methods, several of which have considerable predictive and interpretive power. The new, integrated, dynamic science that stratigraphy has become is now inseparable from what were its component parts, including sedimentology, chronostratigraphy, and the broader aspects of basin analysis.

Andrew Miall has been professor of geology at the Department of Earth Sciences, University of Toronto, since 1979, where his focus is teaching and research on the stratigraphy and sedimentology of sedimentary basins. His particular interest is in sequence stratigraphy, and in the sedimentology of nonmarine sandstones, and their characteristics as reservoir rocks for nonrenewable resources. He is the inaugural holder of the Gordon Stollery Chair in Basin Analysis and Petroleum Geology, which was founded in 2001. He was elected a Fellow of the Royal Society of Canada in 1995.

Miall was vice president of the Academy of Science of the Royal Society of Canada from 2005 to 2007 and president of the Academy from 2007-2009. From 2000-2004 he served as Canada's representative to the NATO Science and the Environment Program's Committee on the Challenges of Modern Society, during which time he assisted in the organization of several international workshops dealing with natural hazards. In 2010-2011 he served on expert panels struck by the Government of Canada and the Alberta Government to examine the environmental management of the Alberta Oil Sands.

Miall has been the author of five research-level technical books and the editor of five special research collections. In 2007 he published *Canada Rocks*, co-authored with Nick Eyles. He has been awarded the Grover E. Murray Distinguished Educator Award (2004), the Francis J. Pettijohn Medal in Sedimentology (SEPM, 2014), the Logan Medal (Geological Association of Canada, 2014), the Digby McLaren Medal in Stratigraphy (International Commission on Stratigraphy, 2015), and the Science Excellence Award (International Union of Geological Sciences, 2016). He has been an Honorary Member of the Canadian Society of Petroleum Geologists since 2012.

PAUL G. LILLIS
George C. Matson Memorial Award

The George C. Matson Memorial Award for the best paper presented during the oral technical session at the Annual Convention and Exhibition is presented to Paul G. Lillis for "Application of oil gravity and sulfur content relationships to oil typing and source rock kinetics."

API gravity and sulfur (S) content of crude oil are a function of the organic composition and thermal maturity of the source rock as well as oil alteration effects, such as biodegradation, water washing, and thermal cracking. The paper defines the slope S/gravity as a new quantitative genetic parameter that has applications in oil-oil correlation studies, characterization of source-rock depositional environment, and in basin modeling studies where source-rock oil generation kinetics are unknown.

Paul Lillis is a supervisory research geologist with the Central Energy Resources Science Center of the US Geological Survey (USGS) in Denver, Colorado. He received a B.A. in geology from San Jose State University, an M.S. in geology from San Diego State University, and a Ph.D. in geochemistry from Colorado School of Mines. He was a petroleum exploration geologist with Atlantic Richfield for eight years (1978 to 1986) in Colorado, California, and Texas, and has been with the USGS in Denver since 1987. His research focuses on the application of petroleum and source-rock geochemistry to identify, characterize, and map petroleum systems.

KATIE-JOE MCDONOUGH
Jules Braunstein Memorial Award

ELISABETH GILLBARD
Jules Braunstein Memorial Award

KENNETH MCDERMOTT
Jules Braunstein Memorial Award

KYLE REUBER
Jules Braunstein Memorial Award

JIM PINDELL
Jules Braunstein Memorial Award

BRIAN W. HORN
Jules Braunstein Memorial Award

The Jules Braunstein Memorial Award for the best poster presented at the AAPG Annual Convention and Exhibition is presented to Katie-Joe McDonough, Kenneth McDermott, Elisabeth Gillbard, Kyle Reuber, Jim Pindell, and Brian W. Horn for their poster "Chronostratigraphy Across a Conjugate Margin Source-to-Sink: UruguaySPAN and NamibiaSPAN—Why Stop at Basement?"

The idea for this work was spontaneously generated at the 2016 AAPG ICE in Cancun. The authors, working various, disparate areas around the world, had gathered to hear a colleague's presentation. Afterward they were discussing similarities and differences of stratigraphy on the various margins, and how each might correspond to basement evolution on that margin. The conversation evolved and converged on the key bridge between posing questions and designing ways to answer them. Several "I wonder ifs" later, this idea was sparked. ION's E & P Advisors group provided the two-dimensional (2-D) seismic data, software, and funding, and the work proceeded.

They began by focusing on the question of whether stratigraphic evolution of a basin might be related to evolution of the "basement" below it. To answer the question required deep crustal seismic images such as the SPAN™ data which ION Geophysical has acquired on many margins around the world. Answering the question also required a means to measure the chronology of that evolution. We were familiar with and had software (OpendTect from dGB Earth Sciences) which permits us to analyze geochronology of a sedimentary basin via the use of Wheeler ("chronostratigraphic") diagrams; however, to their knowledge no one had previously attempted to look at the "chronostratigraphy" of crustal rock. They decided to construct a different version of a Wheeler diagram—of the crust.

They embarked on their evaluation of geochronologic timing of crustal formation by choosing two 2-D data sets from opposite sides of the southern Atlantic conjugate margin, Uruguay and Namibia. These data offered high-quality deep crustal reflection seismic imaging to a depth of 40 km (the Moho and beyond), and they were positioned over significant emerging petroleum systems on each margin. They generated individual HorizonCubes in OpendTect on each of the seismic profiles. A HorizonCube is an ultrahigh-resolution seismic interpretation produced by auto-tracking all stratal surfaces present in the seismic data—essentially a "seismic outcrop." Because of seismic frequency attenuation with depth, they had to separately generate HorizonCubes within the sedimentary section and within the crust.

The many horizons generated within the HorizonCube were flattened to create a chronostratigraphic representation of sedimentation (including synrift volcaniclastic seaward dipping reflectors [SDR]) along each profile. This flattening was done for each of the four HorizonCubes, one in the sedimentary section and one in the basement for each of the two seismic lines. This flattened, or Wheeler representation, shows spatial variation in deposition through time, and worked well in both the sedimentary sections and in the

"basement." Thus, they were able to compare evolution of both sedimentary basin as well as "crustal" architecture across the south Atlantic.

The authors found that crustal evolution on opposite sides of the margin, though similar, was not identical. Striking similarities in basement architectural structure and timing include the "sedimentary fill'" appearance of a subhorizontal crustal fabric from the Moho to the base of downlapping SDRs. They also noted approximately equivalent (800 km) lateral extents of the basement fabric indicating continent-to-oceanic crust transition. The main difference between the margins was the lateral extent of the coeval SDR packages. These covered roughly twice the lateral distance on the Namibian margin as on the Uruguayan side, suggesting a potentially shallower gradient on the Namibian volcanic margin during rifting.

They found that stratigraphic evolution on the conjugate margins was synchronous, and geometries mirror each other for the Cretaceous as well as the Tertiary part of the section. Key transgressive-regressive packages are similarly timed on both sides of the mid-Atlantic. This observation has important ramifications for the evolving understanding of petroleum systems on both margins. Lateral extents of the stratigraphic systems vary, with greater lateral extent on the Namibian margin. Likely the basement gradient changes persisted into the sediment section and drove subsidence history variations. The shelf-margin sedimentary wedge package on both margins developed landward of crustal rift-fill (SDR) "deposition," inferring that crustal fabric exerts a control on subsidence variation even today.

Katie-Joe McDonough specializes in multi-data set, integrated sequence stratigraphic and seismic interpretation. She began her career as a geophysicist with Exxon USA in Denver, Colorado working western United States basins. As seismic stratigraphy burgeoned in the 1980s, graduate studies beckoned, and Katie-Joe earned her Ph.D. at Colorado School of Mines (CSM) on seismic-scale carbonate outcrops in the Southern Alps. After launching KJM Consulting, LLC in 1995, Katie-Joe has enjoyed two decades of consulting/advisory/mentoring gigs working diverse, integrated data sets for the international and domestic United States petroleum industry. Projects have included multiscale applications of stratigraphy to basin analysis, exploration play assessment and reservoir-scale development. She works worldwide continental to deep marine strata in conventional and unconventional plays. Katie-Joe has served as adjunct faculty teaching stratigraphy at Colorado School of Mines, and currently serves as an industry mentor to RMAG YPs and to CSM graduate students in the CSM Reservoir Characterization Project.

Ken McDermott was awarded his Ph.D. from the University of Birmingham, United Kingdom in 2013 for his work on hyperextension at magma-poor rifted margins; and a B.Sc. in geology from University College Dublin, Ireland in 2007. From 2012–2014 Ken held a postdoctoral research position at University College Dublin, working on North Atlantic tectonostratigraphy. Since 2014, Ken has held the position of structural geologist at ION's E & P Advisor service mainly focused on megaregional margin studies using the ION BasinSPAN data. Ken is a member of the PESGB and a fellow of the Geological Society of London.

Elisabeth Gillbard is a senior geologist with over 10 years industry experience, including petrophysics, wellsite geology, exploration Geology and geophysical interpretation. She received a B.Sc. (2002) in geology from Durham University, United Kingdom; an M.Sc. (2003) in micropaleontology from University College London, United Kingdom; and a Ph.D. (2007) from University of Birmingham, United Kingdom.

Kyle Reuber is a geologist for ION's E & P Advisors Team based in Houston. His primary area of focus is Latin America and the Caribbean. His current role has projects that range from new acquisition SPAN program design, to two-dimensional -SPAN and reprocessed data set interpretation, to basin modeling studies using the ION data. Kyle has earned a B.S. in geology from Wright State University and a Ph.D. in geology from the University of Houston.

Jim Pindell specializes in tectonics, basin analysis and paleogeographic reconstruction,

integrating geology with plate kinematic history and plate tectonic processes. He has directed Tectonic Analysis Inc and Ltd since 1986, while concurrently maintaining academic research positions at various institutions. He teaches and consults within the oil industry and has published a broad range of papers on the Gulf of Mexico, the Caribbean, Latin America and the Atlantic margins and opening history. Since 2011, he has interpreted the deeper levels of regional seismic data sets for ION Geophysical, while assessing processes of rifting and passive margin development. In 2014 he won the Best Paper Award in Basin Research from EAGE (Europe). Jim received a B.A. (1979) from Colgate University, an M.Sc. (1981) from State University New York, Albany, and a Ph.D. (1985) from Durham University.

Brian Horn is the senior vice president and chief geologist for ION E&P Advisors. His focus is in integrating geological and engineering/production data for play-based exploration, and development, basin and play fairway analysis, petroleum systems, regional stratigraphic and seismic correlations, prospect development and resource potential assessments. He has delivered exploitation/development programs generating prospects, development and reservoir characterization for (infill) drilling designed to identify and evaluate critical geologic uncertainties focused on increasing recovery efficiencies and reservoir management strategies. Brian received his bachelor's and master's degrees in geology from the University of Colorado and his Ph.D. in geology and geological engineering from the Colorado School of Mines, Golden, Colorado.

KRZYSZTOF M. (CHRIS) WOJCIK
SEG/AAPG Best Paper in *Interpretation* Journal Award

IRENE S. ESPEJO
SEG/AAPG Best Paper in *Interpretation* Journal Award

ADEBUKONLA KALEJAIYE
SEG/AAPG Best Paper in *Interpretation* Journal Award

OTUKA UMAHI
SEG/AAPG Best Paper in *Interpretation* Journal Award

Krzysztof M. (Chris) Wojcik, Irene S. Espejo, Adebukonla Kalejaiye, and Otuka Umahi have been recognized for their authorship of the best paper published in the SEG/AAPG *Interpretation* journal titled "Bright spots, dim spots: Geologic controls of direct hydrocarbon indicator

type, magnitude, and detectability, Niger Delta Basin" (*Interpretation*, v.4, no.3, p.SN45-SN69).

This paper is a result of several years of quantitative interpretation activities carried out to support Shell's exploration teams in Lagos and Port Harcourt. The project was triggered by resolving some difficulties with well-to-seismic ties identified in a few onshore areas. Integration of the well-tie results with basinwide rock properties models, log pattern analysis, inspection of conventional cores and thin section data was used to establish systematics of dim spot occurrences and their geologic controls. From exploration perspective, the most promising dim spot plays are characterized by stratigraphically driven changes in bounding shale lithology, from fast mudstones to slow claystones promoting dim spot response while preserving fluid signal. A number of dim spot-supported prospects with robust fluid contact evidence have been identified to date in shallow marine/deltaic classics of the Niger Delta.

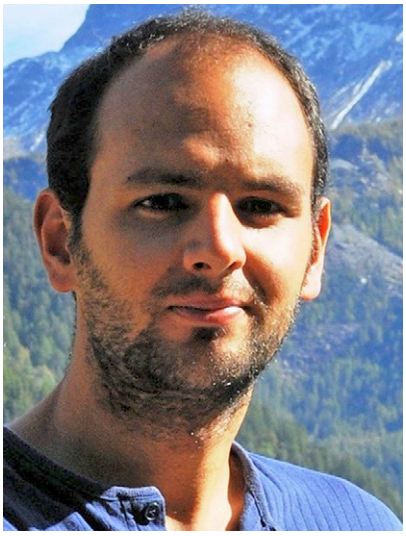
Krzysztof M. (Chris) Wojcik received an M.S. in sedimentology from Warsaw University and a Ph.D. in sedimentary petrology from the University of Kansas. Chris joined Shell in 1991 as an exploration geologist in New Orleans and moved to the quantitative interpretation area in 1998 with Shell Angola and with Shell Brazil. Later, he was involved in global deployment of QI technologies and worked as exploration QI specialist with Shell in Nigeria. Currently, he holds the position of geophysical/QI advisor in Houston supporting global exploration projects.

Irene Espejo graduated from University of Buenos Aires. Her academic experience includes research fellowships in the Argentinian Scientific Research Council and research associate positions at both Macquire and Rice Universities. She started to work at Shell in 2001, in the Research Center as a sedimentary petrologist, where she studied siliciclastic reservoirs from microscopic to subseismic scales, integrating depositional environments, provenance, and rock physics. Most recently, Espejo has focused on the characterization and prediction of reservoir quality by forward modeling, and the integration of this work with quantitative seismic interpretation, both in international and United States projects. She has been working in the petrology of unconventional reservoirs as well. Since 2011 she has lead the sedimentary petrology and reservoir quality team in Shell Houston, as part of the Projects and Technology Upstream division. Previously in her career, she participated in production and exploration projects, regional evaluations and acquisitions in different Latin American countries, while working as geologist in Amoco, Union Texas Petroleum, and Unocal.

Adebukonla (Bukkie) Kalejaiye joined Shell in 2006 after an M.Sc. in petroleum geoscience from the University of Manchester, United Kingdom. She started her career as an exploration geologist with the onshore exploration team based in Port Harcourt Nigeria. After which she worked as a hydrocarbon maturation (HCM) geologist with the HCM team before proceeding to The Hague in the Netherlands as a regional geologist with the offshore Gabon team. She is currently with the HP swamp team in Port Harcourt as an exploration geoscientist exploring the Niger delta deep plays.

Otuka Umahi obtained an M.Sc. in petroleum geoscience at Imperial College London, United Kingdom. He has over 10 years of professional experience with Shell. He has worked in several basins and roles in exploration and currently works in the onshore, high pressure high temperature (HPHT) exploration team. He is a recipient of several professional awards.

NIGEL P. MOUNTNEY
Gabriel Dengo Memorial Award



LUCA COLOMBERA
Gabriel Dengo Memorial Award

NA YAN
Gabriel Dengo Memorial Award

BILL MCCAFFREY
Gabriel Dengo Memorial Award

The Gabriel Dengo Memorial Award is given each year in recognition of the best paper presented at the previous year's AAPG International Conference and Exhibition. This year, the award is presented to Nigell P. Mountney, Luca Colombera, Na Yan, and Bill NcCaffrey for "Challenges in fluvial reservoir geology."

The petrophysical characterization of subsurface fluvial reservoir successions is challenging because accumulated deposits comprise a complex mosaic of sedimentary lithofacies assemblages and architectural elements, the arrangement of which is dictated by multiple interacting autogenic and allogenic processes that operate over a wide range of spatial and temporal scales. The international research community has amassed large data sets from studies of both modern rivers and ancient preserved successions to characterize the geology of many types of fluvial system; such data have the potential to provide analogue constraint to subsurface models. However, an overarching challenge is how to collate these disparate datasets to enable meaningful comparison and thereby constrain and inform models to improve reservoir prediction.

To address this issue the fluvial architecture knowledge transfer system (FAKTS) has been developed. This a relational database, which collates published data in a standardized form, has been used to compile sets of quantitative information on proportions, geometries, spatial relationships, and petrophysical properties of fluvial facies units, architectural elements, and depositional elements from several hundred documented case studies. Principal applications include (1) compilation of quantitative facies models describing the sedimentary characteristics exhibited by specific types of fluvial systems (e.g. braided, coastal plain) and genetic units (e.g. channel complexes, deltaic distributary channels), with the scope to guide interpretations and predictions, and constrain uncertainty associated with architectural variability; (2) investigation of the relative roles of climate, tectonics, and eustasy in controlling the sedimentary architecture of fluvial systems at multiple spatial and temporal scales, through comparison of different continental successions, whereby observation-based quantitative data are used to

critically evaluate deeply entrenched paradigms in fluvial sedimentology and sequence stratigraphy; (3) quantification of connectivity metrics associated with types of fluvial systems (e.g. meandering, distal fluvial fan) by consideration of the arrangement of reservoir-quality genetic units; (4) constraint of forward stratigraphic modeling algorithms for simulation of fluvial stratigraphy; and (5) use of the database to guide and constrain stochastic simulations of fluvial architecture, whereby results can be used to characterize reservoir connectivity for different types of fluvial depositional systems in different tectonic and climatic settings.

Nigel Mountney is chair of Sedimentology at the School of Earth and Environment, University of Leeds, United Kingdom. He obtained a B.Sc. in geology and geography from the University of Nottingham (United Kingdom) in 1990, an M.Sc. in computing in earth sciences from Keele University (United Kingdom) in 1992, and a Ph.D. in tectonics and sedimentation from the University of Birmingham (United Kingdom) in 1996. Nigel is principal investigator of the Fluvial and Eolian Research Group joint industry project, and co-investigator on the Shallow-Marine Research Group JIP. For 2014-2018 Nigel is chief editor of the journal *Sedimentology* and sits on the Bureau of the International Association of Sedimentologists.

Luca Colombera received B.Sc. and M.Sc. degrees in geological sciences from the State University of Milan, Italy, and a Ph.D. in fluvial sedimentology from the University of Leeds, United Kingdom (2012), where he is currently a research fellow working in the Fluvial and Eolian Research Group developing novel techniques for database-assisted interpretation, classification, and prediction of the sedimentary architecture of clastic depositional systems.

Na Yan obtained her B.Sc. degree (geography) from Beijing Forestry University and her M.Sc. degree (geography) from Beijing Normal University with distinctions. In 2010, she joined the Earth and Environmental Dynamics Group at the Department of Geography, King's College London, fully supported by a King's Graduate School Studentship and a King's Overseas Research Studentship. She obtained her Ph.D. in 2015. Na is currently a research fellow in the Fluvial and Eolian Research Group of the School of Earth and Environment, University of Leeds. Her research interests seek to bridge the gaps between field observations and prediction of morphological and sedimentary processes in fluvial and eolian systems on different temporal and spatial scales through application of numerical modeling techniques and statistical methods. Na specializes in development of modeling software that can be used to guide policy making, hazard assessment, paleoenvironmental reconstruction, and subsurface hydrocarbon reservoir and groundwater aquifer appraisal.

Bill McCaffrey is chair of Clastic Sedimentology at the School of Earth and Environment, University of Leeds, United Kingdom. He obtained a B.A. (geology) from Oxford University in 1987 and a Ph.D. (provenance of Silurian turbidites in the north of England) in 1991. Bill is principal investigator of the Turbidites Research Group joint industry project, and co-investigator on the Fluvial and Eolian Research Group and Shallow-Marine Research Group JIPs. Bill's principal research area is in deep-marine clastics but his interests in databasing approaches to characterize sedimentary architecture span a range of clastic sedimentary environments.

ANASTASIA POLYMENI
Ziad Beydoun Memorial Award

JOHN RICHARD UNDERHILL
Ziad Beydoun Memorial Award

RACHEL J. JAMIESON
Ziad Beydoun Memorial Award

The Ziad Beydoun Memorial Award is given each year in recognition of the best poster presented at the previous year's AAPG International Conference and Exhibition. This year, the award is presented to Anastasia Polymeni, John Underhill, and Rachel Jamieson for "Role of passive continental margin geometry on structural styles and prospectivity. An example from southern Sicily."

Fold-thrust belts are often perceived as "difficult" places to explore due to their complexity and an incomplete understanding of the processes that can interact to control their development. However, they can host large oil and gas fields, and recent appreciation of the role of precursor structures on the development of compressional systems has led to a greater understanding that might lead to new appraisal of previously discounted areas. The aim of the project, a subset of whose conclusions were presented at the 2017 AAPG International Conference and Exhibition (ICE) in London, was to use subsurface data in key areas of the highly complex Alpine fold-thrust system to refine models of the evolution of this and other collisional systems.

One such key area was identified as offshore southern and eastern Sicily due to the unusual architecture of the thrust front and historic difficulty in tracing its extent offshore. Reprocessed seismic datasets donated by Spectrum Geo and Shell, integrated with well data and fieldwork in coastal and inland areas of Sicily (the latter made possible due to receipt of an AAPG Grant in Aid), provided the basis upon which the evolution of the Alpine fold-thrust system in the Central-Eastern Mediterranean could be examined.

In the area examined, the Gela Thrust represents the most southerly extent of the thrust system and subsurface mapping confirmed its unusually arcuate shape, development of both thin and (relatively) thick-skinned thrusting, differential timing of thrust emplacement and evidence of preexisting lineaments, none of which had previously been taken into account in standard models of collision. The new model presented at AAPG ICE integrates the role of inherited geometries belonging to the precursor passive continental margin and suggests that these controlled the development and evolution of the fold-thrust system in the area.

The overall aim of the project is to determine if there are any generic learnings that could be applied to other margins that could enhance our understanding of these complex areas and aid derisking of identified prospectivity.

The results presented form a subset of the conclusions of a Ph.D. research project being conducted at the Centre for Exploration Geoscience, Heriot-Watt University. The project and publications resulting from it are expected by the end of 2018.

Anastasia Polymeni is a geologist currently undertaking a Ph.D. at the Centre for Exploration Geoscience, Institute of Petroleum Engineering, Heriot-Watt University (HWU). Anastasia developed an interest in petroleum geoscience while studying for her undergraduate geology degree in Greece and moved to Edinburgh in 2011 to pursue this further by undertaking an M.Sc. in reservoir evaluation and management at

HWU. Her impressive performance during the M.Sc. led to an offer from HWU of a position as a research assistant investigating the petroleum geology of the Red Sea and Malta Plateau, during which time she also undertook teaching roles. This characteristic willingness to enhance her skills in different areas of petroleum geology and subsurface characterization led her to her present-day position as a Ph.D. student undertaking the project entitled "Role of passive continental margin rugosity in controlling thrust system emplacement. Examples from the Central Mediterranean." Her Ph.D. is underpinned by one of HWU's prestigious James-Watt scholarships but to supplement this and support field and lab work, she has also won competitive prizes and awards including the AAPG Grant-In Aid twice as well as awards from the Geological Society of London, British Sedimentology Research Group (BSRG), Edinburgh Geological Society, and Edinburgh Association of University Women.

John Underhill has a degree in geology from Bristol University and a Ph.D. from the University of Wales. He worked for Shell in The Hague and London as an exploration geoscientist before joining the University of Edinburgh becoming professor of stratigraphy there in 1998. While at Edinburgh, he spent sabbaticals in BP (1992-1993) and Norsk Hydro (1997-1999). He is a past-president of the European Association of Geoscientists and Engineers (EAGE). John joined Heriot-Watt University in 2013 to take up the chair of Exploration Geoscience and now holds the position as university chief scientist. John has received the Geological Society's Petroleum Group's top award, the Silver Medal and the Edinburgh Geological Society's Clough Medal, the AAPG Distinguished Educator Award, the EAGE's Alfred Wegener Award and the Geological Society's Lyell Medal. John undertook an AAPG Distinguished Lecture Tour of North America in 1998-1999 and is also Heriot-Watt University's faculty advisor of the AAPG student chapter. His main area of geological research is understanding how the sedimentary basins form and evolve through fieldwork and the use of subsurface seismic interpretation methods. The work provides a basis for accurately mapping subsurface structure and reservoirs in which fluids migrate and carbon may be sequestered. He was also a well-respected football referee in the Scottish Premier League and FIFA panel.

Rachel Jamieson is a geoscientist specializing in subsurface characterization and regional basin analysis. She completed her undergraduate degree in earth science at the University of Glasgow before winning a scholarship from the British Geological Survey's University Funding Initiative to pursue a Ph.D. at the University of Edinburgh titled "Controls on the Structural, Stratigraphic and Climatic Development of the Central North Sea." During her Ph.D., Rachel also undertook a variety of consultancy projects for industrial partners and the experience developed her knowledge of different basins and structural regimes and led to her interest in highlighting and encouraging the mutual benefits of academia-industry collaboration, both of which have continued to form the basis of her professional activity. In her current role as a post-doctoral research associate at Heriot-Watt University she, together with John Underhill, underpin and develop the Centre for Exploration Geoscience's research activities and links with industrial partners.

JOHN AMORUSO
L. Austin Weeks Memorial Medal

The L. Austin Weeks Memorial Medal is given in recognition for extraordinary philanthropy and service directed to advance the mission of the AAPG Foundation. The 2018 recipient is John Amoruso. Amoroso died January 29, 2018, following a brief illness. He was 87.

Amoruso, a Houston-based geologist, was among the most

honored members in AAPG history. Serving AAPG as well as the Foundation was a career-long passion for Amoruso. He served as AAPG president in 1983-1984 and was named an Honorary AAPG member in 1987. He became involved with the Foundation as a Trustee Associate in 1984, then was appointed a Trustee (and one of the original members of the Members of the Corporation) in 1986, serving as secretary and then, starting in 1999, as vice chair until his retirement last June, when he was named Trustee Emeritus.

He also was an award-winning explorationist whose experience in the industry spans more than six decades, including more than 50 years as an independent petroleum geologist.

Amoruso joined AAPG in 1958, recognizing as a young man the value a professional association could bring to his career. He quickly recognized the tremendous opportunities AAPG afforded by providing accessibility to science and networking with other geologists. When he received AAPG's Michel T. Halbouty Outstanding Leadership award in 2007 he noted that it was a joy to be involved in all levels of professional societies through hands-on participation, emphasizing the friendships developed, along with the networking opportunities.

Amoroso was a two-time winner of the A. O. Leverson Memorial Award in the early 1970s. He served as a Distinguished Lecturer through the Foundation's Distinguished Lecture program. He also won AAPG's Norman H. Foster Explorer of the Year award in 2010. Amoroso was recognized as one of AAPG's Discovery Thinking speakers and held a coveted spot on AAPG's celebrated GeoLegends video archive.

While serving as president of AAPG in 1983-1984, he saw the role and value the Foundation played in supporting the geoscience community and educating public about the industry. After joining the Trustee Associates, the Foundation's major donor group that provides the backbone of financial support to the Foundation, he recruited many of his friends and colleagues to join and give their financial support to programs focused on sharing the science with the next generation of geoscientists. In 1986, Amoruso was appointed a trustee on the AAPG Foundation's Board of Trustees, where he served for three decades.

PAUL H. DUDLEY
Chairman's Award

Longtime AAPG Foundation supporter and promoter Paul H. Dudley Jr. has been named recipient of this year's Chairman's Award, presented annually to honor extraordinary contributions to the AAPG Foundation.

Dudley, a Foundation Trustee Emeritus, has had a long relationship with AAPG and the AAPG Foundation, which follows what he refers to as his "wandering career searching for oil."

Dudley credits his interest in petroleum geology to his father, who was an oil geologist on the West Coast. Dudley attended the University of California, Los Angeles, and after receiving his master's there in 1954 he joined Humble Oil, where he spent the next 25 years in various management positions.

It was during this time he became acquainted with geology giants L.T. Barrow, Morgan Davis and Wallace Pratt, all of whom played important roles in the development and early days of the AAPG Foundation.

Dudley's career took with took him to Midland, Houston and New Orleans, where he became friends with famed AAPG geologists Bob Megill and Mike Halbouty. Halbouty, then-president of AAPG, developed the concept for the Foundation and took steps to bring it to existence; Megill was one of the Foundation's early contributors.

In the late 1970s the AAPG Foundation was just over

a decade old, and leaders wanted a way to build its donor base and recognize those who provided financial support for the Foundation. The Trustee Associates group was formed, and this distinguished group of donors became, and remains, the backbone of contributions to the AAPG Foundation.

Dudley's friends approached him about joining the group—and with Halbouty prompting him to "hurry up," he did, providing strong financial support for such important projects as the Treatise of Petroleum Geology and North American Tectonic Map project. Not only did he quickly see the value of the Foundation and what it had to offer to the geoscience world, he began asking his friends and colleagues to join the effort.

Dudley and his wife became active participants in Trustee Associates' events, with him chairing the group in 1992-1993. When the AAPG Foundation was changed from an Oklahoma Trust to an Oklahoma non-profit corporation in 1986, Dudley was appointed as one of the original Members of the Corporation.

In 1995 he was elected as a Trustee on the Foundations Board of Trustees, where his leadership skills help guides the Foundation through the next decade. He continues to serve on the Members of the Corporation as a Trustee Emeritus, calling attention to the role and value of the Foundation.

DEBORAH MORGAN
Teacher of the Year Award

The AAPG Foundation has named Deborah Morgan as the recipient of the 2018 Teacher of the Year Award. Morgan is a geology teacher from South Sevier High School in Monroe, Utah. The Teacher of the Year is presented to a K-12 teacher within the United States who has demonstrated outstanding leadership in the field of geoscience education.

Upon learning that she had been honored with the award, Morgan said that "'Thank you' does not seem adequate enough to express my gratitude to AAPG for this incredibly humbling honor."

Morgan asserts that science is "extremely critical to helping solve many of our twenty-first century problems" and that "it is my job to contribute to that work by inspiring the next generation of geoscientists and ensuring that all students are earth science literate."

LAUREN BIRGENHEIER
Inspirational Geoscience Educator Award

The Inspirational Geoscience Educator Award (IGEA) is given annually to a college or university professor who has shown outstanding academic leadership and works to inspire the future of geoscience. The AAPG Foundation has named Lauren Birgenheier as the 2018 recipient of the IGEA. Birgenheier is an assistant professor in the geology and geophysics department at the University of Utah in Salt Lake City.

"I am honored to receive this Inspirational Geoscience Educator Award," said Birgenheirer. "I am deeply grateful for the creative, bright, and thoughtful graduate students I advise and mentor. It is truly the most rewarding part of my job."

Birgenheier has led students on multi-disciplinary research projects in the Mancos Shale (Uinta, Piceance and San Juan), Green River Formation (Uinta Basin), Wolfcamp Shale

(Permian Basin) and Agrio Formation (Neuquén Basin, Argentina). As faculty advisor, she led her University of Utah student team to an AAPG Imperial Barrel Award win in 2013, as well as second place in the Rocky Mountain section in 2015 and 2017. Birgenheier says that teaching brings "a great deal of satisfaction in designing and helping graduate students carry out research to help answer a small piece of a relevant societal question – 'How will we meet energy needs and address climate change today and into the future, particularly in the context of a planet that will likely be populated with 10 billion people by 2050?'" She served as Technical Program chair at the 2018 AAPG ACE, held in May, in Salt Lake City.