

2015 ANNUAL REPORT



2015 Annual Report of the Society of Exploration Geophysicists

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Reports of the Officers

Christopher L. Liner, president

When my term as SEG President began on 30 October 2014, the West Texas Intermediate (WTI) price of oil was \$81/bbl, down 24% in four months. As I stated to the SEG Board on that day, our membership is strongly influenced by oil price fluctuations. Certainly, there are significant sectors of our membership — mining, environmental, engineering — that are largely independent of oil price, but we have long experience that shows the close connection between SEG membership and energy exploration and production. While oil price can change rapidly in a connected world, the North American oil and gas rig count published by Baker Hughes gives a better indication of hydrocarbon energy sector activity. As of 26 June 2015, the rig count stands at 859, down 1014 (54%) from one year earlier. During the Great Recession of 2008, the rig count had a comparable fall and took 2.5 years to recover. But, unlike 2008, there is no North American shale gas boom to cushion the blow.

This, then, is the backdrop of my presidency. In response, I directed SEG staff to analyze operations streamline where ever possible, delay staff hiring, organize, and extend benefits for displaced SEG members, and undertake significant cost-cutting measures. All this was initiated before the downdraft showed up on the budget, and before industry layoffs were announced in waves during the first half of 2015, impacting our members at a global level. SEG has elevated its online Career Center, making valuable resources readily available to those in need. In addition, SEG members facing hardship may also take advantage of discounted rates on Continuing Education courses and workshops at the 2015 SEG Annual Meeting in New Orleans.

After digesting the shock of an oil price collapse, there is a surprising amount of good news to report. SEG continues to diversify and strengthen the budget through intersociety collaboration on big cooperative conferences, including NAPE, the Offshore Technology Conference (OTC), the Unconventional Resources Technology Conference (URTeC), and the International Petroleum Technology Conference (IPTC). I am delighted to announce a new member of this elite family, the AAPG/SEG International Conference & Exposition (ICE). There will be two ICE meetings per year at venues around the world, beginning with ICE Melbourne in September 2015

and followed by ICE Barcelona in April 2016. I encourage SEG members to attend these important new geoscience conferences.

SEG international offices in Dubai and Beijing continue to support SEG membership and meetings in the Middle East and China. Following advice of a blue-ribbon SEG Advisory Board, the China office has been restructured to allow more autonomy in organizing workshops and collecting registration fees in local currency. As the only major geoscience society with an office in China, this positions SEG well for future cooperative conferences in this large and growing market.

SEG members who attend the Annual Meeting in New Orleans will see many improvements expanding on many of last year's successful initiatives, including:

- Registration and self-serve kiosks for check-in and badge printing.
- Members-only breakfast on Tuesday morning to emphasize SEG's renewed commitment to its members.
- Child-care services for attendees.

New this year will be:

- Women's Networking Roundtable — focus will be on women in the geoscience industry.
- Louisiana's Children's Museum Party for a Cause — although not an official SEG event, this party illustrates SEG's commitment to our local communities.
- Geoscientists Without Borders® (GWB) Fun Run — in addition to drawing interest to the program, all proceeds from Fun Run registration will benefit GWB.
- Suggestion wall in the Lobby — this area will be a fun place where attendees can interact, give feedback, and offer suggestions for SEG's 2016 event in Dallas.

New this year for exhibitors:

- Onsite exhibitor surveys and filmed client/exhibitor testimonials.
- Onsite exhibitor luncheon in addition to the offsite Exhibitor Roundtable (after event) for feedback and continuous improvement.

Technology improvements this year:

- Concurrent virtual trade show with live online streaming of several technical sessions, facilitating participation by geoscientists worldwide as well as onsite. This includes FREE booths for all exhibitors.
- SEG app for smartphones has been overhauled and will have a new look.
- Large interactive way-finder screens will once again be utilized on the floor.
- Expanded High Performance Computing Theater to include more presentations as well as networking opportunities.
- Onsite SEG website usability testing and surveys.
- Third Annual Wiki Meetup promoting use and development of SEG Wiki.

The Geophysical Resource Center (GRC) has been home for the SEG since 1985. By the time you read this, the SEG campus in Tulsa will have a new building, GRC2, added to diversify budget income for the Society and expand our flagship brand as a prime real estate location in south Tulsa. Leasing commitments ahead of grand opening are running near 75%, well on the way to matching the 90+% long-term lease rate of GRC. The SEG Real Estate Board has closely monitored progress of GRC2 and arranged financing that will optimize current program support against loan repayment.

Finally, perhaps the most important task of my early presidency was chairing an Executive Director Search Committee. That year-long process culminated in the hiring of Dorsey Morrow, who began his new SEG responsibilities 1 June 2015 upon relocation from Montgomery, Alabama, to Tulsa. Morrow has over 30 years experience in technology and law, including 13 years of executive leadership in international information security serving as general counsel, executive vice president, and corporate secretary for a nonprofit organization with 90,000 global members operating in 135 countries with regional offices in Florida, London, Hong Kong, and Tokyo. Morrow's education includes computer science, law, and business. He brings strong day-to-day operations experience to the job, including budgeting, finance, member services, and staff management. His personal qualities include being a keen listener and a continuous lifelong learner of technology. The SEG Board is to be congratulated for its wise judgment to have Morrow lead the SEG in its continued growth and globalization.

I am honored to be entrusted with the SEG presidency, especially during tumultuous times. The SEG is financially sound, technologically progressive, aggressively cooperative with other societies, and poised to improve staff support across our worldwide activities. We can weather this storm and come out stronger and leaner on the other side.

John Bradford, president-elect

My term as president-elect began early, in fact, prior to being elected. In June of 2014, President Don Steeples appointed the search committee charged with finding a new executive director for the SEG. Knowing that one of us would necessarily be working closely with this individual and to ensure full engagement and continuity, the president asked both of the candidates for president-elect to temporarily serve on the search committee until the election was completed in August, at which time the winner of the election would remain as a permanent committee member. We had an excellent pool of candidates from which to choose, with nearly 70 applicants for the position. After a thorough review and vetting process, led by President Chris Liner, the committee concluded its work in May 2015 when Dorsey Morrow accepted the position and was announced as the new executive director of the SEG. Morrow has an exemplary professional record and is well positioned to lead the SEG into the future.

Another significant event early in my tenure was the vote to establish SEG Near Surface, a new technical section. The new technical section was approved during my first official board meeting at the end of the SEG Annual Meeting in October of 2014. SEG Near Surface came about from reorganization of the previous Near Surface Geophysics Section with the primary objective of better utilizing SEG support and resources to serve SEG members who are engaged in geophysical exploration of the shallowest part of the earth and including hydrogeophysics, archaeology, environment, engineering, infrastructure, cryosphere, and near-surface oil and gas problems.

A key duty of the president-elect is serving as the Board liaison to SEG's three subsidiary corporations, (SEAM, SEG Global Inc., SEG Real Estate Corp), and the SEG Foundation, which is technically a separate but affiliated entity.

- The SEG Foundation continues its strong work, bringing in an amount of revenue to support SEG programs (close to US\$3M per year) that is second only to the SEG Annual Meeting. The Foundation board and staff are to be commended for their efforts.
- Despite a challenging budgetary environment, SEAM has continued to build a strong portfolio of research modeling projects that include three projects currently under way (Phase I, Phase II, and the recently initiated Pressure Prediction) and another in the works (Life of Field). Additionally, this year SEAM began making subsets of data available for free download via the web — a welcome and tangible benefit to the larger research community.
- SEG Global Inc. underwent some major changes during the last fiscal year with Middle East Office operation moving under the purview of SEG proper

so that SEG Global could focus primarily on SEG operations in China. In China, SEG transitioned from a representative office to a Wholly Owned Foreign Entity (WOFE), which we anticipate will enable SEG to operate more effectively and thereby better serve our members in China.

- SEG Real Estate Corporation has been hard at work overseeing the construction of the new office building in Tulsa. With a grand opening currently scheduled for 20 August 2015, the construction phase is nearing completion. This project promises to become a long-term, stable, and significant source of income that will help support SEG programs well into the future. In addition, SEG Real Estate is overseeing a much-needed renovation of the SEG business office, which will be completed in phases over the next two years.

In June, I had the pleasure of being SEG's first formal representative to the Mexican Petroleum Congress, held in Guadalajara. On a sad note, this event was marred by a tragic accident during the gala evening — a sudden, severe storm caused the collapse of a large tent which resulted in dozens of injuries and one fatality. I commend the organizers and local community for a rapid and effective emergency response. This was a difficult occurrence for the tight-knit global community of geophysicists and my condolences go out to those who were impacted directly. The event brought together over 8,000 participants from around Latin America fueled by the excitement brought on by a shift in federal policies that led to the 2015 opening of Mexico's oil industry which had been closed for more than 75 years.

I served as the SEG representative at the AAPG annual meeting in Denver in June. Our collaboration with AAPG is growing ever stronger, and we look with anticipation toward the three events which we will hold jointly with AAPG in the next 18 months (ICE Melbourne, Australia, September 2015; ICE Barcelona, Spain, April 2016; ICE Cancun, Mexico, September 2016). Additionally, our joint publication, *Interpretation*, is thriving.

Our Middle East Office is running exceptionally well and will be operating a number of workshops and conferences this year. This includes the International Conference on Engineering Geophysics (ICEG) in Al Ain, United Arab Emirates, which is being operated by SEG for the first time, and which I will have the opportunity to visit in November 2015. Additionally, I will have the chance to visit the IPTC being held in Doha, Qatar, in December 2015. This latter event is an important part of our portfolio of big collaborative conferences, where we are partnering with other professional societies to put on events throughout the world such as OTC, IPTC, and the AAPG/SEG ICE.

When I agreed to run for SEG president-elect, the oil industry was flourishing on high oil prices. The abrupt slow down brought

on by the oil price collapse in the fall of 2014 has had a deep impact on our corporate and private members. Consequently, the downturn has had a profound impact on SEG's budget. As I look forward to my term as president in the coming year, my challenge has shifted from looking to grow SEG programs to managing an increasingly tight budget. However, this presents an opportunity. SEG has a new executive director and has reached the time when it is necessary to evaluate and update our strategic plan. Coupled with a lean budget year, this is an ideal time for SEG to carefully consider what products and services are most important to its members and how it can most efficiently deliver them over the next five to ten years. This is a challenge that I am looking forward to.

Robert R. Stewart, first vice president

For an organization celebrating its 85th birthday, SEG is certainly spry and active! New technologies, creative science, resource discoveries, fresh students, and early career professionals keep the Society young and vibrant. The growth in our online offerings, meetings and lectures around the world, and student sections all promise a bright future for the Society. We are also very pleased to appoint a new SEG Executive Director, Dorsey Morrow. Morrow has a broad background in many key areas for SEG: he is an attorney-at-law, holds an MBA, and has an undergraduate degree in computer science. He was General Counsel for a large information security organization, and we look forward to what will undoubtedly be his fine contributions.

While thinking about contributions, a core activity of the SEG is to disseminate geophysical information — part of our “3C” mandate to create, conserve, and communicate. In fact, some authors claim that information growth is an essential element of the overall wealth of a nation (C. Hidalgo, 2015, Why information grows: The evolution of order, from atoms to economies). Written communication of our geophysical information is ably undertaken by our flagship journal, *GEOPHYSICS*, and magazine, *The Leading Edge*, as well as the nascent SEG-AAPG journal, *Interpretation*. But along with these classic forms, exciting developments in our online presence can be seen in the growing number of interactions with our SEG Wiki and other electronic media. We were delighted to have the inaugural Wiki Write-On! Workshop, at the Geophysical Society of Houston's 2015 Spring Symposium, where attendees learned how to create Wiki entries. We hope to see many more of these events! In addition, our SEG webinars are continuing to make distinguished SEG instruction accessible worldwide.

Along with all of this positive geophysical activity has come the challenge of recently declining energy prices — which some economists have characterized as “slowing growth meets expanding supply.” David S. Jacks (2014, From boom to bust:

A typology of real commodity prices in the long run) suggests that petroleum is actually in a long-term uptrend but has likely peaked in the current decade-long super-cycle. What does this mean to SEG? In many ways, it means that our Society is even more important to share best and most impacting practices, provide ongoing education to motivate and elevate geophysicists, and to encourage advancements in our science. For these challenging times, we have initiated a dues waiver program for unemployed members, a Career Center with free résumé posting, and discounted training courses. To try to provide “more bang for a buck,” we also are collaborating with a constellation of other geoscience and engineering associations to deliver joint meetings, courses, and publications.

We continue to emphasize engagement with students (some 338 Student Chapters in 63 countries) and early career professionals via the legendary Challenge Bowls, SEG/Chevron Student Leadership Symposium, SEG/ExxonMobil Student Education, and EPIC (Emerging Professionals International Committee) programs. Generous SEG support for student scholarships continues as does the critical assistance for geophysical field camps.

The Geoscientists *Without Borders*® program is providing an outstretched helping-hand for the humanitarian application of geophysics. Its supporters are growing with involvement from the American Association of Petroleum Geologists (AAPG) and Environmental and Engineering Geophysical Society (EEGS). While hydrocarbons constitute the world’s largest traded commodity (some US\$3.5 trillion per year), drinkable water and safety from hazards may often be at least as important.

It is certainly a heartfelt honor to help serve and develop the people and science of geophysics in any capacity. The first vice president’s position and responsibilities include participating on the Board as well as providing liaison between the Board and a number of the excellent committees that help make our Society, its members, and our profession prosper. I would offer many thanks to all of the dedicated volunteers for their time and capabilities in their service to our community. It is also wonderful to work with the Board, who comprise some of the world’s finest geophysicists, along with the outstanding SEG staff.

Our Annual International Meeting (a major part of the Society’s life) will be in New Orleans this year. The venue will undoubtedly have special meaning to many of our members — certainly to me, as it was in New Orleans where, as a graduate student, I experienced my first SEG meeting and felt the butterflies of delivering a talk to a crowded room of professionals, many of whom had years of experience greater than my age. But, it was a wonderful meeting and a beacon for our continuing aspiration to enthuse geophysicists and develop the science. A new SEG Board will come onboard in New Orleans as will many new members, ideas, and products. We look forward to another fascinating year in geophysics — exploring for resources, understanding earth processes, and working with the people who underpin so much of the world’s prosperity.

Eve Sprunt, second vice president

The second vice president’s position and responsibilities include participating on the Board as well as serving as the liaison between the Board and some important committees that create and manage products and services for our members. The committees do the heavy lifting, but it is my responsibility as their Board liaison to coach them on what is feasible and in turn to present their requests for authorization and funding to the Board.

The committees for which I am the liaison are the Committee on University and Student Programs, the Continuing Education Committee, the Distinguished Lecturer Committee, the SEG Distinguished Instructor Short Course (DISC) Committee, the Development and Production Committee, the Online Committee, the Wiki Committee, the URTeC Management Committee, and the 85th AM Technical Program Chair and the 85th AM Exhibitors Committee.

As members of SEG, all of us owe our dedicated committee members many thanks for the countless hours that they invest in serving their fellow members. We also owe thanks to the diligent staff members who provide valuable support to the volunteers.

Having been in the oil industry since the 1970s, I feel as if I have the oil price engraved in my brain. The oil industry is manic/depressive. When oil prices are rising, activity is frantic with salaries and hiring skyrocketing. When oil prices collapse, one round of layoffs follows another, travel is restricted, and discretionary funds are very tight.

Even though many SEG members do not work in the oil industry, much of our Society’s funding comes from oil industry supporters. The drop in oil prices has influenced many Board decisions. The Board must be creative to position our Society to thrive through an extended period of austerity. In tough times, members need more support from SEG, but we did not have the luxury of being able to expand our budget. To make room for new programs, difficult decisions had to be made as to what to cut. As a Board, we literally had to try to do more with less, improving current products and services while addressing emerging needs.

In a tight job market, our members must keep their skills polished, so continuing education is of even greater importance than in boom times. One of the challenges in offering new courses is getting reviewers for the courses. Offering to serve as a reviewer is a way of both serving your Society and having the opportunity to attend the newest courses.

The lectures and courses offered by the Distinguished Lecturer Committee and SEG Distinguished Instructor Short Course

(DISC) Committee are additional great sources of continuing education. A DISC is an eight-hour, one-day short course on a topic of current and widespread interest. Get more from your membership by taking advantage of these member resources.

SEG's flagship event is the Annual Meeting, which in 2015 will be held in New Orleans. At the Annual Meeting, the Wiki Committee will host a third annual SEG Wiki Meetup (formerly the SEG Wikithon). Attendees can build SEG Wiki pages, discuss software developments, and forecast the future of the science. The Wiki Meetup will have five stations: (1) SEG Wiki 101 — the basics; (2) contributing to the wiki; (3) using open data; (4) pioneers of the science & women in geophysics, and (5) hack station (or, "unconference").

Students and young members are the future of the Society. The Committee on University and Student Programs (CUSP) has 42 members, 12 faculty, 16 industry representatives, and 14 students. In 2015, the committee organized an impressive array of programs including four International Geosciences Student Conferences around the world in Kenya, Brazil, India, and the Czech Republic. The committee also assigned awards totaling US \$108,168.45 for summer field camps to 13 applicants from eight countries.

The committees are innovating and doing an excellent job, but that doesn't mean that individual members at all stages of their careers from students to seasoned professionals to retirees cannot make valuable suggestions on how SEG can better serve its membership. We all tend to see things from different perspectives. Contribute to SEG by making suggestions. If you want to increase the chances that your ideas are implemented, ask to join the relevant committee.

Get involved! During tough times the best way of networking is by working on professional society committees. Your fellow committee members get to see you in action. When or if you need or want to switch employers, you will have many friends in other organizations who can personally vouch for your abilities. The Development and Production Committee is arguably even more important when oil prices are falling than during a boom. When oil prices are low, many companies focus on production and development rather than on exploration. Companies that were focused on factory drilling during the shale boom may be more open now to discussion of the latest technologies to improve reservoir characterization. While it is important to educate our own members, it may be even more important in terms of increasing utilization of the technologies (and employment of geophysicists) to reach out to petroleum engineers, who are often the ones who hold the purse strings.

URTeC is the Unconventional Resources Technology Conference which is held annually. This conference, which is a joint effort by SPE, SEG, and AAPG, is the perfect opportunity for SEG members to submit papers to explain to petroleum

engineers and geologists how valuable geophysical technologies can be in reservoir characterization. The 2015 event was held in San Antonio 20–22 July. The URTeC in 2014 in Denver attracted 5,000 participants, but the meeting in San Antonio drew only slightly more than 3,000 participants. However, that is still a very large audience for the message that geophysics should play a major role in reservoir characterization.

My only quibble with URTeC is how can we continue to refer to resources that are responsible for over 40% of U. S. oil production as unconventional? If the petroleum industry can't adopt more appropriate nomenclature, will the difference between unconventional and conventional become as meaningless as the difference between inflammable and flammable? I recommend using the term, "low permeability resources," which can be quantified and evolve as we are able to commercially produce from lower and lower permeability formations. As with "deep water resources," the designation "low permeability resources" can continuously adapt.

Don Steeples, past president

With the close of the 2014 SEG Annual Meeting in Denver, my term as past president began with a drive back to my farm in western Kansas. In January, I attended the "topping out ceremony" when the last beam was welded in place on the new office building on the SEG campus property in Tulsa. Except for travel to Board meetings in Houston and Tulsa, my other responsibilities as have been fulfilled by email and telephone.

SEG Executive Director Steven Davis retired in the summer of 2015 after five years of dedicated and much-appreciated service. I want to thank the search committee of Chris Liner, Dave Monk, John Bradford, Dana Falletti, Jeff Springmeyer, and David Curtiss for bringing the search for a new executive director to a successful and timely conclusion. Dorsey Morrow joined the SEG as executive director on 1 June 2015, and we are pleased to have someone with his long history of international experience and his expertise in law and information technology.

I served on and acted as Board liaison to the Honors and Awards Committee, and on the Nominations Committee. I also served as Board liaison to several other committees.

When I was on the ballot for president-elect in 2012, the one new program that I wanted to develop was an online volunteer registry. I am happy to report that this is now a reality, and it has already attracted hundreds of volunteers who are willing to help the SEG serve our members more effectively.

As I complete my three-year term on the Board, I must profess my admiration for my colleagues on the Board who have dedicated a significant percentage of their professional time

and effort to the SEG. In addition, many dozens of committee chairs and hundreds of other volunteers have made my work with the SEG enjoyable and rewarding.

Alison Small, treasurer

Managing the finances and stewarding the financial health of the consolidated SEG entities is a team effort of volunteer leadership, committee volunteers, staff, and third-party accounting and auditing firms. SEG programs and services would not be possible without all of these people working together to budget, manage, and grow the assets of the organization. All are commended for their contributions to these efforts over the past year, especially CFO Dana Falletti's team, which has done an excellent job coordinating and overseeing all aspects of the financial business and risk management of the Society.

As treasurer, I remained abreast of the consolidated financials of the SEG, managed engagement of an independent audit firm for SEG's annual consolidated audit and regulatory tax filings, presented the proposed fiscal year 2016 SEG budget to the Board of Directors, served as chair of the Continuous Innovation Portfolio (CIP) Committee reviewing potential new initiatives and assessing value of existing programs, served as SEG Board liaison to the Audit and Finance committees of the related companies, and participated in several Real Estate Corporation Board meetings. It also was my duty to review and approve the expense reports and credit card charges of the Executive Director.

In the tradition of the most recent Annual Reports, I will not comment on the particulars of the financial statement, as that is provided in the Consolidated Financial Report at the end of this report; rather, I will discuss the impactful financial decisions that were made this year, budgeting for fiscal year 2016, and where SEG financial planning is headed in the near future. More details on these topics may also be found in the reports of the subsidiary corporations, and the CIP, Audit, and Finance committees.

The Board of Directors approved one Invested Reserves Above Target (IRAT) expenditure for US \$70,000 submitted by the publications department in fiscal year 2015. This is over and above the approved budget and will be used to implement publications enhancements in the areas of public access, validation, and market assessment. The expenditure was necessitated by a government mandate in August 2014 that articles resulting from any project receiving funding through the U. S. Department of Energy must be open access within one year of publication in a journal. Failing to implement such a program could result in loss of submissions to SEG journals. Other government agencies will be moving in this direction as

well. The reserve policy for SEG allows excess funds above the reserve target to be approved for use on special unexpected items that may need funding through the year and fall outside of the normal budgeting timeline. The Society must maintain 50% of the year's budget in reserve. At the time that the decision was made, the reserves above target was approximately \$2,000,000.

The Board of Directors voted to cover student dues after subsidizing Foundation funding for the year had been depleted, representing lost income of approximately \$75,000. The program is being examined as it is not self-sustaining as it exists currently and cannot continue to be subsidized by the SEG at the current level.

SEG has three subsidiaries: SEG Global Inc., SEAM, SEG Real Estate Corporation, and an affiliated entity, SEG Foundation. Fiscal year 2015 saw several changes to the financial landscape with regard to how these companies operate financially within the SEG structure. The programs formerly administered by the SEG Foundation were shifted from SEG Foundation to SEG. SEG Foundation is now strictly a fund-raising arm of SEG. Middle East office operations were shifted from SEG Global Inc. to SEG, and application was made to form a Wholly Owned Foreign Enterprise (WOFE) in China. SEG Global Inc. now houses only the China operations. The WOFE will allow the China office to operate as a business, collecting money and issuing official receipts, enabling SEG corporate office oversight and controls on the revenue and expense reporting. A China office five-year plan was submitted to the SEG Board of Directors for approval as well as a budget for FY 2016. WOFE performance will be evaluated each year and adjustments made as necessary. It is a goal that all foreign offices be financially self-supporting. The China office will be given a reasonable amount of time to reach self-sustainment. Transfer of the programs formerly administered by SEG Foundation and the Middle East operations into SEG operations facilitates the reporting of revenue and expenses associated with each so that the true cost of doing business may be more easily compared with that of all other programs and activities offered by SEG.

In a further effort to fully burden all programs and operations with their true costs, an indirect cost rate (IDC) structure and formula was approved by the SEG Board of Directors. The approved methodology is one of three industry standard options presented to the Board for consideration and allocates costs using a base of direct labor, benefits, and occupancy costs. The IDC will be applied to all departments, subsidiaries, and affiliates, and reflected on the respective financial statements. The requirement that subsidiaries and affiliate reimburse SEG for the IDC will be phased in over five years so as not to cause an undue burden in the near term and give all involved time to plan and budget accordingly for the added costs. In the past, indirect costs have been absorbed within the SEG budget without being quantified, segregated, and clearly and equitably charged to activities, projects, and subsidiary programs, making

it very difficult to evaluate the true cost of Society programs and activities. In addition, federal funding supporting SEAM projects requires an IDC structure and formula to be in place.

Efforts of the past few years have focused on putting systems and software in place to provide financial reports and project-level metrics in a timely manner so that informed financial decisions can be made by SEG leadership and staff. This year, those efforts have succeeded in providing the Finance Committee and SEG Board with both SEG and consolidated financial reports at a department level for review and approval in a timely manner. The reports have been provided in both a balance-sheet and cash-basis format and include a summary of the investment portfolio. Progress is being made toward being able to provide reports on a program/project level, the final step in the improved metrics.

The staff worked very diligently to provide a budget that reflected fiscal restraint amidst predicted decreased revenues due to the downturn in the oil industry. In addition, a process was implemented whereby departmental operating plans were required to support all FY16 budgets. The budget was presented to the Finance Committee, and a final version was presented to the SEG Board of Directors for approval. A net positive SEG budget was approved by the Board of Directors with the recognition that net revenues from the 2015 Annual Meeting and Level V meetings may be less than projected if an industry turnaround is not seen. SEG's primary sources of gross income in order of contribution are the Annual Meeting and Exhibition, SEG Foundation program support, and large collaborative meetings. In the event of such a revenue shortfall, the Board of Directors is prepared to use reserves on a short-term basis to make up the difference in revenue rather than cut programs or associated expenses, pending prioritization by the CIP Committee. It also was noted that the long-term use of reserve funds to finance Society business is unacceptable and that prioritization activities must be accelerated along with plans to rebuild the reserve fund should it be necessary to use it. The SEG consolidated budget is net negative for fiscal year 2016 due to SEG Global Inc. and SEG Real Estate Corporation being net negative while the China office gets off of the ground and remaining tenants are secured for Geophysical Resource Center 2. Real estate net revenue will change through the year as more space in the building is leased and as permanent financing is secured. As parent company of SEG Real Estate Corporation, SEG acts as guarantor of the permanent financing plan for the construction project. The Board approved the guarantee and financing plan as presented by the joint GRC2 Financing Task Force. The Board also voted to provide financial assistance to SEG Real Estate Corporation, from SEG operating cash reserves below target, if necessary, for tenant improvement and leasing costs, not to exceed \$1,000,000 with the understanding that the support will be repaid at the earliest opportunity.

Focus is now shifting to analysis of metrics on an individual

program/project level and an evaluation of the reserves and investment policies with an eye toward long-term sustainability and growth of core services. The Society must find ways to become less reliant on the monetary success of a single event each year while innovating activities, offerings, and products that cost-effectively serve its members and customers. Sunsetting those offerings that have exceeded a cost/value benefit to the Society must be considered as new means of furthering the SEG mission. In the coming years, all existing programs, activities, and proposed new offerings will be prioritized by the CIP Committee so that a clear list of Board-ranked programs and activities may be provided to staff, enabling them to generate operating plans and budgets that clearly reflect the effective priority-driven allocation of Society funds.

It has been an exciting year to be treasurer and serve on the Board. I look forward to my service in the coming year.

Guillaume Cambois, director at large

During this second year of my three-year stint as director at large, I have become chair of the Audit Committee (see specific report), board liaison for the Field Camps Committee (one of the four programs recently transferred back from the Foundation), and I have joined the newly formed Continuous Innovation Portfolio (CIP) Committee. The task of this committee, headed by Treasurer Alison Small, is to prioritize all new initiatives and focus our resources (both human and financial) on the activities that will have the most impact for our membership. The CIP was launched by Past President Don Steeples to plug a hole identified in our governance. The timing could not have been better given the current economic environment and the inevitable resource reduction it will bring.

But the two most important tasks for every Board member this year were budget approval and selection of the new executive director:

- Fiscal year 2016, which starts in July, promises to be quite difficult for our industry and SEG must brace itself for hard times. Despite these challenges, the budget process, honed over the years by CFO Dana Falletti and the Finance Committee, went flawlessly thanks to the excellent preparatory work by the management team and Treasurer Small.
- Selecting the executive director is the single most important task of the Board. The Selection Committee, headed by President Chris Liner, went through an extremely thorough process and presented the rest of the Board with a short list of excellent candidates. It is with great enthusiasm that we welcome Dorsey Morrow as our new executive director!

Finally, I must report disappointingly slow progress in my crusade with the Foundation to offer tax incentives to non-U. S. residents. This is not for lack of effort by Foundation Executive Director Paul Allison. Tax laws vary considerably from country to country and it is very difficult to find a simple and cost-effective solution that works everywhere. Even concentrating on a single country (Norway) proved more problematic than anticipated. But I am not one to give up, and hopefully more progress will be achieved next year.

Gustavo Carstens, director at large

This one has been the second of my three-year term as director at large. With more experience and a better understanding of the Board functioning, I've been able to have more participation and interaction with the other members.

It has been a very interesting year. We were confronted with the process of finding a new executive director for the Society. It has been a long and amazing process that confronted us with a number of interesting and skilled candidates. All of them have enough conditions for the position. It was hard to select one, but at the end I believe we did a good election.

We also had to deal with the budget for the next fiscal year, in a world affected by the downsizing of the industry. Again, it was a great challenge to find the balance point. It is clear that due to the situation we will experience a reduction on the incomes, and then we had to work hard on the allocation of the resources in order to maintain the functionality of the Society. A wonderful support from the Finance Committee and all the Finance Department was essential to approve a budget that looks appropriate for the current situation.

I also had the opportunity to represent the SEG in a couple of international events, with some other members of the Board. It is a tremendous experience to be in those places and appreciate the recognition that the Society has in different countries. A lot of people approached our booth and either asked for information or congratulated us for what the SEG does as a global Society.

As a liaison with several committees, I was involved in the development of their activities. It is remarkable the task developed by the HSSE Committee. A very enthusiastic group of people with a tremendous commitment has been able to develop in a very short time a considerable number of procedures and guidelines for several SEG activities. Main concern focused in the Annual Meetings and students field trips. I strongly recommend reading the HSSE Committee report in this same section.

I still have another year to go with the Board. It is always a pleasure to work together with such a talented and enthusiastic

group, and I have big expectations. There are always many issues to consider in an association with more than 30,000 members around the world, and it is a continuous process to build up a truly global entity that can satisfy any member at any location, always connecting, inspiring, and propelling the people and science of geophysics.

Christine Krohn, director at large

I have been privileged to serve as director at large for the first three-year term of a Board member under the new Bylaws; this is my final year. The increased continuity on the Board has resulted, in my opinion, in more progress. While I wish even more had been accomplished, the foundations have been laid for greater member participation within SEG. We have created a young professionals program, improved the Web resources, instituted a resource allocation process, and hired a new executive director. I look forward to a revitalized Society with the SEG being THE CENTER of technology-enhanced collaboration and resources for geophysics.

This year, we created EPIC (Emerging Professionals International Committee) whose purpose is to promote a sense of belonging and volunteer engagement for early-career geoscientists. As its liaison, I am facilitating the activities of the committee, and early-career themed events are being planned for the New Orleans Annual Meeting. The committee, along with our new Young Professionals program, will focus on global services for all members who are in their first eight years of employment after graduation from a university. These efforts will complement our outstanding student programs and assist in the transitions from student to active membership and to leadership within the SEG.

Under the leadership of Treasurer Alison Small, we have instituted a new process for budgeting and resource allocation. Our budget, especially in these times of low oil prices, does not permit us to do everything we want; it is important to set priorities. In the past, the Board approved a budget but did not prioritize various programs that went into the budget; the process was largely driven by staff. This year, for the first time, we solicited ideas for new initiatives from our committees. In the future, the Board will do more to evaluate old programs, sunset some, and starting new ones. The goal is a Society that continues to innovate and evolve its products using the latest technology.

Some progress has been made with improving resources that can better engage geophysicists located anywhere in the world. The SEG Wiki is a great start. Last year, the SEG hired a wiki editor, who has championed volunteer involvement in the development of wiki content. Activity in the workshop arena continues to escalate; I worked with the meetings staff to develop a new set

of guidelines, which will assist new groups in proposing and organizing successful workshops. At the Annual Meeting in Denver, the Meetings department offered live web streaming of several key sessions and created a virtual exhibit hall for people who could not attend the meeting. While I wish more had been done to improve the SEG Website, particularly its navigation and the eCommunities, this work is on the schedule and should proceed as resources permit. My vision is that we establish Special Interest Groups (SIGs) within the SEG, the first being the SEG Near Surface (NS). In the future, I hope that we have many more groups supported by Web-based tools.

Finally, I am excited about the hiring of our new executive director, Dorsey Morrow. Morrow comes to us from (ISC)², an international professional society of over 90,000 computer security specialists. He understands the value of an active online forum of members and of an active global education and certification program. It is my hope that Morrow, with his experience within a professional society that served a high-tech industry, can help us develop new capabilities to better enable the SEG to better achieve its mission of “connecting, inspiring, and propelling the people and science of geophysics.”

Edith Miller, director at large

It has been a pleasure to serve as director at large on the 2014–2015 Board of Directors, the third and last year of my three-year term. Again, I will start by saying that the Board of Directors and the committees could not be as effective as they are if it weren't for the excellent staff support that they receive. The SEG business office is filled with competent professionals, dedicated to serving our worldwide growing membership.

As a Board member, I have the opportunity to be involved in many facets of the Society, not only by fulfilling the core tasks of governance and oversight of the Society, but also by serving on several committees: the Committee on Nominations (chair), Audit Committee (member), Membership Committee (Board liaison), Women's Network Committee (Board liaison), and the Oil and Gas Reserves Committee (Board liaison).

The Women's Network Committee (WNC) had another very productive year. The committee organized and had involvement in a range of events and publications. Achievements include organization and execution of a successful 4th Annual Women's Network Breakfast, and the creation of a new column in *TLE*, “Full Spectrum,” with several articles published.

Activities of the Oil and Gas Reserves Committee include the organization of another successful Reserves Workshop at the 2014 SEG Annual Meeting in Denver, as well as joint workshops with sister societies in various locations around the world. A major role of this committee is communication of the

Petroleum Resources Management System (PRMS) guidance for reserves/resources evaluation to the broader industry.

Focus items for the Membership Committee this year were sponsorship options for student membership dues and retention of members. Thanks to efforts of the SEG Membership staff and the Membership Committee, the decline in membership of the last two years has been reverted to a growing membership in 2015.

One of my further roles on the Board has been to serve as a member of the Audit Committee, with Risk Management as main focus for 2015, in addition to review of policies & procedures, audit, and tax returns. Financial health of the organization and responsible and efficient use of resources are of fundamental importance to the overall health of the SEG.

I had the honor to chair the Committee on Nominations this year, tasked with assembling the 2015 SEG elections ballot, with candidates for SEG Board positions and SEG Council District Representatives. The committee compiled a list of worthy candidates to take over from the volunteers who are at the end their term, including myself. Volunteering for SEG offers a great opportunity to contribute to the health and future of our profession and its society, and to connect with and work with a group of like-minded but diverse professionals. I would like to thank the SEG members, my fellow Board members, and SEG staff for the opportunity and the experience.

Maurice Nessim, director at large

It has been my great honor to serve as a SEG director at large during 2014–2015. During this first year of my assignment period, I had the pleasure to work closely with a group of enthusiastic and forward-thinking Board of Directors. The contribution and commitment of each member of this Board can definitely translate into a positive impact to the Society and its outstanding performance.

One of the most interesting parts of this assignment has been the opportunity to work closer with and meet SEG staff better. The Society has a diverse team of people who are committed to take SEG to the next level. My term in serving the Society began in a turmoil period in our industry; the sudden drop in the price of oil required a shift in the course of activities related to exploration ventures. I was able to contribute on bringing the new market perspective to the Society, increasing the understanding of the new environment and its impact on SEG current planning of workshops, due to the decrease in participation. In response to that, our efforts are focused on developing solutions for virtual conferences and workshops to a target audience that cannot be physically present while expanding opportunity to participate. This new approach is a solution to expand the responsibility of our Society to promote

knowledge sharing through an online platform. And I am glad to see the SEG team proactively take the lead into this new environment presence that demands innovative thinking, and can definitely make an impact on our younger demographic population.

I am also excited about my contribution to promote deeper collaboration among industry players. My contribution to the activities in Middle East region included active participation in organizing the SEG-KOC Multiples workshop, “Seismic multiples — Are they signal or noise?” in Kuwait in December 2014, chaired by Ahmad Eidan and cochaired by Mohammed Al Ajmi. The workshop demonstrated how collaboration within the industry can overcome specific challenges and extract benefits in addressing seismic multiples.

I continue to elaborate on the same topic in my article in *The Leading Edge* publication where I have made a parallel comparison of a collaborative approach in a similar technologically advanced industry. In addition to this, I will participate in the SEG Deepwater Exploration Workshop in China — Innovative Solutions for Deepwater Exploration Challenges — where I will present a vision on our industry’s collaborative approach. In this presentation, I will expand on how collaborative working relationships between various industry players promise to enable all parties to focus on their core business while dramatically improve their chances of exploration success, to better balance risk and reward, and to manage costs within tighter constraints.

I appreciate the opportunity to be an SEG Board member. The experience has been very rewarding and enriching. And on the same note I recognize the talents of the other members of the Board and the SEG staff in this challenging and exciting time to make a difference in today’s market environment.

Xianhuai Zhu, director at large

It has been my great honor to serve as a SEG director at large on the 2014–2015 Board of Directors, the first year of my three-year term. During this period of time, I had the pleasure to work closely with the team of Board of Directors and SEG staff, serving as a member of the Audit Committee, SEG Task Force on SEG Editor Nomination, and Board liaison on the Earth Model Committee. In addition, I have been working closely with SEG China Office to promote joint training programs between SEG and CAPA. Thanks to ConocoPhillips for supporting my involvement with SEG activities.

The Audit Committee is chaired by Guillaume Cambois this year and previously by Edith Miller. The role of the Audit Committee is to ensure that proper process is followed, that policies and procedures are in place, and that risk is adequately managed.

For example, this year the SEG China Task Force Committee proposed to transfer the China office from a Registered Office to a Wholly Owned Foreign Enterprise (WOFE). The Audit Committee worked hard with SEG Finance Department and the Board of Directors, investigating all possible issues including legal and accounting. I am very pleased to get involved in this activity, as we would like to ensure that SEG China office can be not only legally present, but also can perform effectively and economically in the current low oil-price environment.

The SEG Task Force on SEG Editor Nomination is chaired by Tamas Nemeth, the former SEG editor and chair of the Publications Policy Committee. Based on the proposal from Evert Slob, current SEG editor, the task force has discussed whether the duties of the Editor-in-Chief (EIC) of GEOPHYSICS and Board member representing publication interests should be separated. In conclusion, the task force recommended two positions for the Board to approve: the Editor-in-Chief (EIC) of GEOPHYSICS and the Vice President, Publications on the SEG Board. The former should be appointed by the SEG Board and nominated by the EIC in office, who is not required to attend SEG Board meetings. The latter should be elected by SEG members from at least two candidates, nominated by the Committee on Nominations, who is required to attend the Board meetings. I really enjoyed working with Nemeth, Ted Bakamjian, and other members of the task force, and am pleased to see that the Editor-in-Chief (EIC) of GEOPHYSICS will now focus on the editorial activities.

The SEG Earth Model Committee is chaired by Carmen Dumitrescu. This committee has been very active and will form its fourth Summer Forum on “Rendering rock properties for qualitative and quantitative interpretation” in Vail, Colorado, in August. In the meantime, a special section on “Earth Model: Effective interpretation for conventional and unconventional reservoirs” will be published in the August issue of the *Interpretation* journal. I would like to get more involved in this committee’s activities, as my jobs at ConocoPhillips have been focused on seismic and microseismic modeling for acquisition and integrated studies.

Working together with Alfred Liaw, Gary Liu of SEG China Office, and Bill Barkhouse in the SEG headquarters, we are promoting a joint training program between SEG and Chinese American Petroleum Association (CAPA). CAPA is one of SEG’s Associate Societies, which is a nonprofit and nonpolitical organization. Formed in 1983, CAPA has more than 1400 members in the United States and other countries, mainly from major oil and service companies with masters and PhD degrees. Invited by CAPA, Chris Liner, SEG president, visited China University of Petroleum (Qingdao) in June this year and gave a short course on “Carbonate Essentials: Pore to Prospect.”

Nominated by the SEG China Office, I will serve as a Technical Program cochair for the SEG/SPG 2016 Geophysical

Conference in Beijing in April, representing SEG. In the next few months, I will work closely with my cochair, Huimin Hao, BGP chief geophysicist, to finalize the theme of the conference and invite participants and keynote speakers from the United States and the world over.

Evert Slob, editor

This report summarizes the main developments in *GEOPHYSICS* from July 2014 through June 2015, the second and final year of the work of the current Editorial Board. Eleven new associate editors joined the Editorial Board this past year, meeting increased paper submissions in selected categories. All associate editors worked hard to handle the significantly increased number of manuscripts within the deadlines of the established peer-review process. The editorial board includes assistant, associate, special, SWAT, and department editors, and guest editors associated with special sections. I thank them and the staff of SEG's Publications Department for making the work of the outgoing editorial board enjoyable and a resounding success.

Incoming SEG Editor Mauricio Sacchi is forming the new Editorial Board for the next two years. I am sure the new Editorial Board will build upon and exceed the work of the outgoing and previous boards and wish the new team a successful tenure.

Performance of the 2013–2015 *GEOPHYSICS* Editorial Board.

The tremendous dedication of the outgoing Editorial Board has resulted in favorable performance numbers. Chief among them were (a) time required to make a first decision on submitted manuscripts of 64 days, (b) average time between acceptance and publication of 65 days, and (c) the largest number of submitted manuscripts (653, up from 521 last year and 524 in 2013).

Supplements and Special Sections. In the past several years, *GEOPHYSICS* produced a number of supplements and special sections dedicated to various geophysical categories. A supplement differs from a special section mainly in the format and the number of papers. According to the adopted definition, a supplement is a separately bound collection of more than 20 papers subdivided into different sections, whereas a special section, which typically contains about 20 or fewer papers, appears in a regular issue of *GEOPHYSICS*. The special sections have proven useful in providing timely and comprehensive overviews of the state of the art of specific geophysics subject area and fostering wider industry participation. The following is an overview of recently published and planned supplements and special sections.

Attenuation has been used in delineating steam floods and in monitoring the thermal recovery of hydrocarbons. Some researchers have noted that zones of relatively high attenuation coincide with the producing formations, while others claim

good correlation of attenuation with lithology. In addition, other properties such as permeability, mobility of fluids, and fluid saturation, that cannot be inferred from velocity or amplitude-variation-with-offset (AVO) analysis, could possibly be extracted from attenuation analysis. Despite the many potential benefits of attenuation analysis, it has yet to become part of routine reservoir characterization primarily because of two reasons: first, challenges involved in its estimation from reflection seismic data and second, understanding of the physical mechanisms and the relation to rock properties. To address advances in these challenges, a special section on **Attenuation: Advances in analysis and estimation** was published in the September–October 2014 issue. The guest editors were Jyoti Behura, Baishali Roy, Larry Lines, and Mike Batzle.

Advances in time-lapse geophysics are being driven by spectacular innovations in theory, data collection, and data analysis. The intent of this special section of *GEOPHYSICS* is to create a well-sampled snapshot of the state of the art in our science today, and emerging concepts for future research, across a wide range of time-lapse geophysical applications and methods including 4D seismic, EM, gravity, and magnetics. For these reasons a special section on **Advances in time-lapse geophysics** was published in the March–April 2015 issue. The guest editors were David Lumley, Martin Landrø, Paul Hatchell, Mark Thompson, Leo Eisner, Yaoguo Li, and Matthew Saul.

The coastal zone is a habitat for much of the world's population, a key economic driver for fishing, shipping, recreation and tourism, and critical wetlands ecology. However, the coastal zone is also a dynamic setting undergoing significant change at many different time scales. Large storms, for example, can restructure coastal morphology on the scale of hours or days. Rising sea level or changes in sediment supply will alter the coastline over decades to centuries and longer. These are human-relevant time scales, and such changes can have major impacts on coastal infrastructure, habitability, and ecology. The goal of the special section on **Near-surface geophysics in the dynamic coastal environment: Crossing the land/sea interface**, published in the May–June 2015 issue, is to highlight the latest developments, instruments, and techniques in application of near-surface geophysical methods to the coastal zone.

The special section **Taking signal and noise to new dimensions** is currently being finalized for publication in the November–December 2015 issue. The guest editors are Laurent Duval, Sergey Fomel, Mostafa Naghizadeh, and Mauricio Sacchi.

The special section on **Microseismic monitoring** is being prepared for publication in the November–December 2015 issue. The guest editors are Brad Artman, Leo Eisner, Vladimir Grechka, Werner Heigl, and Stephen Wilson.

The special section on **Advancements in the measurement of the cryosphere using geophysics** is being prepared for

publication in the January–February 2016 issue. The guest editors are Andrew Parsekian, John Bradford, Georgios Tsoflas, Steven Arcone, and Bernd Kulessa.

There is an upcoming special section on **Nuclear magnetic resonance for near-surface applications** with a submission deadline of 1 September 2015. The guest editors are Kristina Keating, Lin Jun, Mike Müller-Petke, Ahmad Behroozmand, and Jean-François Girard. The publication is scheduled for the July–August 2016 issue.

Up-to-date information about GEOPHYSICS supplements and special sections can be found on <http://seg.org/geophysics/specialsections>.

GEOPHYSICS Reviewer of the Year Award. The GEOPHYSICS Editorial Board established a new award in 2012: the GEOPHYSICS Reviewer of the Year Award. The award honors a dedicated, constructive, and prolific reviewer and will be presented annually.

The third winner of the award is Mark Pilkington of the Geological Survey of Canada. Pilkington has consistently provided high-quality reviews; he returned nine recommendations in the award-consideration period with an average review time of 16 days. Any editor would love to get a high-quality review in 16 days, and consistently! Then Associate Editor Carlos Torres-Verdin stated: “His detailed and thorough reviews concerning borehole potential field methods are of highest quality. Pilkington spends a significant amount of time evaluating and understanding technical contributions and often makes excellent suggestions to improve the quality of manuscripts. Authors enormously benefit from Pilkington’s technical and editorial remarks to improve submitted manuscripts.” Such reviews are very helpful for authors and editors. Congratulations Mark, for the job well done and hopefully you will maintain this pace and effort in the future.

Statistics. The number of papers submitted to GEOPHYSICS has increased by 25% in comparison to last year. The latest five-year trend shows 441 (1 July 2010–30 June 2011), 514 (1 July 2011–30 June 2012), 524 (1 July 2012–30 June 2013), 521 (1 July 2013–30 June 2014), and 653 (1 July 2014–30 June 2015) submissions. The recent substantial uptick is distributed over many countries that all contributed to more submissions, most from universities and research institutes.

Approximately 29% of the contributions last year came from U. S.-based authors, while China-based authors contributed 26% of the papers. The Americas contributed with 253 papers, Middle East/Asia/Australia with 248, and Europe/Africa with 152. The broad geographical distribution of the papers reflects the international character of SEG and GEOPHYSICS (Table 1). The contributions from oil and service companies continue to be relatively moderate at approximately 10% (Table 2).

Manuscript turnaround times have been substantially reduced last year, mostly because of the new platform efficiencies. The average time required for first review is 64 days, well below last year’s performance (Table 3). The average time between acceptance and publication is at 65 days, which is a best ever performance in this category (Table 4).

Thomson’s ISI Web of Knowledge defines the impact factor of a journal in a specific year as the number of citations in that year to articles published in the journal in two preceding years, divided by the total number of articles published in those years. According to the Science Edition of Thomson Reuters’ Journal Citation Reports released in June 2015, GEOPHYSICS’ impact factor is 1.612. GEOPHYSICS belongs to the ISI category Geochemistry and Geophysics and ranks 40 out of 79, which is the same ranking position as in 2013. The median impact factor of the category is equal to the impact factor of GEOPHYSICS. In the previous five years the impact factors were 1.662 in 2009, 1.404 in 2010, 1.418 in 2011, 1.723 in 2012, and 1.759 in 2013.

Table 5 presents the impact factors for GEOPHYSICS from 1975 to 2014. GEOPHYSICS’ impact factor fluctuates during the past five years and less than 8% of all cited material in GEOPHYSICS refers back to journal papers published in the previous two years. The cited half-life of GEOPHYSICS is more than 10 years. Half of the citations to the journal are to items published within the cited half-life. For this reason, the five-year impact factor is more relevant for GEOPHYSICS. The development of the five-year impact factor was 1.939 in 2009, 1.805 in 2010, 1.713 in 2011, 1.933 in 2012, and 2.046 in 2013. The five-year impact factor in 2014 is 1.954.

Table 1: Origin of papers submitted for publication in GEOPHYSICS by country 1 July 2014–30 June 2015

USA	191
China	169
Canada	40
United Kingdom	32
Norway	21
Australia	18
Brazil	18
Switzerland	15
Germany	14
France	13
Iran, Islamic Republic of	13
Netherlands	13
India	11
Saudi Arabia	11
Italy	10
Japan	10
Sweden	9
Denmark	5
Korea, Democratic People's Republic of	5
Portugal	4
South Africa	4
Russian Federation	3
Czech Republic	2
Egypt	2
Malaysia	2
Mexico	2
Argentina	1
Austria	1
Belgium	1
Cameroon	1
Hong Kong	1
Hungary	1
Ireland	1
Kuwait	1
Singapore	1
Slovakia	1
Spain	1
Syrian Arab Republic	1
Tunisia	1
Turkey	1
United Arab Emirates	1
Venezuela	1
TOTAL	653

Table 2: Origin of papers submitted for publication in GEOPHYSICS by employer 1 July 2014–30 June 2015

Universities	492
Research Institutes	77
Service Companies and Manufacturers	29
Oil Companies	22
Governments	20
Consultants	7
Instrument Companies	3
Retired	2
Mining Companies	1
TOTAL	653

Table 3: Manuscript-handling statistics.

Year submitted 1 July–30 June	Average number of days required for first review
1991–92	172
1992–93	157
1993–94	184
1994–95	182
1995–96	211
1996–97	186
1997–98	205
1998–99	214
1999–00	212
2000–01	211
2001–02	178
2002–03	133
2003–04	141
2004–05	105
2005–06	66
2006–07	53
2007–08	57
2008–09	55
2009–10	66
2010–11	61
2011–12	66
2012–13	61
2013–14	72
*2014–15	64

** First reviews have not been returned for all papers.*

Table 4: Manuscript-handling statistics.

Year published 1 July–30 June	Average number of days between acceptance and publication
1991–92.....	176
1992–93.....	181
1993–94.....	178
1994–95.....	210
1995–97.....	N/A
1997–98.....	180
1998–99.....	177
1999–00.....	202
2000–01.....	208
2001–02.....	213
2002–03.....	195
2003–04.....	161
2004–05.....	158
2005–06.....	181
2006–07.....	143
2007–08.....	82
2008–09.....	111
2009–10.....	122
2010–11.....	135
2011–12.....	126
2012–13.....	78
2013–14.....	72
2014–15.....	65

Table 5: Impact factor.

Year	Impact factor
1975.....	0.629
1976.....	1.095
1977.....	0.773
1978.....	0.591
1979.....	0.918
1980.....	0.895
1981.....	1.087
1982.....	1.100
1983.....	1.461
1984.....	1.193
1985.....	1.206
1986.....	0.968
1987.....	1.084
1988.....	0.931
1989.....	1.017
1990.....	0.905
1991.....	1.166
1992.....	0.697
1993.....	0.919
1994.....	0.824
1995.....	0.877
1996.....	0.867
1997.....	0.824
1998.....	0.687
1999.....	0.818
2000.....	0.861
2001.....	0.649
2002.....	0.834
*2003.....	0.589
2004.....	1.087
2005.....	1.030
2006.....	1.228
2007.....	1.167
2008.....	1.349
2009.....	1.662
2010.....	1.404
2011.....	1.418
2012.....	1.723
2013.....	1.759
2014.....	1.612

**The impact factor for 2003 is based on a single issue.
A recalculation based on all issues in 2003 gives 0.862.*

Reports of the Standing Committee Chairs

AAPG-SEG Cooperation Bob A. Hardage, cochair

The AAPG-SEG Cooperation Committee is a co-chaired committee. The AAPG cochair is R. Randy Ray; I am the SEG cochair. The membership of this committee currently consists of two cochairs and the executive directors of AAPG and SEG. The committee traditionally has three to five additional members from each organization. The committee meets twice annually, during the annual meeting of each organization. Additionally, this committee organizes and facilitates one face-to-face summit per year of the two leaderships, in conjunction with the February NAPE meeting in Houston, where we are joined by the AAPG and SEG presidents as well as by selected senior members of the AAPG and SEG office staffs and others as appropriate. As the name implies, this committee focuses on joint-society issues and actions that will enhance the memberships of both AAPG and SEG. Key action steps that have been taken are:

Joint sponsorship of the *Interpretation* journal. The first editor of *Interpretation* was Yonghe Sun from SEG. Sun has completed his three-year assignment and will be replaced by the first AAPG editor, Kurt Marfurt, who will serve for three years. Based on the success of this joint journal, other possibilities related to common publication platforms and merged publication activities will be considered by AAPG and SEG.

Joint sponsorship of ICE (International Conference and Exhibition). An agreement has been signed that establishes joint sponsorship of ICE. There will be two ICE venues each year. AAPG will manage the fall venue, and SEG will manage the spring venue. The fall 2015 venue is Melbourne, Australia, and the spring 2016 venue will be Barcelona, Spain.

Geoscientists Without Borders® (GWB). The AAPG Foundation became an associate-level partner with GWB in December 2014. AAPG and SEG collaborate on program outreach. Two AAPG members, Robert Merrill and Nick Lagrilliere, joined the GWB Technical Committee, providing broader geosciences perspective to application reviews and project monitoring.

Other joint-society projects are in early stages of discussion and evaluation. Among these possibilities are a joint journal tailored for the near-surface community, joint bookstores at selected convention venues, coordination of student activities, shared office staffs at international locations, joint geoscience jobs board, and a joint IT department.

Advisory David Monk, chair

The Advisory Committee consists of the five most recent SEG presidents and meets at the sitting president's request to develop and deliver advice on specifically requested topics. No advice was requested by President Liner.

AGU-SEG Collaboration Remke Van Dam, cochair

The AGU-SEG Collaboration Committee (ASCC) was established as part of the SEG-AGU Alliance MOU signed in 2010. In the MOU, the ASCC was "charged with considering and making recommendations to the respective organizations regarding areas of cooperation, such as joint workshops or programs and continuing education courses." AGU and SEG provide complementary support for geophysical sciences with SEG focusing on methodology development in applied geophysics and AGU primarily supporting geophysics as applied to broader scientific questions. ASCC identified the following areas of overlap between the two communities: active and passive seismology, gravity and magnetics, electrical and electromagnetic methods, near-surface geophysics, geothermal exploration, and basin analysis.

The ASCC meets four times a year, of which two meetings are in-person meetings at the major annual meetings of each organization. The members of the 2014-2015 ASCC are: Remke van Dam (Gap Geophysics) SEG cochair; George Tsoflias (University of Kansas) AGU cochair; John Lane

(USGS) incoming SEG cochair; Fred Day-Lewis (USGS) AGU incoming cochair; Ludmila Adam (University of Auckland); John Bradford (Boise State University and SEG President-elect); Richard J. Blakely (USGS); John A. Hole (Virginia Tech); David E. Lumley (University of Western Australia); Louise Pellerin (Green Engineering); Benjamin Drenth (USGS); and Kamini Singha (Colorado School of Mines). SEG support was provided by Laurie A. Whitesell (SEG staff liaison), Dennis Cooke (SEG board liaison), and Rob Stewart (incoming SEG board liaison).

In 2011, the SEG and AGU executives approved an MOU that provides a framework for joint meetings and workshops to be held by the two organizations. The first cooperative workshop on hydrogeophysics was held in July 2012. The second workshop, on cryosphere geophysics, was held in January 2013. The third workshop on advancements in active/passive full wavefield inversion seismic imaging and monitoring techniques occurred in July 2014. The fifth workshop in this series, "Potential Field and Electromagnetic Methods as Applied to Basin Studies," is scheduled for August 2015. This will be the first joint workshop operated by AGU. The technical committee for this workshop is Ben Drenth (AGU cochair), Michal Ruder (SEG cochair), Paul Bedrosian, Rick Blakely, Neda Bundal, Tien Grauch, Randy Keller, Darcy McPhee, Louise Pellerin, Anji Shah, and Janet Watt.

The sixth workshop on the physics of rocks of the upper crust is scheduled for summer 2016. This workshop aims to share information on the state-of-the-art laboratory measurements, modeling, and interpretation toward the common parameters scientific communities estimate: fractures, rock composition, microstructure, and fluids. This workshop will focus on common practices in experimental design, modeling, and borehole logging, illustrated by global scientific drilling programs, hydrocarbon exploration case studies, volcanology, and geothermal exploration among others. Some topics to be examined are: fracture characterization, pore fluid pressure, and rock alteration. The technical committee for this workshop are Ludmila Adam (SEG cochair), Doug Schmitt (AGU cochair), Tobias Mueller, Boris Gurevich, Manika Prasad, Colin Sayers, Erik Saenger, Michael Heap, Luca Duranti, Arthur Cheng, Jerome Fortin, Brett Carpenter, Carolyn Boulton, Xin Zhan, and Ben Kennedy. Plans are under way to revisit hydrogeophysics during the summer of 2017.

The ASCC has the goal to hold joint sessions at the major annual meeting of each organization. The standing Special Session on hydrogeophysics at the SEG Annual Meeting has been held since 2012, with Kristina Keating (Rutgers University) as lead convener each year. At the AGU Fall Meeting beginning in 2013, the SEG Near Surface (NS) Honorary Lecturer (HL) has spoken at the AGU Near-Surface Focus Group's luncheon and/or has been an invited speaker with a technical session designed around the subject of the lecture. Whenever the SEG NS HL presents or speaks, the SEG has been listed as cosponsor. The

tradition continues in 2015 with Hansruedi Maurer as the 2015 NS HL.

The ASCC has discussed improved student collaboration, and both SEG and AGU student program coordinators have joined us to discuss progress.

Annual Meeting Steering Julius Doruelo, chair

The 2015 SEG Annual Meeting Steering Committee was organized in the fall of 2014. Most of the committee chairpersons were past officers and members of the Southeastern Geophysical Society (SGS), the organization of New Orleans-based geophysical professionals. Their familiarity with each other resulted to a band of highly motivated volunteers steering the various programs required to effectively conduct the annual SEG meeting in the Big Easy.

The first organizational meeting was held on 6 February 2015. By that time, the core group of volunteers had already established what will be the highlights of the 85th Annual SEG Meeting. First, in lieu of progressively increasing number of submitted abstracts, Technical Program Cochairs Rocky Detomo and Bob Schneider set out to strike the balance between acceptance rates, quality and length of presentations and availability of venues. Secondly, we took serious consideration of recommendations from a post-2104 SEG convention review held on December last year that sought to address shortfalls in the portrayal of women participants in the exhibition halls. Thus, a decision was promptly made that corporate sponsors and company exhibitors will be held to a standard that maintains, if not wholly advances, the depiction of women as active contributing members of the geophysical exploration profession. Consequently, we decided that future correspondence will specifically require exhibitor companies to employ more inclusive and gender-sensitive sales practices during the convention. This policy of inclusiveness will also be stated clearly in the Annual Meeting Announcement and as such, its mandate extends to all SEG convention delegates. The language that will be used in this announcement is similar to those utilized by other professional societies engaged in oil exploration and production such as AAPG and SPE. The overall goal is to steer the exploration community to adopt measures that advocate inclusiveness and nondiscrimination even after the Annual Meeting. Finally, the steering committee also made it clear to the SEG staff and officers that we aim to inspire the greater geophysical exploration community to make a lasting impression to the city of New Orleans during the 2015 convention. The legacy contribution comes in the form of actively supporting the SGS in its drive to raise funds for an exploration geoscience-themed gallery called Dig Into Nature, in the Louisiana Children's Museum. Dig Into Nature

will showcase children-centric displays and interactive exhibits, which aim to convey with youthful exuberance the core principles of oil exploration to visiting kids and their parents. The SGS leadership and members view the advocacy as a way to remind the city of New Orleans and the state of Louisiana of the tremendous contributions of the exploration geoscience profession to its economy, culture, and history.

To address the challenge of accepting as many quality papers as possible, Detomo, Schneider, and the Technical Program Committee requested additional meeting rooms in the convention center. As a result, they were able to expand the electronic posters session and successfully reduce the rejection rate of the submitted papers with nearly 71% of the 1519 evaluated abstracts getting accepted. Indeed, the solution was so effective that delegates to the New Orleans Annual Meeting will be able to choose from 146 technical sessions — the largest technical program ever in SEG annals.

Sponsorship Committee Chair Eric Zimmerman and Exhibits Committee Chair Julianne O'Brien were aided tremendously by SEG Manager for Sales, Exhibit, and Publications Dick Rauner in contacting and locking up corporate sponsors and exhibitors early on. As of 8 May of this year, during our second organizational meeting, they reported that 283 exhibitors and 32 corporate sponsors have officially signed up. Both numbers are slightly below where they were at that point in 2014. However, the overall trend is still tracking the record numbers posted last year, which is an impressive feat given the gloomy outlook surrounding the oil industry these days.

Recognizing that this year's Annual Meeting will be held under the spectre of industry-wide, cost-cutting measures due to the drastic downturn in oil prices, Gary Crouse and myself chose a topic for the SEG Forum that is both timely and forward-looking. We invited leading experts from various sectors and different backgrounds — federal government, academia, and public policy; a career geophysicist now in a corporate leadership role in oil company; and a specialist in an international supercomputing agency — to share their views on the current state and future of the energy sector and how oil companies as well as seismic acquisition and processing vendors can leverage certain technologies like high-performance computing (HPC) to succeed in cost-constrained business environment. The lineup of speakers was finalized just in time to update the SEG staff and Steering Committee volunteers during the second organizational meeting. Thus, the opening session is set with Chris Liner giving the State-of-the-Society address, then followed by the SEG Forum which will be titled "The Only Thing Constant is Change: Strategic Impacts of Current & Future Technologies to the E & P Business."

The Applied Science Education Program (ASEP) Committee, which is cochaired by Peter Clift, Tessa Hermes, and Adam Turner, was actually the very first committee to get its program

all firmed up. This was largely because we envisioned the ASEP activities to closely align with the SGS-sponsored fundraising party for the Dig Into Nature gallery. The ASEP Committee thus came up with a program that will give us all a glimpse of the key elements of the said gallery. The ASEP program includes exciting learning opportunities for kids and students such as miniature demonstration experiments and interactive displays that will be conducted in a dedicated area inside the exhibition halls. Thus, in addition to participating in activities that will spur their interest in science, the visiting children and their teachers will also have the rare opportunity to observe the incredible breadth and diversity of exploration geoscience careers. Additionally, there will be an ASEP-sponsored lecture by Torbjörn E. Törnqvist from Tulane University on the Quaternary geology of New Orleans and offshore Louisiana, and why this area of the country is so rich in petroleum resource. The ASEP displays will ultimately be brought to the (old) Children's Museum just a few blocks from the Ernest N. Morial convention center for general public viewing. There will then be a Tuesday evening party sponsored by SGS for delegates and visitors who are keen on supporting the construction of the Dig Into Nature gallery.

A visit in New Orleans will not be complete without the obligatory partying for which the city is renowned. Julio Gomez chaired the committee for the Wednesday night gala, which will be held in the House of Blues. The venue is quite remarkable in that it marries the best New Orleans has to offer — great music and eclectic cuisine. Situated in the heart of the historic French Quarter, the delegates surely will be treated to an evening of revelry full of unforgettable memories.

The guests and spouses of the conference delegates will have plenty of things to do while they are in town as the Guest Program, cochaired by Robin Broussard and Christy Gautre, have a full slate of possible side trips and activities to conduct. These include among other things a cemetery tour, a walking tour of the Garden District, and even a half-day trip to the swamps or nearby plantations. Indeed, there are so many things to consider doing in New Orleans that the Guest Program Committee was challenged in whittling down their offerings to about 5–7 activities.

Vince Liaw headed the Golf Tournament Committee and they chose to hold the event at the Audubon Park Golf Course in uptown New Orleans in the morning on 17 October (Saturday). While the avid golfer-geophysicists surely will come with their "A game" to win the tourney, just a visit to the venue itself is well worth everyone's time and effort because the Audubon Park Golf Course is considered by CNN as one of the top 10 city golf courses in the world! Its exquisite landscaping and immaculate greens with strategically located lagoons earned it four-and-a-half stars from *Golf Digest*, which also called it the number one of all golf courses over 100 years old.

The Volunteers Chair is Don Dubose, and his deep roots in

the city and longtime membership in SGS, will guarantee that the technical sessions and other activity programs that will be conducted during the weeklong event will be fully staffed. The number of volunteers that will be needed to run the various activities smoothly have not been finalized as of this writing but with the SGS holding our Summer Socials on 16 July, there is little doubt that our tightly knit group of members from the remaining companies in the “Big Easy” will band together to make the SEG Annual Meeting here in New Orleans one for the ages!

Annual Meeting Technical Program

Robert Schneider & Rocky Detomo, cochairs

The Technical Program Committee for the New Orleans 2015 SEG Annual Meeting began organizing immediately after the 2014 Annual Meeting in Denver. The standard SEG calendar was followed, beginning with the submittal of Expanded Abstracts in 24 technical topics and seven special sessions, including the focus region of the Middle East and a new special session for Geoscientists Without Borders®.

A total of 1,519 abstracts were submitted to the 2015 Annual Meeting program, of which 1,078 presentations were accepted for 146 Sessions. This will therefore be the largest technical program in SEG history! This also led to a 29% rejection rate for abstracts, which is a significant reduction from that of recent past Annual Meetings.

The Annual Meeting Technical Program also includes postconvention workshops. Seventeen workshops are planned, giving Annual Meeting attendees the opportunity to further enrich their professional development on a variety of geophysical topics.

The rejection reduction rate was principally accomplished by expanding the e-poster sessions requiring extra meeting rooms being made available. This may not be possible at all future SEG Annual Meeting sites. The committee discussed a number of other presentation options, including:

- reducing the length of presentation time from 20 to 15 minutes
- introducing a break into the morning and afternoon sessions

The first suggestion was deferred until next year since the New Orleans convention center had a surplus of rooms available. Also, the committee felt that such a major change should be announced during the “Call for Abstracts” so that all potential authors are aware of the change before submitting an abstract.

The second option also will be discussed among the committee, and the suggestion was that instead of a break in the morning or afternoon technical sessions, it would be better to expand the lunch break time by shortening the afternoon sessions. This option should be considered by next year’s committee.

The previous year’s Denver committee also suggested creating a fourth category of presentations called “On-Demand” presentations, which unlike the current oral presentations, oral discussions, and poster presentations, would consist of papers that are prerecorded and presented via the Web at any time by conference registrants. Without a limitation on presentation slots, all abstracts that pass review would then be able to be published in one of the four forums. The New Orleans Committee supports this suggestion but did not have time to implement it. It is suggested that this option be considered by future committees.

Finally, this committee was tasked with the first implementation of the SEG’s new abstract management system, AMS, which suffered from significant performance issues that forced SEG staff to perform numerous workarounds. SEG’s IT department has been actively seeking feedback and is currently working to resolve issues. Enhancements and improvements will be in place before the next Annual Meeting cycle.

We would like to specifically acknowledge and thank the many Technical Program Committee members for their hard work in assembling this outstanding Technical Program, and to the over 900 registered reviewers who diligently reviewed every abstract submittal. Finally, we would like to thank the SEG staff, especially the work of Kristi Wann and Jenny Cole, for their efforts in supporting us and in building this Technical Program.

Audit

Guillaume Cambois, chair

The Audit Committee consists of three nonexecutive members of the SEG Board of Directors. The members of the 2014–2015 Audit Committee were Edith Miller (who served as chair last year), Xianhuai Zhu, and Guillaume Cambois. Board liaison was Treasurer Alison Small, and staff liaison was SEG Chief Financial Officer Dana Falletti. The Audit Committee is now in its third year and is gradually finding its marks on how it operates.

The Audit Committee’s role is to ensure that proper process is followed, that policies and procedures are in place, and that risk is adequately managed. SEG has become organizationally more complex over the last decade, with activities being housed under separate subsidiaries (Global, SEAM, and Real Estate). It has been a challenge to keep all policies and procedures current among the organizational changes. Falletti and her team have made impressive progress implementing process improvements,

as well as making sure that all legal requirements are met and that proper procedures are in place.

This year's activities of the Audit Committee included:

- review of SEG's annual audit. The fiscal year 2014 audit was completed in October 2014 — a clean audit with no material findings. The audit included SEG and its subsidiaries. Per procedure, after the audit is completed, the audit firm shares its observations with the chairs of the Audit Committees of SEG and the subsidiaries. The Audit Committee then makes a recommendation to the SEG Board of Directors regarding acceptance of the audited consolidated statements and postaudit communications.
- ensuring due diligence in completing and filing the SEG's IRS 990 and 990-T forms, followed by distribution of these documents to the full SEG Board of Directors prior to filing.
- review of SEG policies and procedures, in particular for the four programs which were transferred from the SEG Foundation. The SEG Board had decided earlier that Scholarships, Field Camps, Geoscientists Without Borders®, and Travel Grants, which had been directly operated by the Foundation since 2008, would return under SEG management. This was an opportunity to review and update their policies and procedures.
- engaging in a formal Enterprise Risk Management process (see the President's Page in the January 2015 issue of *TLE*).
- addressing a potential case of fraud in East Africa from an organization pretending to be associated with the SEG.

Bylaws

Alison Small, chair

Working with various committees and the Council, the Bylaws Committee recommended five sets of Bylaws changes to the Board of Directors, which with modest modification to two sets approved the changes for consideration at the 2015 SEG Council meeting at the Annual Meeting in New Orleans. The proposed changes, if approved by the Council, will go to a vote of Active Members, and each set that draws support from a majority of voters will be adopted.

Under one of the proposals, initially brought forward by the Council, each SEG District would elect two District Representatives, regardless of Active Member population, and all Active Members within each District would be eligible to vote in District Representative elections. Currently, the number of representatives per district varies with Active Member population, and Active Members represented through Sections, Associated Societies, or Technical Sections are ineligible to vote in district elections.

Under another proposal, a Vice President, Publications would replace the Editor position on the Board of Directors. This officer would advance the complete publications portfolio. The Editor of *GEOPHYSICS* would remain primary judge of papers submitted for publication in the journal but no longer would have a major governance role. At least two candidates would be nominated for Vice President, Publications in each biannual election cycle. SEG has not conducted an election for Editor with two or more candidates since 1971.

Another Bylaws-change proposal would allow the Board of Directors to delegate Active Member application approval to a committee. Another would give the Board sole authority to establish and implement dues-waiver policies, including unemployed member dues waivers. Yet another would abolish the Committee of Tellers, transferring its modest election-monitoring responsibility to the Committee on Nominations.

In other business, the Committee approved proposed changes to the Canadian Society of Exploration Geophysicists' bylaws to be taken to its membership for vote. Sections and Associated Societies are required to get approval for any bylaws changes to avoid inconsistencies with SEG Bylaws.

Committee on University and Student Programs

Elsa Jaimes, chair

In 2015, the 42-member Committee on University and Student Programs (CUSP) consisted of 12 faculty, 16 industry representatives, and 14 students. Many things happened during 2015 thanks to the commitment of the committee members, the subcommittees, chairs, and especially the great work done by staff members who I wish to make a sincere and heartfelt appreciation. To reflect the current workload completed by the University and Student Programs (USP) Department at SEG, the team has a new Board-approved name of Student and Early Career (SEC). Considering that new programs have been implemented and that some others have changed considerably in the last four years, the CUSP Policies and Procedures were updated and, at the time this report is being written, the document is being prepared for submission for Board approval. Special recognition to Kyle Spikes, Jeffrey Shragge, and Johnna Yoder for your dedication and contribution with this process.

CUSP Subcommittee for the Student Chapter Excellence Program. Under the leadership of Joan Marie Blanco, the subcommittee is currently reviewing 338 SEG Student Chapter Annual Activity Reports to determine the Best Student Chapter award. All chapters will be divided into Base, Ridge, or Summit level based on their experiences as reported in the Annual Activity Report.

IGSC. There will be four International Geosciences Student Conferences (IGSCs) held in 2015. The 3rd African Geosciences Student Conference was held in June in Nairobi, Kenya. In July 2015, three International Geosciences Student Conferences was held: the Latin American LAGSC in Niteroi, Brazil; the 1st South Asian Geosciences Student Conference in India; and the 6th IGSC will be held in Prague, Czech Republic.

SLS. The SEG/Chevron Student Leadership Symposium (SLS) program will take place 24–25 October at the 2015 SEG Annual Meeting in New Orleans. A total of 139 applications were sent to the Travel Grant Committee for evaluation to fill the 50 spots open for this travel grant. New in 2015, SEC looks forward to adding more formal poster sessions for the event.

SEP. The final SEG/ExxonMobil Student Education Program (SEP) for 2014 held in Denver had 43 students (13 female, 30 male) from 25 universities in Canada and the United States. Students came from 13 different countries with 19% holding U. S. citizenship. The SEP Europe (Prague) had 139 applications submitted for 38 awarded travel grants. A total of 107 applications were received for the SEP North America (New Orleans) where students residing in the Americas (countries and nations of the Americas: Caribbean, Central, and South America) were eligible to apply for the event, which takes place 16–18 October 2015 and is held in conjunction with the SEG Annual Meeting.

Young Professionals. SEC worked together closely with the Emerging Professionals International Committee (EPIC) to develop the policies and procedures that provide the framework within which the committee will operate. They will celebrate two events at the SEG Annual Meeting in New Orleans this year. The EPIC Session is on Monday afternoon, 19 October in the convention center, and the EPIC Boat Party is a social networking event on Monday night for emerging professionals to meet with one another in a social session after their afternoon professional session.

Annual Meeting. All Student and Early Career programs are well under way for the 85th SEG Annual Meeting. In addition to the Student Pavilion, SEC will add presentations in the theater on the exhibit floor. Some of SEC's largest sponsors will present at the theater, leaving the Student Pavilion open to student pop-up talks and presentations from SLS, SEP, and EVOLVE students and emerging professionals. Four speakers from across industry, academia, and research organizations will again speak at the Career Panel and the Rock Breakers Open Mic Night will give participants the opportunity to impress peers with their abilities in song, dance, poetry, and more. New in 2015 is the **SEG/HALLIBURTON EVOLVE (Early Career Vital Opportunity Virtual Learning Education) Program.** The program continues to be driven as collaboration between staff members of Halliburton, SEG (SEC business staff), the SEG Foundation, EPIC, and others. As 2015 is a pilot year, only six teams from preselected universities and companies will

be eligible to apply. The inaugural session of EVOLVE will take place at the SEG Annual Meeting in New Orleans.

Scholarships. The application deadline for the 2015–2016 SEG Scholarships was 2 March. A total of 622 completed applications were received — fewer than last year — but still substantially more than other previous years. Applications have been passed along to the committee for review.

Field Camps. A total of 22 applications were received this year from 11 different countries for field camps. The committee assigned awards to 13 applicants from eight countries. The total amount awarded was \$108,168.45.

Continuing Education

Friso Brouwer, chair

The Continuing Education (CE) Committee works to provide a curriculum of high-quality professional courses to the exploration-geophysics community. To ensure that the current needs and standards of the community are met, it is essential to exercise constant control on the curriculum of offered topics and on the way the courses are given.

Course offerings 2014–2015. During the 2014 SEG Annual Meeting in Denver, Continuing Education offered 16 courses, five of which were new. The total number of attendees was 282. The program included a geologic fieldwork, organized by the AAPG, which was attended by 20 participants. It will be investigated in the future if fieldworks, geologic, or geophysical could become a more regular part of the course program. Additional educational events in 2014–2015 were held as stand-alone events or attached to the conference program of SEG and non-SEG events. See Table 1 for a complete overview:

Table 1. CE events in 2014–2015.

Event	Dates	Number of courses held	Number of participants
2014 SEG AM	25–26 October	16	282
West Houston Week	24–27 February	4	39
North Houston Week	8–11 September	3	46
London Week	12–16 May	3	18
GEO Bahrain Conference	8–9 March	1	24

These numbers are slightly lower than average, presumably due to the downturn in the market.

In addition, 11 contract courses were held and included the following countries: Saudi Arabia, United Arab Emirates, United Kingdom, Indonesia, Mexico, and United States.

New Courses. Since July 2014, seven new courses were provisionally approved for addition to the curriculum. The topics cover new areas of interest in the exploration and production communities. The courses are: Explorational Rock Physics and Seismic Reservoir Prediction; An Introduction to Seismic, Petrophysical, and Geomechanical Characterization of Organic-rich Shale Reservoirs; Structural Geology for Seismic Interpretation; Seismic Interpretation in Deep Water Basins; Practical Mathematics and its Applications in Seismic Processing; Introduction to 2D/3D Seismic Data Acquisition and Processing for Non-Geophysicists; Processing & Inversion of Airborne Gravity Gradiometry Data.

Also during the 2015 fiscal year, two courses were discontinued, resulting in 61 total courses in the current curriculum.

SEG OnDemand. SEG OnDemand is the new name for eLearning, which was the name used in previous reports. This year, SEG developed Lesson 6 (“Reflections”) of the 10 part series of Geophysics 101, taught by renowned geophysicist Leon Thomsen. In 2014, it was also the first time SEG OnDemand offered the Annual Meeting Technical Program Presentation recordings online. Available for purchase only by topic, benefits of this offering included significantly reduced production cost, decreased staff time in shipping, and providing the product much sooner to our members. SEG also offered five virtual courses, including a collaboration with GSH. This year also saw a rise in the number of quizzes taken and passed by CE course attendees: 108 in 2014 compared to 58 in 2013.

Other. We are developing a bundle approach to combine courses in a logical way as a means to market contract courses better. A first bundle has been created and is in use, aimed at providing an all-around introduction and extension of geoscientific knowledge for company new hires and young professionals.

We are also creating a program of CE ambassadors to provide more outreach to local chapters, student chapters, and companies, the latter assisting in the marketing of contract courses.

Discussion is also ongoing regarding a more focused vision for the CE Committee, and a compilation of committee members’ ideas regarding ways to increase the impact of the CE program.

SEG staff. All the reported work was made possible due to the excellent work of the staff of SEG’s Professional Development department. The committee is very thankful for their hard work!

Continuous Innovation Portfolio

Alison Small, chair

The Continuous Innovation Portfolio (CIP) Committee, comprised of past and present SEG Board members and a Foundation representative, was formed in 2014 to develop and apply methods for prioritizing new initiatives and ongoing programs. The goal of the CIP Committee is to produce prioritized program lists to be presented to the SEG Board of Directors for discussion and approval. The resulting Board-approved lists are to be used to allocate resources to those programs that are most effective, suggest programs which should be evaluated for sunseting, and indicate new initiatives that should be considered for funding. The Board-approved lists are to be provided to staff prior to the build of operating plans, ensuring that operating plans and budgets are aligned with Board priorities. The Board-approved lists also will be provided to the Finance Committee to facilitate the budgeting process and focus resource use according to the Board of Directors’ direction. The committee’s work aims to help the Society identify activities that can and do provide the Society and its members and other customers with the most value in exchange for resources. Growth in SEG programs, coupled with tightening resource availability, make it more necessary than ever for the Society to take a data-driven approach to strategy development. SEG has prioritized new initiatives previously, but with little structure to its evaluation processes. Ongoing programs have not been prioritized in the past.

The CIP Committee’s recent initiative solicitation and its development and application of a prioritization matrix are the first major steps in carrying out this charge. A new initiative solicitation was sent to all committee chairs, sections and associated societies, SEG Council members, Board members, subsidiaries, and staff in early 2015. The solicitation resulted in 19 initiative submissions, six of which were deemed as either descriptions of ongoing programs or as items for which other evaluation processes (e.g., Meetings Review and Planning Committee) were better suited. The remaining 13 submissions were evaluated and ranked by the CIP Committee using a prioritization matrix developed by Ted Bakamjian.

The matrix was developed to facilitate the objective analysis of programs and initiatives and works on a points system. Value points are awarded according to several criteria — scope and degree of member/customer impact; alignment with SEG strategic priorities; to what degree the service is required; importance to risk mitigation; and financial value. Resource points are awarded according to three criteria — implementation and first-year financial requirements; staffing requirements for implementation and ongoing operation; and the amount of volunteer support required. Value and resource points are balanced with multipliers that place total points for each on scales of between 0 and 60. “Gap between value and

resources” is provided as the difference between value points and resources points so that programs and initiatives may be ranked by this gap.

The matrix evaluations of the submissions was a beneficial first step in attempting to quantify the potential cost/value of proposed initiatives and pointed out modifications that should be made to the matrix. As this prioritization process is still in development, the rankings based on the matrix evaluation were presented to the Board for information only and are not presented in this report. The next step will be to apply the matrix to SEG ongoing business and programs to build a high-priority and sunseting list. After matrix refinement and an evaluation of ongoing programs, the prioritized lists will be presented to the Board for discussion and approval. The committee will strive to have rankings of all current programs completed by the Annual Meeting so that the Board may decide if a new initiative should replace a possible sunseting item in the priority list or if the program suite should be trimmed. Focus will be on programs that are net negative, with attention given to the possible value other than monetary. The final Board-approved priority lists should be complete for the Fiscal Year 2017 budgeting process. The emerging prioritization process will provide the means for SEG to offer the most beneficial and cost-effective services to all of its members. Policies and procedures will be revised to reflect a best practice once a full prioritization cycle is complete.

Distinguished Instructor Short Course Subcommittee

Ulrich Zimmer, chair

The 2014 Distinguished Instructor Short Course (DISC) instructor was Shawn Maxwell from IMA GE: Itasca Microseismic and Geomechanical Evaluation. Maxwell’s DISC was very well received in all locations. His DISC lecture topic was: “Microseismic Imaging of Hydraulic Fracturing: Improved Engineering of Unconventional Shale Reservoirs.” The DISC was held in 30 locations reaching over 1,200 professionals and students.

The 2015 DISC instructor is Öz Yilmaz, and his DISC lecture topic is “Engineering Seismology with Applications to Geotechnical Engineering.” The near surface is the subject of all three branches of seismology — earthquake seismology, exploration seismology, and engineering seismology. The difference is not just a matter of scale, but also the nature of seismic wave propagation. The narrow scope of engineering seismology includes its applications to geotechnical site investigations, and seismic microzonation to determine soil amplification and liquefaction susceptibility within a municipal area to estimate the earthquake risk. The broad scope of engineering seismology also includes its application to groundwater exploration, coal and mineral exploration, geothermal exploration, and investigations

of historical buildings and archaeological sites. This course is devoted to application of the seismic method to delineate the near-surface geology primarily for geotechnical remediation of the soil column for civil-engineering structures. Nevertheless, the course also includes case studies for the broader scope of engineering seismology.

The 2016 DISC instructor will be James Gaiser. His topic is “VSP and 3D Seismic,” and his manuscript is currently under preparation. The DISC Committee will approve locations for Gaiser’s tour, and we are working closely with the instructor to target these key locations.

The 2017 DISC instructor will be Doug Oldenburg and the topic is “Nonseismic Methods.”

The D & P Committee plans to hold a Middle East workshop on the Characterization of Tight Reservoirs, 25–28 April 2016 in Bahrain. This forum will focus on discussing the state of the art on geophysical methods and workflows that can be applied to improve reserve estimates in tight reservoirs. Recent advances in wide azimuth 3D processing, borehole geophysics, electromagnetic, microseismicity monitoring, time lapse methods, and their integration with carbonate geology and petrophysics provides the opportunity for a step change in reservoir characterization and monitoring.

Development and Production

Reynaldo Cardona, chair

The Development and Production (D & P) Committee continued to promote discussion and interaction on the latest technologies to improve reservoir characterization. This effort included the organization of the annual D & P Forum and hosting a luncheon, committee meeting, and workshop at the Annual Meeting.

Approximately 10 members attended the D & P Committee meeting at the 2014 Annual Meeting. Martin Terrell ended his chairmanship and welcomed the new chair, Reynaldo Cardona. The discussion focused on the 2015 and 2016 D & P Forum locations and topics. The D & P Luncheon was attended by approximately 50 participants and featured Malcolm Lansley from Sercel who discussed the topic of “Low frequencies in seismic acquisition: how low can we go?”. The half-day workshop after the Annual Meeting was attended by 60 participants, who heard the presentations from the D & P Forum held earlier in the year in Santa Rosa, California. The forum addressed the topic of “Reservoir Characterization and Monitoring with Advanced Geophysical Technology” where earth scientists from around the globe participated in oral and poster presentations and informal discussions on the latest technologies.

The upcoming D & P Committee Luncheon will be held at the Annual Meeting and will feature Andrew Royle from Chevron who will be discussing “It’s all about scale: the increasing role of geophysics in reservoir management.” The Annual Meeting will also feature the annual committee meeting and a workshop on the topic of “4D under complex overburden: are we there yet?”.

Distinguished Lecture

Louise Pellerin, chair

The Distinguished Lecture (DL) and Honorary Lecture (HL) tours are two of the highest-profile programs in SEG. In 2014, the lecturers reached out to over 7,500 members in 38 countries with overwhelmingly positive feedback. The programs recognize individuals for their outstanding contributions to geophysics at an international level. The tours are comprised of high-quality lectures given to sections, societies, and student chapters throughout the world. The lecturers are outstanding communicators of ideas and concepts, inspiring professionals and students within SEG, and recruiting new members.

The global Distinguished Lecture (DL) program is sponsored by CGG, Paradigm, and Statoil through the SEG Foundation.

- Peter I. Pecholcs, 2014 Spring DL, 16 lectures, 942 attendees
Countries: Canada, Russia, United Kingdom, and United States
Title: “A journey through time in search of Arabian giants – Oil/gas fields, recording channels, and petabytes”
Quote: “His lecture was very interesting and special for our students and young geophysicists.” — Vladimir Troyan, St. Petersburg University, St. Petersburg, Russia
- Dave Hale 2014 Fall DL, 27 lectures, 1,729 attendees
Countries: Australia, China, Saudi Arabia, Canada, and United States
Title: “3D seismic data processing for interpretation of faults and horizons”
Quote: “Dave spoke with great enthusiasm and raised the interest levels of seismic/geophysics. Around the office I heard comments like “That was AWESOME” “That was a really great lecture” and “I want to go and study at Colorado under Dave” — Millicent Crowe, Australian Society of Exploration Geophysicists, ACT Branch, Canberra, Australia

The 2015 DLs are:

- Jean Virieux: Spring DL, “Hierarchical seismic imaging: A multi-scale approach”
- Dimitri Bevc: Fall DL, “Full-waveform inversion: Challenges, opportunities, and impact”

The Honorary Lecture program, which includes tours in six regions and one thematic tour on near-surface geophysics, is supported by Shell through the SEG Foundation, with the exception of the near-surface lecture that is supported by SEG.

The 2014 HLs were:

- Central and South America HL: Mauricio D. Sacchi, 18 lectures, 800 attendees
Countries: Argentina, Brazil, Colombia, Trinidad-Tobago, and Mexico
Title: “Practical aspects of regularization and interpolation of (5D) seismic data”
Quote: “All of the attendees polled were unanimous in saying this was an excellent presentation. Students, university professors, people from local oil companies, and seismic processing service companies attended.” — Walter Eugene De Medeiros, UFRN, Natal, Brazil
- Europe: Laurent Sirgue, 25 lectures, 947 attendees
Countries: France, Norway, United Kingdom, Russia, Sweden, Denmark, Poland, Switzerland, Netherlands, and Italy
Title: “Full waveform inversion of seismic data: Investigating the earth for high-resolution velocities and more ...”
Quote: “Thank you very much to Laurent Sirgue for giving such a brilliant talk.” — Zulfia, Imperial College, London, United Kingdom
- Middle East and Africa: Bruce Blake, 16 lectures, 673 attendees
Countries: Ghana, Uganda, Kenya, South Africa, Mozambique, Botswana, Egypt, United Arab Emirates, Saudi Arabia, and Oman
Title: “Improving seismic structural time-map accuracy with better near-surface measurements”
Quote: “The HL is excellent and gives students the opportunity to have contact and ask questions of an experienced field person. Bruce Blake’s answers to my questions cleared the doubt I had for my project’s very low P-wave velocities and helped me become very confident in my results. I still communicate with him through mail. I give a big THANKS to SEG and Shell for these wonderful lecturers they provide.” — Emmanuel Addai, Research Student, KNUST Geophysical Society, Ghana
- North America: Aria Abubakar, 20 lectures, 865 attendees
Countries: United States and Canada
Title: “Joint inversion of multiphysics data for petrophysical and engineering properties”
Quote: “The overall experience of the lecture was great. He was also very sociable and after-lecture talks were also very useful.” — Ayodeji Kuponiyyi, University of Victoria, Victoria, British Columbia
- Pacific South: Sandeep Chandola, 24 lectures, 1,049 attendees

Countries: Malaysia, Indonesia, Brunei, Australia, and New Zealand

Title: "Marine seismic acquisition: Expanding the possibilities!"

Quote: "An excellent engaging lecture, well suited to a geophysicist with general knowledge as well as the seismic expert. I really enjoyed Sandeep's lecture style — easy to listen to and very informative." — Marina Costelloe, Geoscience Australia, Canberra, AU

- South and East Asia: Xuri Huang, 13 lectures, 456 attendees
Countries: Japan, Korea, China, India, and Taiwan
Title: "Bridging the chasm between geophysics and reservoir engineering"
Quote: "Dr. Xuri Huang gave an excellent lecture providing a 'bridge' between geophysics and reservoir engineering giving our students new ideas through his lecture." — Yin Cheng, Southwest Petroleum University Geophysical Society, Chengdu, China
- Near Surface: Koichi Hayashi, 22 lectures, 635 attendees
Countries: Japan, China, South Korea, Australia, Thailand, Malaysia, Taiwan, and United States
Title: "Integrated geophysical methods applied to geotechnical and geohazard engineering: From qualitative to quantitative analysis and interpretation"
Quote: "Excellent and very intuitive talk providing good case study examples for various applications." — Passakorn Panaont, Kasetsart University, Bangkok

The 2015 HL tours are:

- Central and South America: Sergio Chávez-Pérez, "Seismic bandwidth extension and resolution improvement: What works"
- Europe: Evgeny Landa, "Pitfalls and challenges of seismic imaging"
- Middle East and Africa: Elijah Ayolabi, "Near-surface geophysics: A high-fidelity tool for engineering, environmental, and hydrological problems"
- North America: Dan Whitmore, "Concepts and applications of imaging with multiples and primaries"
- Pacific South: Greg Beresford, "Some interesting concepts associated with seismic seafloor acquisition"
- South and East Asia: Naide Pan, "Broadband marine seismic and beyond: With focus on wave-theory and multicomponent streamer-based solutions and applications"
- Near Surface: Hansruedi Maurer, "The curse of dimensionality in exploring the subsurface"

colleagues, and students to explore this valuable resource. The committee accepts nominations twice a year from SEG members.

These lectures would not be possible without the substantial commitment of SEG members and the diligent and conscientious work of Judy Wall, Peggy Pryor, Laurie Whitesell, Tom Agnew, and the rest of the SEG business staff in Tulsa. Many thanks to all!

Earth Model

Carmen Dumitrescu, chair

Earth Model Committee

1. 2014–15 Chair: Carmen C. Dumitrescu
2. Committee composition: William Abriel, Robert Benson, Craig Beasley, Cassidy Coleman, Rocco Detomo Jr., Bob Hardage, Matthias Imhof, Gary Jones, Andreas Laake, Jill Lewis, Konstantin Osypov, Huyen Bui, Michael Zhdanov, and Alana Schoepp
3. Board liaison: Xianhuai Zhu
4. SEG staff liaison: Bill Barkhouse

Preparation for 2015 SEG Earth Model Forum

1. The committee decided that 2015 Earth Model Forum would be held on 2–5 August at the Vail Marriott Mountain Resort, Vail, Colorado, USA. This is the fourth Summer Forum.
2. Theme: Rendering Rock Properties for Qualitative and Quantitative Interpretation
3. Focus in: (1) rock and fluid properties at the preproduction reservoirs, (2) quantitative seismic and nonseismic interpretation, and (3) dynamic reconstruction of processes for conventional and unconventional reservoirs using seismic and nonseismic methods.

Collaboration with *Interpretation* journal for Annual Special Section

1. Special section: Earth Model – Effective interpretation for conventional and unconventional reservoirs; publication of issue: August 2015
2. This special section of *Interpretation* includes six contributions, which present multidisciplinary workflows for conventional and unconventional reservoir characterization, reservoir property uncertainty, quantitative risk reduction, and structural uncertainty.
3. Special-section editors: Carmen C. Dumitrescu, Andreas Laake, and Konstantin Osypov

To view SEG lectures online, visit <http://www.seg.org/professional-development/seg-on-demand/recordings/>. Encourage your friends,

Raising SEG Earth Model visibility at SEG Annual Meeting by holding “Best of Earth Model” Workshop

1. W-9: The Best of Earth Model Forum: Rendering Rock Properties for Qualitative and Quantitative Interpretation will be held on Thursday, 22 October (1:30–5 p.m.)
2. Organizer: Carmen C. Dumitrescu

Emerging Professionals

Paul Anderson, chair

The inaugural year for the Emerging Professionals International Committee (EPIC) of SEG was 2014–2015. The initial, 17-member committee was made up of members from around the world — from Canada to France, Houston to Saudi Arabia, and Norway to Florida. “Emerging professionals” are defined as those who have worked in the industry for eight years or less and might be beginning to gain seniority and increasing responsibilities. The intent is to provide young professionals with the opportunity to network, providing a transition from students to senior professionals, as well as to more directly involve younger members of our profession in SEG to foster the next generation of leaders in our Society and industries.

The Student and Early Career Department (SEC) has worked closely with EPIC to develop the policies and procedures that provide the framework within which the committee will operate. The policies and procedures also will ensure transparency and consistency while supporting effective decision making and delegation.

SEG/Halliburton (Early Career Vital Opportunity Virtual Learning Education) EVOLVE. The program continues to be driven as collaboration among staff members of Halliburton, the SEG business staff, the SEG Foundation, EPIC, and other SEG members. Six teams — five from preselected universities and one Early Career Professionals Team from Halliburton — will be eligible to apply for the inaugural 2015 EVOLVE program. The first session of EVOLVE presentations will take place at the SEG Annual Meeting in New Orleans. The “Presentations/Findings” segment offers EVOLVE teams the opportunity to share findings with peers, colleagues, and all SEG members in a supportive environment.

ELA Conference Eighth Annual Emerging Leaders Alliance Training. The Emerging Leaders Alliance (ELA) Conference is a partnership with leading engineering, research, and science-based organizations, including AIME, AIST, ASCE, NACE, NGWREF, SAME, SME, SPE, TMS, and SEG. The conference, a cross-disciplinary leadership-training opportunity for SEG emerging professionals, will be held 8–11 November 2015 at the Hyatt Regency in Reston, Virginia. SEG will sponsor

eight travel grants to cover the costs of hotel and conference registration. Other costs will be covered by applicants.

Canadian Young Professional Intersociety Collaboration.

About 300 people attended the first meeting of the Canadian Young Professionals Intersociety Collaboration on 15 December 2014. This multisociety event, which included SPE, CSPG, AAPG, SEG, and CSEG, was a social bowling night, and the societies contributed \$500 to \$1,000 each. The event raised \$1,200 for a food bank. The event will be held every quarter or perhaps twice a year. Although it is initially a social event, opportunities to expand to include technical events are possible. Similar events can be planned in other major centers with significant numbers of emerging professionals, which will require budgetary support in future years, either directly from SEG or through sponsorship. A second networking event was held in Calgary, again in conjunction with other societies, in May 2015, with a focus on teaching networking skills to young professionals.

Annual Meeting. EPIC will celebrate two events at the 2015 SEG Annual Meeting. The EPIC Session will be an “unconference” which allows participants to build their own event schedule through a voting feature on the SEG Wiki. The event is scheduled for 1:30–5 p.m. Monday, 19 October, in the Convention Center. The EPIC Boat Party will be held at 6:30–9:30 p.m. on Monday, 19 October. It will be a social networking night for emerging professionals to meet with one another after their afternoon professional session. The EPIC Session and EPIC Boat Party will seek sponsorship in future years.

Field Camps

Tim Maciejewski, chair

In 1993, the Field Camp Grant program was established by the SEG Foundation to provide seed money for geophysics faculty and SEG Student Chapters to create and support field courses, which give students hands-on experience with data collection and analysis using geophysical instruments and software applications. The program started with two grants of \$10,000 each to two field camps in the United States. With the generous support of our donors, the field-camp grant program has grown to better reflect the global nature of the SEG membership.

The 2014 grant application process yielded a record number of applications and requests for funding. The Field Camp Committee received 28 applications for review, requesting a total of \$348,153. From the submitted applications, the committee selected 16 to receive awards totaling \$120,038 — also a record. Awards ranged in size from \$1,750 to \$20,000. The award amounts averaged approximately 58% of the total

funds requested by the applicants, with two projects receiving 100% of the funds requested. Awards were given to help sponsor field camps in Canada, Germany, Indonesia, Kenya, Romania, Russia, Serbia, South Africa, Switzerland, and the United States. In total, 882 students participated in field camps sponsored in whole or in part through funding provided by donors to the Field Camp Grant Program.

The review committee used new scoring criteria for the 2014 review to ensure greater attention was given to Health, Safety, Security, and Environment (HSSE) as part of the students' educational experience. Additional work is being done to increase students' awareness of HSE issues in the field using resources provided by the SEG HSSE committee.

Field Camp Committee members: Tim Maciejewski, chair; John Lane; Steve Sloan; Madeline Lee; Nawfel Gharieni; Justin Simmons; Ingo Geldmacher; and Jeffrey Shragge.

Finance Committee

Gary Servos, chair

Finance Committee information for this year was included in the Treasurer report by Alison Small, chair.

Geoscientists *Without Borders*®

William Doll, chair

Geoscientists *Without Borders*® (GWB) is SEG's humanitarian program that transforms lives in developing and vulnerable communities, while promoting the importance of geosciences beyond the realm of oil and gas. By design, each project must involve students. They are the heart of the program and the near-future industry leaders.

The approved GWB Business Plan for 2013–2015 identifies expansion goals and actions necessary to achieve increased funding, outreach, and marketing growth, and development of robust metrics to evaluate projects and assure effectiveness. Many of the growth opportunities are dependent upon raising additional financial support. Given the current state of the economy relative to the GWB donors, it is critical to develop a diversified donor base. To that end, 70% of the GWB program manager's time is allocated to fundraising.

The program made significant advances this last year:

- Expanded GWB scope from geophysical to geoscience projects
- Awarded World Oil's Best Outreach Program in 2014
- Initiated quarterly GWB Project webinars

- Signed three partnerships — EEGS, GSA, and AAPG
- Successfully transitioned from SEG Foundation to SEG
- Policies and procedures updated
- Reviewed 26 applications and selected four new projects: Potable water supply (Argentina), Landslide and Slope failure (Bosnia, Serbia & Herzegovina), Landslide preparedness (Peru), and Tsunami Preparedness (Java)

GWB project applications are reviewed twice a year — January and June. Selections are based upon technical merit, humanitarian benefit, student involvement, and available funds. The program portfolio includes 25 projects in 23 different countries.

The GWB technical review committee membership requires a minimum of five and maximum of 12 members serving two-year terms. Most committee meetings are via web conferencing four times a year. The exception is the committee meeting at the SEG Annual Meeting.

Technical Committee Members:

William Doll, chair, Battelle (Oak Ridge, TN)
 Jon Nyquist, Temple University (Philadelphia, PA)
 Gregg Parker, PGS (Houston, TX)
 Michael Burianyk, Shell (Rijswijk, Netherlands)
 Isabelle Lambert, CGG (Massy Cedex, France)
 Najib Abusalbi, Schlumberger (Houston, TX)
 Robert Merrill, Catheart Energy (Houston, TX)
 Phoebe McMellon, Elsevier–Geofacets (New York, NY)
 Nick Lagrilliere, Maersk (Houston, TX)
 SEG Board Liaison – John Bradford
 SEG Foundation Board Liaison – Mike Forrest

Partnerships. GWB policies and procedures allows for three tiers or partnership levels. In a fast-paced, member-driven environment, these partnerships leverage resources and increase opportunities for everyone. To date, we have secured three partnerships: Level 1 — GSA and EEGS; Level 2 — AAPG.

Global Affairs

Joe Mongan, chair

In June 2014, the Global Affairs Committee (GAC) was pleased to welcome Channing Wendt as SEG liaison for Global Affairs, working with Kerry Cosby's team as Global Business Development Advisor. In September, Bill Ayers was elected to serve as vice chair, ahead of the Denver Annual Meeting.

The decline in oil prices generated a wave of cost cutting across the sector, which consequently impacted the forward plan for a number of GAC initiatives in 2015. The idea to revive the previously successful “international space” at the 2015 meeting received pushback from the Steering Committee with insufficient interest to include this in the program for New Orleans 2015.

The Denver meeting included topics such as the GAC relationship with the CUSP committee, provision of a register of supply and demand of geophysical equipment in educational institutions, and ways to engage student and new members. To that end, the GAC executive met with the CUSP to plan for support to the 3rd African Geosciences Student Conference (AGSC) in Nairobi, Kenya on following the success of the 2nd AGSC in Ghana in 2014. The Kenya conference took place in June and was a notable success. GAC members were in attendance after helping secure most of the funding from industry sponsors. The conference explored ways in which natural resources can be exploited effectively, with a particular focus on increasing capacity and bridging the existing skills gaps in the industry. This year’s theme was “Diversifying Geosciences in Africa” and brought together students, lecturers, and professionals from across Africa.

The mid-year meeting was held in Madrid, ahead of the June EAGE meeting. There was a healthy discussion on the GAC Project Prioritization (hardware and software exchange initiatives), which had been submitted to the Continuous Innovation Portfolio (CIP) committee earlier in the year. Both initiatives ranked on the lower half with the hardware initiative ranking last, again a reflection of the current difficulties experienced in the industry. It was thought that the software initiative could be partnered with another existing open data initiative associated with SEAM.

With emphasis on how the SEG can best utilize available resources in the current market downturn, the GAC has focused on the findings of recently published regional assessments. It was agreed to examine how technical webinars/e-lectures can appeal to student societies. Additionally, GAC country representatives can provide student-focused lectures to supplement Distinguished Lecture (DL) or Honorary Lecture (HL) topics. This would attract geology/engineering students to geophysics and encourage geophysics students to stay in the profession. Such lectures also may be distributed on the Web and hard media such as a CD to cater to those who have difficulty with Internet access.

However, it was acknowledged at that the mid-year meeting that there are clear difficulties associated with the regional coordinators oversight of a region remotely, and that support from SEG could be best addressed in a new (outreach) program. It was also felt that this could include an SEG student day at the SEG Annual Meeting with e-conferences and live instructor webinars with live chat, supplemented by year-round live instruction by GAC volunteers.

Later on in the year, the SEG Deepwater Workshop in Shenzhen afforded the GAC chair the opportunity to present in one session, preside over another, and thereafter, present to a student and early career gathering in Shenzhen. A request to act as sponsoring committee for technical workshop, scheduled to take place after the New Orleans Annual Meeting, also gained GAC support.

Gravity and Magnetism

Vsevolod Egorov, chair

The Gravity and Magnetism Committee focuses on activities within the Society dealing with gravity and magnetism, and promotes the knowledge and use of these potential field methods. Our Committee meets twice this year — spring (April 2015) and again at the Annual Meeting. The committee will meet at 5 p.m. Wednesday, 21 October 2015 at the Convention Center in New Orleans. There are more than 50 members on this committee. They are instrumental in organizing Annual Meeting sessions and activities, providing input to *The Leading Edge*, advising on technical standards, and overseeing the Gravity and Magnetism dedicated list server, which includes geophysicists outside SEG.

The 2015 SEG Annual Meeting activities organized by the Gravity and Magnetism Committee include technical oral and e-poster sessions, a luncheon, and a workshop. Chuck Campbell has organized the technical oral and poster sessions, with abstract-reviewing assistance from committee members. The luncheon will feature Fabio Caratori Tontini of GNS Science as speaker. The title of his talk is “Potential-field exploration of submarine volcanoes in the Kermadec Arc with application to hydrothermal systems and gravitational stability.”

Last year’s SEG Annual Meeting postconvention workshop titled “Gravity gradiometry in exploration workflow” was attended by over 100 attendees. The 2015 workshop, “Salt challenges in hydrocarbon exploration,” is being organized by Vsevolod Egorov and Neda Bundalo. The main focus of this interdisciplinary workshop is to improve our understanding of the role played by gravity and magnetism within an exploration workflow in areas where salt presence is an important factor of petroleum system and play. It will include talks from industry and academia covering the geology of salt as well as processing and integrated interpretation of various geophysical data. The workshop will be scheduled to facilitate maximum interaction and discussions among the participants. There will be both oral and poster presentations.

This year, members of the Gravity and Magnetism Committee are also organizing the AGU/SEG workshop, “Potential Field and Electromagnetic Methods Applied to Basin Studies,”

chaired by Benjamin Drenth and Michal Ruder. The workshop is taking place 25–27 August in Keystone, Colorado.

Our committee is involved in SEG publication activities. A column within *The Leading Edge* titled “The Meter Reader” focuses on different issues involving potential fields. Jerry Hensel coordinates the publication of this column. Continuing-education activities are spearheaded by Michal Ruder, who coordinates and teaches the gravity and magnetics methods and interpretation short course several times through the year.

The chair of the Gravity and Magnetics Committee for 2014–2015 is Vsevolod Egorov and vice chair is Neda Bundalo.

Health, Safety, Security, and Environment

Ian Threadgold, chair

The SEG Health, Safety, Security, and Environment (HSSE) Committee has continued in its second year of operation. During the year, several additional committee members have joined, with the emphasis on getting members from the EPIC community. Current membership stands at 10, including Board liaison Gustavo Carstens and staff liaison John Meade.

The committee’s mission continues to be “... to help ensure that HSSE is taken into consideration for any activities that the SEG manages or sponsors. It will not duplicate the work that the IAGC and IOGP do with HSSE for geophysical operations but rather complement it, and utilize wherever possible industry guidance already developed.”

Progress this last 12 months includes:

- board approval and publication of an SEG HSSE policy statement
- creation of a Tulsa business office HSSE Committee under the leadership of John Meade which meets monthly
- commenced publication of a quarterly series of HSSE-related articles in *TLE* as of May
- drafted an SEG “guidance document on the development and implementation of HSSE plans for student field activities”
- drafted a guidance document of “Exhibition Floor Safety” jointly with the SPE
- successfully recommended to Chevron to include safety in the SLS curriculum
- the committee is trying to use Web-based conferencing capabilities to allow members from around the globe to participate more

Some of the progress by the business office HSSE committee includes:

- integrated HSSE orientation into the Tulsa organization on-boarding process
- introduced quarterly and annual office safety audits and inspections
- developing office-based policies, checklists, and guidelines (e.g. a new draft Severe Weather Policy and a predeparture International Traveler Checklist)
- developing an annual HSSE training plan for office, establishing a schedule of drills, and emergency preparedness exercises
- increasing Tulsa staff awareness of HSSE issues through a variety of avenues

The following projects are in progress by the SEG HSSE Committee:

- developing a guidance document on Personal Protective Equipment (PPE)
- joint risk matrix for HSSE and enterprise wide financial and business risks
- development of a risk register for all the activities that the SEG manages or sponsors, working in conjunction with the appropriate SEG staff
- developing an SEG HSSE Resources Web page on the SEG external site

At the time of writing, two committee meetings have been held on 6 February and 28 May 2015. Further meetings will be held in July and in conjunction with the SEG Annual Meeting in New Orleans in October.

Historical Preservation

Bob Wyckoff, chair

The Historical Preservation Committee (HPC) was established to continue the preservation of important artifacts, instruments, and documents that had previously been part of the SEG Geoscience Center, which was closed in 2009. HPC has completed several projects, and others are moving forward in alignment with action items established at the HPC Annual Meeting held during the SEG Annual Meeting.

Exhibits detailing various aspects of applied geophysics have been created at various locations. The exhibit at the University of Oklahoma (OU) in the Sarkey Energy Center, a part of the ConocoPhillips School of Geology and Geophysics, which is also part of the Oklahoma Geological Survey, was visited to perform maintenance and updating. Brian Frehner, an associate professor of history at Oklahoma State University (OSU), continued his consulting/research role for the HPC. Exhibit displays in the Noble Research Center, Boone Pickens School of Geology, continue to be a large attraction for students and

the general public. The four panels assembled from his 2012 research work, Finding Oil, Exploration, Technology, and Innovation, were custom designed by Brockington Cultural Resources Consulting and mounted in a high-visibility area near the exhibit. Also, photo backdrops and descriptive signage for pieces were designed for the exhibit display cases. The Oklahoma Historical Society reception for the opening of the Oklahoma History Exhibit in Oklahoma City was on 11 February 2014. On display from our collection is a 1950 vintage 24-channel recording system (Midwestern – made in Tulsa and operated by CEJA Corp., a Tulsa company) and other assorted geophysical pieces including a painting of geophysical operations from the 1950 era and Karcher documents. SEG is recognized for its contributions in preserving the geophysical history associated with Oklahoma roots. The Geophysical Society of Houston (GSH) Geoscience Center (Bill Gafford) continues to monitor, as custodian, the Iverson Gravity Meter Collection housed at CGG/Fugro in Houston. HPC has limited funds for supporting all exhibits in 2016.

Activities for 2015 include Frehner continuing his research work on projects, some assigned as action items from the committee's meeting at the 2014 Annual Meeting in Denver. Gerhard Keppner's book on Ludger Mintrop, translated from German to English, is now before the SEG Publications for publishing. Tom Agnew, SEG liaison, now has dedicated staff to assist with digital attributes, including the SEG Wiki. The artifacts that were stored in Tulsa have been sorted, and the geophysical artifacts retained are now stored in Norman, Oklahoma, at the Oklahoma Petroleum Information Center. Plans are to exhibit artifacts for exposure at this facility which has training seminars for teachers and students. Inventory of all artifacts is in progress.

Of great importance is the effort being focused on a large scale and long-term digital history project. Agnew and Frehner, with their strong education backgrounds, are engaged with formulating a proposal supporting this effort through the use of digital media with a unique outreach opportunity to engage and interest young people in the profession of geophysics. History faculty at OSU will oversee graduate students recruited specifically for the purpose of researching and assembling digital content depicting the far-reaching impacts of geophysics over time. This project will commence when funding is secured.

John Stockwell has completed uploading of SEG member biographies to SEG Wiki. He also is working with SEG staff (Isaac Farley and Andrew Geary) in a test mode to transform the virtual museum artifacts to a full online experience using Omeka.

A great year ... thanks to everyone for being an integral part of preserving geophysical history!

Honors and Awards

Stephen J. Hill, chair

The Honors and Awards Committee consists of the five most recent past presidents of SEG, one appointed each year by the current president. The 2015 committee members were Steve Hill (chair), Klaas Koster, Bob Hardage, Dave Monk, and Don Steeples. Nominations were solicited from the membership at large following the 2014 Annual Meeting in Denver. The committee also individually solicited nominations from the SEG committee chairs. The contributed suggestions from the membership were augmented by suggestions from the Honors and Awards Committee itself. Nominations for certain Best Paper or Best Presentation Awards are provided by the Technical Program Committee for the 2014 Annual Meeting, the Editor of *GEOPHYSICS*, the Editorial Board of *Interpretation*, and the Editorial Board of *The Leading Edge*.

The decision process for awards is handled by the Honors and Awards Committee, following extensive research by each of the committee members. The Honors and Awards Committee recommendations must receive approval from the SEG Board of Directors. The nominations from the 2014 Honors and Awards Committee were approved by the SEG Board at its 5 May 2015 meeting.

The following awards will be conferred at the 85th SEG Annual Meeting held in New Orleans, Louisiana. Full citations for these awards will be published at the Annual Meeting and subsequently in *The Leading Edge*.

The Maurice Ewing Medal: Manik Talwani

Honorary Membership: Ilya Tsvankin, Mrinal Sen, Anton Ziolkowski, and Doug Fraser

Virgil Kauffman Gold Medal: H. Justus Rozemond

Cecil Green Enterprise Award: Geoffrey Dorn (TerraSpark Geosciences LLC)

Reginald Fessenden Award: Heloise Lynn

J. Clarence Karcher Award: Joost van der Neut, JinCai Zheng, and German Rubino

Life Membership: Alfred Liaw and Terry Young

Distinguished Achievement: ETH Institute for Geophysics; Center for Applied and Environmental Geophysics (CAEG)

Outstanding Educator Award: Zie Zhang and Manika Prasad

2015 BEST PAPER AND TECHNICAL PROGRAM AWARDS

BEST PAPER IN *The Leading Edge* IN 2014

"Relative rock physics"

Vaughn Ball, J. P. Blangy, Christian Schiott, and Alvaro Chaveste

Honorable Mention, Best Paper in *The Leading Edge* in 2014

(strong tie between two runners-up; articles below are listed in no particular order)

“Wave-equation angle-based illumination weighting for optimized subsalt images”

Mariana Gherasim, Bertram Nolte, John Etgen, Petr Jilek, Phuong Vu, Matt Trout, and Ken Hartman

“Prestack seismic inversion versus neural-network analysis: A case study in the Scarab field offshore Nile Delta, Egypt”

Islam A. Mohamed, Hamed Z. El-Mowafy, Dina Kamel, and Mohamed Heikal

BEST PAPER IN GEOPHYSICS IN 2014

“Cooperative constrained inversion of multiple electromagnetic data sets”

Michael S. McMillan and Douglas W. Oldenburg

HONORABLE MENTION, BEST PAPER IN GEOPHYSICS IN 2014

“Estimating the influence of stress state on compaction behavior”

Matt R. Hauser, Brent A. Couzens-Schultz, and Alvin W. Chan

“Pore-scale modeling of electrical resistivity and permeability in FIB-SEM images of organic mudrock”

Vahid Shabro, Shaina Kelly, Carlos Torres-Verdin, Kamy Sepehrnoori, and André Revil

“Recursive integral time-extrapolation methods for waves: A comparative review”

Xiang Du, Paul J. Fowler, and Robin P. Fletcher

“Computationally efficient three-dimensional acoustic finite-difference frequency-domain seismic modeling in vertical transversely isotropic media with sparse direct solver”

Stephane Operto, Romain Brossier, Laure Combe, Ludovic Métivier, Alessandra Ribodetti, and Jean Virieux

BEST PAPER IN *Interpretation* IN 2014

“Conical faults apparent in a 3D seismic image”

Dave Hale and Richard H. Groshong

Technical Program Awards SEG 84th Annual Meeting, Denver, Colorado

TOP ORAL PAPER

Paper Title: “Attenuated high-frequency emission from a new design of air-gun”

Emmanuel Coste, David Gerez, Halvor Groenaas, Ola Pramm Larsen, Michel Wolfstirn, Jon-Fredrik Hopperstad, Robert Laws, Jack Norton, and Matthew Padula*

ORAL PAPER HONORABLE MENTION

Paper Title: “Azimuthal pre-stack depth migration for in-situ stress evaluation in a fractured carbonate oil reservoir: Predrill prediction of instantaneous shut-in pressure gradients”

Heloise B. Lynn, Walter Lynn, Justin Obilo, and Vinod Agarwal*

TOP POSTER PAPER PRESENTED

“Churning seismic attributes with principal component analysis”

Satinder Chopra and Kurt J. Marfurt*

POSTER PAPER HONORABLE MENTION

“Transforming prestack seismic data by Gardner continuation”

Sergey Fomel

TOP STUDENT ORAL PAPER PRESENTED

“An approximate inverse to the extended born modeling operator”

Jie Hou and William W. Symes*

STUDENT ORAL PAPER AWARD OF MERIT

“Seismoelectric interface response signal behaviour in thin-bed geological settings”

Niels Grobbe and Evert Slob*

TOP STUDENT POSTER PAPER PRESENTED

“Monitoring hydraulic fracturing using distributed acoustic sensing in a treatment well”

Sudhish K. Bakku, Michael Fehler, and Peter Wills*

STUDENT POSTER PAPER AWARD OF MERIT

“Modified anelliptic approximations for qP velocities in transversely isotropic media”

Yanadet Sripanich and Sergey Fomel*

*Denotes presenter

International Science & Engineering Fair Subcommittee

Richard Nolen-Hoeksema, chair

The SEG International Science & Engineering Fair (ISEF) Subcommittee’s focus is the International Science and Engineering Fair (ISEF), which occurs annually in May. The 2016 ISEF will be held 8–13 May 2016 in Phoenix, Arizona.

Activities. The 2015 ISEF was 10–15 May 2015 in Pittsburgh, Pennsylvania. Chuck Meeder (Emeritus, Marathon Oil), Jeff Daniels (Ohio State University), and I (Oilfield Review, Schlumberger) made up the SEG judging team at the 2015 ISEF. The SEG judging team selected the following projects to receive awards or honorable mentions, listed in the table below. An article about the 2015 ISEF will be published in *The Leading Edge*.

Award	Awardee	Project	Title
First	Ben L. Schade, Justin H. Hamilton	SOFT056T	Calculating Horizons with Perspective Projection
Second	Iselle Van Den Heever	PHYS003I	An Easy Way to Measure a Sidereal Day
Third	Coleman J. Kendrick	PHYS039I	Coupled Hydrodynamic Ocean and Atmospheric Simulation of El Niño
	Jesse Tan Zhang	EAEV073I	The Effect of the Atlantic Ocean on Polar Vortex Weakening
	Jovan Y. Zhang	EGCH043I	Modeling Gas Flow in Hydraulically Fractured Shale
	Matthew Caffet	EGPH015I	Riding the Wave: Energy in Motion II
Honorable Mention	Morgan Elizabeth Kane	ENEV048I	Can the Design of Natural Aquifers Be Used to Filter Run- off on the Roads in Communities and Wetlands?

Interpretation Editorial Board

Yonghe Sun, editor-in-chief

This is the third *Interpretation* annual report since its launch in October 2012. The Editorial Board members are Yonghe Sun, editor-in-chief (EIC); Robert Randolph Ray, deputy EIC; William L. Abriel; Huyen Thi Thanh Bui; Bob A. Hardage; Thomas Hearon; Donald A. Herron; David H. Johnston; Steve Laubach; Kurt J. Marfurt; Balazs Imre Nemeth; John J. O'Brien; Mark A. Rosin; Cedric Schmelzbach; Gerard T. Schuster; Stephen A. Sonnenberg; Linda R. Sternbach; Lisa Stright; Chicheng Xu; Hongliu Zeng; and Guangfa Zhong.

Before the 2014 SEG Annual Meeting, the Editorial Board drafted operating procedures for the journal. Soon afterward, the SEG Board of Directors and the AAPG Executive Committee both approved the procedures. They have been fully implemented as the official procedures of the journal. One significant change in the current procedures from the informal set in use earlier was the elimination of the cap on the board size, which had hamstrung the journal's special-section and peer-review processes. Another significant change was the explicit quantitative definition of board responsibilities in initiation of special sections, the journal's

primary mechanism for content generation. This change aims to maintain an active Editorial Board.

Interpretation's editorial leadership positions for the January 2016 through December 2018 term are set. Kurt Marfurt will be the EIC, and Hongliu Zeng will serve as Deputy EIC. Following the procedures established jointly by AAPG and SEG, Marfurt was nominated by AAPG and accepted by SEG, and Zeng was nominated by SEG and accepted by AAPG. Marfurt and Zeng, both members of *Interpretation's* current and inaugural Editorial Board, have outstanding records in SEG and AAPG technical engagements. Marfurt is the foremost expert on seismic attributes. He has taught classes around the world, has written several books, and has published extensively in both AAPG and SEG journals. Marfurt's journal-editing experiences span three decades, starting as an Associate Editor of *GEOPHYSICS* in the 1980s. Zeng has strong ties with both industry and academia and has been an active contributor to both AAPG and SEG technical programs, including service as an Associate Editor for *AAPG Bulletin*. Zeng is a well-recognized expert in sedimentology, geomorphology, and stratigraphy. Marfurt's and Zeng's strong commitment to AAPG and SEG collaboration, their high degree of scientific integrity, and their extensive experiences in both education and research will serve *Interpretation* well.

The journal is open for editorial participation by subject matter experts (SMEs) through the mechanism of special sections. The members of the editorial board are a small number of SMEs appointed by the EIC to guide the journal's operations and to facilitate the initiation of a critical mass of special sections. The SMEs not serving on the board are far greater in number. Since its launch three years ago, the journal has engaged a large number (345) of SMEs as editors of the journal's special sections. This, without a doubt, promotes the culture of publication because these SMEs identify with the journal and form a base for future interpretation publication. Special sections provide an effective mechanism to harvest the broad supply of SME energy without requiring service on a board that could not operate effectively with a large number of members.

The journal usually features several special sections per issue (Table 1). There is no limit in the number of special sections per issue, however, and there is no ranking and queuing of special-section proposals. This is important for several reasons:

- Special sections do not always go as planned, as indicated by the mismatches between the numbers of planned special sections for each issue and the number published, with the November 2014 issue being a good example as shown in Table 1. If the journal featured just one or two special sections per issue, the Board would be burdened with ranking and queuing special-section proposals. The viability of a special section depends on the number of accepted papers. The task of assessing viability requires polling and projection and is time-consuming and

difficult if not downright impossible. A failure to generate a critical mass of manuscript submissions may lead to tolerance of low-quality papers, failed quarterly issues, or both.

- Planning several special sections per issue makes it unnecessary to rank special section proposals by viability. Table 1 shows that only six out of 40 special sections planned for the first nine issues did not materialize. (If two or fewer papers are accepted for a special section, they are not published as a special section and instead are included under the general “Technical Papers” section.) Every announced topic engages some SMEs, and almost every topic has led to submissions of manuscripts. A potential organizer would not need to hesitate in proposing a special section for fear of failing an entire issue of the journal.
- The Editorial Board does not collectively rank and queue special-section proposals. Each member of the board is empowered to select topics and recruit organizers.
- An eager SME would not need to moderate his or her enthusiasm and energy because there are no restraints on special-section scheduling.

Table 1 also shows that the current (August 2015) issue features eight special sections with 55 papers published. This is a temporary peak; a record that likely will remain for the next year. Based on the special sections we have planned (approximately five per issue, 12–15 months in advance) in the past year, the number of papers should decrease to be in 20–40 range starting with the November 2015 issue and for 2016 issues.

A year ago, the number of Board positions was capped. This had limited the Board’s potential for initiating special sections and had made editorial review assignments by expertise of the editors difficult. With the current reconstituted Board size and newly adopted operating procedures, the number of papers per issue may stabilize to be around 40–60 per issue after 2016.

Now that several issues of *Interpretation* have been published, Thomson Reuters ISI is in the process of evaluating the journal’s application for inclusion in the Science Citation Index. We expect to receive a ruling later this calendar year and are optimistic that the ruling will be favorable.

Table 2. *Origin of papers submitted for publication in Interpretation by country, 1 July 2014—30 June 2015.*

USA	119
China	23
Canada	9
Norway	9
United Kingdom	8
Brazil	7
Saudi Arabia	6
Australia	5
France	5
India	5
Japan	4
Austria	3
Italy	3
Nigeria	3
Spain	3
Germany	2
Greece	2
Netherlands	2
Sweden	2
Cameroon	1
Colombia	1
Egypt	1
Indonesia	1
Ireland	1
New Zealand	1
Russian Federation	1
Syrian Arab Republic	1
Thailand	1
Total	239

Table 1. *Planned and published special sections in the quarterly (February, May, August, and November issues.)*

Year	2013		2014				2015				2016			
Issue	A	N	F	M	A	N	F	M	A	N	F	M	A	N
Planned special sections	1	1	2	2	4	8	8	8	6	7	3	6	5	
Special sections published	1	1	2	3	3	4	6	6	8					
Papers published	21	19	28	26	21	35	40	41	55					

Table 3. *Origin of papers submitted for publication in Interpretation by employer, 1 July 2014–30 June 2015*

Universities	108
Oil companies	43
Research institutes	23
Consultants	22
Service companies and manufacturers	15
Governments	12
Mining companies	4
Retired	2
Total	239

Table 4. *Manuscript-handling statistics*

Year submitted 1 July–30 June	Average number of days required for first review
2013–14	64
*2014–15	70

* First reviews have not been returned for all papers.

Table 5. *Manuscript-handling statistics*

Year published 1 July–30 June	Average number of days between acceptance and online publication
2013–14	82
2014–15	70

Office for review and recommendation to the SEG Board, who provide final approval for the meeting.

Additional details for the committee structure and process can be found in the recently updated MRPC Policy & Procedures document.

A secondary purpose of the MRPC is to ensure that all segments of our Society have visibility, voice, and representation into the content, approval/rejection, and scheduling of proposed meetings. MRPC membership includes representatives from SEG's regional advisory committees, from SEG standing committees (Earth Model, Research, Development & Production, Gravity & Magnetism, Oil & Gas Reserves, and Mining & Geothermal), and from intersocietal/cooperative committees (OTC, Intersocietal Relations, Arctic Tech, Global Affairs).

The slate of reviewed and approved meetings mirrors the changing face of the SEG membership: 75% of the meetings are international and 50% are intersocietal or jointly sponsored meetings. Meetings sponsored by the SEG Regional offices (Middle East and China) are 25% and student-focused meetings are about 10% of the approved meetings. About 44% of the reviewed meetings involve significant financial participation by SEG. An increase in the number of canceled or postponed meetings reflects current industry economic. While the geoscience meeting schedule appears ever increasingly crowded, we encourage our members to submit ideas and proposals to SEG.

Meetings Review and Planning Committee (MRPC)

Mark Houston, chair

The primary mission of the Meetings Review and Planning Committee (MRPC) is to provide to the SEG Board of Directors and SEG staff member-driven advice for all proposed meetings that request in-kind or financial support of the SEG.

SEG staff, in concert with the Global Relations and Meetings departments and the various collaboration committees, review all meeting proposals and add additional information, particularly SEG staffing and resource requirements. The SEG Business Office liaison submits the Proposed Level I-V Meeting Requests, which may originate from the standing committees, intersocietal collaborations, SEG regional offices, or directly from the membership, to the MRPC on a monthly schedule for review, comment, and recommendation.

The majority-approved Level I-III Meeting Requests are returned to the SEG Business Office liaison for entry into the SEG production schedule by the SEG staff. Majority-approved Level IV-V Meeting Requests (which entail significant potential impact or risk to SEG) are forwarded to the SEG Business

Membership

Madeline Dana Lee, chair

SEG's membership numbers indicate an upward trend after a two-year decrease in membership enrollment. As of 30 April 2015, the Society had approximately 32,000 total members — an improvement of 12% from the previous fiscal year. Data indicates that the increase is attributed to new Student and Active members. Despite the overall improvement, the Society had a continued decline in Associate Members.

As of 31 March 2015:

- Active membership improved since 2014. Over the past year, paid Active (including Emeritus) membership has increased marginally. Amendments were made to SEG Bylaws (Article III, Sections 1 and 5) in 2014 to streamline the Active Member application, review, and approval procedure. These changes simplified the process and were communicated to all eligible members.

- Associate membership continues to decline since 2013. Over the past year, paid Associate Membership has declined by 9%. In FY2014, it was the aim of the Membership Committee to expedite Associate Members to Active Members, which may have contributed to the decline in Associate membership renewals.
- Student membership continues to improve since 2013 and represents the largest percentage of SEG membership at 38% of total. Over the past year, paid Student membership rose by 26%. At the 2014 Annual Meeting in Denver, the Membership Committee funded the registration for eight faculty advisors to attend a forum addressing the concerns of SEG Student Chapters and faculty advisors. The committee observes the importance of faculty advisors as the primary contact for students.

which will further streamline the process for applicants and the Board.

A lapsed-member survey was sent out to detail the reasons why members have not renewed and how the Society can work toward mitigating the loss of future members. Two different surveys were distributed: one to student members and one to professional members. Although the results are still being received and tabulated, the surveys themselves acted as a reminder for members to pay annual dues.

Looking forward to 2015–2016, the Membership Committee and SEG staff remain committed to:

- I. Student membership dues. Sponsorship of Student membership has been key in student membership enrollment in past years and ensuring a long-term funding solution for student membership is critically important. The committee is assessing the Society's student membership eligibility requirements and the impact of restructuring membership dues similar to sister organizations.
- II. Retaining students beyond graduation. Upon graduation, Student members are eligible for free Associate membership dues for the first year following graduation; however, the Society has struggled with Associate member retention. Thanks to the formation of new Society committees such as the Emerging Professionals International Committee (EPIC) dedicated to aiding these members, renewal numbers may improve. The Membership Committee also has again agreed to participate in the Faculty Advisor Forum held at the Annual Meeting 2015 in New Orleans and fund registration for eight faculty advisors.
- III. Retention of professional members. With professional member attrition expected due to a dynamic economic aspect, the Society strives to remain committed to its members through optional support plans such as the dues-waiver process. The committee also aims to be more involved in the Active Member application process,

Mining and Geothermal

José Arce, chair

This was the first year in which José Arce and Sean Walker took functions as chair and cochair of the Mining and Geothermal Committee. During the Denver 2014 meeting, Jean Legault was voted as the next technical session key contact for the committee.

During the Denver 2014 gathering, the previous committee had organized a 3D induced-polarization symposium which gathered a significant group of professionals and technical presentations. The symposium had a second part which included a field trip to the Cripple Creek mine.

Committee meetings have been held at the Cordilleran Roundup in Vancouver in January 2015, followed by the Prospectors and Developers Association of Canada (PDAC) meeting in early March 2015. Another meeting took place at the Geological Society of Nevada meeting in late May 2015. Both the Vancouver and Nevada SEGMIN meetings were organized by Ken Witherly. The PDAC meeting was organized by José Arce, Sean Walker, and Jean Legault, and SEG sponsored the meeting catering in the Metro Toronto Convention Center South building. Ken Witherly coordinated the room for the meeting, and the meeting minutes were sent to the SEG.

Communication of the committee continues to be through the SEGMIN list server, which has been kindly provided by Geosoft Ltd. for the last several years. We would like to analyze the possibility of handling such communications through the SEG Website.

There are two sessions already organized for the New Orleans 2015 meeting: one oral and one e-poster. A total of 16 papers were reviewed and accepted for both sessions. Both sessions were very efficiently and professionally organized by our technical contact, Jean Legault. We unexpectedly received some papers with geothermal applications. Even though most committee members do not feel the geothermal geophysics community is well served through our committee, there was a vote during the PDAC to request all future geothermal submittals to be handled in the future by another SEG committee.

Plans will be started this year for a possible symposium and field trip for the 2016 SEG meeting in Dallas, after discussion with committee members during the meeting in New Orleans.

Nominations

Edith Miller, chair

The Committee on Nominations is charged with assembling the list of candidates for the Board of Directors and the district representatives. The committee is composed of SEG Past Presidents, Section/Associated Society representatives, the Chair of the Council, and SEG Directors. This year's committee members were Bob Hardage, David Monk, Don Steeples, Uche Aigbokhai, Joel Starr, Chuandong (Richard) Xu, Farkhod Zunnunov, Mike Gaul, and Committee Vice Chair Gustavo Carstens.

Filling a slate of candidates is not an easy task. The Board and the Council need to represent and give voice to our diverse membership of different geophysical disciplines, geographic areas, and personal backgrounds. The committee looks for candidates who do not only help balance this representation, but also care about the SEG, have shown that they are willing to make an effort and commit time, have the best interest of the organization and its members in mind, and are willing to roll up their sleeves. Therefore it is not surprising that nominees are often people who have served on SEG committees, have been involved in the organization of the Annual Meeting, have served on the Board of an SEG subsidiary (SEAM, SEG Global, SEG Real Estate), are Council members, or have otherwise made a mark.

The complete slate for the 2015 SEG election is:

President-elect:

- Nancy House
- William (Bill) Abriel

Second vice president:

- Jie Zhang
- Bud Pope

Editor:

- Mauricio Sacchi

Directors at large (two positions):

- Rocco (Rocky) Detomo
- Vladimir Grechka
- Ricardo Rosa Fernandes
- Robert (Bob) Brook

District 1 (one position):

- Jeremy Zimmerman
- Baishali Roy
- Mike Cogan

District 2 (two positions):

- Kyle Spikes
- Jerry Beaudoin
- Dennis Yanchak

District 3 (two positions):

- Michael Albrecht
- Stew Levin
- Jonathan Ajo-Franklin

District 4 (one position):

- Rob Jacob
- Bill Harbert

District 5 (one position):

- Madeline Lee

District 6 (one position):

- José Arce

District 7 (two positions):

- Per Eivind Dhelie
- Colin MacBeth
- Olav Inge Barkved

District 8 (one position):

- Sandra Tegtmeier-Last
- Salvador Rodriguez

District 10 (two positions):

- Tariq Alkhalifah
- Maria Angela Capello

District 11 (one position)

- Peiming Li *
- Hong Liu

Candidates can also be added to the slate by membership, through petition of 40 active members. One candidate was added to the 2015 slate through this process: Malleswara Yenugu for the District 1 Council position.

Publications

Sergey Fomel, chair

The SEG Publications Committee is responsible for soliciting book proposals, managing development of books, and approving completed books. Another mission of the committee is to address strategic issues related to book publication and recommend appropriate actions to the Board of Directors.

Current committee members are Sergey Fomel, Vladimir Grechka, Lianjie Huang, Alan Jackson, Long Jin, Ian F. Jones, Rebecca B. Latimer, Yunyue Li (Translations Committee chair), Wei Liu, and Tijmen Jan Moser. Editor Evert Slob is the Executive Committee liaison. Publications Director Ted Bakamjian and Books Manager Susan Stamm are the staff liaisons.

During fiscal year 2015, SEG published the following books: The committee activities included the following:

- *AVO* by Satinder Chopra and John P. Castagna
- *Engineering Seismology with Applications to Geotechnical Engineering* by Öz Yilmaz
- *Remote Sensing in Action: The Curious Case of Sherlock Holmes and Albert Einstein* by Enders A. Robinson and Dean Clark
- *Understanding Seismic Anisotropy in Exploration and Exploitation, second edition* by Leon Thomsen.

Titles planned for publication in fiscal year 2016 include:

- *Classical and Modern Diffraction Theory* edited by Kamill D. Klem-Musatov, Henning Hoeber, Tijmen Jan Moser, and Michael A. Pelissier
- *Seismic Diffraction* edited by Kamill D. Klem-Musatov, Henning Hoeber, Tijmen Jan Moser, and Michael A. Pelissier
- *SEAM Phase I: Challenges of Subsalt Imaging in Tertiary Basins, with Emphasis on Deepwater Gulf of Mexico, Volume II* by Charles Meeder and Michael Fehler
- *High-resolution Seismic Exploration* by Qing-zhong Li
- *Seismic Inversion* by Gerard Schuster
- *VSP and 3C Seismic* by Jim Gaiser (2016 DISC)
- *Handbook of Poststack Seismic Attributes* by Arthur Barnes
- *Elements of 3D Seismology, third edition* by Chris Liner

Publications Policy

Tamas Nemeth, chair

The Publications Policy Committee (PPC) advises the SEG Board of Directors on a range of issues that fall outside the purview of other publications-related committees or involve more than one such committee. It focuses on strategic issues such as member publications benefits, intersociety publication initiatives, publication pricing policies, and questions of commercialism and conflicts of interest in publications.

Committee members are Tamas Nemeth, chair; Sergey Fomel, Publications Committee chair; Carlos Torres-Verdin, *The Leading Edge* Editorial Board chair; Yunyue Li, Translations Committee chair; Mauricio Sacchi, GEOPHYSICS assistant editor; John Stockwell, Wiki Committee chair; Yonghe Sun, *Interpretation* editor; Kris Innanen, At-large member; Kasper van Wijk, At-large member; Evert Slob, editor, Ex-officio member and SEG Board of Directors liaison; and Ted Bakamjian, Publications director and staff liaison.

- Recommendation for enhancements of the publication systems, including for (1) systems to help SEG achieve compliance with public-access mandates; (2) disambiguation and validation of authors, affiliations, funding sources, and article versions of record; and (3) marketplace assessment.
- In-person meeting at SEG Annual Meeting in Denver and discussion of a wide range of topics, among them (1) public-access and market-database tools update, (2) GeoscienceWorld (GSW) update, (3) green open access policy, (4) member discount for gold open access and (5) near-surface update.
- Jointly with a special task force, recommendation of formal separation of the duties of SEG Editor and Editor-in-Chief of GEOPHYSICS.
- It is anticipated that in the final months of the SEG year, the PPC will continue to address and refine the details of the separation of duties mentioned above.

Research

Jacques P. Leveille, chair

The Committee currently has 135 dispersed members from a variety of industry segments and academia. We have added eight new members to date and retired a number of ex-members who did not want to continue or could not be contacted. In 2015, the precipitous drop in oil price has led many companies to implement travel restrictions or bans. This has led to the cancellation of two 2015 Summer Research Workshops and a venue change to Houston for another.

2014 Annual Meeting Special Sessions:

- Recent advances and the road ahead
- What can microseismic data say about fluid flow?

2014 Annual Meeting Postconvention Workshops:

- Intellectual Property in Geophysics
- Seismic Acquisition and Imaging for Unconventional Reservoirs — Too Conventional?
- Nodes and Beyond—Hardware, Creative Geometries
- Latest Developments in Time-frequency Analysis
- Reservoir and Caprock Integrity Monitoring (containment, seal)
- Using Multiples as Signal for Imaging
- Rock Physics of Unconventional Reservoirs
- Microseismic Source Mechanisms

- Seismic Attenuation and Scattering
- Seismic Acquisition: What Comes After WAZ? + Non-conventional Acquisition systems
- Towards Robust First-arrival Picking
- New Advances in Migration
- Full Waveform Inversion — Elastic Approaches and Issues with Anisotropy, Nonshallow Inversion, Poor Starting Model
- DAS (Distributed Acoustic Sensing) and Recent Advances and the Road Ahead in Borehole Geophysics

2015 SEG Summer Research Workshops:

- FWI — Fool or full (changed venue to Houston, 2–3 days)
- Geophysics of Unconventional Reservoirs (cancelled)

2015 SEG-EAGE Forum:

- Integration of different types of geophysical data for reservoir characterization (cancelled)

2016 SRW and other joint society planned workshops:

- Integrated approaches to velocity model building
- Elastic imaging: From acquisition to elastic earth model determination
- Reservoir monitoring for CO₂ injection projects
- AGU/SEG workshop on the Upper Crust physics of rocks

Other activities/updates:

Continued efforts to improve active member participation through the creation of various subcommittees.

Reviews

Patrick T. Taylor, chair

Each year, the Society of Exploration Geophysicists is sent books (some e-books) from various publishers. They represent a very wide variety of subjects from exploration and solid-earth geophysics to petroleum, tectonics, and structural geology, hydrology, petrophysics, physics, mathematics (including computers), and topics of general scientific interest. Several times a year, a list of the most appropriate is compiled and sent to the members of the Reviews Committee, a group of more than 35 members, both domestic and international, who span a broad range of backgrounds and expertise from industry, academia, government, and consultants.

Through September, 33 of their reviews will have been published in *The Leading Edge*. These reviews not only apprise the membership of the extensive range of subjects contained in these recent technical volumes but serve the purpose of this review process; that is, to allow the members to decide if they want to purchase, examine, or just be aware of these scientific publications and determine if they might be either of aid in their work or of general interest. In my reviews, I try to highlight pertinent information of interest to the exploration geophysicist.

Thanks not only goes to Stacy Baker (SEG staff liaison) for her ability to search for and find relevant volumes, their compilation into an attractive book list, and subsequent handling of the resulting electronically submitted reviews, but also thanks to all the reviewers for their insightful reviews. This committee is not static, so if you wish to join, please contact me at patrick.taylor@nasa.gov.

Scholarship

Dana Enciu, chair

Since its inception in 1956, the SEG Scholarship Program has helped advance geophysics today and inspire geophysicists for tomorrow. Approximately \$7 million in scholarship money to date has been awarded to the top geosciences students in the world. From freshmen just beginning their education to PhD students doing research to advance the field, SEG scholarship awardees are recipients of the most prestigious geoscience scholarship in the world. They are the beneficiaries of the gifts from SEG members, their employers, SEG Sections and Associated Societies, and memorial funds established to honor colleagues, friends, and family members of geophysicists.

For the 2014–2015 academic year, the SEG scholarship program awarded a record \$590,750 to a total of 163 students, freshmen to PhD students, studying in universities in 14 different countries across the globe. Funding for their scholarships was provided by the donations of 18 corporations, 46 individuals, and 17 regional societies.

All Scholarship Committee members reviewed a record number of 726 applications. Each committee member ranked applicants for merit based on information provided in their applications. Individual rankings were compiled and a composite forced ranking was created to determine the highest qualified applicants in each of six categories (freshman, undergraduate, and graduate, each divided into North American and international). The North American freshmen applicant category saw the greatest growth with an increase of 2.5 times over the previous year. The committee considered the specific selection criteria for each of the individual scholarships and carefully matched qualified applicants, in some cases with the assistance of advisory boards

who provided feedback and recommendations on applicants. All scholarships are merit based, insuring that the top geoscience students in the world are honored and awarded.

Scholarship Committee members served as mentors to each of the 163 recipients, helping them learn more about career opportunities in geophysics and connecting with valuable resources to enhance their education and prepare for their careers.

Scholarship Committee members are Dana Enciu, chair; Andreas Rueger; Zhaobo Meng; Ron Kerr; Camelia Knapp; Bruce Mattocks; Karl Schleicher; and Esther Babcock.

SEG Oil & Gas Reserves

Naomi Boness, chair

General. The SEG Oil & Gas Reserves Committee (OGRC) currently has 18 members. The committee represents the global geophysical community with multinational participation and different facets of the industry, including large integrated companies, midsized and small E & Ps, academics, and third-party consulting firms.

The SEG OGRC is fully integrated within the dynamic of defining guidelines for reserves/resources evaluation:

- Through the PRMS (Petroleum Resources Management System) endorsed by the SEG (the SEG OGRC is observer at the SPE, OGRC, and SPEE RDC).
- Through exchange with other geophysics and geology sister societies (CGF, EAGE, and AAPG have observers at the SEG OGRC).

PRMS-AG. Because SEG is a formal sponsor of the Petroleum Resources Management System Application Document (PRMS-AG), SEG OGRC actively supports the rolling out of the PRMS-AG guidance to the broader industry through SEG Reserves Workshops and SPE Applied Technology Workshops.

United Nations Framework Classification. SEG OGRC had a representative at the UNFC (UNECE) in 2015 and supports the development of an international resource classification framework. In addition, the SEG OGRC reviewed and provided feedback on the application of framework to renewables document.

SPEE monograph 4 and PRMS update. The SEG OGRC has been involved with the development of SPEE Monograph IV and is currently reviewing the final draft to provide comments for SPEE to finalize. The committee is in the loop for future PRMS update and will be involved with reviewing any updates pertaining to geophysics.

SEG Reserves Workshops. A half-day workshop was organized

by the SEG OGRC during the SEG Annual Meeting (Denver, September 2014). Three main themes have been actively discussed:

- Presentation of the PRMS and its guidance on the use of seismic technology.
- The role of geophysics in reserves estimation in the conventional domain.
- The role of geophysics in reserves estimation in the unconventional domain.

The workshop continues to be well received with more than 50 attendees and interesting discussions. The next SEG Reserves workshop is planned for the upcoming SEG Annual Meeting in New Orleans (October 2015).

SPE Applied Technology Workshops (ATW). In 2014, two workshops have been held: London (March 2014) on applications guidelines document and case studies, and Moscow (May 2014) as a SPE-OERN joint workshop on “Petroleum Reserves and Resources Estimation: Sharing the Vision.”

URTeC Joint workshop on “Reserves estimation in unconventional reservoirs.” An intersociety joint workshop with SPE and AAPG will be held at the URTeC meeting in San Antonio (July 2015).

Training and JCORET. SEG is a formal sponsor of the Joint Committee on Reserves Evaluator Training (JCORET). JCORET reviews and approves courses directed to engineers and geoscientists in the areas of recommended evaluation practices, reserves and resources definitions, and ethics training. JCORET recognized a lack of available courses on the use of for reserves evaluation and SEG has developed a two-hour webinar that will hopefully be expanded into a full-day course. The OGRC is currently reviewing the SEAM (SEG Advanced Modeling) data set for applicability in hands-on reserves training.

SEG Online

Matt Hall, chair

At the SEG Annual Meeting in 2014, the Committee held an unstructured committee meeting, and this felt more progressive than the usual format. However, in August 2015, Matt Hall, Chris Liner (SEG president and the first chair of this committee), and Dorsey Morrow (SEG executive director) agreed that the Online Committee (OC) had reached the end of an era. The Society’s Web presence and online offerings are higher on the agenda than ever, for both SEG staff and the various member committees. In a world in which “online” permeates everything, SEG will have more freedom and agility without an Online Committee to potentially throttle the progress the Society wants to make.

The Wiki Committee will continue unabated in its fantastic work. But the Online Committee was dissolved as of 28 August 2015. There will therefore not be a meeting at the Annual Meeting in New Orleans.

The OC core members for 2015 included Bill Barkhouse, Joe Dellinger, Brian Frehner, Matt Hall, Tony Sabatino, Karl Schleicher, and John Stockwell. Rob Stewart was the Board of Directors liaison, and Brian Frehner was the Historical Preservation Committee liaison. Kris Innanen connected us to the Online Technical Content Board. Ted Bakamjian, Jennifer Crockett, Andrew Geary, and Isaac Farley were the vital connections to SEG staff and systems. Thank you to everyone for the attention and enthusiasm you brought to the committee over the last few years.

SEG-SPE Collaboration

Jamie Rector, cochair

The SEG-SPE Collaboration Committee, created out of a 2009 MOU between the two societies, was formed to promote closer collaboration on topics of mutual interest. The first members of the committee were Brad Birkelo (SEG), Jamie Rector (SEG), Terry Todd (SEG), Gene Narahara (SPE), Sid Smith (SPE), and Mark Rubin (SPE). In 2014, Vikram Sen (SEG) replaced Brad Birkelo and Brian Mueller (SPE) replaced Smith and Rubin. Jamie Rector assumed the chair for 2015.

During the period from July 2014 to June 2015, the committee promoted and facilitated the second induced seismicity workshop in Banff and the post-URTeC Operator Forum. Rector served as cochair of the Operator Forum.

The Banff workshop, held in September 2014, consisted of over 50 presentations and was attended by over 120 people roughly equally divided between E & P companies, service companies, academia, and government organizations, including national labs, geologic surveys, and regulatory bodies. Most of the attendees were geophysicists with some petroleum engineers and geomechanists. A key takeaway from the workshop was the absence of a ground motion model for induced seismic events. Limited observations seem to indicate that induced seismic events create different ground motions from earthquakes. Many leading researchers pleaded with industry to release data to assist in ground-motion calibration.

Another key takeaway was the need to create industry best practices guidelines to mitigate seismic risk. These guidelines would need to be location specific incorporating local geology, stress distributions, and tectonics. Finally, it was clear from the workshop that, in general, industry has been reactive rather than proactive in monitoring and mitigating the issues associated with induced seismicity. More extensive information

about the workshop is presented in an article by workshop chair Shawn Maxwell published in the January 2015 issue of *The Leading Edge*. The committee is already working toward a third workshop on the topic in a U. S. location.

The first post-URTeC Operator Forum was held in August 2014, not surprisingly after the URTeC. The title of the forum was Appraisal and Development of Unconventional Reservoirs. The forum was attended by a large (more than 60 attendees) diverse group of geophysicists, geologists, and engineers. Topics ranged from case studies of microseismic event location and characterization to geomechanical shale modeling to case studies of engineering appraisal. The first forum was extremely successful and has been incorporated into the URTeC program. A post-URTeC 2015 Operator Forum developed by SPE, AAPG, and SEG volunteers features presentations by operators in eight different unconventional plays.

Technical Standards

Jill Lewis, chair

Committee members include Jill Lewis, Troika International (chair); Bill Rimmer, Rimmer Consultants (past chair); Rune Hagelund, Daeco (format advisor); Stewart Levin, Stanford University (format advisor); Tom Owen, MidPoint Geo (IOGP SPS liaison); Robert Firth, Troika International; Alexander Sokolov, Schlumberger; Friedrich Roth, EMGS; Peter Green, Aramco; Nils Aatland, CGG; Barry Barrs, Exxon; Jay Hollingsworth, Energistics liaison; Ted Bakamjian, SEG staff liaison; and Robert Stewart, SEG Board liaison, University of Houston.

The committee is building up to the culmination of many years work with the update to SEG D3.1, the publication of the draft SEG Y2, and SPS3 update. These are all being published with considerations of other standards, including the Geomatics Group of the IOGP (International Oil and Gas Producers Association) via Tom Owen and the Units of Measurement Team at Energistics headed up by Jay Hollingsworth.

The SEG Technical Standards Committee is also working with the National Data Repository Group and the Professional Petroleum Data Management (PPDM) association in the creation of guidelines for the use of formats.

This committee is committed to work on all format updates in association with work already being carried out in the industry. In this endeavour, we canvass and provide “lunch and learns” whenever possible to educate those involved in the use, implementation, and science that requires exchange format use. Please let us know if you would be interested in such a presentation.

SEGD3.1. The committee is about to publish updates to SEG-D 3.0 and shortly will be publishing the proposed update to SEG-D3.1 where there will be the addition of little endian samples and a new layout for the Coordinate Reference System (CRS). The new layout is to keep the SEG-D format in line with the new P1/11 CRS format that should also be included.

SEG-Y2. The committee has published the first comprehensive draft for the SEG-Y2 format. This is urgently needed as many companies currently break SEG-Y to try to get their more modern data into a format that was developed in 1975. The committee is rather disappointed that there has not been more take up of SEG-Y1 and is working hard to create simple guidelines for the use of that format so that 3D data can be automatically read from tape or disk.

This is a major update of the SEG-Y format, and it is strongly recommended that those who use the format become actively involved. We already have received some input but are canvassing for more and also would like to work with companies that have modern and unconventional data sets on which we can test the format.

SPS3. The SPS format has been under review for some time. It was last brought up to date to match with the SEG-D2.1 format. There have been many changes between the SEG-D2.1 and SEG-D3, and therefore to keep the formats in line, this is quite urgent work.

Rune Hagelund, Tom Owen, and I are working on this and will ensure that it is closely associated with the P1/11 format. Not only will the new format enable better survey planning but also improved handshaking with field acquisition and processing. Now to include seabed node planning and a checklist, this could be the foundation of a workflow of exchange formats from planning to interpretation.

Future of tape in seismic. Rune Hagelund, Nils Aatland, Silvert Kibsgaard, and I wrote an article about the use of tape in the industry that appeared in the August issue of *The Leading Edge*. Many times, we are asked about the relevance of tape in the computing, acquisition, and processing industry of today. With the recent increase in capacity, the current economic climate, and the robust nature of tape, we believe it still has a place. Please read this article as it contains important information about how to best use tape, which is especially applicable when it comes to blocking structures.

Tellers

Kim Guyer, chair

Survey & Ballot Systems, Inc. (SBS) was contracted to conduct the SEG election for the Board of Directors. SBS designed and distributed an elective ballot and a paper ballot to each voting member. SBS received, tabulated, and verified the votes, and submitted the results to the SEG business office. The SEG Tellers Committee verified the count provided by SBS.

Official ballots were sent out 3 June 2015 to 7,774 Active members eligible to vote in this year's election. The annual election had a participation rate of 32.6%. The final results include 2,537 returned ballots received on or before 31 July. Of those ballots, 2,153 were submitted via Web voting, and 384 paper ballots were returned by mail.

The election results are as follows:

2015–2016 SEG Board of Directors

President-elect: Bill Abriel

Second vice president: Jie Zhang

Editor: Mauricio Sacchi

Directors at large: Rocco (Rocky) Detomo Jr. and Vladimir Grechka

District Representatives

District 1

Michael Cogan

District 2

Gerard Beaudoin and Dennis Yanchak

District 3

Stewart Levin and Jonathan Ajo-Franklin

District 4

William Harbert

District 5

Madeline Lee

District 6

Jose Arce

District 7

Colin MacBeth and Olav Inge Barkved

District 8

Sandra Tegtmeier-Last

District 10

Tariq Alkhalifah and Maria Angela Capello

District 11

Hong Liu

The Leading Edge Editorial Board

Carlos Torres-Verdín, chair

The *Leading Edge* (*TLE*) continues to fill the much-needed gap between the high-level technical content of the journals *GEOPHYSICS* and *Interpretation* and the dissemination of general technical topics and events of interest to a wide sector of the SEG membership. During 2014–2015, the *TLE* Editorial Board was composed of Doug Foster, Ezequiel Gonzales, John Lane, Mosab Nasser, Julie Shemeta, Tracy Stark, and Carlos Torres-Verdín. This very active, energetic, and creative group of individuals was responsible for leading the selection, reviewing, editing, and production of multiple special sections and editorial columns covering contemporary technical topics of interest, all of which were very well received by the SEG readership. The voluntary time contributions of the Editorial Board to SEG have been both immense and transformative.

Organizational, logistical, production, and editorial functions of *TLE* were fulfilled by an excellent team of staff members headed by Ted Bakamjian (SEG director of publications) and Jenny Kucera (*TLE* managing editor), who diligently and with great professional practice and efficiency, consistently maintained high standards of quality and punctuality. The *TLE* team also included Rowena Mills (associate editor), Natalie Blythe (staff writer/production editor), Isaac Farley (digital publications manager), Steve Brown (senior staff writer), and graphic designers. We are fortunate to count on this incredibly resourceful and effective group of individuals to keep *TLE* on course.

We had an exciting and eventful period of activities, which at this writing included the following figures:

- 57 published technical papers; 26 of which were stand-alone papers
- Nine special sessions
- Three regularly occurring editorial columns: “President’s Page,” “From the Other Side,” and “Interpreter Sam”
- Four new columns: “Technology Leaders Interview Series,” “Wiki Leaders Interview Series,” “Geophysical Tutorials,” and “Full Spectrum”

Of special mention are the “Technology Leaders Interview Series” and “Geophysical Tutorials” columns, which have been receiving excellent readership marks and comments. Based on input provided by the SEG’s Women Network Committee (WNC), we gave inception to a new column titled “Full Spectrum,” intended to showcase gender, societal, and ethnic matters of interest and discussion to special-interest groups within SEG. Thus far, the column has published two interesting articles penned by the WNC, with one more article currently in the pipeline. We are currently exploring the possibility of

launching a new column titled “The Pulse of the Industry” to showcase emerging and frontier geophysical technology developments being implemented by the industry.

Special technical sections published during 2014–2015 were:

- November 2014: *Sensor technology and nanotechnology with two technical articles; five stand-alone articles*
- December 2014: *Humanitarian geophysics with eight technical articles; two stand-alone articles*
- January 2015: *Time-frequency applications with five technical articles; six stand-alone articles*
- February 2015: *Near-surface geophysics with nine technical articles; two stand-alone articles*
- March 2015: *Borehole geophysics and sonic logging with three technical articles; three stand-alone articles*
- April 2015: *Geohazards/OTC with four technical articles; five stand-alone articles*
- May 2015: *Well geosteering with four technical articles; three stand-alone articles*
- June 2015: *Injection-induced seismicity with 11 technical articles*
- July 2015: *Multiples from attenuation to imaging with 11 technical articles*

Topics of *TLE* special sections are chosen not only by consensus and discussions with members of the Editorial Board but also through consultation with the SEG readership to make sure that the subjects are timely and of wide general interest. Publication of papers in special sections is open to general author participation; members of *TLE* Editorial Board typically serve as facilitators of ad-hoc, special-section editors to support the solicitation and publication process.

Following ample vetting, examination, and deliberations by the Editorial Board, the following papers were selected as best 2014–2015 *TLE* publications:

Best *TLE* Paper:

“Relative rock physics,” March 2014, by Vaughn Ball, J. P. Blangy, Christian Schiott, and Alvaro Chaveste

Honorable Mentions:

“Wave-equation angle-based illumination weighting for optimized subsalt images,” April 2014, by Mariana Gherasim, Bertram Nolte, John Etgen, Petr Jilek, Phuong Vu, Matt Trout, and Ken Hartman

“Prestack seismic inversion versus neural-network analysis: a case study in the Scarab field offshore Nile Delta, Egypt,” May 2014, by Islam A. Mohamed, Hamed Z. El-Mowafy, Daa Kamel, and Mohamed Heikal

A readership survey conducted in late 2014 provided us with useful guidelines to continue to publish relevant technical material and general society information, new sections and editorial columns, and to fine tune existing columns and formats. One visible result of the feedback received from our readership survey was the transformation of *TLE* publication format, which included the generation of cover illustrations based on graphics material taken from papers published in the same issue.

We look forward to continuing the excellent publication tradition of *TLE* with relevant and interesting new special sections and columns in the years to come.

Translations

Yunyue Li, chair

The Translations Committee continued its traditional activity of reviewing and recommending books for translation from foreign languages and subsequent publication by SEG.

Committee members are Yunyue Li, Sergio Chávez-Pérez, Vladimir Grechka, Chaoshun Hu, Long Jin, Evgeny Landa, Wei Liu, Toshifumi Matsuoka, Gabriel Perez, Edson Sampaio, Michael Stylianou Arvanitis, Juan C. Soldo, Ilya Tsvankin, Dennis Yanchak, Junzhe Sun, Hyoungsu Baek, and Henning Kuehl.

The Translations Committee reviewed and accepted the following proposals since last year's report:

- CBM AVO: A tool for locating sweet-spots of CBM reservoirs and well appraisal by Xin-Ping Chen (written in Chinese).
- Ludger Mintrop: The man who looked into the earth – the conquest of the subsurface by Gerhard Keppner (written in German).

Travel Grants

Brian Miller, chair

SEG/Chevron Student Leadership Symposium (SLS). The 2015 SEG/Chevron Student Leadership Symposium (SLS) will be held 17–18 October at the 2015 SEG Annual Meeting in New Orleans, Louisiana, USA. Currently, there are 139 applications being reviewed by the committee for the 50 spots in SLS. SLS applicants must be active and current SEG Student Chapter officers of SEG Student Chapters who have completed the Annual Activity Report. The applicant must be nominated by his/her fellow Student Chapter officer(s), and only one

application is accepted per Chapter. The applicant must be pursuing a geoscience degree. Things taken into consideration for evaluation are transcripts, letters of recommendation, essays about leadership experiences, and plans for the applicant's and the Chapter's future.

SEG/ExxonMobil Student Education Program (SEP). There will be two SEP Program events in 2015.

SEP Europe (Prague) opened the 2015 Travel Grants season when 139 students residing in Africa, Asia, Europe, and Oceania applied at seg.org/apply and 38 travel grants were awarded. Priority was given to graduate students. The SEP Europe will be held in conjunction with the 6th International Geosciences Student Conference (IGSC) in Prague, and applicants awarded this opportunity will also be participating in the conference.

A total of 107 applications were received for the SEP Program in New Orleans. Students residing in the Americas (countries and nations of the Americas, Caribbean, Central, and South America) applied for the SEP North America (New Orleans) event to take place 16–18 October 2015 and held in conjunction with the SEG Annual Meeting. Priority was given to undergraduate students.

Foundation Annual Meeting Travel Grant. The grant has been renamed to Technical Program Student Travel Grant. Applications for the Technical Program Student Travel Grant are ongoing for students and recent graduates who have a paper accepted for the SEG Annual Meeting Technical Program. There are currently 60 application drafts for this travel grant.

Geophysical Research Award Fund. Paul Allison, former executive director of the SEG Foundation, presented a new travel grant to be awarded this year. A total of \$10,000 has been received for a summer research workshop for five years. It could be used for sponsored workshops, meetings, and forums. The Travel Grant Committee might ask the Research Committee this year what workshops would best fit this Travel Grant opportunity.

Near-Surface Travel Grant. It means a lot to donors and recipients that the Travel Grant Committee is able to evaluate travel grants for Near Surface. Ideally, it is a hybrid beyond a travel grant and funds may be used in support of research and not limited to travel. At this time, we have only one near-surface award that is being established, which will be awarded by the Travel Grant Committee.

SEG Women's Network

Maria Angela Capello, chair

The SEG Women's Network Committee (WNC) creates opportunities for networking, exposure to role models, sharing of best practices, surveys, and self-empowerment webinars for women in geoscience and related careers. It also engages in activities to identify issues and possible solutions to the conditions, treatment, image, or handling of women in geophysics. Finally, the committee increases awareness of women's and dual-career issues via a series of awareness articles and advertising campaigns.

The WNC is committed to the following:

- Promote SEG membership among women by creating worthwhile activities which increase awareness of diversity issues and provide opportunities to network
 - create physical opportunities for SEG women's networking
 - provide self-empowerment and self training opportunities via webinars
- Create awareness of issues related to being a female scientist in a traditionally male industry
- Mentor young women to pursue careers in geophysics
- Develop a clear understanding of the WNC stakeholders by working with SEG. Identify needs and develop a strategic plan to address those needs inside the SEG, with a prioritized approach following WNC priorities and resources
- Prepare and launch surveys to assess women's careers in various geophysical sectors
- Expand outreach to members:
 - Publish a series of articles in *TLE*'s "Full Spectrum" column (beginning March 2015)
 - advertise the SEG Women's Network on the SEG Website and in SEG magazines as well as other societies' magazines
 - create and maintain a presence of SEG WNC in social media

The committee made significant advances this past year:

- Published five articles in "Full Spectrum," a new column in *TLE*. Prepared a schedule for future articles and assigned authors.
- Engaged in all necessary supporting procedures to acquire a budget to ensure direct and dedicated part-time support from staff and sponsors for its main

activities, for the first time since the committee inception.

- Organized the successful 4th Annual Women's Network Breakfast with over 100 in attendance.
- Organized the 5th Annual Women's Network Breakfast, with four panelists representing AAPG, SEG, SPE, SPWLA, and AWG with an expected audience of 150 attendees.
- Partnered with the SEG Wiki to expand the biographies of women on the site by joining the Wiki Committee and by encouraging the creation of new entries.
- Published several ads in *TLE*, raising awareness of nominations for H & A, and SEG leadership roles to all membership.
- Advanced the nominations of women for SEG leadership roles, resulting in the nomination of Nancy House for SEG president.
- Advanced the nominations of women for SEG H & A, resulting in the selection of Best Educator Award given to Manika Prasad and the Maurice Ewing Medal to Heloise Lynn.
- Initiated the first strategic planning effort for the committee, which ranks priorities and establishes a five-year roadmap.
- Led a campaign to increase and codify exhibitor professionalism standards at the Annual Meeting, an initiative further expanded by SEG to work with other sister societies such as SPE and AAPG.
- Established child-care services at the Annual Meeting 2014, improving facilities offered to attendees for the first time in the history of the event, and establishing a new quality threshold onwards.
- Initiated plans for WNC networking and mentoring webinars.
- Activated the organization of a Women's Session at ICEG, the 3rd International Conference on Engineering Geophysics, 15-18 November 2015, at Al-Ein, U.A.E.
- Activated the organization of a Women's Networking session during Summer 2015 in Denver, Colorado, USA.
- Initiated actions to run a survey addressing and focusing on women geophysicists' work conditions in academia, to be run in 2015–2016 on a global scale.
- Created a roundtable discussion on the number of women entering schools and careers in geophysics at SEG Annual Meeting.
- Significantly expanded outreach through social media, establishing and launching an active presence on

LinkedIn, Twitter, Facebook, and Instagram, and also through ads in *TLE*.

- Expanded committee membership and developed a new e-community for the committee workspace.
- For the third consecutive year, coorganized with AAPG and AWG the 3rd Workshop for Women Leadership in Houston, Texas, United States, in 2014.
- Partnered with the SEG DL Committee to expand the efforts in a more direct way about nominations of women for DL and HL, encouraging nominations.

Committee Leadership:

Maria Angela Capello, chair
 Patricia MacQueen, vice chair
 Maitri Erwin, finance chair
 Edith Miller, SEG board liaison
 Eve Sprunt, past chair
 Nancy House, past chair

Youth Education

Janie Schuelke, chair

The Youth Education Committee's (YEC) primary objective is promoting geosciences and geophysics education for elementary and secondary school children and their families. Our goal is to facilitate resources for use by SEG members, educators, students, and families.

The committee has 12 members plus an SEG staff liaison. The committee met at the 2014 SEG Annual Meeting in Denver. Rob Stewart, board liaison, shared his ideas for the committee, and it was established that we would concentrate efforts on accumulation and redistribution of online materials utilizing the SEG Web site. The SEG Web site currently has geoscience teaching resources in two different locations that should be consolidated. Plus, there is a great richness of material online, and it would be of substantial service to educators if it was organized and also included background material.

To this purpose, a shared Google spreadsheet was created for the accumulation of Web sites and the material they covered. Committee members contributed to this and were also involved on their own in various education-related activities, including:

Lisa Buckner's reported activities:

- 1) At the Celebrating STEM Education Week in Texas event, GSH had a teacher resources booth at which I:
 - Passed out hard copies of my list of links.
 - Passed out the AGI "Careers that Change the World" brochure which SEG helped develop.

- Displayed and told teachers how to download the SEG Seismic Cube.

2) I-SWEEEP was being held in the neighboring exhibit hall and a number of international educators also visited the booth

- I organized and/or participated in over 20 GSH outreach events, and distributed 3500 coiled toy springs with GSH logo, reaching about 6000 students, parents, and teachers directly (over 10,000 indirectly).

Koya Suto's reported activities:

I gave a presentation of his "Hitchhiker's Guide to Geophysics" to high school students and teachers on the ASEG high school students' day at the ASEG Conference in Perth in February. About 100 students and 10 teachers attended and all enjoyed. (Note: This presentation will be made during the 2015 SEG YEC meeting in New Orleans. Each member will receive a copy to take home.)

My recommendation:

The October 2015 edition of *The Leading Edge* will focus on education. With all of the information and creative hands-on activities available today, it would be a great service to our educators (in schools and in homes) to have a Web site that is expansive but simple to use, well organized, and included background materials so that any educator could use it regardless of their current knowledge base. After creation of this excellent resource Web site, it is imperative that someone advertise it at teacher conferences, science events, and with education service centers and independent school districts, plus establish and maintain links with other sites.

This is a full-time job. There are very few people who have a good understanding of the science of geophysics and also know the education industry. To find such a person and hope they like to volunteer, but also hope that they are not already over-extended in time constraints, is to hope for impossibility. If the SEG is interested in achieving this excellent resource for educators, they should consider hiring a person to do this. That is my recommendation.

Otherwise, we can expect a similar outcome to 2016 as we had in 2015: very little progress was made toward gathering Web site information. No progress was made with consolidation of the two locations of teacher resources on the SEG Web site. The contributions committee members made to various groups would have been done anyway, without the members' involvement in the YEC.

Reports of the Representatives

Joint Committee on Reserves Evaluator Training **A. Clifford, representative** **N. Boness, representative**

On 15–16 October 2010, the SEG Executive Committee voted to accept an invitation for SEG to become a member of the Joint Committee on Reserves Evaluator Training, known by the acronym JCORET. JCORET was started in 2007 by four sponsors: Society of Petroleum Engineers (SPE), American Association of Petroleum Geologists (AAPG), Society of Petroleum Evaluation Engineers (SPEE), and World Petroleum Council (WPC). SEG is now the fifth sponsor.

Note: The committee did not meet this year.

NAPE Advisory Committee **Allen Gilmer, representative**

SEG has been a partner/stakeholder in the North American Prospect Expo (NAPE) since 2004, when it and the AAPG joined the original owner, the American Association of Petroleum Landmen (AAPL), and later stakeholder (1995) Independent Petroleum Association of America (IPAA). The first summer NAPE, at the George R. Brown Convention Center in Houston, was held in 2005. The singular focus of NAPE conferences has been the deal, the prospect, and the business, with advancing technology being a second priority.

NAPE Summit (previously Winter NAPE) is the hallmark event, which drew some 16,000 plus attendees during 2015, following a 2014 record attendance of over 18,000. NAPE Houston (previously NAPE Summer) is less than half that size, recording some 6,000 attendees in 2014.

NAPE adopted a strategy to expand regionally in 2014, with the old Summer NAPE becoming the Gulf Coast NAPE, and added Denver in December as NAPE Rockies, and NAPE East in Pittsburgh in April. Recently added regional NAPE Denver and NAPE Pittsburgh conferences are smaller. With

these additional NAPE expos, avoiding date conflicts with other conferences of the other stakeholders has become increasingly challenging. The Winter NAPE (NAPE Summit) is very profitable; the Summer NAPE less profitable but still very much in the black; and the other NAPEs are money losers at this point due to the attendance versus fixed cost. In 2015, NAPE chose to cancel the east show in Pittsburgh. Whether this decision is permanent is still to be seen. Pittsburgh, and the whole Appalachian region, has some business dynamics very different from either Gulf Coast, Permian Basin, or Rockies areas, in that they are focused primarily in only two plays, the Utica and Marcellus, instead of dozens in each of the other areas, and have a much smaller company concentration than the others.

Through the years, the NAPE format has evolved to including a “business” conference preceding the expo itself. For NAPE Summit, there is also an international expo preceding the business conference. The recent industry downturn has led to a degree of “slimming down” the events, plus a more formalized Partners Marketing Committee has been organized. Results for conferences held during SEG fiscal year 2015 are summarized below.

- NAPE Houston 2014, 20–22 August 2014, Houston, TX. Attendance remained strong in 2014, and even with the industry downturn, NAPE Houston 2015 is expecting 6,000 attendees.
- NAPE Denver 2014, 10–12 December 2014, Denver, CO. This event draws 2,300–2,400 attendees and interaction is good, but it struggles to be economically attractive. NAPE will continue to work to improve future economic results.
- NAPE Summit 2015, 10–13 February 2015, Houston, TX. Attendance still approached 16,000 (down some 10% from 2014) even with the industry downturn. SEG is examining whether it should play some role in the International Expo.
- NAPE Pittsburgh 2015, 15–17 April 2015, Pittsburgh, PA. Marginal in its first couple years, NAPE Pittsburgh was cancelled with the industry downturn and 2016 has not been scheduled. The viability of NAPE Pittsburgh events is in serious question.

OTC Board of Directors

Wafik B. Beydoun, director

SEG is one of 13 sponsoring organizations that work together to develop the Offshore Technology Conference (OTC). As a sponsoring organization, SEG has one position on the OTC's Board of Directors (BOD). Founded in 1969, OTC is the world's foremost event (actually, family of events) for the development of offshore O & G resources covering the realms of exploration, drilling, completion, production, and environmental protection. For SEG and other geosciences-related societies, OTC provides opportunity to educate and move the science forward in the offshore geosciences/geophysical realm. Because it represents the gold standard for offshore-oriented programs, OTC proves to be a prime networking environment. Because it delivers value to individuals and the sponsoring organizations, OTC remains quite profitable. In SEG's case, about 5% of SEG's annual income comes from the OTC family of events.

OTC has expanded from the primary OTC conference in Houston to include:

- d5: "The Next Big Thing," debuted Friday after OTC 2015 at the University of Houston. OTC developed a separate "for fee" fifth-day event where speakers that had a track record of innovation within other industries shared their insights. See below for a highlight of the first d5 event.
- OTC Brasil in Rio de Janeiro, Brazil (biennially in odd years)
- OTC Asia in Kuala Lumpur, Malaysia (biennially in even years)
- Arctic Technology Conference (ATC), initially in Houston but most recently in Denmark with next upcoming conference in Canada (approximate 18-month frequency)

Forward-looking opportunities. Operating in a forward-thinking mode, OTC's BOD continually looks for ways to add value. New initiatives are funneled through a BOD Task Force for subsequent recommendation to the full OTC BOD. Recent and "potential" initiatives include:

- Continuing education courses at OTC. OTC's sponsoring organizations responded affirmatively to offering "society-nominated" short courses at OTC. Courses will be first held in conjunction with OTC 2016. Initial plans are to hold courses at George R. Brown Convention Center, before/after OTC.
- Potential initiatives. Consideration of a *Journal of Offshore Technology* continues. Feasibility studies for additional "regional" conferences (OTC Africa? OTC Middle East? OTC Russia/Caspian Sea?) are also under way.

Benefits and opportunities for SEG. Looking forward through the next 10–30 years, the O & G industry recognizes that major

sources of future reserves will be coming from the offshore (particularly deepwater), unconventional resources and the Arctic regions. OTC participation provides SEG with a visible presence in two of the three areas (offshore and the Arctic). This presence, to more than a 100,000 individuals annually, is global, covering North and South America, Southeast Asia, and the Arctic countries with additional regions also under consideration. OTC provides SEG opportunity to collaborate with its Sections and Associated Societies (SASs) and AAPG to further strengthen geosciences content and visibility. This should stimulate more geophysicists to attend OTC events and ultimately have a positive impact on SEG membership.

Enhancing the visibility and identity of the geosciences community at large (and in particular at OTC events) appears a sustaining strategy in the worldwide competitive arena. The current initiative of SEG and AAPG collaborating together "where it makes sense" could not find a better experimental testing ground than OTC. They are both OTC Sponsoring Organizations, and their challenges and opportunities are similar and intertwined.

OTC 2015 d5: The Next Big Thing (8 May 2015, Houston, Texas).

Born out of the realization that the offshore energy industry is in the midst of a global technology boom, d5 brought together innovators, entrepreneurs, investors, economists, and other thought leaders to jumpstart the creative process, highlight emerging developments, and inspire leadership. The day-long event attracted more than 300 global energy professionals and featured a collection of 10 nonenergy industry luminaries, each of whom discussed game-changing technologies to help foster new ideas about "the next big thing" for offshore.

Speaker highlights:

- When it comes to leadership, former U. S. Navy commander Mike Abrashoff said he has been successful by focusing on excellence without arrogance. "You cannot order excellence," he offered. "You must create a culture of engagement and ownership."
- Former NASA astronaut and ex-officio member of the Columbia Accident Investigation Board Michael Bloomfield talked about safety and how space exploration and oil and gas exploration face similar challenges.
- Futurist Lisa Bodell stated that "simplicity is the new norm," as a company culture of clear vision will be the efficient ones moving forward.
- Genomic researcher Juan Enriquez shared how programmable cells will transform systems for fuel, biomedics, and even human evolution.
- Consultant Partha Ghosh encouraged attendees to connect the dots of all the speakers to take back to their own companies and "make crazy ideas prosper." He added that the industry should change return on investment (ROI) to return on inspiration.

- Frans Johansson, author and entrepreneur, described how disparate disciplines have connections if they are viewed through the perspective of intersections. He noted, “The unexpected is what makes us stand apart.”
- Political scientist Bjorn Lomborg said the most vital tenant that will help change the world is free trade.
- Jane McGonigal, an expert on the engagement economy, encouraged attendees to consider games for collective problem solving. In addition, she suggested using gamification to predict human behavior in a possible crisis.
- Economist Michael Porter described his research demonstrating how the energy industry — more than any other — is making the U. S. more globally competitive.
- Avi Reichental, president of 3D Systems, said redefining printing is reinventing the American dream. He asserted, “The technology is here now, and it is exciting to disrupt your own business model since 3D lets you make great things happen.”

During the event, OTC announced that d5 will return in 2016 at Rice University on Friday, 6 May.

OTC 2015 (4–7 May 2015), Houston, Texas. Chair of SEG’s Technical Program Subcommittee: Charles Knobloch. More than 94,700 attendees from 130 countries gathered at the annual conference, demonstrating OTC’s position as the leading forum to exchange ideas and opinions to advance scientific and technical knowledge for the safe, environmentally friendly, and sustainable development of offshore oil and gas resources. It is the sixth largest attendance in the 47-year history of OTC.

The sold-out exhibition was the largest in show history at 695,005 square feet, including outdoor exhibits, up from 680,025 square feet in 2014. This year’s conference also had 2,682 companies exhibiting, up from 2,568 in 2014, representing 37 countries. International companies made up 42 percent of exhibitors.

This year’s event featured 11 panel sessions, 29 executive keynote presentations at luncheons and breakfasts, and nearly 300 technical paper presentations. Speakers — including major, independent, and national oil companies, federal and regional government officials, and academics — presented their views on a wide variety of topics, including future industry directions, operational integrity, and risk management.

OTC also hosted, for the first time, The Rice Alliance Startup Roundup. At the new event, 50 emerging companies had the opportunity to meet one-on-one with investors. It offered a great opportunity for OTC attendees to learn more about these startups and enable potential partnerships and investments. The Next Wave, OTC’s program for young professionals, was attended by nearly 500 people and focused on how to face the challenges ahead for young professionals while recognizing the increased interconnectivity of our global industry.

The fifth Annual OTC Dinner raised US\$250,000 for the Independent Petroleum Association of America (IPAA) and the Petroleum Equipment & Services Association (PESA) Energy Education Center for the benefit of the Energy Institute High School. During the dinner, OTC presented its 2015 Distinguished Achievement Award to Elmer Peter Danenberger for his significant contributions to offshore safety and environmental protection. The Distinguished Achievement Award for Companies, Organizations and Institutions was presented to Petrobras for its presalt development; while Ray Ayers, Ph.D., PE, was honored with the OTC Heritage Award in recognition of his 50+ years in offshore research and development.

OTC 2016 takes place 2–5 May 2016 at NRG Park.

OTC Brasil 2015 (27–29 October 2015, Rio de Janeiro, Brazil). Chair of SEG’s Technical Program Subcommittee: Paulo Johann. The theme of the event is “Atlantic, from East to West, an Ocean of Innovation.” Technical program: 550 manuscript proposals were received; 281 proposals accepted: 219 regular papers and 62 alternate papers. 41 technical sessions, 13 panel sessions and three topical luncheons are planned.

Activities highlights:

- spotlight on new technology
- distinguished achievement awards
- student activity
- Energy Institute
- university R & D showcase (five universities per day using the digital poster format)
- leadership summit. Objectives: Inspire and engage the international and Brazilian Societies in the discussion of relevant matters that can foster initiatives of common interest; Promote interactions among the societies’ membership; Engage the Professional Societies in the success of OTC Brasil.
- Speakers from IBP, AIChE, SEG, SBGF, and SPE have been invited.

OTC Asia 2016 (22–25 March 2016, Kuala Lumpur, Malaysia). Chair of SEG’s Technical Program Subcommittee: Deva Ghosh. Contribution from Charles Knobloch, member of OTC Asia Oversight Committee.

In spite of the lower oil prices, the OTC Asia appears to be on track for a successful showing of program papers, exhibitors, and anticipated attendance. Organizational assistance was provided to guide leadership selection for SEG’s Technical Program Subcommittee. Unfortunately, the appointed SEG Subcommittee Chair was obliged to resign due to a change in work responsibilities. In an interim, Lance Cole, SEG, temporarily filled gaps. Subsequent appointments to leadership of SEG’s Technical Program Subcommittee are Chair Deva Ghosh and Vice Chair Arthur Cheng. Other Subcommittee members are also now in place.

Assistance has been given to the leaders of the Program Committee to strengthen participation from Indonesia on the various program subcommittees. This assistance included a personal visit to Indonesia with the Program Committee vice chair to introduce and hold a number of meetings with local contacts to solicit their engagement with the Program Committee.

It is anticipated that the Indonesia Country Session will receive additional coordination support through SEG participation on the Oversight Committee.

ATC 2015 (23–25 March 2015, Copenhagen, Denmark).

Chair of SEG's Technical Program Subcommittee: Bill Goodway. Contribution from Lance Cole, SEG staff supporting SEG's *ATC Technical Program Subcommittee*.

ATC 2015, held 23–25 March 2015 in Copenhagen, Denmark, was impacted by three circumstances: (1) an expected decline in attendance from the historical audience in Houston; (2) much lower than anticipated attendance from the Russians with the embargo/sanctions, and (3) an industry downturn with potential travel restrictions. Attendance of 661 was roughly half of prior conferences in Houston. There were 47 exhibitors, 110 presentations, and 20 panelists.

There were positives, though. There were about twice as many Europeans as normally attend in Houston, plus more students than in Houston. New programs included a Distinguished Achievement Award (Dan Masterson for Individual Award and Chukchi Sea Environmental Studies Program for the Organization Award). Financially though, the event lost about US\$54,000.

From a geophysical standpoint, for geology and geophysics, there were two technical sessions and a poster session. For the first time, ATC 2015 opened nominations for the Arctic Technology Distinguished Achievement Awards. Single awards were made in both the "individual" and "companies, organizations or institutions" categories. Additionally, two "Spotlight on Technology" awards were made. Neither award was related to the geosciences.

ATC 2016 will be held in St. John's, Newfoundland, and Labrador, Canada 24–26 October 2016. Early support by the Canadian government and industry has been strong. Location should keep some of that European audience that came to Copenhagen, plus be somewhat more convenient for the historical audience from Houston. Another positive is that Shell has announced it will be drilling in the U. S. Arctic in the summer of 2015. When forming its Technical Program Subcommittee for ATC 2016, SEG focused on drawing volunteers from Canada and expanding the size of the Subcommittee. The resources are in place for ATC success in Canada.

OTC Technical Program

Charles Knobloch, chair

This year, the OTC/SEG Subcommittee's role included development of technical sessions, industry-influencing events, and facilitation: helping one major oil-producing country meet to plan for strategic increased OTC presence in future years.

For 2015, a significant percentage of the OTC program events were created, developed, managed, hosted, or facilitated by or through the SEG Program Subcommittee. SEG will receive more than \$1.251M in distributed proceeds from OTC.

The SEG Subcommittee created and/or supported the following technical sessions:

- Special Session: Geoscience Technology in Offshore Projects: Emphasis on Pore Pressure Prediction
- Special Session: Advanced and Integrated Geophysical Interpretation
- Special Session: Broadband Seismic — Recent Advances, Current Pitfalls, and Future Promise
- Special Session: Advances in Quantitative Geohazard and Georisk Assessment (AAPG sponsored)
- Special Session: Caspian Sea Site Integrated Geohazards Assessment (AAPG sponsored)

There were also several events that SEG played a role in organizing, developing, and/or hosting:

- Topical breakfast: Emerging Offshore Technology Trends — More Value from Technology and Faster Cycle Times; Speaker: James Dupree, chief operating officer, reservoir development, technology & IT & S, BP
- OTC "Governors' Panel": Offshore Energy Development — Improving Federal & State Cooperation
- OTC Active Arena: The Next Energy Hotspots (provided the Indonesian Minister of Oil and Gas)
- Topical breakfast: Understanding the Challenges of Vietnam Fractured Basement Exploration, Drilling, and Production (Presidents of PetroVietnam companies)
- Panel: Global Energy Outlook — North America Challenges and Opportunities (ranking ministers, Congressman, DOE), then CEO Pemex (should be "DOE, CEO Pemex)
- Ethics breakfast: Geoethics — A Way of Thinking and Practicing Geosciences
- Topical breakfast: A World's-Eye View of Unconventional vs Offshore Technology
- Special Networking Event: Subsurface Integration: Where Engineering and Geoscience Meet (Kickoff Keynote: "Achieving Reality through Magic: Where Technologies Meet" by Charles Knobloch, JD, PG of Arnold, Knobloch & Saunders)

- Panel: Project Management, Contracts and the Law: Can Attorneys and Managers Get Along?
- Country luncheon: The Role of Offshore Technology in Indonesia's Strategic Framework for Development (provided Indonesian Ministry Oil and Gas)

It is hoped that SEG continues to support the hard work of its OTC 2015 Program Subcommittee. Members included Charles Knobloch (chair), Jim Kreamer (first vice chair), Rocco Detomo (second vice chair), Dan Heinze, Ashwani Dev, Ali Mese, and Alex Martinez. Special thanks to Lance Cole for tirelessly championing the Subsurface Networking Event. Special thanks to Bill Barkhouse for strategic guidance and organizational development.

SEG's Technical Program Subcommittee for OTC 2016 has been formed and is already working to develop sessions for OTC 2016. Jim Kreamer is Chair and Alex Martinez is Vice Chair.

IPTC Management

Joseph Reilly, board member

Philippe Doyen, board member

The International Petroleum Technology Conference (IPTC) is a collaborative effort among the American Association of Petroleum Geologists (AAPG), the European Association of Geoscientists and Engineers (EAGE), the Society of Exploration Geophysicists (SEG), and the Society of Petroleum Engineers (SPE). The synergy of these four leading, individual member-driven societies provides the most comprehensive opportunity to form multidisciplinary committees and an outstanding technical program with a goal of furthering the advancement of scientific and technological knowledge related to the exploration, development, production, transportation, and processing of oil and natural gas. The IPTC to date has been an annual event rotating between Asia Pacific and the Middle East. A key element of the IPTC format is securing the financial and personnel support from the host National Oil Company, IOCs, and major service providers prior to the creation of an event. Structurally, IPTC is incorporated in Hong Kong as a private company with the four societies as the owners. The Board of Directors consists of eight members, two appointed from each society. Proceeds distributed to SEG over the period are as follows:

November 2014: US\$90,660.42
(15% residual balance from 2013 IPTC Doha)

April 2015: US\$381,938.27
(85% distribution from 2014 IPTC KL)

Total: US\$472,598.69

The eighth IPTC was held 10–12 December 2014 at the Kuala Lumpur Convention Center, returning to Malaysia

for the first time since 2008. The conference had a record-breaking attendance of 10,318 industry professionals from 68 countries. The event drew speakers from the highest echelons of government, operators, service providers, advisory and research firms, and academia. The technical program included more than 420 oral presentations and ePosters. For the first time in IPTC history, the geoscience + integrated reservoir component of the program exceeded 50% of the sessions, and presentations were given by many leading SEG members. SEG-sponsored sessions covered a wide range of subjects, including seismic acquisition, processing, reservoir characterization, and case histories. Many of these topics were presented as integrated geology/ geophysics/ engineering studies.

With the theme of “Innovation and Collaboration: Keys to Affordable Energy,” the event, hosted by PETRONAS and cohosted by Shell and Schlumberger, featured a ministerial session, high-level plenary and panel sessions, a comprehensive multidisciplinary technical program, exhibition, and various educational activities. On the second day, delegates heard from technology leaders on the emerging trends in technology development, the process by which new technology comes into use, and the role of academia, start-ups, and venture capital in this process. IPTC's four sponsoring societies — AAPG, EAGE, SEG, and SPE — came together on the third and final day to offer perspectives on innovative technologies, including unconventional oil and gas, integrated reservoir geoscience, and offshore geophysical technology (Christopher Liner, SEG president), and industry trends shaping the future of the energy industry.

During the conference, Liner shared his perspective on the value of the IPTC to the industry in general and to the SEG membership in particular: “The importance of IPTC as a platform to showcase geophysical technology in the Middle and Far East is clear. Our support of the conference is an effective way to communicate the mission of SEG and to attract new international members.”

With a multisector exhibit area of more than 3,600 square meters, the event showcased the latest technological advancements, innovations, and achievements from various countries to a highly qualified, multidisciplinary, business, and technical delegation. Other highlights such as a Young Professionals Workshop on “Technology and Management: Creating Affordable Energy for our Future,” Education Week, Education Days, and Teachers' Day were held in conjunction with the conference and exhibition. These elements brought together young professionals, international students from selected universities, and local high school students and teachers to gain insight into the energy industry. Ninety- seven undergraduates took part in Education Week, and 87 high school students joined in the Education Days. Rounding out the program were topical luncheons, panel session training courses, an Excellence in Project Integration Award, and an active program of social activities.

The forward plan is to hold the 9th IPTC in Doha, Qatar, 8–10 December 2015, the 10th IPTC in Bangkok, Thailand, 14–16 November 2016, and the 11th IPTC in Doha, Qatar, December 2017. We are also in the planning stages for Beijing, China, in 2018.

Over the course of the year, the IPTC Board of Directors has been extremely active in the continued development of our operating procedures manual and future direction. Following a strategic planning session in December 2014, three working groups were established covering the topics of Technical Program Enhancements, Society Engagement, and Event Development. These efforts benefited from the active participation of member society presidents, executive directors, and their staff.

Technical Program Enhancements. In a focused effort to improve the attractiveness of the conference to technical professionals, two new program elements were created, both requiring active engagement from the member societies. The Best Paper program was established to enable the top papers in a given year from each member society to be presented at the conference. To encourage participation, the normal copyright requirements were waived and the authors were offered free registration. As a result, nine Best Papers will be included in the technical program for Doha 2015. In addition, an “Ask the Expert” program was created from member society submissions of Distinguished Lecturers and “industry gurus.” For Doha 2015, 12 speakers have been included in the program in a specially designed session format. It is intended that similar programs will be included in forward years. Finally, the Executive Committee for the Doha event was requested to submit projects, which highlighted geoscience and engineering integration from exploration to production. For Doha 2015, one project has been selected for inclusion in the program.

Society Engagement. A series of initiatives have been identified to further improve communication between member societies and IPTC staff. A key driver is the desire to increase the level of technical professional member and nonmember attendance at the conference. This process will include the establishment of a point-of-contact within each member society for coordinating marketing efforts for future IPTCs.

Event Development. To address the need to continually evaluate venue opportunities beyond our current established NOC partners, a working group was established to determine specific criteria to measure the viability of new venues. Eleven potential venues were then identified and evaluated against these criteria. As a result of this effort, on 5 June 2015 the Board of Directors authorized that IPTC staff conduct a feasibility study for holding an event in Mexico City, Mexico. Specific questions to be addressed include: PEMEX/CNH support, appropriate scale and timing, support of member societies, current NOC/IOC sponsors, and involvement of indigenous associations.

Unconventional Resources Technology Conference (URTeC) Management Committee

Bob Hardage, SEG volunteer representative

URTeC is an acronym for *Unconventional Resources Technology Conference*, an annual meeting that focuses on technology used to support the development of unconventional reservoirs. URTeC is unique in that it is the only major annual meeting in which the three principal U. S. professional societies involved in unconventional-reservoir technology (SPE, AAPG, and SEG) join resources to present an annual multiday event that benefits members of all three societies. This three-society effort is viewed as a test bed that could lead to expanded cooperation between SEG and our related professional societies.

From the perspective of the URTeC Management Committee, it is essential that URTeC be a successful joint-society effort. If this first, major three-society cooperative effort fails, it will be difficult to initiate an equivalent joint-society effort soon. The first two URTeC conferences in 2013 and 2014 are viewed as successes. The first conference (2013) had an attendance of approximately 4100 which is respectable for a first-time conference experiment. The 2015 attendance increased 25%, which is a respectable growth rate. More importantly, more exhibitors were attracted to the year two conference after they realized URTeC was an excellent venue for business opportunities and would lead to expanded client bases.

Our upcoming, third-year conference will be a critical milestone because unconventional reservoir development has slowed dramatically as a result of the severe drop in oil price. Will this slow-down in unconventional-reservoir development mean URTeC attendance will drop? That URTeC exhibitor participation will decrease? The answer to both questions is probably “yes.” Will future URTeC annual conferences be cancelled? In my opinion, “no.” As long as there is any level of unconventional reservoir development, there will be an URTeC that is scaled to match the magnitude of the unconventional-reservoir economy. Our obligation as a sponsoring society is to ensure that SEG is well represented in URTeC activities in terms of SEG member attendance, SEG short courses, and SEG member participation in technical sessions.

URTeC 2014 (25–27 August 2014, Denver, CO). R. Randy Ray, SEG cochair, Technical Program Committee.

In its second year, the SPE/AAPG/SEG conference program greatly expanded to include short courses, field trips, intersociety workshops, ePapers presented in the exhibit hall, and a core exhibit showing rock from 12 unconventional plays around North America. The program included industry executives in

a plenary session to open the meeting, and each day included well-known breakfast and luncheon speakers as separate ticket items for attendees. The meeting had seven concurrent technical sessions, which included nontraditional formats like team presentations, interactive expert panel discussions, and focused state-of-the-art presentations on advancing geology, geophysics, and engineering aspects of unconventional resources. The expansion of “hybrid” technical sessions, including all three disciplines in case history and technical presentations, is the hallmark that makes the meeting unique and valuable.

A larger effort was spent to increase the geophysical presence at the conference. SEG Cochair R. Randy Ray pushed for greater advertising and communication with SEG Sections and Associated Societies to promote increased abstract submission and meeting attendance. As SEG staff became more involved, announcements within SEG publications were increased to make SEG members aware of the new conference. There was not a proportionate increase in SEG attendance, despite the expanded announcements. Nevertheless, long range SEG strategies were developed that will be used in future URTeC events.

The conference highlighted geophysical tools and techniques important for geophysicists and nongeophysicists alike to understand. 3D seismic has an important role to play in development of unconventional resources and is used for structural mapping, geosteering of horizontal drilling, and reservoir characterization. The use of microseismic was highlighted in technical presentations and a short course by Shawn Maxwell, SEG distinguished instructor. Microseismic is a valuable tool for engineers and geophysicists to integrate information characterizing natural and induced fracturing in wells. A very successful postconference forum, “Multidisciplinary Assessment of Unconventional Resources,” was developed by the SPE/SEG Cooperation Committee and will continue as an interactive workshop for 2015.

Perhaps the most important learning for geophysicists at this meeting is the necessity for, and the power of, integrating geophysics with the other disciplines. The meeting spun off technical case history papers which became a special invited session at the SEG 84th Annual Meeting in Denver, 26–31 October 2014 and the SEG/AAPG *Interpretation* journal will publish a special section based on URTeC 2013 and 2014 presentations in the fall of 2015.

URTeC 2015 (19–20 July 2015, San Antonio, TX). Gene Sparkman, SEG cochair of Technical Program Committee.

This is the third edition of what has become the leading conference to discuss unconventional technologies, as the integrated concept has proven quite successful. The format is truly integrated, as it is not three mini conferences where the three disciplines are compartmentalized. There were over 5,200 oil and gas professionals last year, which was a 25% attendance increase over the first year's attendance. The current oil price drop causes us to be concerned

about the attendance for this year's meeting scheduled for 20–22 July in San Antonio, Texas, but preregistrations at the time of this writing are at a level close to last year's numbers. This is encouraging as it shows the perceived value that previous attendees brought away from the previous meetings.

There are planned pre- and postconvention opportunities including a Postconference Operators' Forum scheduled all day Thursday, 23 July. This event listed under “Short Courses” in the program will consist of presentations from operators describing experiences in the major shale plays including the Bakken, Eagle Ford, Fayetteville, Haynesville, Marcellus, Niobrara, and Utica. They will be discussing geology, geochemistry, geophysics, geomechanics, petrophysics, drilling and completions, production analysis/forecasting, and economic considerations. There will be time for discussions with the audience at this event. Be sure to plan your schedule with time to participate.

SEG put forth two short courses, one of which received sufficient registration to be held (as of 10 June 2015). Shawn Maxwell will present his ever popular “Microseismic Imaging of Hydraulic Fracturing: Improved Engineering of Unconventional Shale Reservoirs.” With the conference being held in the heart of the most prolific shale play, the Eagle Ford, there are opportunities to visit outcrops relevant to the Eagle Ford as well as planned field trips to see the Bakken and Marcellus formations.

The Technical Program Committee continues to assemble an outstanding array of technical papers covering the broad unconventional topic gathering both invited and submitted papers. It presented a difficult time choosing the excess of 300 papers (oral and ePaper) from the record number of 749 excellent abstracts submitted. The selected papers will be presented in eight concurrent sessions each morning and afternoon, and there will four to seven ePapers being present each session. The ePapers have successfully replaced poster presentations as it allows the presenter a better opportunity to look at details in the presentation with fruitful discussions.

A special effort was made to bring together integrated teams to make presentations describing how each discipline contributed to the development of the project evaluations. Fourteen team presentations scattered throughout the program schedule are designated with a blue icon in the announcement book. These team presentations are scheduled at the end of the sessions to allow for plenty of discussion time if participants want to continue.

The exhibition should be successful as we are expecting around 200 exhibitors displaying some of the latest technology applications. The exhibit floor will also include a Core Exhibit with opportunities to view significant cores and listen to summary presentations of service companies that conducted analyses. The ePaper sessions are also presented in the exhibition area. I have been receiving positive comments regarding the integrated program that is being presented.

SEG Foundation

Foundation Board of Directors

Mike Forrest, chair

2014 fundraising results

- Goal: \$3,755,000
- Preliminary results: \$4,000,000
- Includes \$150,000 gift from Total — The University Excellence Program was cancelled. Total asked for a refund but negotiations resulted in using funds to create the “Total Excellence Scholarship Fund,” benefiting European graduate students.

Corporate Gifts

- ExxonMobil — SEG/ExxonMobil Student Education Program (SEP): \$1,000,000
- Halliburton — EVOLVE: \$1,250,000
- Statoil — \$600,000 new gift for several programs
- BGP — eLearning: \$250,000
- Total — \$150,000 for new scholarship program benefiting European students
- Whiting — \$3,000
- Paradigm — \$3,000

Societies

- \$63,550 from five societies for scholarships
- \$120,000 from AAPG for Geoscientists *Without Borders*® (GWB)

Individuals \$528,241 and Donations with Dues \$72,753

- 14 new Trustee Associates (\$10,000 donation/pledge)
- 25 new Sustaining Trustee Associates, totaling 41 (\$2,000/year)

The Foundation’s 2015 fundraising goal is \$3,050,000: \$2,400,000 for corporate and \$650,000 for individuals. The Foundation’s priorities are Annual Fund, GWB, Near Surface Honorary Lecture, renewals (Chevron for the SEG/Chevron Student Leadership Program (SLS); Anadarko for scholarships), and Society giving.

Foundation Board of Directors

Mike Forrest (chair), Peter Duncan (vice chair), Mike Loudin (treasurer), Hank Hamilton (retired summer 2015), Cung Vu, Robert Talley, Peter Duncan, Arthur Cheng, Magne Reiersgard, Julie Hardie, Pete Cramer, Erik Finnstrom, David Bartel, and Anna Shaughnessy

SEG Subsidiaries

SEAM

Bill Abriel, chair

SEG is the sole owner of SEAM. Please see the Web site for details (www.seg.org/SEAM). The SEAM mission provides opportunities for companies to share the high cost of model design and data simulation. It also provides a forum for industry leaders to discuss geophysical problems of common interest, advances the art of modeling and computation by stimulating research and development, and provides data sets for industry benchmarks and educational purposes. SEAM research projects are conducted by an industry cooperative assembled around a geophysical challenge of great current relevance. In February 2014, the SEAM mission was expanded to include projects that serve the integrated interpretation community.

The 2015 SEAM board consists of Bill Abriel (chair), Rocco Detomo Jr. (vice chair), Robert Corbin (treasurer), Kamal Al-Yahya, Steve Danbom, Scott Morton, Chuck Peng, and Kevin Bishop. The Board has several committees focused on business aspects including finance, business development, execution, commercialization, and interpretation. During the first half of 2015, the major efforts of SEAM have been to complete the Phase II project, support the Pressure Prediction project, and develop a new project for Life of Field (LoF). The Board continues to ensure that the operations of SEAM are conducted in a fiscally and legally responsible manner.

SEAM Current Projects

- SEAM Phase II consortium “Land Seismic Challenges,” which started in 2011, constructed three digital geologic models for 3D numerical simulations of land-seismic exploration. First, the Unconventional Model, renamed as the Barrett Unconventional Model (in honor of Ray Barrett and BP), contains shale reservoirs, modeled with orthorhombic elastic properties similar to the Eagle Ford and Woodford shale-gas plays, and placed in the stratigraphic setting of a mid-continent basin that is modeled after the near surface and overburden of the Arkoma Basin. Over 43,000 synthetic shots have been computed and delivered. Second, the Arid Model contains the same reservoirs and overburden as the Unconventional Model, but replaces the first 500

meters of the near surface with structures such as karsts, wadis, and outcropping bedrock, often encountered in desert terrains. Simulation of the geophysical data is expected to be completed in the third quarter of 2015. Third, the Foothills Model contains complex structural features of fold-and-thrust belts, overlain by the highly heterogeneous near surface and rough topography of foothills regions. The type area for the Foothills Model is similar to the Eastern Cordillera of Colombia. Simulations are to be completed by the first quarter of 2016.

- Pressure Prediction and Hazard Avoidance is a three-year RPSEA partnership project initiated in September 2014 involving 11 SEAM participants in the design and execution of a model of Gulf of Mexico pressure mechanisms and their geophysical expression. The purpose of the project is to help the industry define and understand the degree of various pore pressure processes (mechanical and chemical) that can be encountered in the exploration and development of subsalt reservoirs. Basin modeling will be employed to ensure property predictions are consistent with geologic history. The project will then build on the SEAM Phase I Gulf of Mexico salt model to include additional property variations resulting from pressure changes. Following this, geophysical simulations will be performed and distributed to participants for the purpose of testing pressure prediction procedures.
- Interpretation Challenge. SEAM created an imaged volume from the SEAM Phase I data set to be distributed free to the interpretation community from the SEAM Web site. This volume was imaged using a perturbed velocity model in order to create varying degrees of interpretation difficulties. The data set also includes a well and gathers from a 2D line.

SEAM Business Development

- Life of Field — This project is aimed at providing benchmark models and simulations intended to improve the efficiency and accuracy of Life of Field (LoF) workflow for both clastics and carbonates. Simulations required are the modeling of geology and the time production effects on reservoir fluid flow, geomechanics, geophysics, and well

control. The project will generate controlled case histories not possible to obtain in the field. Project initiation has been delayed from January 2015 due to major economic changes in the industry, and the intent is to open the project before December 2015. Meanwhile, a volunteer design team (the pilot team) has been working on the elements of geology needed for production modeling and testing the complications of the interactions of the modeling codes for geology, geophysics, engineering, and geomechanics.

SEAM publicity. The Board is committed to disseminating SEAM results to the global geophysical community. Recent technology transfer activities include the following:

- Phase II Progress reports by Project Manager Michael Oristaglio were published in *The Leading Edge* in July 2014 and April 2015. These supplement earlier articles, and a complete listing of articles is available at www.seg.org/SEAM.
- Pressure Prediction reports by Project Manager Michael Fehler were published in *The Leading Edge* in March 2015 and July 2015.

SEAM data sales. A detailed description of the data sets and license fees is available on the SEAM Web site for orders to be placed. Several orders have been fulfilled, enabling extended use of the Phase I results outside of the 24 participating companies. SEAM has created an additional suite of small models and classic data sets to encourage even broader use of the data at educational and research institutions, as well as small companies. Several of these data sets will be available at a minimal cost, while the 2D extracted model and data will be offered free of charge. For more information, companies and academic institutions interested in purchasing the models or specific data sets should visit the SEAM Web site at <http://www.seg.org/resources/research/seam/seam-data-sets/>.

SEG Global Inc. Ricardo Fernandes, chair

SEG Global Inc. is a for-profit company, fully owned by SEG, founded to provide strategic and tactical oversight and recommendations to the SEG Board of Directors regarding the planning, establishment, resourcing, and management of SEG's regional offices, and it is the avenue for future development of regional offices.

SEG Global, Inc. Board of Directors includes Ricardo Rosa Fernandez (chair), Jie Zhang (vice chair), Rick Miller (treasurer), Said S. Mahrooqi, Sue Webb, Jie Zhang, and Said Sadykhov.

Regional Assessments. To assist SEG's strategic growth globally, SEG Global, Inc. partnered with the Global Affairs Committee and SEG staff to conduct assessments of Latin America and Asia and Pacific opportunities, risks, and internal challenges. The process consisted of four phases: (1) preliminary research, (2) brainstorming, (3) strategic analysis, and (4) financial analysis. SEG Global Inc. and the Global Affairs Committee have begun comparing the data across regions to provide strategic recommendations for global growth.

SEG China. SEG China, in collaboration with CGS, conducted GEM Chengdu 2015. Recent events are VMB/FWI (PetroChina/BGP) and Deep Water Geophysical Exploration (COSL). An upcoming event is Envisioning Future Geophysics (CNPC). The China office changed its registration from a Representative Office to a Wholly Owned Foreign Enterprise (WOFE), with operation under the WOFE to commence on 1 July 2015.

Middle East Office. The Middle East Office has continued its efforts in developing and conducting workshops and conferences across the region including PD Forum, Exploiting Deep Gas, Seismic Multiples, Intrashelf Basins, FWI, Giant Oilfields, and ICEG. The Middle East Office also conducted its 3rd SEG/DGS Young Professionals and Regional Student Event. The office is also supporting efforts at the upcoming IPTC and GEO Bahrain, and aided SEG's provision of training and lectures in the region.

SEG Real Estate Corporation Bob Wyckoff, chair

The SEG Real Estate Corp was established in 2011 as a subsidiary of the Society of Exploration Geophysicists (SEG). The purpose of the corporation is to oversee the activities associated with the property at 8801 South Yale, Tulsa, Oklahoma called the Geophysical Resource Center (GRC): (1) building maintenance and property management; (2) leasing of all space not occupied by SEG business staff; and (3) maximizing the value of the physical assets of the corporation.

Related activities through May 2015 are listed below:

- ♦ New Building Update/Progress
 - Building & parking garage completion are on schedule for June with the surrounding grounds and landscaping to be completed in July.
 - To date contingency items and allowances are under budget.
 - CCK tenant improvements are in progress on the 4th floor.
 - Revised estimate for leased office space is +56% by June 2015.

- Our leasing agent is optimistic that additional tenants will be occupying the building in the 3rd/4th quarter 2015. Leasing opportunities are available for the 1st floor and 3rd floors.

◆ Existing Building

- Renovation plans are in place for the space occupied by SEG staff, which includes the 5th floor and penthouse, work to begin 1 June 2015.
- Based on a survey completed, 86% of SEG staff were amenable to staying in the existing building.
- Office space is currently 98% leased. The Doodlebugger statue will not be moved.
- A conference room is now available on the 1st floor for SEG and tenant use.

◆ SEG Real Estate Corp BOD

- RE Buildings and Grounds Committee was appointed to evaluate current needs of the property as a whole and possible future needs and/or improvements to the property.
- RE Policy and Procedures Manual is being updated.
- A Finance Committee member was appointed to replace a member who resigned.
- A revised list of candidates for RE BOD is being prepared to present to the SEG Board for approval.
- RE BOD 2015 meeting schedule: 16 January, 27 February, 10 April, 5 June, 31 July, 19 October, and 18 December.
- RE 2016 budget reviewed by RE BOD. Audit Committee reviewed IRS tax documents.

◆ Geophysical Resource Center 2 Financing Task Force

- A plan was developed to form a task force including RE and SEG Board and Finance Committee members in June 2015.
- This task force would take on the onerous task of reviewing multiple financing scenarios and recommending to the REC Board as Borrower and the SEG Board as Guarantor a permanent financing solution in the best interest of both organizations in time to meet the deadline to convert to permanent financing.
- Seven different scenarios were to be reviewed, culminating in a recommendation with the following objectives in mind:

1. Provide opportunities to reduce the outstanding balance to accelerate the goal of providing annual income to SEG.
2. Maintain SEG reserve capacity during the current industry downturn.
3. Maximize:
 - Total interest
 - Total SEG support
 - Total prepayment and balloon payments
 - Final balloon payment requiring refinancing at a time of higher interest rates
 - SEG portion of final balloon payment or refinance

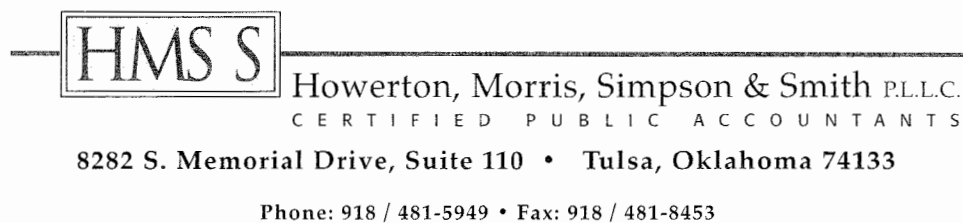
◆ Strategic Planning Near Term

- Looking forward to SEG BOD strategy/priorities to align RE BOD initiatives to maximize the value of the physical assets of the corporation:
 - o Generate revenue.
 - o Reduce debt.
 - o Maintain Class A buildings and grounds.
 - o Remain optimistic in moving forward with RE task.
 - o Continue to provide a sustainable source of financial support to SEG.

Many thanks to the RE BOD, SEG staff, and contracted services for their great work!!

SEG Consolidated Financial Statements

**Society of Exploration Geophysicists 30 June 2015 and 2014
(With Independent Auditors' Report Thereon)**



INDEPENDENT AUDITORS' REPORT

To the Board of Directors of
Society of Exploration Geophysicists

We have audited the accompanying consolidated statements of the Society of Exploration Geophysicists (a nonprofit organization), which comprise the statement of financial position as of 30 June 2015 and 2014, and the related statements of activities and cash flows for the years then ended, and the related notes to the financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform our audits to obtain reasonable assurance about whether the financial statements are free of material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.



Board of Directors of
Society of Exploration Geophysicists
Page 2

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Society of Exploration Geophysicists as of 30 June 2015 and 2014, and the changes in its net assets and its cash flows for the years then ended in conformity with accounting principles generally accepted in the United States of America.

Howerton, Morris, Simpson & Smith, PLLC

14 September 2015

See accompanying notes to consolidated financial statements.

SOCIETY OF EXPLORATION GEOPHYSICISTS

Consolidated Statements of Financial Position

30 June 2015 and 2014

	<u>2015</u>	<u>2014</u>
<u>Assets</u>		
Current assets:		
Cash and cash equivalents	\$ 4,227,719	5,258,479
Short-term investments	3,821,690	4,047,732
Accounts receivable, less allowance for doubtful accounts of \$130,277 in 2015 and \$105,933 in 2014	2,465,448	1,073,510
Accounts receivable - SEG Foundation	302,932	405,059
Inventories	498,901	710,088
Prepaid expenses	1,193,207	722,597
Deferred leasing costs	75,722	-
Accrued interest receivable	2,794	3,041
Total current assets	<u>12,588,413</u>	<u>12,220,506</u>
Investments	8,291,513	7,527,005
Deferred leasing costs – long term	643,992	-
Property and equipment:		
Land	489,605	489,605
Construction in progress	16,685,947	2,844,911
Building and leasehold improvements	9,728,197	9,278,879
Application development	641,025	2,893,195
Furniture, fixtures and equipment	<u>1,145,135</u>	<u>1,637,537</u>
	28,689,909	17,144,127
Less accumulated depreciation	<u>7,032,470</u>	<u>10,199,380</u>
Net property and equipment	<u>21,657,439</u>	<u>6,944,747</u>
	<u>\$ 43,181,357</u>	<u>26,692,258</u>

See accompanying notes to consolidated financial statements.

SOCIETY OF EXPLORATION GEOPHYSICISTS

Consolidated Statements of Financial Position (Continued)

30 June 2015 and 2014

	<u>2015</u>	<u>2014</u>
<u>Liabilities and Net Assets</u>		
Current liabilities:		
Accounts payable and accrued liabilities	\$ 4,527,777	2,084,245
Deferred revenue	<u>7,785,807</u>	<u>8,232,649</u>
Total current liabilities	12,313,584	10,316,894
Construction loan payable	13,946,253	687,126
Deferred revenue – long term	<u>576,345</u>	<u>41,130</u>
Total liabilities	<u>26,836,182</u>	<u>11,045,150</u>
Unrestricted net assets	<u>16,345,175</u>	<u>15,647,108</u>
	\$ <u>43,181,357</u>	<u>26,692,258</u>

See accompanying notes to consolidated financial statements.

SOCIETY OF EXPLORATION GEOPHYSICISTS

Consolidated Statements of Activities

For the Years Ended 30 June 2015 and 2014

	<u>2015</u>	<u>2014</u>
Revenues:		
Membership dues	\$ 1,396,313	1,464,319
Conferences and meetings	10,946,471	10,334,417
Publication sales and advertising	4,051,516	3,948,105
Professional development	843,128	1,000,483
Student and early careers	64,630	11,278
Building lease operations	1,024,533	1,145,230
Research and data	1,060,588	1,695,957
Other	15,513	117,214
Foundation support for programs	2,211,638	1,078,855
Investment income	<u>127,862</u>	<u>931,667</u>
Total revenues	<u>21,742,192</u>	<u>21,727,525</u>
Expenses:		
Program expenses		
Membership record services	675,369	626,958
Conferences and meetings	5,045,981	3,760,288
Publications and advertising	3,412,062	3,168,182
Professional development	1,439,240	1,829,585
Student and early careers	1,650,687	451,474
Global outreach	1,763,696	1,316,395
Building lease operations	1,136,434	1,275,757
Research and data	982,290	1,664,552
Other	<u>126,540</u>	<u>231,519</u>
Total program expenses	<u>16,232,299</u>	<u>14,324,710</u>
Support expenses		
Management, general and administrative	<u>4,333,590</u>	<u>4,974,468</u>
Total Expenses	<u>20,565,889</u>	<u>19,299,178</u>
Increase in net assets before contributions to Foundation	1,176,303	2,428,347
Contributions to Foundation	<u>(478,236)</u>	<u>(478,260)</u>
Increase in net assets	698,067	1,950,087
Unrestricted net assets, beginning of year	<u>15,647,108</u>	<u>13,697,021</u>
Unrestricted net assets, end of year	\$ <u>16,345,175</u>	<u>15,647,108</u>

See accompanying notes to consolidated financial statements.

SOCIETY OF EXPLORATION GEOPHYSICISTS

Consolidated Statements of Cash Flows

For the Years Ended 30 June 2015 and 2014

	<u>2015</u>	<u>2014</u>
Cash flows from operating activities:		
Increase (decrease) in net assets	\$ 698,067	1,950,087
Adjustments to reconcile increase (decrease) in net assets to net cash provided (used) by operating activities:		
Depreciation and amortization	563,838	706,312
Loss on disposal of assets	3,938	10,581
Net realized/unrealized (gain) loss on investments	258,647	(563,977)
(Increase) decrease in assets:		
Accounts receivable	(1,391,939)	2,181,389
Accounts receivable-SEG Foundation	102,127	(148,427)
Inventories	211,187	(13,919)
Prepaid expenses	(470,612)	(186,742)
Deferred leasing costs	(719,715)	-
Accrued interest receivable	248	1,989
Increase (decrease) in liabilities:		
Accounts payable and accrued liabilities	2,443,533	422,208
Deferred revenues	88,374	(523,676)
Net cash provided by operating activities	<u>1,787,693</u>	<u>3,835,825</u>
Cash flows from investing activities:		
Purchases of property and equipment, net of disposals	(15,280,468)	(2,469,795)
Purchases of investments	(7,640,966)	(8,732,566)
Proceeds from sale of investments	<u>6,843,854</u>	<u>9,084,733</u>
Net cash used in investing activities	<u>(16,077,580)</u>	<u>(2,117,628)</u>
Cash flows from financing activities:		
Proceeds from construction loan	<u>13,259,127</u>	<u>687,126</u>
Net cash provided by financing activities	<u>13,259,127</u>	<u>687,126</u>
Net increase (decrease) in cash	(1,030,760)	2,405,323
Cash, beginning of year	<u>5,258,479</u>	<u>2,853,156</u>
Cash, end of year	\$ <u>4,227,719</u>	<u>5,258,479</u>
Taxes paid	\$ <u>80,471</u>	<u>-</u>
Interest paid	\$ <u>137,406</u>	<u>-</u>

See accompanying notes to consolidated financial statements.

SOCIETY OF EXPLORATION GEOPHYSICISTS

Notes to the Consolidated Financial Statements

For the Years Ended 30 June 2015 and 2014

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIESNature of Operations

The Society of Exploration Geophysicists (the “Society”), was organized in 1930 as a not-for-profit organization. The objectives of the Society are to promote the science of exploration geophysics and related fields, including applications and research, to foster the common scientific interests of geophysicists, and to maintain a high professional standing among its members. The Society accomplishes these objectives by publishing scientific literature, conducting professional development and student programs, hosting technical meetings and providing other informational services.

The Society maintains offices in the United States, United Arab Emirates and China.

These financial statements do not include the SEG Foundation (the “Foundation”), a separate not-for-profit organization which receives contributions for public education and other scientific and humanitarian purposes.

Principles of Consolidation

The consolidated financial statements include the accounts of the Society and its subsidiaries, SEG Advanced Modeling Corporation (“SEAM”), SEG Real Estate Corp and SEG Global, Inc. All intercompany balances and transactions have been eliminated.

Cash and Cash Equivalents

Cash and cash equivalents include cash in banks and all highly liquid investments with an original maturity of three months or less. Accounts at each institution are insured by the Federal Deposit Insurance Corporation up to \$250,000. At times, cash exceeds federally insured limits, but management believes any possible risk of loss is minimal. At 30 June 2015, the Society, SEAM, and SEG Real Estate Corp had deposits in excess of the federally insured limit.

Accounts Receivable

Accounts receivable consists of uncollateralized billings for memberships, advertising, page charges, subscriptions, sponsorships, research participation agreements, and exhibit space. Accounts receivable are stated at the amount billed, less an allowance for uncollectible accounts. The Society provides for losses on receivables using the allowance method. The allowance is based on experience, terms of agreements, and other circumstances affecting the ability of customers to meet their obligations. Outstanding balances are written off when management determines that the receivables will not be collected.

(continued)

SOCIETY OF EXPLORATION GEOPHYSICISTS

Notes to the Consolidated Financial Statements

For the Years Ended 30 June 2015 and 2014

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)Accounts Receivable (continued)

The Society provides for probable uncollectible amounts through a provision to bad debts expense and a corresponding amount to the allowance based on management's assessment of the current status of individual accounts. Unpaid amounts that remain after management has pursued reasonable collection efforts are written off through a charge to the allowance for uncollectible accounts and a credit to accounts receivable. Interest is not charged on outstanding balances.

At 30 June 2015, management estimates that the allowance for uncollectible accounts of \$130,277 is adequate to absorb any losses which might arise from nonpayment. Receivables are considered impaired if full principal payments will not be received in accordance with contractual terms. Such impaired receivables are written down to the amount of cash expected to be collected.

Inventories

Inventories of publications for resale are valued at the lower of cost, determined by the average method, or market. In the year ended 30 June 2015, the Society wrote-down inventory by \$203,705.

Investments

Investments consist of marketable debt and equity securities which are valued at their fair values in the statements of financial position. Fair values for investments are based on quoted market prices. Unrealized gains and losses are included in the statements of activities. Investments in joint ventures are valued at cost.

Property and Equipment

The Society capitalizes all expenditures for property and equipment in excess of \$1,000. Property and equipment are carried at cost. Depreciation is computed using the straight-line method based on the estimated useful lives of the assets. When assets are retired or otherwise disposed of, the cost and related accumulated depreciation are removed from the accounts, and any resulting gain or loss is included in the statement of activities. Expenditure for maintenance and repairs are charged to expense as incurred. Major improvements are capitalized. The lives used in computing depreciation are as follows: building – 50 years; software, tenant improvements, furniture and equipment – 3 to 10 years.

The Society reviews the carrying value of property and equipment for impairment whenever events and circumstances indicate that the carrying values of long-lived assets may not be recoverable from the future cash flows expected to result from their use and

(continued)

SOCIETY OF EXPLORATION GEOPHYSICISTS

Notes to the Consolidated Financial Statements

For the Years Ended 30 June 2015 and 2014

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)Property and Equipment (continued)

ultimate disposition. In cases where the undiscounted expected future cash flows are less than the carrying values, an impairment loss is recognized equal to the amount by which the carrying value exceeds the fair value of each asset. The factors considered by the Society in performing an impairment assessment include current operating results, trends, and prospects, and the effects of obsolescence, demand, competition, and other economic factors. Based on these criteria, there was no impairment for the year ended 30 June 2015.

Based on a comprehensive review during the year ended 30 June 2015, furniture, fixtures and equipment, and tenant improvements were reduced by \$1,213,306 for assets fully depreciated and no longer in service.

Construction in Progress

Costs of construction are capitalized in Construction in progress.

Application Development

Direct costs associated with the purchase of enhancements, upgrades, and new modules for the Society's accounting and association management systems are capitalized and amortized over the estimated product life of three years on the straight line basis.

Based on a review of capitalized application development costs at 30 June 2015, \$2,521,380 of fully amortized costs associated with the development of SEG Online were written off in 2015.

Unamortized costs are carried at the lower of book value or net realizable value.

Net Assets

Net assets and income, expenses, gains and losses are classified based on the existence or absence of donor-imposed restrictions. Accordingly, our net assets and changes therein are classified and reported as follows:

- **Unrestricted** – Unrestricted net assets represent those resources that are not restricted by donors. Board-designated net assets represent amounts that the Board of Directors set aside for future use. The Society does not have any board-designated net assets at 30 June 2015 and 2014.
- **Temporarily Restricted** – Temporarily restricted net assets reflect donor-imposed restrictions that require us to utilize or expend the related assets as specified. We record contributions as temporarily restricted if they are received with donor

(continued)

SOCIETY OF EXPLORATION GEOPHYSICISTS

Notes to the Consolidated Financial Statements

For the Years Ended 30 June 2015 and 2014

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Net Assets (continued)

stipulations that limit their use through either time or purpose restrictions. When donor restrictions expire, that is, when a time restriction ends or a purpose restriction is fulfilled, temporarily restricted net assets are reclassified to unrestricted net assets and presented in the statement of activities as “net assets released from restrictions.” Our policy is to record temporarily restricted contributions received and expended in the same accounting period as unrestricted revenues and expenses in that period. The Society does not have any temporarily restricted net assets at 30 June 2015 and 2014.

- ***Permanently Restricted*** – Permanently restricted net assets reflect donor-imposed restrictions which stipulate that the related resources be maintained in perpetuity, but which permit us to expend part or all of earnings derived from the donated assets for either specified or unspecified purposes. The Society does not have any permanently restricted net assets at 30 June 2015 and 2014.

Income Taxes

The Society is exempt from federal income tax under Section 501(c)(6) of the Internal Revenue Code. Income from its consolidated for-profit subsidiary is subject to income tax and advertising not directly related to the Society’s tax-exempt purpose is subject to taxation as unrelated business income. Tax expense of \$80,471 for the year ended 30 June 2015 was associated with unrelated business income.

The accounting standard on accounting for uncertainty in income taxes addresses the determination of whether tax benefits claimed or expected to be claimed on a tax return should be recorded in the financial statements. Under that guidance, the Society may recognize the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by taxing authorities based on the technical merits of the position. There were no unrecognized tax benefits identified or recorded as liabilities for the years ended 30 June 2015 and 2014.

Revenue Recognition

Funding for certain program activities is received in advance, recorded as deferred revenue and recognized as follows:

- Membership dues and publication subscription revenues are recognized ratably over the applicable membership or subscription period.
- Meeting revenues are recognized as revenue at the time of the meeting.
- Research revenues are recognized as the related services are performed in accordance with the terms of the contracts.

(continued)

SOCIETY OF EXPLORATION GEOPHYSICISTS

Notes to the Consolidated Financial Statements

For the Years Ended 30 June 2015 and 2014

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Building Lease Operations

SEG Real Estate Corp utilizes a real estate management and leasing company to manage leasing, operations and maintenance of the building. Office space that is not used by the Society is leased to other organizations.

Fair Value Measurements

The Society establishes a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to measurements involving significant unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are as follows:

- Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets that the Society has the ability to access at the measurement date.
- Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for the assets, either directly or indirectly.
- Level 3 inputs are unobservable inputs for the assets.

The level in the fair value hierarchy within which a fair measurement in its entirety falls is based on the lowest level input that is significant to the fair value measurement in its entirety.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reported period. Actual results could differ from those estimates.

Reclassification

Certain accounts in the prior year financial statements have been reclassified for comparative purposes to conform with the presentation in the current year financial statements.

(continued)

SOCIETY OF EXPLORATION GEOPHYSICISTS

Notes to the Consolidated Financial Statements

For the Years Ended 30 June 2015 and 2014

NOTE 2 – INVESTMENTS

At 30 June, investments at fair value were as follows:

	<u>2015</u>	<u>2014</u>
Certificate of deposit	\$ 1,676,583	2,163,155
Equities	3,898,982	3,419,495
Government and corporate bonds	<u>6,287,638</u>	<u>5,742,087</u>
Subtotal – Total Level 1 Assets	11,863,203	11,324,737
Joint ventures (Level 3 Assets)	<u>250,000</u>	<u>250,000</u>
Total investments	12,113,203	11,574,737
Less short-term investments	<u>3,821,690</u>	<u>4,047,732</u>
Long-term investments	\$ <u>8,291,513</u>	<u>7,527,005</u>

The Society's only investment measured at fair value on a recurring basis using significant unobservable inputs (Level 3 inputs) is its investment in a joint venture. The joint venture is valued at cost but has received significant cash flow in excess of cost since its purchase. The Society's ability to sell this investment is limited because of the nature of the investment arrangement.

Fixed income securities totaled \$7,964,221 at 30 June 2015 and were held in certificates of deposit maturing in less than one year and mutual funds invested in government and corporate bonds.

At 30 June, investment income (loss) in the accompanying consolidated statements of activities includes the following:

	<u>2015</u>	<u>2014</u>
Interest and dividend income	\$ 386,509	212,242
Gain (loss) on investments	<u>(258,647)</u>	<u>719,425</u>
	\$ <u>127,862</u>	<u>931,667</u>

Fees charged by investment advisors totaled \$73,380 and \$85,137 for the years ended 30 June 2015 and 2014, respectively.

(continued)

SOCIETY OF EXPLORATION GEOPHYSICISTS

Notes to the Consolidated Financial Statements

For the Years Ended 30 June 2015 and 2014

NOTE 3 – RELATED PARTY TRANSACTIONS

The Society and Foundation support each other with contributions, and the Society provides services to the Foundation, some of which are reimbursed by the Foundation. During the year ended 30 June 2015, the Society implemented an indirect cost structure and policy to allocate the costs of shared services (indirect costs) to related parties. Transactions for the years ended 30 June, are as follows:

	<u>2015</u>	<u>2014</u>
Contributions to the Foundation	\$ -	100,000
Foundation Support for Program Activities	\$ 2,211,638	1,078,855
Reimbursement from the Foundation for fundraising services	\$ 358,589	562,031

In-kind contributions to the Foundation consist of the following:

Administrative expenses	\$ 95,656	334,888
Rent	26,311	43,372
Allocation of indirect costs	<u>356,269</u>	<u>-</u>
	<u>\$ 478,236</u>	<u>378,260</u>

Accounts receivable due from the Foundation was \$302,932 and \$405,059 at 30 June 2015 and 2014, respectively.

NOTE 4 – SALARY REDUCTION PLAN

The Society sponsors a salary reduction plan. The Society's contributions to this plan are computed based on 2% of salaries and a two-for-one matching contribution of employees' contributions, up to a maximum of 4.33% of salaries. As of August 1, 2011 the Society's contributions to this plan are computed based on 6% of salaries and a one-for-one matching contribution of employees' contributions, up to a maximum of 3% of salaries.

The Society's expense under this plan was \$526,205 and \$481,228 for the years ended 30 June 2015 and 2014, respectively.

NOTE 5 – CONSTRUCTION IN PROGRESS AND LOAN PAYABLE

SEG Real Estate Corp constructed a four story building and parking garage on the same site as its existing building. Construction costs, including interest on construction financing totaling \$150,086 at 30 June 2015, have been capitalized as Construction in

(continued)

SOCIETY OF EXPLORATION GEOPHYSICISTS

Notes to the Consolidated Financial Statements

For the Years Ended 30 June 2015 and 2014

NOTE 5 – CONSTRUCTION IN PROGRESS AND LOAN PAYABLE (CONTINUED)

Progress. Upon completion of the new building in July 2015, the assets were placed into service and depreciated based on estimated useful life.

SEG Real Estate Corp entered into a loan agreement with a bank to fund construction of the new building not to exceed the principle amount of \$20 million, with interest at LIBOR plus 2% through the construction period. Subsequent to 30 June 2015, the loan was amended to extend the end date of the construction period to November 15, 2015 to enable borrowing significant costs of tenant improvements. SEG Real Estate Corp will convert to a permanent financing arrangement with the construction lender by November 15, 2015.

The loan is collateralized by all assets of SEG Real Estate Corp, including the existing building, and is guaranteed by the Society. SEG Real Estate Corp and the Society have semi-annual financial reporting requirements and affirmative covenants including 1) a requirement for the Society to maintain liquid assets of at least \$7 million until achieving a debt coverage ratio of 1:1 at which time the liquidity requirement will be reduced to \$5 million, and 2) a requirement for the Society and SEG Real Estate Corp to maintain a combined tangible net worth of at least \$10 million.

NOTE 6 – LEASING ARRANGEMENTS

SEG Real Estate Corp leases approximately 68% of the office space in its existing building to unaffiliated parties under non-cancelable operating leases.

As of June 30 2015, SEG Real Estate Corp obtained non-cancelable operating lease commitments from unaffiliated parties for 56% of the new building. Subsequent to 30 June 2015, SEG Real Estate Corp obtained non-cancelable operating lease commitments from unaffiliated parties for an additional 13% of the new building.

Costs incurred to obtain new tenants, including leasing commissions, that are paid in advance and due upon occupancy will be amortized over the life of the lease.

(continued)

SOCIETY OF EXPLORATION GEOPHYSICISTS

Notes to the Consolidated Financial Statements

For the Years Ended 30 June 2015 and 2014

NOTE 6 – LEASING ARRANGEMENTS (CONTINUED)

The following is a schedule of minimum future rental revenues from tenants, including subsequent commitments, as of:

Year Ending		<u>Amount</u>
<u>30 June</u>		
2016	\$	1,509,326
2017		1,734,029
2018		1,569,797
2019		1,526,752
2020		1,504,554
Thereafter		<u>7,350,570</u>
	\$	<u>15,195,028</u>

NOTE 7 – JOINT VENTURE

In September 2014, SEG entered into a joint venture with the American Association of Petroleum Geologists (AAPG) to operate two international conferences a year. An investment of \$1.5 million by SEG will be paid, based upon contracted percentages, from SEG's 50% portion of the net proceeds of the conferences. Should the conference produce a loss, SEG will be required to fund 50% of the net loss. Termination clauses allow the venture to be terminated by SEG or AAPG after four conferences or two consecutive net loss conferences. No additional investment obligations are required upon termination.

NOTE 8 – SUBSEQUENT EVENTS

The Society has reviewed subsequent events and transactions which occurred after 30 June 2015 through the date of the independent auditor's report on these financial statements, which is the date that the financial statements were available for release. The financial statements include all events or transactions, including estimates, required to be recognized in accordance with accounting principles generally accepted in the United States. The Society has also determined that there are no non-recognized subsequent events which require additional disclosure in order for these financial statements to not be misleading.

SEG Foundation Financial Statements

**SEG Foundation 31 December 2014 and 2013
(With Independent Auditors' Report Thereon)**



INDEPENDENT AUDITOR'S REPORT

To the Board of Directors
SEG Foundation

Report on the Financial Statements

We have audited the accompanying financial statements of SEG Foundation (a not-for-profit corporation), which comprise the statements of financial position as of December 31, 2014 and 2013, and the related statements of activities and cash flows for the years then ended and the related notes to the financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of SEG Foundation as of December 31, 2014 and 2013, and the changes in its net assets and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

A rectangular box containing a handwritten signature in black ink that reads "HoganTaylor LLP".

May 29, 2015

SEG FOUNDATION
STATEMENTS OF FINANCIAL POSITION

31 December 2014 and 2013

	2014	2013
Assets		
Cash	\$ 2,070,846	\$ 812,312
Pledges receivable, net	6,799,487	6,646,018
Due from affiliate	17,438	16,588
Investments	16,462,422	17,238,182
Exhibits and office equipment, net	131,736	131,802
Other assets	28,094	32,664
Total assets	\$ 25,510,023	\$ 24,877,566
Liabilities and Net Assets		
Liabilities:		
Due to affiliate	\$ 377,367	\$ 349,581
Accounts payable and accrued liabilities	929	17,201
Total liabilities	378,296	366,782
Net assets:		
Unrestricted:		
Undesignated	1,498,395	1,080,845
Board-designated	2,777,587	2,780,587
Total unrestricted	4,275,982	3,861,432
Temporarily restricted	9,347,583	9,412,218
Permanently restricted	11,508,162	11,237,134
Total net assets	25,131,727	24,510,784
Total liabilities and net assets	\$ 25,510,023	\$ 24,877,566

See accompanying notes to financial statements.

SEG FOUNDATION
STATEMENT OF ACTIVITIES

Year ended 31 December 2014

	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
Revenues, gains and other support:				
Contributions	\$ 308,667	\$ 3,428,717	\$ 265,795	\$ 4,003,179
In-kind support from affiliate	500,365	-	-	500,365
Interest and dividends	60,126	307,013	-	367,139
Net gain on investments	14,552	204,890	5,233	224,675
Loss on bad debts	-	(867,500)	-	(867,500)
Net assets released from restriction	3,137,755	(3,137,755)	-	-
Total revenues	4,021,465	(64,635)	271,028	4,227,858
Expenses:				
Program services:				
Grant awards to affiliate	2,016,098	-	-	2,016,098
Other grant awards	382,795	-	-	382,795
Program administrative expenses	158,744	-	-	158,744
Total program services	2,557,637	-	-	2,557,637
Supporting services:				
Management and general	514,752	-	-	514,752
Fundraising	409,520	-	-	409,520
Investment fees	125,006	-	-	125,006
Total supporting services	1,049,278	-	-	1,049,278
Total expenses	3,606,915	-	-	3,606,915
Change in net assets	414,550	(64,635)	271,028	620,943
Net assets, beginning of year	3,861,432	9,412,218	11,237,134	24,510,784

See accompanying notes to financial statements.

SEG FOUNDATION

STATEMENT OF ACTIVITIES

Year ended 31 December 2013

	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
Revenues, gains and other support:				
Contributions	\$ 1,488,976	\$ 2,585,016	\$ 313,059	\$ 4,387,051
In-kind support from affiliate	489,406	-	-	489,406
Interest and dividends	42,721	250,263	-	292,984
Net gain on investments	397,236	783,177	712,423	1,892,836
Loss on bad debts	-	(575,000)	-	(575,000)
Net assets released from restriction	2,690,943	(2,690,943)	-	-
Total revenues	5,109,282	352,513	1,025,482	6,487,277
Expenses:				
Program services:				
Grant awards to affiliate	1,289,066	-	-	1,289,066
Other grant awards	474,586	-	-	474,586
Scholarships	447,867	-	-	447,867
Program administrative expenses	237,812	-	-	237,812
Total program services	2,449,331	-	-	2,449,331
Supporting services:				
Management and general	505,557	-	-	505,557
Fundraising	408,414	-	-	408,414
Investment fees	104,203	-	-	104,203
Total supporting services	1,018,174	-	-	1,018,174
Total expenses	3,467,505	-	-	3,467,505
Change in net assets	1,641,777	352,513	1,025,482	3,019,772
Net assets, beginning of year	2,219,655	9,059,705	10,211,652	21,491,012

See accompanying notes to financial statements.

SEG FOUNDATION

STATEMENTS OF CASH FLOWS

Years ended 31 December 2014 and 2013

	2014	2013
Cash Flows from Operating Activities		
Change in net assets	\$ 620,943	\$ 3,019,772
Adjustments to reconcile change in net assets to net cash provided by (used in) operating activities:		
Permanently restricted contributions	(265,795)	(313,059)
Donated stock	(28,568)	-
Net gain on investments	(224,675)	(1,892,836)
Depreciation	66	1,315
Provision for uncollectible contributions	867,500	575,000
Change in assets and liabilities:		
Pledges receivable	(1,024,944)	(484,412)
Due to and due from affiliate	26,936	186,828
Other assets	4,570	3,155
Accounts payable and accrued liabilities	(16,272)	16,188
Net cash provided by (used in) operating activities	(40,239)	1,111,951
Cash Flows from Investing Activities		
Proceeds from sale of investments	6,240,880	3,300,434
Purchase of investments	(5,211,877)	(4,760,740)
Net cash provided by (used in) investing activities	1,029,003	(1,460,306)
Cash Flows from Financing Activities		
Permanently restricted contributions received in cash	269,770	218,234
Net increase (decrease) in cash	1,258,534	(130,121)
Cash, beginning of year	812,312	942,433
Cash, end of year	\$ 2,070,846	\$ 812,312

See accompanying notes to financial statements.

31 December 2014 and 2013**Note 1 – Nature of Operations and Summary of Significant Accounting Policies**Nature of operations

SEG Foundation (the Foundation), is a not-for-profit corporation affiliated with the Society of Exploration Geophysicists (the Society) (see Note 7). The Foundation encourages and supports scientific, educational and charitable activities of benefit to geophysicists. The Foundation provides funding to the Society, and prior to July 1, 2014, directly to students and others. Awards to the Society support major programs including student programs, lecture programs and SEG online. Awards to students include scholarships and travel grants. The Foundation also provides funding, directly or through the Society, for grants to other organizations for summer field camps, the Geoscientists *Without* Borders program and projects of special merit. Contributions are received primarily from members of the Society and corporations.

Use of estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Cash

Cash consists of deposit balances maintained at high quality financial institutions. Typically, cash exceeds federally insured limits, but management believes any possible risk of loss is minimal.

Contributions and pledges receivable

Unconditional promises to give that are expected to be collected within one year are recorded at estimated net realizable value. Unconditional promises to give that are expected to be collected in future years are recorded at the estimated present value of their estimated future cash flows. The discounts on those amounts are computed using risk-free interest rates applicable to the years in which the promises are received.

Management determines the allowance for doubtful accounts based on periodic assessment of outstanding pledges, particularly those pledges which are past due, as well as consideration of historical experience on collection of pledges. Pledge receivables are written off when deemed uncollectible.

Investments

Investments are carried at estimated fair value as reported by the asset custodians. See Note 3 for a description of the fair value inputs and methodologies utilized.

Accounting principles generally accepted in the United States of America require the Foundation to report information regarding its financial position and activities in three classes of net assets: unrestricted net assets, temporarily restricted net assets and permanently restricted net assets.

The Foundation reports contributions as restricted support if they are received with donor stipulations that limit their use. When a donor restriction expires, that is, when a stipulated time restriction ends or purpose restriction is accomplished, temporarily restricted net assets are reclassified to unrestricted net assets and reported in the statements of activities as net assets released from restriction.

Permanently restricted net assets are subject to donor imposed restrictions that stipulate resources be maintained permanently, but permit the Foundation to expend earnings for the purpose restricted in accordance with the spending policy established by the Foundation's Board of Directors (see Note 6).

Net assets that are not subject to donor imposed restrictions are classified as unrestricted.

The Foundation maintains a pool of investment funds for the unrestricted, temporarily restricted and permanently restricted net assets. Investment returns are allocated to net asset classifications based upon the percentage of the balance of net assets held in each classification. Investment returns on permanently restricted assets and board-designated matching funds are temporarily restricted for the purposes stipulated by donors. Investment returns on board-designated funds that are not associated or matched with a restricted gift are unrestricted. Investment losses on permanently restricted assets in excess of accumulated nonexpended returns are allocated to unrestricted net assets. Returns on temporarily restricted assets are allocated to unrestricted net assets.

Income tax status

The Foundation is a tax-exempt organization under Section 501(c)(3) of the Internal Revenue Code and is considered an organization that is not a private foundation. Generally, the Foundation is no longer subject to income tax examinations by the federal, state or local tax authorities for years before 2011.

Reclassifications

Certain reclassifications have been made to the 2013 Statement of Activities to correspond to the current year's format. Net assets and changes in net assets are unchanged due to these reclassifications.

Subsequent events

Management has evaluated subsequent events through May 29, 2015, the date the financial statements were available to be issued.

	2014	2013
Due in less than one year	\$ 2,565,685	\$ 2,172,261
Due in one to five years	4,683,922	4,591,510
	7,249,607	6,763,771
Allowance for doubtful accounts	(395,000)	(50,000)
Unamortized discount	(55,120)	(67,753)
	(450,120)	(117,753)
	<u>\$ 6,799,487</u>	<u>\$ 6,646,018</u>

Note 3 – Investments

The fair value measurement standards establish a consistent framework for measuring fair value and a fair value hierarchy based on the observability of inputs used to measure fair value. These inputs are summarized in three broad levels:

- Level 1 Quoted prices in active markets for identical assets or liabilities.
- Level 2 Observable inputs other than Level 1 prices, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.
- Level 3 Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

There were no investment transfers due to changes in the observability of significant inputs between Level 1, Level 2 and Level 3 assets during the years ended December 31, 2014 and 2013.

Investments measured at fair value on a recurring basis consisted of the following:

	Fair Value Measurements as of December 31, 2014			
	Level 1	Level 2	Level 3	Total
Money market funds	\$ 2,150,855	\$ -	\$ -	\$ 2,150,855
Equity securities	9,706,955	-	-	9,706,955
Corporate bonds	-	1,163,676	-	1,163,676
Asset-backed securities	-	31,790	-	31,790
Government securities	-	1,630,386	-	1,630,386
Mutual funds	1,755,646	-	-	1,755,646
Alternative investments	-	-	23,114	23,114
Total investments at fair value	<u>\$ 13,613,456</u>	<u>\$ 2,825,852</u>	<u>\$ 23,114</u>	<u>\$ 16,462,422</u>

	Fair Value Measurements as of December 31, 2013			
	Level 1	Level 2	Level 3	Total
Money market funds	\$ 3,127,098	\$ -	\$ -	\$ 3,127,098
Equity securities	8,907,806	-	-	8,907,806
Corporate bonds	-	1,268,972	-	1,268,972
Asset-backed securities	-	215,737	-	215,737
Government securities	-	1,582,387	-	1,582,387
Mutual funds	803,496	-	-	803,496
Alternative investments	-	-	1,332,686	1,332,686
Total investments at fair value	\$ 12,838,400	\$ 3,067,096	\$ 1,332,686	\$ 17,238,182

The estimated fair value of alternative investments has been estimated using the net asset value per share of the investments as reported by the fund managers.

Alternative investments held at December 31 consist of the following:

2014	Cost	Estimated Fair Value	Redemption Frequency	Redemption Notice Period
Hedge funds (a)	\$ 20,962	\$ 23,114	Quarterly	30 - 90 days
	<u>\$ 20,962</u>	<u>\$ 23,114</u>		
2013	Cost	Estimated Fair Value	Redemption Frequency	Redemption Notice Period
Hedge funds (a)	\$ 822,581	\$ 904,163	Quarterly	30 - 90 days
Managed futures fund (b)	418,845	428,523	Monthly	Three business days prior to month-end
	<u>\$ 1,241,426</u>	<u>\$ 1,332,686</u>		

- (a) The purpose of the funds is to achieve long-term capital appreciation and reduce volatility of overall portfolio returns. The funds take both long and short positions, primarily in common stocks, options, warrants, credit securities and derivative instruments. Fund managers calculate net asset value based on the fair value of the underlying assets, which are primarily valued with Level 1 or Level 2 inputs.
- (b) The Fund aims to achieve substantial capital appreciation through speculative trading in U.S. and international markets for currencies, interest rates, stock indices, agricultural and energy products and precious and base metals. The Fund may employ futures, options on futures, and forward contracts in those markets. The Fund may also enter into swap transactions relating to the value of crude oil and other energy related products. The general partners calculate net asset value based on the fair value of the underlying investments, which are primarily valued with Level 1 or Level 2 inputs.

Balance, December 31, 2012	\$ 1,494,922
Sales	(270,000)
Unrealized gain	88,010
Realized gain	19,754
Balance, December 31, 2013	1,332,686
Dividends reinvested	16,000
Sales	(1,369,926)
Realized gain	44,354
Balance, December 31, 2014	<u>\$ 23,114</u>

Note 4 – Exhibits and Office Equipment

A summary of exhibits and office equipment at December 31 are as follows:

	2014	2013
Furniture and fixtures	\$ -	\$ 3,736
Computer equipment	-	10,830
	-	14,566
Less: accumulated depreciation	-	(14,500)
	-	66
Exhibits	131,736	131,736
	<u>\$ 131,736</u>	<u>\$ 131,802</u>

Exhibits consist of historical geophysical equipment and a "Doodlebugger" statue commemorating the geophysical tradition.

Note 5 – Net Assets

Unrestricted

Unrestricted net assets are comprised of the following at December 31:

	2014	2013
General operating fund	\$ 1,498,395	\$ 1,080,845
Board-designated matching funds	2,777,587	2,780,587
	<u>\$ 4,275,982</u>	<u>\$ 3,861,432</u>

The Foundation Board has designated these funds for investment and is obligated to use the returns in compliance with donor restrictions for the matched gift.

Temporarily restricted

Temporarily restricted net assets are available for the following purposes at December 31:

	2014	2013
Professional development	\$ 2,224,250	\$ 2,375,579
Student support	4,726,189	4,127,878
Youth outreach	21,588	30,315
Geoscientists <i>Without</i> Borders	1,613,069	1,949,367
IQ Earth	95,000	235,922
Other	667,487	693,157
	<u>\$ 9,347,583</u>	<u>\$ 9,412,218</u>

Permanently restricted

Permanently restricted endowment funds are designated for the following purposes at December 31:

	2014	2013
Professional development	\$ 413,516	\$ 412,478
Student support	8,099,499	8,003,607
Youth outreach	310,929	310,929
Geoscientists <i>Without</i> Borders	1,128,980	1,105,813
General	1,555,238	1,404,307
	<u>\$ 11,508,162</u>	<u>\$ 11,237,134</u>

Note 6 – Endowment Funds

The Foundation's endowment consists of 13 individual programs established for a variety of purposes. Its endowment includes both donor-restricted funds and funds designated by the Board of Directors to function as endowments.

The Board of Directors of the Foundation has interpreted the Uniform Prudent Management of Institutional Funds Act (UPMIFA) for Oklahoma as requiring the preservation of the fair value of the original gift as of the gift date of the donor-restricted endowment funds absent explicit donor stipulations to the contrary. As a result of this interpretation, the Foundation classifies as permanently restricted net assets (a) the original value of gifts donated to the permanent endowment, (b) the original value of subsequent gifts to the permanent endowment, and (c) excess accumulated investment earnings in accordance with the applicable donor gift instruments and policy.

The remaining portion of the donor restricted endowment fund that is not classified in permanently restricted net assets is classified as temporarily restricted net assets until those amounts are appropriated for expenditures by the Foundation in a manner consistent with the standard of prudence prescribed by UPMIFA.

Investment return objectives, risk parameters and strategies

The Foundation has adopted investment and spending policies, approved by the Board of Directors, for endowment assets that attempt to provide a predictable stream of funding to programs supported by its endowment funds while also maintaining the purchasing power of those investment earnings over the long-term. Accordingly, the investment process seeks to achieve an after-cost total real rate of return, including investment income as well as capital appreciation, which exceeds the annual distribution with acceptable levels of risk. Endowment assets are invested in a diversified asset mix that is intended to result in a consistent inflation-protected rate of return that has sufficient liquidity to make an annual distribution of at least 3%, while growing the funds, if possible. Therefore, the Foundation expects its endowment assets, over time, to produce a target return, net of fees, of at least 5% per annum. Actual returns in any given year may vary from this amount.

Spending policy

The Foundation has a policy of appropriating for distribution each year 3% to 5% of its endowment fund's average fair value of the prior 12 quarters through the third calendar quarter year-end preceding the fiscal year in which the distribution is planned. In establishing this policy, the Foundation considered the long-term expected return on its investment assets, the nature and duration of the individual endowment funds, many of which must be maintained in perpetuity because of donor-restrictions, and the possible effects of inflation. The Foundation expects the current spending policy to allow its endowment funds to grow at a nominal average rate of 1% to 3% annually. This is consistent with the Foundation's objective to maintain the purchasing power as well as to provide additional real growth through new gifts and investment returns.

Due to actual investment performance, the Board of Directors increased the distribution rate to 4% of the average endowment fund balance for the year ending December 31, 2014. The distribution rate was set at 1% for the year ended December 31, 2013. A 2% supplement to the annual spending rate in 2013 was approved by the Board on May 1, 2013, for distribution from a particular contribution.

Donor agreements allow for a portion of the earnings of permanently restricted contributions to be used for administration expenses. Funds released from temporarily restricted net assets to unrestricted net assets for management fees were \$136,686 and \$30,483 for the years ended December 31, 2014 and 2013, respectively.

Endowment net asset composition by type of fund as of December 31 is as follows:

2014	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
Donor-restricted endowment funds	\$ -	\$ 985,560	\$ 11,508,162	\$ 12,493,722
Board-designated endowment funds	2,777,587	-	-	2,777,587
	<u>\$ 2,777,587</u>	<u>\$ 985,560</u>	<u>\$ 11,508,162</u>	<u>\$ 15,271,309</u>

Changes in endowment net assets for the fiscal years ended December 31:

2013	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
Donor-restricted endowment funds	\$ -	\$ 1,257,929	\$ 11,237,134	\$ 12,495,063
Board-designated endowment funds	2,780,587	-	-	2,780,587
	<u>\$ 2,780,587</u>	<u>\$ 1,257,929</u>	<u>\$ 11,237,134</u>	<u>\$ 15,275,650</u>
2014	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
Endowment net assets, beginning of year	\$ 2,780,587	\$ 1,257,929	\$ 11,237,134	\$ 15,275,650
Investment return:				
Interest and dividends	-	307,013	-	307,013
Net realized and unrealized gains on long-term investments	-	204,890	5,233	210,123
Total investment return	-	511,903	5,233	517,136
Contributions	-	-	265,795	265,795
Appropriation of endowment assets for expenditure	-	(698,063)	-	(698,063)
Fund adjustments and transfers	(3,000)	(86,209)	-	(89,209)
Endowment net assets, end of year	<u>\$ 2,777,587</u>	<u>\$ 985,560</u>	<u>\$ 11,508,162</u>	<u>\$ 15,271,309</u>
2013	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
Endowment net assets, beginning of year	\$ 1,862,081	\$ 535,674	\$ 10,211,652	\$ 12,609,407
Investment return:				
Interest and dividends	-	250,263	-	250,263
Net realized and unrealized gains on long-term investments	-	1,495,600	712,423	2,208,023
Total investment return	-	1,745,863	712,423	2,458,286
Contributions	750,000	-	313,059	1,063,059
Appropriation of endowment assets for expenditure	-	(289,358)	-	(289,358)
Fund adjustments and transfers	168,506	(734,250)	-	(565,744)
Endowment net assets, end of year	<u>\$ 2,780,587</u>	<u>\$ 1,257,929</u>	<u>\$ 11,237,134</u>	<u>\$ 15,275,650</u>

Note 7 – Society of Exploration Geophysicists

The Society is the sole corporate member of the Foundation and appoints the Foundation's Board of Directors. The Foundation and Society support each other with contributions and the Society provides services for which they are reimbursed by the Foundation. Those transactions for the years ended December 31 are as follows:

	2014	2013
Cash contributions from the Society	\$ 100,000	\$ -
In-kind support from the Society	500,365	489,406
Total support from the Society	<u>\$ 600,365</u>	<u>\$ 489,406</u>
Grant awards to the Society	<u>\$ 2,016,098</u>	<u>\$ 1,289,066</u>
Reimbursement to the Society for fundraising expenses	\$ 316,523	\$ 294,430
Reimbursement to the Society for grant administration expenses	128,128	169,440
Total reimbursements to the Society	<u>\$ 444,651</u>	<u>\$ 463,870</u>

In-kind support from the Society consists of the following as of December 31:

	2014	2013
Administrative expenses	\$ 312,347	\$ 476,667
Rent	11,801	12,739
Indirect allocation costs	176,217	-
	<u>\$ 500,365</u>	<u>\$ 489,406</u>

In-kind support from the Society is reflected in the Foundation's financial statements as both revenue and expense, with no net overall financial impact to the statement of activities.

The Society has committed to continue to provide the necessary administrative, rent and indirect support to the Foundation for the foreseeable future.

Note 8 – Commitments

The Foundation has committed approximately \$484,000 to the Society for Geoscientists *Without Borders* awards and grants to various universities as of December 31, 2014. The ultimate amount funded for each award and grant is based on the respective project's performance and actual expenditures. No amounts have been accrued in the accompanying financial statements for these commitments.

