

2014 Annual Report

SOCIETY OF EXPLORATION GEOPHYSICISTS
Connecting, inspiring, and propelling the people and science of geophysics



2014 Annual Report of the Society of Exploration Geophysicists

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Reports of the Officers

Don Steeples, president

With the Annual Meeting of 2013 being in September and the 2014 meeting being in late October, my term as president has been a month longer than average. My predecessor, Dave Monk continued to serve on the Board as past president, and I have benefitted greatly from his advice and guidance during the year. As I look back on my 40 years of SEG membership, I see a major shift in our membership as about 65% of our members now live and work outside North America, and this trend is continuing. The Society is changing, and we need to change with it. While any SEG presidential term is too short to effect major change, it is important to look forward and plan strategically for the future of the Society. Over the past two years, a strategic-planning exercise has been conducted using a Strategic Planning Task Force composed of Board members with assistance from the SEG Foundation and other SEG subsidiary organizations. I believe that this will set a path that subsequent Boards will use to guide them.

Looking forward, it appears that the Annual Meeting in Denver, which will mark the end of my term, will be another successful SEG meeting. It will certainly be the most selective technical program that we have ever attempted, with more than 1600 expanded abstracts submitted, resulting in only slightly more than half of the abstracts being accepted. We will make facility adjustments so that a larger percentage of abstracts can be accepted in future years. The SEG Annual Meeting is not the only large meeting that SEG has a hand in each year, but the others are often partnerships with sister organizations. SEG partners with the Society of Petroleum Engineers (SPE), the American Association of Petroleum Geologists (AAPG), and the European Association of Geoscientists and Engineers (EAGE) to operate the International Petroleum Technology Conference (IPTC), which this year was held in Doha, Qatar. This was a successful event and gave me the opportunity to meet with some of our many members and section representatives in the Middle East as well as visit our regional office in Dubai. Yogan Bhatia, Middle East regional manager, and her staff are doing an excellent job of developing SEG in the Middle East, and our membership there is growing as a result of the services we are able to provide. Events such as IPTC, the Offshore Technol-

ogy Conference (OTC), the NAPE Expo, and others operated jointly by SEG and sister societies are important to the Society, and this year we have continued to improve our cooperation with other groups. In partnership with EAGE, a series of joint workshops will be conducted by the societies. The first was held in November 2013 in Portugal. We have continued to discuss several opportunities to work more closely with other societies, especially with the AAPG.

While the SEG continues to spread across the world, our head office remains in Tulsa, Oklahoma. A subsidiary corporation, SEG Real Estate, is responsible for the management of the SEG's office building in Tulsa.

The main reason for establishing this entity was to allow SEG to diversify its revenue sources by becoming a larger property owner. The Society already owns the office and campus in Tulsa, and the property has space for another grade "A" office building, which is now under construction. Tulsa is a ready market for commercial real estate, and the intent is that SEG will move its staff into the new building and lease the remaining space, as well as the space vacated in the existing building. Completion of the new facility is expected in the summer of 2015. When the building loan is paid off, the revenue stream will help fund SEG programs for many years into the future.

The new governance model that expanded the Board of Directors two years ago has spread the workload of individual Board members. It has also provided some year-to-year continuity in oversight of SEG program activities. I have been privileged to be on the Board with some of the most dedicated, talented, and effective members of the Society, and they have served the Society well. I will hand over the presidential reins to Chris Liner in October, and I can assure you that SEG will be in good hands.

Chris Liner, president-elect

My term as SEG president-elect began informally in August 2013 with participation in weekly phone conferences between Executive Director Steven Davis and sitting Presidents Don Steeples (elect), Dave Monk (then current), and Bob Hardage (past). Having not served on the SEG Board

of Directors since my 1999-2001 term as editor, these weekly conversations were vital in getting up to speed on current SEG governance and issues.

At the 2013 Annual Meeting, my term as president-elect began with immediate assignment as Board liaison to SEG Foundation; SEAM; SEG Global, Inc.; and SEG Real Estate. These subsidiary board meetings gave important opportunities to meet or re-connect with key volunteers who form the core of SEG. In particular, I had little prior knowledge of the inner workings of the SEG Foundation and its relation to SEG. These early liaison assignments were critical in giving me a broad understanding of our Society.

I represented the SEG at Beijing 2014 and learned first-hand about the SEG China office, one of only two international offices (the other being Middle East). China is a challenging market for SEG, but we have in place a solid advisory board and office staff to facilitate conferences and serve our growing Chinese membership. To build on SEG-China relationships established in Beijing, I will as president attend the International Workshop on Gravity, Electrical, and Magnetic Methods and their Applications in Chengdu in April 2015. I also represented SEG at the EAGE annual meeting in Amsterdam (June 2014). There is goodwill in both SEG and EAGE to promote cooperation in ways that benefit members of each society.

Another important cooperative effort is a new agreement in principle with AAPG to co-host two international conferences each year, with SEG becoming a partner in AAPG's successful ICE conference and a new conference soon to be announced. This fits well with SEG's history of large cooperative conferences like OTC, NAPE, and URTEC that both generate significant revenue for SEG and promote the science of geophysics.

My year in office has also seen some difficult situations. One example involves the near-surface segment of our Society, where we were not able to finalize a long-sought merger with the 400-member Environmental and Engineering Geophysical Society (EEGS). Let no one doubt there is a strong near-surface community within SEG that, despite this setback, will reorganize and strengthen moving forward.

Another area of concern for me personally has been turnover and morale of SEG staff. As a nonprofit organization, SEG cannot routinely compete in salary and benefits with commercial organizations. We should be an employer of choice by offering a flexible, well-managed, inviting work environment along with viable career paths and transparent procedures. The employment contract for SEG Executive Director Steven Davis expires in August 2015 and President Don Steeples has asked me to chair an ad-hoc Executive Director Search Committee. The committee was initiated in May 2014, fully appointed in June, and our work is just beginning as this is written in mid-July. The executive director position is the critical link between volun-

teer leadership initiatives and staff support thereof, sets the tone of SEG both internally and externally, and binds relationships with cooperative societies. As the committee moves through the process of identifying the next SEG executive director, we welcome input and suggestions from SEG membership.

Finally, let me say that a year as president-elect leaves a deep appreciation of the quality, devotion, and tireless effort of SEG volunteer leadership and staff. We are the caretakers of a remarkable society forged by the vision and hard work of generations of geophysicists, a guiding legacy, and responsibility.

Dennis Cooke, first vice president

It has been a pleasure to serve as the SEG's first vice president over the past year. It has been a busy year for the SEG with many activities and accomplishments. Below is my report on the most significant events.

This past year, the SEG started construction of a new headquarters building adjacent to our old building. Both buildings are located on the SEG's prime commercial real-estate site in Tulsa, Oklahoma. Paying for this new building and refurbishment of the old building will limit the SEG's cash flow over the near- to mid-term, but when paid off, these buildings should provide the SEG with a steady and secure income stream for years to come. That income will be used to keep member dues low and membership benefits high.

The other significant event of the year was the failed merger of the SEG and EEGS (Environmental and Engineering Geophysical Society). This merger had been under negotiation for over two years and failure to conclude it was a disappointment to all involved. In the end, it was the SEG Board of Directors that stopped the merger as we felt the financial implications of the negotiated terms were too high.

Over the past year, I have helped lead a strategic-planning exercise for the SEG. The upshot of our new plan: The SEG will continue to focus on the science and technology of exploration geophysics and we will *increase our focus on the needs of and services for geophysicists*. This has led to our new mission statement: "Connecting, inspiring, and propelling the people and science of geophysics." The verb connect is about providing geophysicists with a social network based on a common interest in geophysical technology. Inspire is about our conferences and workshops. And propel is about helping geophysicists learn geophysics and advance their careers.

The new SEG program that I am most passionate about is continuing education in basic exploration skills for early-career geophysicists. There is a coming "crew change" in our industry as the older generation retires. The SEG can and should help provide the geophysicists of the future with the technical job

skills that are not taught at university. I envision a set of best-in-class continuing-education courses that teach low to mid-level prospect generation, seismic data processing, and seismic data acquisition and that includes similar programs for potential-fields, environmental, and engineering geophysicists. The SEG Board and SEG Foundation are currently exploring how to design and fund these new courses.

Robert R. Stewart, second vice president

For many of us, from student days onward, SEG has been our geophysical and professional home. So, it is a heart-felt honor to help serve and expand our SEG house with its many rooms. There are numerous initiatives under way in SEG to enhance the Society and its delivery of materials and services to the membership. The second vice president's position and responsibilities include participating on the Board as well as providing liaison between the Board and a number of the fine committees that help make our Society, its members, and our profession prosper. These committees include: University and Student Programs, Distinguished Lecture, Continuing Education, Online, and Annual Meeting Technical Program. And many thanks to all of the dedicated individuals who volunteer their time and capabilities to serve our community via these and other SEG committees. It is also wonderful to work with the Board (some of the world's best geophysicists) and SEG staff (an outstanding group of committed professionals).

Strengthening and expanding geophysics is partially accomplished by creating additional relationships and networks with various other groups. So, it has been very satisfying to help develop cooperation between societies such as the American Association of Petroleum Geologists (AAPG) with an agreement to co-sponsor international meetings. It is also encouraging to see our Sections and Associated Societies foster closer ties among themselves such as the memorandum of understanding between the Geophysical Society of Houston and the Canadian Society of Exploration Geophysicists.

SEG continues to deliver with many meetings, publications, and courses. The Annual Meeting (a major part of the Society's life) was on nearby turf for me last year in Houston. The meeting was a resounding success, although I learned quickly that being a Board member would have some challenging moments: a conventioner saw my Board ribbon and promptly gave me a very clear complaint regarding an aspect of the meeting that we should improve. In fact, we have addressed this particular concern (organization response in action!) and look forward to the 2014 meeting in Denver being even more successful. SEG, as a whole, operates, partners, or shows at many dozens of events per year. Our conferences and workshops are mainstays of the professional calendar. The 2014 Earth Model Forum in Galveston was one of these outstanding events bringing together interpreters and ideas, the best of which will be at the 2014 SEG

Annual Meeting as well as the Offshore Technology Conference in 2015.

Delivery of technical material is clearly changing. I recall anxious moments around the year 2000 when we (our geophysics societies) were deciding whether to switch completely to "computer presentations" instead of overhead transparencies and plastic or glass slides. Well, PowerPoint won! And largely for the better. E-learning along with our iPadding continues to transform our communications. Which brings us to the SEG Wiki. This is a major advancement for us (via the diligent Online Committee). For example, we can now access Bob Sheriff's encyclopedic geophysical knowledge online as well as a host of data sets. Check out the SEG Wiki!

An enthusiastic group of SEG staff and volunteers lead efforts on university and student programs. Currently, SEG has a remarkable 324 Student Chapters in 66 countries! And our international presence continues to grow with the increased number of Challenge Bowl competitions with 13 teams for the finals at the 2014 Annual Meeting. SEG also has recognized the importance of our early-career professionals. We anticipate rolling out a number of early-career programs to help these nascent stars achieve their goals in geophysics.

There are also many areas of exciting technical developments in geophysics from new sensors to superbly realistic imaging. Targets are expanding from localized traps to regional resources. The whole section from the near surface to deep crust hosts features of interest to exploration. Different groups and associations have focused on various parts of the earth, its processes, and development. However, boundaries blur and there are needs to collaborate. For example, at a recent Incorporated Research Institutions for Seismology (IRIS) workshop, it was made apparent that there was an enormous amount of passive data being acquired by the earthquake community as well as the energy-related microseismic groups. In addition, drillers and production engineers are generating large quantities of hydraulic-fracturing data. Along with all of the wonder and usefulness of unconventional production, all of these disciplines need to be able to exchange data. This means having common protocols and formats. SEG is assisting with defining the seismic end of these formats.

Similarly, the near surface is key to deeper exploration as well as many of the resources and responses of environmental and engineering value. SEG sees the near surface, in all of its international expressions, as a critical area for support. While we were not able to formally conclude an integration with one of our fraternal near-surface societies, we look forward to a flowering of the field and future cooperation.

In summary, fellow Board and staff members, with a host of volunteers, have worked conscientiously to help create a responsive and productive society, energetically striving to connect,

inspire, and propel the people and science of geophysics. We look forward to consolidating gains from last year and launching into the opportunities for the next. SEG, geophysics, and their contributions are growing!

David Monk, past president

Now that a three-year term has become the norm for an SEG president (serving first as president-elect, and then finally as past president), it has become clear to me that this is necessary to ensure that long-term projects have continuity. I was lucky enough to participate in the ground breaking ceremony for the new SEG office, but it will be the current president-elect, Chris Liner, who will be president by the time the office is opened. It also means that initiatives that are a focus during a term as president can be continued as past president. In this regard, I acted as liaison to this year's Annual Meeting Steering Committee, where I have continued to push the vision of a more "electronic meeting" component. I'm am hopeful that we will see the results of this in Denver but expect that the final vision will not be complete for several more years. As president, I signed a cooperative agreement with the European Association of Geoscientists and Engineers (EAGE) to run a joint forum each year. The first was to be organized by the EAGE, and I participated in the organizing committee, and found that one of my first responsibilities as past president was to attend the forum on behalf of the SEG, and present at that meeting. The SEG will be responsible for the next in this series, which will be held in 2015. As past president, I also served on and acted as liaison to the Honors and Awards Committee and the Nominations Committee.

As president, I started a weekly conference call of the "the three Ps" which involved Executive Director Steven Davis to update on critical items in the Society. I'm glad that Don Steeples has continued this practice as it has given me the opportunity to continue to express opinions during the year and act as a counsel and advisor to those that follow. (It's been interesting to see how well aligned the three of us have been in our discussions, and perhaps more importantly, how much each of us has been prepared to listen to the suggestions of others). I acted as liaison for several other big meetings that the SEG is involved in, including the International Petroleum Technology Conference (IPTC), the NAPE Expo, and the Offshore Technology Conference (OTC), serving as SEG representative to the OTC Board of Directors and the OTC Program Committee. Our inclusion in these meetings contributes significantly to the Society's membership through integrated technology exchange, but also contributes significantly to the Society's bottom line. The volunteers who represent the SEG on these joint society committees should be congratulated and thanked for their efforts.

As I step away from the board of the SEG, I would be remiss if I did not say that it has been an honor to serve, and I have met

many active volunteers who are the heart and soul of the Society. I thank them for giving me the opportunity.

Gary Servos, treasurer

For the second year in a row, this report will not present any of the detailed financial numbers for the year ending 30 June 2014. The audited financials are complete and presented in the annual report to Council. Please take note that they are consolidated financials, including all of the subsidiary corporations, excepting the Foundation. This practice of including the subsidiary corporations is normal in the business world and is required by our auditors and financial reporting standards. The Foundation is a different kind of subsidiary, and its financials will continue to be presented as standalone financial statements.

Again, the SEG Finance Committee was led by Nancy House (chair), John Eastwood, and Anna Shaughnessy (all past treasurers) and complimented with the vast business experience of Peter Annan. As you know, this committee reviews the entire budget process and recommends the annual budget to the Board of Directors when they are satisfied it is complete and realistic. During the year, they review all major financial matters and advise the Board on the relevant and potential financial implications for the Society. This is an extremely important committee, and the members deserve the thanks of the Board and all members of SEG.

The SEG Audit Committee with Edith Miller (chair), Alfred Liaw, and Guillaume Cambois and with Peter Annan as an advisor, has continued an outstanding job of providing oversight for the formal financial audit and perhaps equally or more importantly, oversight to continued evaluation and improvements in risk management, regulatory filings, business planning, internal controls, policy and procedures, and many additional key processes. A heartfelt thanks to this committee.

This report would not be complete without mentioning the accounting operations staff as well as all who contribute to the financial wellbeing of the Society. They perform many of the thankless tasks that keep the Society on track and progressive. Thank you, thank you, thank you to this dedicated group. Progress continues to be made in the budgeting process (something that probably needs to be observed from the inside to truly appreciate). It will continue to improve due to the dedication of the Finance Department staff under the direction of CFO Dana Falletti. Strong progress continues to be made with software and accounting procedures that will permit true project accounting. It is actually working, and we are beginning to receive reports that represent this effort.

I do have a soapbox that I wish to expand on. In my opinion, our Society is very successful. We spend our money wisely on our membership and projects that benefit the Society. Basically,

we spend all of our available discretionary funds on worthwhile projects annually. Thus, if the Board or the Society wanted to initiate a fairly large new program, there are two options—cut or sunset existing programs or don't start the new project until funds are available. My soapbox is that SEG needs to find new sources of sustainable revenue. I see programs such as virtual meetings as a potential source, but that might cut attendance at the Annual Meeting or other presentations. This is something to think about as SEG successfully transitions into the future.

Alfred Liaw, director at large

It has been my great honor to serve as a SEG director at large during 2013–2014. During this period of time, I had the pleasure to work closely with a group of enthusiastic Board of Directors, chair the Committee on Nominations and China Strategy Task Force, and serve as a member of the Audit Committee and the SEG Strategic Task Force. In addition, I had the honor to visit 15 SEG Student Chapters in China and Taiwan by serving as the SEG Board of Directors Special Lecturer. The lecture series was exposed to more than 1,000 geophysicists.

The Committee on Nominations, which consisted of three past-presidents, the Council chair, two directors at large, and representatives from four selected SEG Sections/Associated Societies, was charged with providing a slate of qualified candidates for the positions of president-elect, second vice president, treasurer, directors at large, and district representatives. The committee carefully reviewed the anticipated deficiencies of the technical skills and constituent representations in the future make-up of the SEG Board of Directors. Based on the identified deficiencies, members of the committee established a set of selection criteria to select and rank the most qualified candidates as the recommended candidates.

It was my honor to serve as the first SEG Board of Directors Special Lecturer in 2013–2014. Thanks to the generous support of the SEG Foundation and Anadarko Petroleum Corporation, as well as the logistic support of the SEG China office staff, the Special Lecturer Series allowed me to tour 15 SEG Student Chapters in China and Taiwan, where I delivered a two-hour presentation entitled “SEG: Bridging Technology and People.” The first tour in 2013 visited Student Chapters at China University of Geosciences (Beijing), Institute of Geology and Geophysics of the Chinese Academy of Sciences, Peking University, China University of Petroleum (Beijing), CNPC Research Institute of Petroleum Exploration and Development (RIPED), and China University of Petroleum (East China). The second tour, in October 2013, visited Student Chapters and SEG Sections in Daqing, Hefei, Chengdu, Wuhan, Qingdao, the Sinopec GRI in Nanjing, and the CNOOC Research Center. The lecture series encouraged geophysics students to actively participate in SEG annual meetings, workshops, and forums, where SEG has served as a platform for innovative technology exchanges. Dur-

ing the lecture tour, Student Chapters were also inspired to organize geophysical competitions as well as student conferences among SEG Student Chapters in China. Energizing student members to self-promote regional geophysical activities with the support of SEG is another strategy to grow SEG.

The China Strategy Task Force has been charged to review the financial and operational performance of SEG activity in China, with the primary goal to provide a recommendation to the SEG Board of Directors on the strategy for future SEG operation in China. The Task Force consists of members from the SEG Finance Committee, SEG Global Inc., the SEG China Advisory Committee, and an SEG senior staff member.

Samir Abdelmoaty, director at large

Under the new SEG governance, I had the pleasure to serve as a Board member for two years; this second year was more focused on firming SEG's new mission and finalizing the strategic plan. Through the planning efforts, I participated in the Board task force led by Guillaume Cambois to develop performance metrics that can help in prioritization of SEG programs and activities.

I was assigned as the liaison to the Global Affairs Committee (GAC). GAC started to look for the next move to better engage the global members, and initiating another forum that accommodates all attendees of the Annual Meeting. It is time for a change. I agree with Koya Suto, GAC chairman, that the GAC needs active members from more regions and countries and regular communication among its members to achieve its goals and serve those sections and associated societies.

Growing membership globally with more in the Middle East necessitated moving faster, doing more, and working within the new SEG mission and strategic plan. The Middle East Advisory Committee (MEAC) and the Middle East regional office had another wonderful year during which activities to serve the region continued to increase significantly.

My contribution to the activities in the region included attending the SEG-DGS Near Surface Modeling and Imaging Workshop in Bahrain in March 2014, chaired by Rick Miller and Ralph Bridle and attended by 69 attendees with highly encouraging feedback. That was followed by GEO 2014, where I represented the SEG and held several meeting with leaderships of some of the companies and societies.

Another outstanding event was the Second Middle East Student Symposium held at the Sultan Qabus University (SQU) in Oman and chaired by Said Mahrooqi and Hesham El-Kaliouby. More than 143 attendees, including 107 students and faculty from 11 universities, participated in this event. This year's event presented new initiatives including inviting young professionals

from the region who delivered talks on their “technical journey.” Through this session, students not only benefited from the presentations but also gained a better understanding of what lies ahead for them as they enter the workforce. SQU students won this year’s Middle East Challenge Bowl, sponsored by DGS. We all were very grateful to SQU students and staff for being wonderful hosts.

SEG also planned the Professional Development Forum in Abu Dhabi in September. The forum theme is “Inspire, connect, and propel from Conventional to Unconventional” which reflects SEG commitment to connect, inspire, and propel early-career and global geophysicists regionally and globally. The forum, chaired by Wafik Baydon and Samir Abdelmoaty, focuses on the growing demand and new technologies and the question: Are new geoscientists, both graduates and young professionals, ready for the upcoming challenges and opportunities? It is hoped that through this initiative, we can lay a foundation to enhance alignment between academia and industry in order to ensure the development of competent, high-caliber graduates to meet the growing demands of the industry.

With all those challenges, achievements, and tremendous energy and enthusiasm, my aspiration is to see more close ties and alignment between SEG Global Inc. and the GAC, with the support of Global Relations staff, for the benefit of the global membership and SEG.

Thank you for giving me the opportunity to serve on the new SEG Board and be part of this great success.

Edith Miller, director at large

It has been a pleasure to serve as director at large on the 2013–2014 Board of Directors, the second 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 Audit Committee (chair), Committee on Nominations (vice chair), Membership Committee (Board liaison), and the Women’s Network Committee (Board liaison).

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 approximately 10 years, with certain ac-

tivities being housed under separate subsidiaries (SEG Global, Inc.; SEAM; and Real Estate), for various reasons. It has been a challenge to keep all policies and procedures current among the organizational changes. SEG Chief Financial Officer Dana 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. Financial health of the organization and responsible and efficient use of resources are of fundamental importance to the overall health of SEG.

The Women’s Network Committee (WNC) has expanded its activities significantly this year, with a continued focus on engagement and retention of women in our profession. The WNC published two articles in *The Leading Edge* discussing the results of its survey on dual-career couples and women. The annual Women’s Network Breakfast at the SEG Annual Meeting is a successful event that has turned into a tradition already; its fourth installment will be held at the 2014 Annual Meeting in Denver. The expansion and internationalization of the WNC’s activities beyond the Annual Meeting has included participation in a multi-society event in the United States and in an SEG event in the Middle East.

The WNC is not the only committee with a focus on retention. The Membership Committee is observing a decline in SEG membership numbers and is committed to finding ways to reverse this trend by continuing to develop and implement strategies for retaining current members and recruiting new members. One of the observations is that Active Members seem to stick around. To encourage Associate Members to apply for Active Membership, the Membership Committee has achieved an amendment of the SEG Bylaws that removes the requirement to submit references, in favor of a stipulation that an applicant must officially declare (self-certify) that they meet the eligibility criteria for admission into Active Membership.

One of the benefits of Active Membership is the opportunity to be nominated for a position on the Board, or on the SEG Council as District Representative. The Committee on Nominations is tasked with finding these candidates. The committee consists of former and current Board members as well as several representatives to the SEG Council. The governing bodies of the Society should consist of a diverse group of skilled, motivated SEG members. Diversity is important; more diverse teams suffer less from group bias, thus promoting better decision-making. Therefore it is especially helpful to receive nominee recommendations from the diverse general membership, as well as guidance from the current Board regarding the desired profile of the nominees. Having served as vice chair on the committee this year, I will be serving as chair in 2014–2015 and will be welcoming your input.

Chris Krohn, director at large

This is the second year of my three-year tenure on the SEG Board. Progress has been made, but there is still work to do. I chaired a task force to further our new strategic priority of connecting and inspiring early-career and global geophysicists. I continue to concentrate on workshops, an area of greatly increased activity and new opportunities. This year, some of the board and staff will focus on better processes for resource allocation, which will utilize clear performance metrics to deliver continued innovation and evolution of SEG products and services.

At the Denver meeting, we will kick off a new young professionals (YP) program and standing committee. Its purpose will be to assist former student members in transition to professional life who consider SEG to be their home society. This will be a follow-up to our successful student programs. I envision YP-themed events at conferences, greater YP participation in SEG committees, a mentoring program, and increased representation of this vibrant group of members within the SEG.

In addition to the YP program, other SEG activities also will focus on better meeting the needs of early-career and global geophysicists. This includes marketing that clearly enunciates the benefits of SEG membership and involvement, more affordable basic continuing-education courses, ability to attend events and committee meetings remotely via the Web, online content to enable volunteering, and improved SEG Wiki and other Web resources. SEG staff continues to advance our capabilities in this area; new capabilities for virtual meeting attendance are expected for our Annual Meeting in Denver.

Activity in the workshop arena continues to escalate. Workshops and intersociety events provide revenue for SEG, but more importantly they facilitate interaction between members with common technical interests. I am the Board liaison for the Research Committee and the Meetings Review and Planning Committee (MRPC). The MRPC committee under Mark Houston does its best to coordinate the many SEG-supported events worldwide. The Research Committee has stepped up to the need to organize the new SEG/EAGE Forum. In addition to the committee activities, I am working with staff to develop better guidelines and procedures that will enable new groups to propose and organize successful workshops.

Much work still needs to be done in the area of resource allocation. Our budget does not permit us to do everything we want; it is important to set priorities. Each year, the Board approves a budget but does not prioritize various programs that go into the budget. Dennis Cooke is leading a task force to develop processes that allow us to better prioritize and to sunset programs to make room for new. The goal is a society that continues to

innovate and evolve its products using the latest technology. In a complimentary effort, Guillaume Cambois chairs a task force to develop clear performance metrics that enable better evaluation of SEG programs. With all this activity and the hard work of staff, I am excited about the progress that has been made and the potential for positive change in the future in furthering our mission: “Connecting, inspiring, and propelling the people and science of geophysics.”

Guillaume Cambois, director at large

I served as vice president on the 2007–2008 SEG Executive Committee and I am now finishing the first of three years as director at large on the newly minted SEG Board. My first impression is that the new governance structure is delivering on its promises. I joined an experienced and well-functioning Board whereas in the past it took us a while to get going and run efficient meetings. I received reasoned explanations for past decisions, when in the old structure we sometimes felt helpless, inheriting projects from past boards and passing them on to the next team without proper context or historical perspective. Finally, I found it extremely beneficial to have the Council chair sit on the board. Mike Graul has been very effective in liaising with the Council and the two bodies (Council and Board) are now collaborating a lot better than in the past.

With more members, the Board can better fulfill its fiduciary duties. We now have proper finance and audit committees (I joined the latter). There are quite a few pressing issues that require our oversight. Chief among them are the legal structure of SEG and its subsidiaries, the revamping of SEG’s accounting system, and the new building, which represents a massive investment given the size of our organization. Our task is made much easier thanks to the always helpful and dedicated staff in Tulsa. They diligently and patiently explain the intricacies of U.S. tax laws and manage to make sense of our financial data!

I am the Board liaison for the Earth Model and Technical Standards standing committees. Coincidentally, these two committees are collaborating on the very exciting and challenging project of defining interpretation data standards. I also have embarked on a crusade with the SEG Foundation to offer tax incentives to non-U.S. residents (see President’s Page in the August 2014 *TLE* issue). With more than half of SEG members currently residing outside the United States, I believe it is time for the Foundation to start cultivating international donors. The Foundation can legitimately expect members from all over the world to contribute funds, and members can legitimately expect the Foundation to provide them with tax incentives. Hopefully, with the help of Paul Allison from the SEG Foundation, I will be able to report progress next year.

Gustavo Carstens, director at large

This has been the first year of my three-year term as director at large. In the past, I have been involved in many SEG activities and am still a member of several committees, but this year on the Board has been an amazing experience. It gave me the opportunity to understand the real dimensions of the Society. The learning process is long, and I'm gaining confidence after each Board meeting, mainly due to great support from the excellent group of people who are members of the Board and the inestimable cooperation from the SEG staff.

During this year, I was focused on developing more stable and fruitful relationships with members and local associations in the Latin American region. This region has always had great input to SEG but has been in some ways underrepresented. My predecessor in this position, Elsa Jaimes, put a lot of effort into changing this situation, despite the short time she had on the Board (one year), and I'll try to continue with what she started. There is a lot of activity that the local associations are performing in each country, and we need to broadcast this to the rest of SEG.

The number of members is slowly growing in the region, but what is especially encouraging is that the number of student chapters and student activities is growing at a faster pace. That is a sign of a better future, and I am committed to furthering this trend in the next couple of years as director at large.

In this position I act as the liaison with some SEG committees. I commend the wonderful work that these volunteers carry on all the time. This was my first relationship with the Gravity and Magnetics Committee. I found the committee very active and functioning well. I helped the committee get more support from the SEG staff in order to improve communication among the constituents.

I'm also the liaison with a brand new committee that has been established this year, the Health, Safety, Security, and Environment Committee. The objectives are well explained in the specific report that its chair, Ian Threadgold, is presenting in this same report, but I want to point out here the excellent job that Ian has done so far in gathering a group of people with tremendous experience in the subject and exuding enthusiasm for the task with which they are charged. I'm happy to have the opportunity to be part of this new development.

I still have a couple of years in front of me as part of the Board. I have high expectations about what can be done during this time.

Evert Slob, editor

This report summarizes the main developments in GEOPHYSICS from July 2013 through June 2014, the first year of the work of the current editorial board. The editorial board includes assistant, associate, special, SWAT, and department editors. Guest editors associated with special sections and the SEG Publications Department staff also provide editorial leadership. Most of the previous editors have returned to the new editorial board, providing historical context and experience to the board. In addition 16 new associate editors, who bring fresh views and new energy to the peer-review process, have joined. All associate editors are working hard to handle manuscripts within the deadlines of the established peer-review process. James Rickett continued as assistant editor for GEOPHYSICS Letters papers, and Ivan Vasconcelos continued as assistant editor for special sections. Jeffrey Shragge and Valentina Socco agreed to serve as new assistant editors, and Mauricio Sacchi continued as assistant editor as well. Additionally, I have added seven special editors during the past year and the team of 27 special editors ensures that every paper undergoes a rigorous final proofreading as well. Our four SWAT editors agreed to continue for the coming two years as well. I thank them all for their energy and dedication.

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 format and 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, is bound with other papers in a GEOPHYSICS issue. The special sections have proven useful in providing timely and comprehensive overviews of the state of the art of specific geophysics subject areas and in fostering wider industry participation. The following is an overview of recently published and planned supplements and special sections.

Studies presented at the 15th International Workshop on Seismic. Anisotropy last year served as a good starting point to organize the **Seismic anisotropy in oil and gas exploration and development** special section. The section features 13 papers from academic and industry contributors that cover a wide range of topics, namely rock physics models for anisotropic media, anisotropy of fluid-filled rocks, stress-induced anisotropy, frequency-dependent Backus upscaling for anisotropic media, traveltimes approximations in anisotropic media, and imaging, tomography, and full-waveform inversion of multicomponent PP and PS reflection data in anisotropic media. This special

section was published in September–October 2013 and edited by Abdulfattah Aldajani, Dirk Gajewski, Andrey Bakulin, and Claudia Vanelle.

The **Advances in finite-frequency imaging and inversion** special section was initiated to document recent developments that will help overcome previous assumptions on linearity and infinite-frequency bandwidth. The special section includes 12 papers on finite-frequency imaging and inversion covering modeling for finite-frequency imaging, advances to data-domain full-waveform inversion, image-domain methods for finite-frequency inversion, and novel data-driven approaches to retrieve and image the nonlinear responses of the earth's subsurface. It was published in the May–June 2014 issue and was edited by Andreas Fichtner, René-Édouard Plessix, Clement Fleury, and Biondo Biondi.

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, which cannot be inferred from velocity or amplitude-variation-with-offset (AVO) analysis, possibly could be extracted from attenuation analysis. Despite the many potential benefits of attenuation analysis, it has yet to become part of routine reservoir characterization primarily for 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 titled **Attenuation: Advances in analysis and estimation** is being prepared for publication in the September–October 2014 issue. The guest editors are Jyoti Bhura, 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, electromagnetic, and gravity and magnetic. For these reasons, a special section titled **Advances in time-lapse geophysics** is being finalized by guest editors David Lumley, Martin Landrø, Paul Hatchell, Mark Thompson, Leo Eisner, Yaoguo Li, and Matthew Saul; it is scheduled for publication in January–February 2015.

The SEG Board of Directors has decided to increase organized activities in near-surface geophysics. As a result, an increased number of special sections on near-surface geophysics topics in *GEOPHYSICS* is chosen. The idea is to activate the global near-surface geophysics community in group-publishing their research results in topical special sections. Rick Miller is actively

pursuing timely topics of interest to large parts of the near-surface geophysics community. He works closely with Ivan Vasconcelos and me. As a result a special section on **Near-surface geophysics in the dynamic coastal environment: Crossing the land/sea interface** was organized. John Goff and Jeff Paine are the guest editors. The special section is scheduled for publication in May–June 2015.

Other near-surface geophysics special sections are being discussed for preparation on surface-wave analysis and on cryosphere geophysics.

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 second winner of the award was Peter Cary of Arcis Seismic Solutions. Peter has consistently provided high-quality reviews; he returned 10 recommendations in the award-consideration period with an average review time of 19 days. Any editor would love to get a high-quality review in 19 days, and consistently! Associate Editor Danilo Velis stated that Cary's reviews "are very thorough, especially from the conceptual point of view, showing a deep understanding of the subject at hand. Clearly, Cary devotes enough time to thoroughly read the manuscript and make valuable and appropriate comments that point to the heart of the paper's main idea, providing key opinions about what the manuscript has to offer to the geophysics community." Such reviews are very helpful for authors and editors. Congratulations, Peter, for the job well done, and hopefully you will maintain this pace and effort in the future.

GEOPHYSICS Digital Access. The number of *GEOPHYSICS* full-text article downloads for the July 2013 through June 2014 time period was 357,599 from the SEG Digital Library and just over 93,000 from GeoScienceWorld. There is a decline in downloads from GeoScienceWorld because downloading by bots was better controlled. The large number of downloads is in contrast with approximately 2000 individual and institutional subscribers for hard-copy journal delivery. Recognizing this shifting preference for digital delivery, new semantic-enrichment and discovery capabilities are being applied to the journal online.

Statistics. The number of papers submitted to *GEOPHYSICS* has increased from 427 (1 July 2008 through 30 June 2009) via 411 (1 July 2009 through 30 June 2010), 441 (1 July 2010 through 30 June 2011), 514 (1 July 2011 through 30 June 2012), and 524 (1 July 2012 through 30 June 2013). Last year we had 521 submissions.

The recent substantial uptick is due mostly to increased international submissions and submissions based on recent SEG abstracts.

Approximately 71% of the contributions last year came from non-U.S.-based authors, while China-based authors contributed just over 23% of the papers. 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 were substantially reduced last year, mostly because of a vendor change and the resulting platform efficiencies. The average time required for first review was 68 days, slightly above last year's performance (Table 3). The average time between acceptance and publication was 72 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 in those years. According to the Science Edition of Thomson Reuters' Journal Citation Reports released in July 2014, GEOPHYSICS' impact factor for 2013 was 1.759, the highest ever in the journal's history. GEOPHYSICS' impact factor has increased steadily during the past several years as the journal has sharply reduced its average time from submission to publication from nearly two years to approximately 10 months. The impact factors were 1.228 in 2006, 1.167 in 2007, 1.349 in 2008, 1.662 in 2009, 1.404 in 2010, 1.418 in 2011, and 1.723 in 2012. Table 5 presents the impact factors for GEOPHYSICS from 1975 to 2013.

Table 1. Origin of papers submitted for publication in GEOPHYSICS by country 1 July 2013—30 June 2014.

USA	152
China	122
Canada.....	25
Norway	24
Australia.....	23
Brazil.....	20
Saudi Arabia.....	17
United Kingdom.....	16
Germany.....	13
Netherlands.....	13
India	10
France	8
Iran, Islamic Republic of.....	8
Switzerland.....	7
Italy.....	5
Japan.....	5
Korea, Republic of.....	4
Russian Federation	4

Sweden.....	4
Turkey.....	4
Denmark.....	3
Egypt	3
Nigeria.....	2
Romania.....	2
South Africa	2
Ukraine.....	2
Argentina	1
Austria.....	1
Czech Republic	1
Finland.....	1
Greece	1
Hong Kong	1
Israel	1
Mexico.....	1
Portugal.....	1
Spain.....	1
Venezuela	1
Vietnam	1
Total	521

Table 2. Origin of papers submitted for publication in GEOPHYSICS by employer.

Universities.....	382
Research Institutes.....	53
Oil Companies	30
Governments	24
Service Companies and Manufacturers	20
Consultants	6
Mining Companies	3
Retired	3
Total	521

Table 3. Manuscript-handling statistics.

Year submitted	Average number of days
1 July–30 June	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	1991.....	1.166
2008–09.....	55	1992.....	0.697
2009–10.....	66	1993.....	0.919
2010–11.....	61	1994.....	0.824
2011–12.....	63	1995.....	0.877
2012–13.....	61	1996.....	0.867
*2013–14.....	68	1997.....	0.824

* 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	2002.....	0.834
1992–93.....	181	*2003.....	0.589
1993–94.....	178	2004.....	1.087
1994–95.....	210	2005.....	1.030
1995–97.....	N/A	2006.....	1.228
1997–98.....	180	2007.....	1.167
1998–99.....	177	2008.....	1.349
1999–00.....	202	2009.....	1.662
2000–01.....	208	2010.....	1.404
2001–02.....	213	2011.....	1.418
2002–03.....	195	2012.....	1.723
2003–04.....	161	2013.....	1.759
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		

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

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

Reports of the Standing Committee Chairs

AAPG-SEG Cooperation

William N. (Bill) Barkhouse, chair

Two thousand fourteen was the third straight year of the AAPG-SEG Cooperation Committee Leadership Summit. Like earlier meetings, it was held in February during Winter NAPE 2014 (North American Prospect Expo) week in Houston, Texas. Continuing the rotational philosophy, AAPG hosted Summit III.

Summit III continued the emphasis from Summit II to focus on areas in which actionable consensus could allow collaboration to achieve significant results within a year. Summit III took a laser focus on joint international meetings. Both societies conceptually committed to conduct two joint international conferences each year; one operated by AAPG and one operated by SEG with the initial joint conference being AAPG's 2015 ICE (International Conference and Exposition) in Melbourne, Australia in fall 2015. The first SEG-operated international conference would be in spring 2016, with the probable initial location being in Spain. Staff and leadership from both AAPG and SEG have been working to finalize an MOA (Memorandum of Agreement) such that respective Boards could take formal action for approvals during their summer 2014 Board meetings. Because AAPG's ICE conferences have been established in the marketplace for years, the MOA does outline how SEG will buy in to that existing conference.

For the Summit III meeting and associated society Board meetings, staff from AAPG and SEG had updated the extensive 2013 "Collaborative Activity Table" being used to track cooperative opportunities, recommending to the respective Boards that several items be reprioritized in the list to better focus on a few tasks with the highest potential. It should be noted that cooperative AAPG-SEG activity continues to occur in many areas—student programs, publications, selected meetings, etc., with the most recent two significant joint collaborations to date being the joint AAPG-SEG Middle East office and the successful launching of the *Interpretation* journal—a joint AAPG-SEG collaboration.

Advisory

Bob Hardage, 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 Steeples.

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 that 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 whereas AGU primarily supports 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 per year, of which two meetings are in-person meetings at the major annual meetings of each organization. The members of the 2013–2014 ASCC are:

Remke Van Dam (Michigan State University) SEG co-chair; George Tsofiias (University of Kansas) AGU co-chair; Ludmila Adam (University of Auckland); Richard J. Blakely (USGS); John H. Bradford (Boise State University); John A. Hole (Virginia Tech); David E. Lumley (University of Western Australia); Louise Pellerin (Green Engineering); and Kamini Singha (Colorado School of Mines). SEG support was provided by Laurie A. Whitesell (SEG staff liaison) and Dennis Cooke (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. A third joint workshop titled “Advances in Active/Passive Full Wavefield Seismic Imaging and Monitoring Techniques” was held in July. In all these meetings, SEG was the lead organizer.

The 2015 joint workshop will have AGU for the first time as lead organizer. The proposed title of this meeting, which is to take place in late summer in Keystone, Colorado, is “Potential-field and Electromagnetic Methods Applied to Basin Studies.” This workshop will provide exchange of concepts and ideas on the development and integrated application of potential-field and electromagnetic methods to defining the structure and tectonics, natural resources, and hazards associated with active and relic basins. Ben Drenth of the USGS and Michal Ruder of Wintermoon, Geotechnologies are AGU and SEG co-chairs, respectively. A meeting agreement has been signed.

To follow the rotation mechanism that is part of the signed MOU between both organizations, the lead for the 2016 meeting will be the SEG. The committee has discussed several potential topics for future meetings, including, agricultural geophysics, NMR, direct push technologies, visualization, and multi-channel GPR.

The ASCC has the goal to hold joint sessions at the major annual meetings of each organization. The standing Special Session on hydrogeophysics at the SEG Annual Meeting was held for the second time in 2013 and will again be held this year, with Kristina Keating (Rutgers Univ.) as lead convener in both instances. At the 2013 AGU Fall Meeting, SEG NS Honorary Lecturer Valentina Socco spoke during the Near-Surface Focus Group luncheon. Also, SEG was listed as the co-sponsor in two sessions. At the 2014 AGU Fall Meeting, SEG is mentioned as co-sponsor of the sessions “Near Surface Seismic Methods for Geohazard Assessment,” in which SEG NS Honorary Lecturer Koichi Hayashi is the invited speaker, and “Advances in Exploration Geophysics” is the topic.

The ASCC has discussed various avenues for improved collaboration in student programs of which SEG has many and AGU fewer. Student program coordinators at both organizations (Elsa Velasco at SEG and Kara Smedley at AGU) have joined us on our regular conference calls and face-to-face meetings to discuss progress in this area.

Annual Meeting Steering

Bud Pope, chair

The Steering Committee for the 2014 SEG Annual Meeting held its first meeting in December 2013 and began to

accrete members from that point on. The first organizational meeting was 10–11 February 2014 in Denver, Colorado. Overall planning was well on its way, with a subsequent 28–29 April meeting and a final meeting scheduled to take place 24–25 July. In the April meeting, we defined our theme, CONNECT. INSPIRE. PROPEL. CLIMB. The technical papers had been reviewed and were in the selection process, and the conference was taking final form. The July Steering Committee meeting provided the opportunity for SEG staff to walk through the Convention Center with the Committee and verify the location of all the Annual Meeting activities.

Brad Birkelo, the Technical Program chairman, and his band of intrepid reviewers evaluated 1634 expanded abstract submissions, which is the highest number on record. This year will feature the largest technical program ever assembled, with nearly 1000 presentations. Birkelo’s committee has been working overtime organizing the oral, poster, and oral discussion/e-poster sessions. The posters will be located on the second level foyer near the oral session and electronic poster session rooms. Twenty-one workshops will follow the technical sessions beginning Thursday afternoon. As per usual, the Continuing Education courses will be held the Saturday and Sunday before the conference begins.

The SEG app for smartphones was expanded in 2013 to not only allow the technical papers and SEG events to be displayed, but also to include exhibitor presentation schedules as well. For 2014, we will integrate the interactive exhibit floor plan from the app into large way-finder screens that will also be interactive.

As reported by Sue Jackson, Exhibition chair, close to 400 commercial company and university booths will be in the exhibition hall. Jackson has worked to elevate the experience of exhibitors and attendees alike by working with SEG staff to introduce a Virtual Trade Show and to expand the High Performance Computing Area that was introduced on a small scale in 2013.

Sponsorship Chair Cambrey Cammon has done a magnificent job in contacting companies to help us put support and expand the programs for the event. By our July meeting, we will have surpassed our goal of \$616,000 and with the time remaining should continue to draw additional sponsors.

The Applied Science Program, headed by Cericia Martinez from the Colorado School of Mines, promises to be one of the best programs ever put together in this event. This year’s program will feature a presentation by Robert Reynolds titled “Flourishing in the Anthropocene: The science challenges.” The address will last approximately one hour, and will be an exciting experience for all in attendance.

Rutt Bridges is working around the clock on the SEG Forum, pursuing some notable speakers to address our convention in

matters of oil and gas. This year's opening session will feature a state-of-the-Society address by SEG President, Don Steeples, University of Kansas, and then transition to the Forum topic of "Threats and Opportunities: Disruptive Innovation in Oil and Gas."

Jason Criss, the Global Affairs chair, has put together an International Reception with Pacific/Asia flavor at the Student Pavilion on the Tuesday afternoon of the convention, complete with Polynesian music and dance. In addition, he has helped organized committee luncheons and a special technical session as well.

The Wednesday Night Wrap-Up Party: A Night at the Museum, chaired by Ray Vogler, will be held at the Denver Museum of Nature & Science, where Colorado's natural beauty and history are on full display.

The Guest/Spouse Program, chaired by Marivic Brook, promises an exciting and entertaining series of events. The program will consist of an intriguing seminar schedule in the Guest/Spouse suite, and great entertainment at the Spouse Program Luncheon. Optional tours also are available, including opportunities for high tea at a historic Denver landmark, a trip to beautiful rock views followed by a brewery tour, a hiking trip into the foothills of the Rockies, and a behind-the-scenes tour of the Denver Performing Arts Complex.

Stuart Wright, the Volunteer chair, has begun to gather the 125 volunteers needed for the technical sessions and other events as of the date of this report. The opportunities and application to participate were released in late May and will be providing the base information for SEG to move forward with the much-needed volunteer database.

The annual Golf Tournament will be held at Arrowhead Golf Club. The course hosts thick rough, plentiful bunkers, and water while presenting a challenging yet fair round of golf to the average player. The tournament will be held on Saturday morning, 25 October and is organized by Golf Chair Damon Parker.

Annual Meeting Technical Program

Brad Birkelo, chair

The Technical Program Committee for the Denver 2014 SEG Annual Meeting began organizing shortly after the 2013 Annual Meeting in Houston. Expanded abstracts were submitted in 24 technical topics and six special sessions, including the focus region of Asia Pacific. A record 1634 abstracts were submitted to the Annual Meeting program that contains 984 presentation slots. This led to a 40% rejection rate for abstracts, which is much higher than normal for the Annual Meeting. The problem would have been worse had 12 additional sessions (96 presentation slots) not been added after the volume of submissions became clear.

The Annual Meeting Technical Program also includes the post-convention workshops. For Denver, 21 postconvention workshops are planned, giving Annual Meeting attendees the opportunity to further enrich their professional development on a variety of geophysical topics.

The problem of high rejection rates is likely to continue unless SEG expands the technical program beyond the current number of presentation slots and types. A couple of initiatives were explored to help with this problem although none was able to be implemented in time for the 2014 Annual Meeting. The first initiative was to create a fourth category of presentations called on-demand presentations. Unlike the current oral presentations, oral discussions, and poster presentations, these papers would be prerecorded and presented via the Web at any time slot desired by the viewer. Without a limitation on presentation slots, all abstracts that pass review would be able to be published. Implementation of this new type of presentation would require a fundamental change in our review process to allow for determining all abstracts that are worthy of publishing and then selecting the smaller number that will be presented live at the meeting.

A minor but significant change was made from "e-poster" to "oral discussion/e-poster." This name was changed to better reflect the style of presentation as it was currently being implemented by SEG. A small group within the Technical Program Committee is currently exploring standards for implementing oral discussions/e-posters in a way consistent with the format as used by other scientific and professional societies.

I would like to acknowledge and thank the committee members for their hard work putting the technical program together and the work of the staff, especially Kristi Wann, for her efforts in organizing the Technical Program.

Audit

Edith Miller, chair

The Audit Committee consists of three non-executive members of the SEG Board of Directors. The members of the 2013–2014 Audit Committee were Alfred Liaw, Guillaume Cambois, and Edith Miller. Board liaison was Treasurer Gary Servos, and staff liaison was SEG Chief Financial Officer Dana Falletti. In addition, the committee received regular guidance from Peter Annan, 2012–2013 Audit Committee chair and member of the Finance Committee. It was the second year that the Audit Committee existed as a Board committee, and while we have made headway establishing the Committee's processes, it is a work in progress.

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 approximately 10 years, with certain activities being housed under separate subsidiaries (Global, SEAM, and Real Estate), for various reasons. 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:

- advising on and overseeing the revision of SEG's Delegation of Authority procedures as used by SEG staff.
- review of SEG's annual audit. The fiscal year 2013 audit was completed in October 2013—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 post-audit 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.
- overseeing the finance process improvements that are being implemented, which include revision of written policies and procedures, implementation of a document management system, and various other indispensable upgrades and improvements.
- review of SEG's revised Office of Foreign Assets Control (OFAC) policy. Ever gaining relevance in the light of SEG's globalization, it is important that these policy and procedures correctly reflect OFAC regulations, as there is a significant financial risk attached. The new policy has undergone legal review, and is much more clear and a lot less cumbersome than the policy previously in place.
- advising on and overseeing the implementation of a more formal risk management system—a key focus of the Audit Committee. Risk management is an internal (staff) function, but significant up-front effort is needed to put a system into place. Therefore an external firm is being engaged to initialize a risk management tool. The Audit Committee will see to internalization of the process.

Bylaws

Alison Small, chair

The Bylaws Committee worked with the Membership Committee and Board of Directors to rework the changes to the Membership Bylaws presented to the Council at the 2013 Annual Meeting. The resulting changes to the Membership Bylaws removed the reference requirement for Active Membership and clarified Active Membership requirements to reflect the intent

of the original Bylaws with unambiguous language. The Bylaws changes were submitted to the Board of Directors and Council for approval and then to the Active Membership for a vote.

A motion was received from the Board of Directors to evaluate restructuring the Council. No action has been taken on this item pending further discussion within the Council and a possible ad hoc committee.

No other significant business was undertaken by the Committee this year. The Committee will continue to work to refine the Bylaws as the need arises.

Committee on University and Student Programs

Elsa Jaimes, chair

The main tasks of the Committee on University and Student Programs (CUSP), are focused on generating activities that support students, universities, and industry in developing a strong global pool of graduating students ready to meet the applied geophysics needs of society. The current committee consists of 13 students, five faculty, and 15 industry members, which is a balanced representation of the three main constituents of the committee.

Among the main activities of CUSP are those related to Student Chapters. Every chapter should produce an Activity Report, which serves to feed the Student Chapter Excellence Program, created in 2012. This program is the basis to establish a hierarchy of chapter recognition (Base, Ridge, and Summit levels) and the "Best Chapter" award. Currently, SEG has 324 Student Chapters in 66 countries. To carry out the important task of evaluating those Activity Reports, the CUSP has the dedication of the Student Chapter subcommittee, who are doing an amazing work. For the time in which this report is being written, assessments will be done and, in consequence, the ranking of the chapters ready. The results of that ranking are going to be announced during the 2014 SEG Annual Meeting in Denver. Near to 30% of the chapters are not sending their activity reports. Due to this situation, the CUSP is working with the Student Membership subcommittee on the list of chapters that have not responded, for trying to encourage them to update their contact information, become active again, and submit their reports. CUSP members living in regions where those chapters did not send their reports are in charge of doing this task. Thus, all committee members are committed to serving student chapters and make it attractive for them to remain active in our geophysical Society.

The SEG Foundation has given us access to some funds for a current project where the Faculty Advisors are working with the students' chapters. During the Faculty Advisors' workshop,

they will produce a paper as to how this program would work. The importance of this initiative is significant considering the integrated work between the faculty and the Student Chapters. This benefit will be launched at the Annual Meeting. In addition, Faculty Advisors will have a relevant space dedicated to them in the newsletter to publish an abstract of their work as long as they are working with their students.

Our international presence continues to grow with the increased number of Challenge Bowl competitions. We have 13 teams for the Finals at the 2014 Denver Annual Meeting with representations from Africa, Canada, China, East Africa, Europe, Gulf Coast, India, Italy, Latin America, Middle East, Rocky Mountains (USA), and South Africa. The Challenge Bowl subcommittee is currently reviewing the rules and procedures to make some adjustments and become them more formal.

Student expos continue to grow as well. The International Geosciences Student Conference (IGSC), created in 2012, is getting more popular. This year in May, we had the Second African Geosciences Student Conference in Ghana and in August, the Second Latin-American Geosciences Student Conference will take place in Mexico. The locations for 2015 are being planned but IGSCs in Russia and Brazil are already scheduled.

The CUSP continues to support important ongoing programs such as the Student Leadership Symposium (SLS) sponsored by Chevron and the Student Education Program (SEP) sponsored by ExxonMobil. These programs and leadership seminar that manages the SEG USP are some of the great benefits that have student chapters at your fingertips.

Last but not least, one of the main concerns is engaging the next generation of geophysicists with the SEG. During the last years, CUSP and the USP were discussing alternatives to address this subject. The idea was to create a soft skills program focused in young professionals and create a truly engaging environment for them. This initiative is now a reality and to everyone's satisfaction, thanks to the action and commitment of many people from the USP, the CUSP, and the Board of Directors, the Early Career Program was approved. There is a lot of work ahead but also great satisfaction and expectations about this program.

The committee does not want to finish this report without acknowledge the exceptional job of the staff of SEG's University and Student Programs Department in realizing and executing all the activities. Their dedication, professionalism, and enthusiasm are inspiring. Thank you!

Continuing Education

Deyan Draganov, 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 2013–2014

During the 2013 SEG Annual Meeting in Houston, we gave 18 courses of which five were new. The total number of attendees was 340, which was very good. SEG organized two educational events in 2013 consisting of one course each. The first was held in Abu Dhabi, UAE, in October and had a total of 31 attendees. The second was held in November in Dhahran, Saudi Arabia, and had 51 attendees. By June 2014, SEG organized three more educational events. The first event consisted of one course. It was held during the 2014 GEO Bahrain conference and was attended by 24 people. Another event, consisting of four courses, was held in February in Houston. The event had in total 39 attendees.

The third event was held in London in May. This was the first time that SEG organized an educational event in Europe. Four courses were scheduled, of which three were held. The total attendance of the three courses was 19. One of the courses had to be cancelled, as the instructor was not given a visa to travel to the United Kingdom. The course had 16 registrations. A few of the registrants opted to attend one of the three other courses, while the others were given refunds. Overall, the London courses' attendees were pleased that SEG started giving courses in Europe, as the location is closer to their working quarters and the travel was easier. Seven contract courses were held from September 2013 through June 2014. These were organized for ZADCO (UAE), BP (UK), KOC (Kuwait), Rock Solid Images (USA), two courses for Saudi Aramco (Saudi Arabia), and BGP (China).

New Courses

Since June 2013, five 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:

- Processing and Inversion of Airborne Gravity Gradiometry Data (Yaoguo Li and Cericia Martinez)
- Seismic Methods for Unconventional Resources (Yuriy Tyapkin)
- Structural Geology in Seismic Interpretation (Shankar Mitra)
- Basics of Clastic Reservoir Characterization (Roger Slatt)
- Exploration Rock Physics and Seismic Reservoir Prediction (Per Avseth and Tor Arne Johansen)
- Appraising and Modeling the Near-Surface for Statics Corrections (Ralph Bridle)

Four of the courses are scheduled to be taught at the 2014 SEG Annual Meeting in Denver. During the 2014 SEG Annual Meeting in Denver, a field trip also will be organized. This is the first time for the CE to organize such an event. Because of this, the

field trip is in cooperation with the American Association of Petroleum Geologists (AAPG), which had it “off the shelf.”

SEG On Demand

SEG On Demand is the new name for eLearning, which was the name used in previous reports. Since August 2011, SEG has offered live, online seminars of 90-minute virtual courses. These courses have proven successful. Since June 2013, three virtual courses were held—in October and November 2013, and in February 2014. The latter reached record attendance. The second part of this course will be held in September 2014. More virtual courses are scheduled throughout the remainder of 2014. All virtual courses also are available for online purchase.

Last year, SEG offered 32 International Human Resources Development Corporation (IHRDC) courses in the field of petroleum geophysics. In addition to these courses, SEG added three new geophysics courses, bringing the total number of offerings to 35. Realizing that there is a growing need for diverse course offerings, the Professional Development department expanded its online library of IHRDC courses to include 43 petroleum geology courses, 42 petroleum-engineering courses, 15 formation evaluation courses, and 39 action courses. With these new courses, SEG’s online library now offers in total 174 courses.

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!

Distinguished Instructor Short Course

Subcommittee

Ulrich Zimmer, chair

The 2013 Distinguished Instructor Short Course (DISC) instructor was David Johnston from ExxonMobil. Johnston’s DISC was very well received in all locations. His DISC lecture topic was “*Making a Difference with 4D: Practical Applications of Time-Lapse Seismic Data.*” The DISC was held in 31 locations reaching approximately 1,435 professionals and students.

The 2014 DISC instructor is Shawn Maxwell from IMaGE. He will be visiting 30 locations worldwide and has had a successful start. Johnston’s DISC lecture topic is “*Microseismic Imaging of Hydraulic Fracturing: Improved Engineering of Unconventional Shale Reservoirs.*”

Hydraulic fracture stimulations are critical for the development of unconventional reservoirs, and the growing interest in shale reservoirs has resulted in the rapid expansion of microseismic fracture imaging. During high-pressure fluid injections of a hydraulic fracture treatment, microseismic emissions occur as cracks form and interact with preexisting fractures. Images of

the microseismic locations can be used to interpret hydraulic fracture geometries, including the direction, dimensions, and complexity resulting from networks of fractures in different orientations. The course will provide an overview of microseismic theory and practical application: from acquisition and survey design, processing through to interpretation. The emphasis will be on practical issues associated with acquisition of high-quality microseismic data, including potential pitfalls and quality control steps. Actual case studies will be used to demonstrate engineering benefits and improved production through the use of microseismic.

The 2015 DISC instructor will be Oz Yilmaz, and his topic will be “*Engineering Seismology: With Applications to Geotechnical Engineering.*” His manuscript is under preparation. The DISC committee has approved locations for Yilmaz’s tour, and we are working closely with the instructor to target these key locations.

The 2016 DISC instructor will be James Gaiser, and the topic will be “*3C Seismic and VSP.*”

The committee is currently working on 2017 DISC nominations.

Development and Production

Martin Terrell, chair

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

Approximately 30 members attended the D & P Committee meeting at the 2013 Annual Meeting. Martin Terrell remained the chairman beginning his second year of the two-year term. Discussion focused on the 2014 and 2015 D & P Forum locations and topics, and the upcoming SEAM modeling addressing time-lapse reservoir analysis. The D & P Luncheon was attended by approximately 50 participants and featured Martin Landrø from the Norwegian University of Science and Technology who discussed recent advances in marine seismic acquisition. The half-day workshop after the Annual Meeting was attended by 60 participants who heard the top presentations from the D & P Forum held earlier in the year in Krakow, Poland on the topic of unconventional resources.

The annual D & P Forum was held in Santa Rosa, California and addressed “Reservoir Characterization and Monitoring with Advanced Geophysical Technology.” Sixty people from around the globe participated in oral and poster presentations and informal discussions on many of the latest emerging technologies. The Forum brought together people from industry and

academia, and experts in seismic, potential fields, and borehole methods sparking many interesting and exciting discussions. The top presentations and posters will be selected to present at a workshop during the upcoming Annual Meeting in Denver.

The upcoming D & P Committee luncheon will be held at the Annual Meeting and will feature Malcolm Lansley discussing broadband seismic acquisition technology. The Annual Meeting will also feature the annual committee meeting and Best of the D & P Forum workshop.

Distinguished Lecture

Louise Pellerin, chair

The Distinguished Lecture and Honorary Lecture tours are two of the highest-profile programs in SEG, reaching out to thousands of members globally. 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 Distinguished and Honorary Lecturers are outstanding communicators of ideas and concepts, bringing professionals and students together with SEG and serving as a means to recruit new members.

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

- Gerard T. Schuster, 2013 Spring DL, spoke on “*Seismic interferometry and beyond: Harvesting signal from coherent noise*” in 50 locations, including 21 universities, in Argentina, Brazil, Canada, Colombia, China, France, Germany, Indonesia, India, Italy, Malaysia, Mexico, Netherlands, Oman, Saudi Arabia, United Arab Emirates, United Kingdom, and the United States. He reached approximately 2476 geoscientists. Here are some representative quotes describing Schuster’s tour: “Jerry Schuster gave us a great talk, and he dedicated plenty of time for us. We spent about 2 hours 15 minutes, with lecture time, questions, and consultation time with students. It was an excellent experience for everyone!” Sergio Chávez-Pérez, Universidad Nacional Autónoma de México (UNAM), Mexico City, Mexico. “Excellent presenter and presentation of a relevant topic within the industry. Can influence the way we process the data. I’m keen to try to experiment with a few of the methodologies presented,” stated Said Mahrooqi, Petroleum Development of Oman, Muscat, Oman.
- Carl Regone served as the 2013 Fall DL, presenting his talk, “*Acquisition modeling: Expect the unexpected.*” Regone visited Australia, Canada, China, France, Italy, Japan, Korea, Norway, Romania, Ukraine, United Kingdom, and the United States, giving his talk at 33 locations, including 11 universities, with 1935 attendees. “Stunning breadth of experience, examples, and insights. I have heard unsolicited praise from

my university colleagues, e.g., ‘That lecture ranks among the best I have ever heard.’ We are grateful to the SEG DL program for enabling Carl to share this compelling story outside of BP,” stated Dave Hale, Colorado School of Mines, Golden, Colorado. “Very rich in content. Carl presented the material in a way that was both convincing and accessible. His lecture is a model of what the DL program is all about,” said Phil Schultz, Geophysical Society of Houston, Houston, Texas.

- Joseph Stefani gave the 2013 Fall AAPG/SEG Lecture in North America, titled “*The earth is cleverer than you are — Learnings in earth and seismic modeling, and applications of FD modeling to rock physics and geomechanics.*” His tour was coordinated by AAPG. We did not receive quantitative feedback from AAPG, but by all accounts, the tour went well.
- Peter I. Pecholcs, the 2014 Spring DL, presented “*A journey through time in search of Arabian giants — Oil/gas fields, recording channels, and petabytes.*”
- Dave Hale, the 2014 Fall SEG/AAPG DL, is scheduled to give his talk, “*3D seismic image processing for interpretation of faults and horizons,*” at 26 locations.

The Honorary Lecture (HL) program, which includes tours in six regions and one thematic tour (near-surface geophysics), is supported by Shell through the SEG Foundation, with the exception of the near-surface lecturer who is supported by SEG. The 2013 HLs were:

- Central and South America HL Marco Polo P. Buonora presented “*The use of mCSEM for deep-water hydrocarbon exploration in Brazil.*” A total of 929 geoscientists attended his talk in 19 locations in Argentina, Brazil, Colombia, Mexico, Trinidad and Tobago, and Venezuela. “Dr. Buonora’s presentation was of great interest to the participants, and the proof was the dynamic question/answer session that followed,” said Miroslava Vielma, Sociedad Venezolana de Ingenieros Geofísicos (SOVG), Caracas, Venezuela.
- Europe HL Marion D. Jegen spoke on “*Joint inversion: The way forward to a comprehensive Earth model*” at 15 locations, including 13 universities, with 488 attendees in the Czech Republic, Denmark, Italy, Netherlands, Poland, Spain, Sweden, Turkey, and the United Kingdom. “Dr. Marion Jegen was absolutely amazing. Professional lecturer, presented the content in a perfect way, clearly, absorbed my attention from the beginning to the end. Smart, smiling, extremely positive person, I would love her as my teacher or leader in future studies or work,” claimed Joanna Szaas, AGH University of Science and Technology, Krakow, Poland.
- Middle East and Africa HL George Smith’s talk was titled “*AVO in exploration and development.*” He visited Egypt, Ghana, Kenya, Kuwait, Mozambique, Namibia, Nigeria, Oman, Qatar, South Africa, Tanzania, Uganda, United Arab Emirates, and Zimbabwe, giving his talk at 22 locations, including 11 universities, with 1528 attendees. “Professor Smith’s lecture was very engaging with the students;

the students expressed interest and appreciation. What was supposed to take two hours stretched to four hours,” said Maurice Odondi k’Oro, Jomo Kenyatta University of Agriculture and Technology (JKUAT), Nairobi, Kenya.

- North America HL Nick Moldoveanu presented “*Evolution of marine acquisition technology after wide azimuth*” to 1058 attendees in Canada and the United States at 24 locations, including 16 universities. “Excellent talk. Great field examples, really clarified some acquisition concepts,” stated L. A. Willemsen, graduate student at MIT, Cambridge, Massachusetts.
- Pacific South HL David Isles presented “*Aeromagnetism — A driver for discovery and development of Earth resources*” in Australia, Indonesia, Japan, and New Zealand at 18 locations, including seven universities, with 643 attendees. “David is an icon within the Australian magnetic arena, highly qualified, experienced, and well respected. SEG couldn’t have picked a better Honorary Lecturer. Clear, concise, well-structured lecture, with a well-defined common thread: integration of magnetism with geology,” said Terry Crab, CGG Gravity & Magnetism, Perth, Australia.
- South and East Asia HL D. P. Sinha presented “*Earth velocity estimation — Bridge the gap of interdependency between geology and geophysics*” in Bangladesh, India, Japan, Korea, and Taiwan. A total of 1225 geoscientists attended his lecture in 16 locations, including 10 universities. “An excellent coverage of the topic from the basics of the topic for the students/beginners and including case studies for the experts,” said Shiva Prasad, Reliance Industries Limited, Mumbai, India.
- Near Surface HL Laura Valentina Socco spoke on “*Surface wave analysis for near-surface characterization: Introduction, theme and variations.*” She gave 17 lectures in Australia, Brazil, Canada, China, Colombia, Germany, Italy, Japan, Netherlands, Poland, Spain, and the United States, with 979 attendees. “With her usual charm and grace, Val entertained, educated, and engaged the near-surface community at AGU,” stated Louise Pellerin, Green Geophysics, Inc., Berkeley, California, USA.

The 2014 HL tours are:

- Central and South America: Mauricio D. Sacchi, “*Practical aspects of regularization and interpolation of (5D) seismic data*”
- Europe: Laurent Sirgue, “*Full waveform inversion of seismic data: Investigating the earth for high-resolution velocities and more...*”
- Middle East and Africa: Bruce Blake, “*Improving seismic structural time-map accuracy with better near-surface measurements*”
- North America: Aria Abubakar, “*Joint inversion of multiphysics data for petrophysical and engineering properties*”
- Pacific South: Sandeep Chandola, “*Marine seismic acquisition: Expanding the possibilities!*”
- South and East Asia: Xuri Huang, “*Bridging the chasm between geophysics and reservoir engineering*”

- Near surface: Koichi Hayashi, “*Integrated geophysical methods applied to geotechnical and geohazard engineering: From qualitative to quantitative analysis and interpretation*”

Overall, the DL and HL programs in 2013 have been attended by more than 10,000 geoscientists and students through 214 lectures, with overwhelmingly positive feedback.

To view SEG lectures online, visit <http://www.seg.org/professional-development/seg-on-demand/recordings/>. Encourage your friends, colleagues, and students to explore this valuable resource. The committee accepts nominations twice a year; please contact us with suggestions for speakers.

These lectures would not be possible without the generous commitment of SEG members and the diligent work of Judy Wall, Jenny Cole, Karlene Threadgill, Laurie Whitesell, Becky Keith, Tom Agnew, and the rest of the SEG business staff in Tulsa. Many thanks to all!

Earth Model

Carmen Dumitrescu, chair

At SEG’s fourth IQ Earth Forum, in June in Galveston, TX, the IQ Earth program was rebranded as the Earth Model program to broaden its reach and advance multidisciplinary approaches to life-of-field data challenges. The committee steering the program also changed its name from IQ Earth to Earth Model Committee. It continues to be led by Carmen Dumitrescu. Among the committee’s new charges is pursuing opportunities for leveraging SEAM data to address life-of-field problems. Future forums will carry the name Earth Model Forum.

Earth Model Committee

1. 2013–14 Chair: Carmen Dumitrescu. Carmen was recommended to be 2014–15 chair by her peers at the Galveston 2014 meeting.
2. Current Committee Composition: William Abriel, Robert Benson, Craig Beasley, Cassidy Coleman, Rocco Detomo Jr., William Harbert, Bob Hardage, Carl Huxohl, Matthias Imhof, Gary Jones, Andreas Laake, Jill Lewis, Yongyi Li, Konstantin Osypov, Robin Pearson, Huyen Bui, Sole Velasco, Michael Zhdanov, Renjun Wen, and Ken Witherly
3. Board liaison: Guillaume Cambois
4. SEG staff liaison: Bill Barkhouse

Data sets and Technical Data Standards

1. Data sets: Discussions have so far been unsuccessful in securing industry data sets for free distribution. There is a possibility of collaboration with the SEG SEAM Board for its SEG data sets.
2. Standardization of Data Sets: SEG collaborates with Energetics (Energy Standards Research Center), a global industry consortium that facilitates an inclusive user community for

the development, adoption, and maintenance of collaborative, open standards for the energy industry in general and specifically for oil and gas and exploration and production. This collaboration is done in cooperation with the SEG Technical Standards Committee and possibly other SEG committees. The extent of the cooperation remains to be determined.

Future Earth Model Forums: Preparation for 2015 Forum

1. Follow up to the highly successful 2014 Forum in Galveston, recommendations are: (1) continue with Annual Summer Forum Workshops, (2) engage SEAM for support to create multidisciplinary, industry production data set, (3) continue collaboration with the *Interpretation* journal for Annual Special Edition and regular Earth Model Corner contributions, (4) continue raising Earth Model visibility at SEG Annual Meeting by holding “Best of Earth Model” Workshops and by growing a targeted “Interpretation” Technical Session, and (5) help facilitate and share new industry standards from SEG (e.g. SEG-Y) and Energistics.
2. Preparation of 2015 Earth Model Forum: The committee decided on dates, locations, and topics for the Forum, and submitted the official meeting request to the MRPC. We hope to have Cassidy Coleman assigned as meeting planner for the event.

Finance Committee

Nancy House, chair

Indicated by Gary Servos in last year’s Treasurer report, the SEG financial management has grown and increased in sophistication to match the growing size, global aspect, and reach of the Society. With this increased complexity, new subsidiary corporations have formed for specific purposes. While the Finance Committee is not specifically charged with financial oversight of those subsidiaries, the impact on the SEG and finances has been in the forefront of the committee’s activities over the past year. The SEG alone has a budget of more than \$19 million and a total consolidated budget incorporating all the subsidiaries and affiliate (SEG Real Estate Corporation, SEAM, SEG Global, Inc., and SEG Foundation, respectively) of more than \$30 million, not considering elimination entries.

The Finance Committee has worked to understand the strategies to be funded as prioritized by the Board of Directors while attempting to clearly and transparently communicate the financial impact of those adopted strategies to the SEG Board. This has become possible with the implementation of new accounting systems and policy allowing project accounting and better allocation of specific costs to the appropriate departments and activities. Some key points were carried directly to the Board as they considered this year’s budget. One consideration raised was related to the subsidiary SEG Global, Inc. In-depth analyses indicate obstacles to delivery of program services by our office

in China due to legal limitations of the form of registration in China. President Don Steeples appointed a task force to review not just the basic finances but also other less tangible benefits and make a coherent recommendation to the Board.

Other issues raised to the Board included the financial impact of SEG Real Estate Corporation (REC) building a new building on the Tulsa campus and the planned EEGS merger. SEG REC was formed as a separate title-holding company in July 2011. Real-estate transactions associated with owning and maintaining the existing building on a prime piece of real estate in Tulsa, and engaging in building and leasing a new building at a cost of \$20MM, are all recorded in this separate legal entity. The new building opportunity is expected to generate revenue to provide future income to SEG to support programs. While the intent is to keep the SEG REC independent of SEG finances, SEG has committed to guarantee the bank loan and maintain agreed-upon levels of liquidity until certain ratios are achieved which should enable reduction of the guarantee to 25 percent of the outstanding balance of the loan within a relatively short period of time. While the overall budget presented indicated slightly positive revenue, there were optional items such as business-class travel, staff salary treatment, and a promised director position to accompany the negotiated EEGS merger that when approved took the budget into negative territory. Budgets are predictions, and revenues are not always predictable. A 1 percent negative budget is not necessarily bad. The SEG is not in dire financial straights, but the impact of Board decisions may potentially eat into the reserve. This must be clearly communicated to the Board by the Finance Committee.

Specific recommendations carried to the Board from the Finance Committee for presentation of the 2015 FY budget included:

- Finance Committee commends SEG staff with stewardship of 2013 reporting and 2014 budget which is projected to be within 1.5 percent of forecast (with minor deficit)
- Program/fiscal prioritization process needs to be a focus for both new initiatives and legacy projects. The Finance Committee is concerned about the continuous growth mode exhibited by SEG in staff, travel, training, and programs. Actions suggested:
 - Understand risk of reduction in revenue to existing programs funded by the SEG Foundation due to donor fatigue or pressure on pricing.
 - Constantly investigate more sustainable revenue streams.
 - Develop reporting tools to provide Board and Finance Committee with better clarity on status of projects versus plan. The Finance Committee sees growth in staff, travel, etc., with no sunseting.
 - Staff needs to prepare annual operating plans that detail programs and how resources are being committed and provide ongoing updates of progress against plan. In addition, an outlook summary of the next three to

five years providing balance sheet and income statement proformas for all SEG activities is needed to allow the Board to anticipate events. Similar budgets and plans are needed for the SEG subsidiary corporations so that full financial impact can be understood. Recent advances in accounting process are shedding light on the interconnected nature of the entities, and the Board needs better understanding of impacts.

- In addition to the prepared FY15 budget, build a 2015 budget flat to 2014 budget showing explicitly what activities are deferred or removed from program (these should not be just the “new initiatives”). This will demonstrate a “what if” you don’t have the revenue increases. Present to Finance Committee then to the Board.
- SEG Global Inc. and SEG Global Relations (China and Middle East offices) represent the single largest deficit item with a deficit of approximately \$1,500,000 = (\$775,000 regional offices + \$740,000 SEG Global Relations, including SEG Tulsa incurred costs) projected for 2014.
- The Middle East office was affected by legal changes that mitigated the issue there.
- As a result of the above observations, President Steeples has appointed the China Task Force to examine the tangible benefits, intangible benefits, and revenue streams to evaluate the situation more objectively.
- Build three-year budget forecast including all meetings (Level V-SEG operated, Level IV-cosponsored, and Annual Meeting) and major assumptions (annual convention location, known strategic initiatives) and inflate other budget items with CPI.

Other opportunities evaluated recently include a proposal to jointly host international conferences with AAPG. While the strategic decision lies with the Board, the Finance Committee’s role was to evaluate the value of the proposal and recommend mitigating language to reduce the financial risk to SEG while equitably dividing revenues. What came out of this committee was a clearer proposal that shared risk, divides revenues equitably, and provides an exit strategy if needed.

While the Finance Committee is not supposed to comment on strategy, the impact of strategic decisions must be transparent to board members when decisions are made. The continuing financial impact of prior decisions needs to be communicated so that appropriate decisions can be made to exit or sunset a program or increase participation levels as conditions change.

Outstanding objectives are to review the reserve policy, continue to support the improvements in financial reporting and discipline exercised by the Finance Department, understand the

impacts of subsidiary corporations on SEG, and communicate the financial impact of strategic decisions on SEG.

Global Affairs

Koya Suto, chair

The Global Affairs Committee’s (GAC) vice chair for 2013, Lawrence Gochioco, passed away in April. GAC had an election for chair and vice chair in September just before the Annual Meeting in Houston. The GAC vice chair is a warm-up period toward chair the next year. The current chair did not have this warm-up period and had to start cold. Also, the sudden departure of Crystal Dugger, the SEG Global Relations advisor, further made it difficult for GAC to move smoothly, although interim GAC liaison, Kerry Cosby, continued to work hard for the GAC.

The GAC held a meeting in Houston, Texas at the SEG Annual Meeting in October 2013. The discussion included a proposal of an international space at the Denver meeting and need for new ideas of GAC activities. The four GAC luncheons were all very successfully implemented in Houston. The discussion with the SEG Board of Directors led to the decision that the international space will not take place in Denver, due mainly to the tight time line. The New Orleans 2015 Steering Committee is examining the opportunity for inclusion at Annual Meeting in New Orleans in 2015.

The GAC needs active members from more regions and countries and regular communication among its members. Team-building is the first priority, and we currently are asking the Sections/Associated Societies to nominate representatives who can contribute to GAC.

The committee’s mid-year meeting was held in June 2014 before the European Association of Geoscientists and Engineers (EAGE) meeting in Amsterdam. Topics included the relationship with the CUSP committee, registry of supply and demand of geophysical equipment in educational institutions, and ways to engage students and new members. GAC may be able to assist the local societies by providing SEG promotion slides before introduction of the Distinguished and Honorary (DL/HL) Lecturers. Additionally, GAC Country Representatives can provide student-focused lectures because many DL and HL topics are too advanced for students. The student-focused lectures will 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. The participants of the meeting also discussed assistance to the flood-stricken Balkan countries.

Gravity and Magnetism

Vsevolod Egorov, chair

The Gravity and Magnetism Committee focuses on gravity- and magnetism-related activities within the Society. The committee and more than 50 of its members promote the use of these methods through technical meetings, publications, and educational events. Interaction between committee members is conducted via digital communication tools, the spring committee meeting in Houston, and the committee's annual meeting during the SEG Annual Meeting.

The 2014 SEG Annual Meeting features several activities organized by the committee: technical oral and poster sessions, a luncheon, and a workshop. Chuck Campbell, a committee coordinator of the technical sessions, works closely with the SEG Annual Meeting Technical Program Committee and organizes abstracts' reviews by gravity and magnetism experts. Many members of the committee participate in the process, providing feedback to authors and assuring a high-quality program.

Following the success of the 2013 postconvention workshop "Exploration of continental rifts: From regional to prospect level" with insightful presentations from industry and academia and more than 100 attendees, this year's workshop titled "Gravity gradiometry in exploration workflow" is being organized by Vsevolod Egorov and Neda Bundalo. In recent years, gravity gradiometry has been rapidly developing and capturing attention of both mining and petroleum explorationists. This workshop focuses on the recent developments of the method and its applications. The format of the workshop includes technical presentations and discussions. This year's committee-organized luncheon coordinated by Gerry Connard and Vsevolod Egorov features Richard Blakely of the U. S. Geological Survey (USGS). The title of his talk is "Tectonic links between Cascadia's backarc and forearc: Applying lessons from Christchurch to the Pacific Northwest, United States of America."

The committee and its members continue to participate in publication activities, including an editorial column, "The Meter Reader," within *The Leading Edge*. A special section titled "Interpretation and integration of gravity and magnetic data" will be published in the 2014 November issue of the AAPG/SEG *Interpretation* journal.

Michal Ruder continues to provide a short SEG course on gravity and magnetism, taking place several times throughout the year. Committee member Alex Blacque has coordinated bi-monthly technical presentations through the Potential Fields special-interest group of the Geophysical Society of Houston. The chair of the Gravity and Magnetism Committee for 2013–2014 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 was established on 1 October 2013 with the appointment of Ian Threadgold as the first chair of this new standing committee. Over the next few months, an additional eight committee members were recruited, including the Board liaison, Gustavo Carstens, and the staff liaison, Dan DeMellier.

SEG previously had a seismic safety committee from 1951 to about 1983. This earlier committee was the steward of safety in the geophysical industry for more than 30 years until this role was passed on to the International Association of Geophysical Contractors (IAGC). So the new SEG HSSE committee was established in October 2013 but with a different role than the earlier committee.

The new committee's mission was developed as "... 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 OGP do with HSSE for geophysical operations but rather complement it, and utilize wherever possible industry guidance developed already."

Early contacts were made with member representatives responsible for some aspects of HSSE and with both the American Association of Petroleum Geologists (AAPG) and the Society of Petroleum Engineers (SPE) to understand what efforts have been made by these sister societies to look for possible areas to work together in the future. These discussions are ongoing but encouraging in terms of working together in the future on common issues such as exhibition floor safety, field safety (for students), or office HSSE (for SEG staff).

At the time of writing, two committee meetings have been held on 6 February and 7 May 2014. Further meetings will be held in July and in conjunction with the SEG Annual Meeting in October. Initial work includes building a risk register for all the activities that SEG manages or sponsors, working in conjunction with the appropriate SEG staff members.

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 by expanding the exhibit displays in the Noble Research Center, Boone Pickens School of Geology. 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. This is now a first-class exhibit providing outreach to students and the general public as well. 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.

Activities for 2014 include Frehner continuing his research work on projects, some assigned as action items from the HPC annual meeting in Houston 2013. Work is in progress on having Gerhard Keppner's book on Ludger Mintrop translated from German to English. Frehner arranged for a person who teaches German at OSU to undertake this task. Tom Agnew, SEG liaison, now has dedicated staff to assist with digital attributes (SEG Wiki, Online Publications). In the near term, a project to move our stored artifacts in Tulsa will be considered. Considerable sorting and disposal of nongeophysical pieces will be in order.

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.

Thanks to everyone for a great year!

Honors and Awards

Larry Lines, 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 2014 committee members were Larry Lines (chair), Steve Hill, Klaas Koster, Bob Hardage, and Dave Monk. Nominations were solicited from the membership at large following the 2013 Annual Meeting in Houston. The contributed suggestions from the membership were augmented by suggestions from SEG committees, including the Honors and Awards Committee itself. Nominations for certain Best Paper or Best Presentation Awards are provided by the Technical Program Committee for the 2013 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 meeting on 9 May 2014.

The following awards will be conferred at the 84th SEG Annual Meeting held in Denver, Colorado. Full citations for these awards will be published in the Annual Meeting Official Program and subsequently in *The Leading Edge*.

The Maurice Ewing Medal: Norman Bleistein

Honorary Membership: Craig J. Beasley, Jack P. Dvorkin, Nick Moldoveanu, Adrian T. de Hoop

Virgil Kauffman Gold Medal: Peter M. Duncan

Cecil Green Enterprise Award: Down Under GeoSolutions

Reginald Fessenden Award: Claes Nicolai Borresen, Rune Tinghamn, Svein Vaage, Yi Lou

J. Clarence Karcher Award: Ivan Pires de Vasconcelos and Elliot Grunewald

Life Membership: Louise Pellerin, Yonghe Sun, Richard D. Miller, Bin Wang, and Ralph Michael Bridle

Distinguished Achievement: Colorado School of Mines Reservoir Characterization Project

Special Commendation: SEG Advanced Modeling Corporation (SEAM), Rune Hagelund, Stewart A. Levin, Jill C. Lewis, R. Randy Ray, and Bill Pearson

Outstanding Educator Award: Susan Jane Webb

Best Paper in GEOPHYSICS:

“Anisotropic 3D full-waveform inversion”

Michael Warner, Andrew Ratcliffe, Tenice Nango, Joanna Morgan, Adrian Umpleby, Nikhil Shah, Vetle Vinje, Ivan Štekl, Lluis Guasch, Caroline Win, Graham Conroy, and Alexandre Bertrand

Honorable Mentions:

“Long-period, long-duration seismic events during hydraulic stimulation of shale and tight-gas reservoirs—Part 1: Waveform characteristics”

Indrajit Das and Mark D. Zoback

“The Backus-Gilbert method and their minimum-norm solution”

Jose M. Pujol

“Three dimensional inversion of multisource time domain electromagnetic data”

Douglas W. Oldenburg, Eldad Haber, and Roman Shekhtman

“Fracture parameter estimation from well log data”

Samik Sil

Best Paper in *The Leading Edge*:

“A new, fully integrated method for seismic geohazard prediction ahead of the bit while drilling”

Cengiz Esmersoy, Arturo Ramirez-Cuellar, Sharon Teebenny, Yangjun Liu, Chung-Chi Shih, Colin Sayers, Andy Hawthorn, and Maurice Nessim

Honorable Mention:

“Breaking the limit of seismic resolution: A synthetic example based on Tunu shallow gas development”

Pierre Thore and Pierre Spindler

Best Paper in *Interpretation*

“Whither seismic stratigraphy?”

Bruce Hart

Best Paper at the Annual Meeting:

“Dual-well 3D VSP in deepwater made possible by DAS”

Albena Mateeva, Jeff Mestayer, Zhaohui Yang, Jorge Lopez, Peter Wills, James Roy, and Todd Bown

Honorable Mention:

“Advanced imaging and inversion for oil production estimates in unconventional resource plays”

Greg M. Johnson, Paul Miller, and David Phillips*

Best Poster at the Annual Meeting:

“Reverse time demigration using the extended imaging condition”

Wiktor Weibull and Borge Arntsen*

Honorable Mention:

“Broadband processing with calm and rough seas: Observations from a North Sea survey”

Sergio Grion, Ahmad Azmi, Jonathan Pollatos, Nick Riddalls, and R. Gareth Williams*

Best Student Paper at the Annual Meeting:

“Application of seismic boundary-preserving constrained inversion for delineating reservoir body”

Tieyuan Zhu and Jerry M. Harris*

Award of Merit:

“Investigating the potential of using conductive or permeable proppant particles for hydraulic fracture characterization”

Lindsey J. Heagy and Douglas W. Oldenburg*

Best Student Poster at the Annual Meeting:

“Comparison of seismic diffraction imaging techniques: Plane wave destruction versus apex destruction”

Luke Decker, Alexander Klokov, and Sergey Fomel

Award of Merit:

“Automatic boundary detection using potential-field data”

Leon Foks and Yaoguo Li

* Denotes presenter

Interpretation Editorial Board

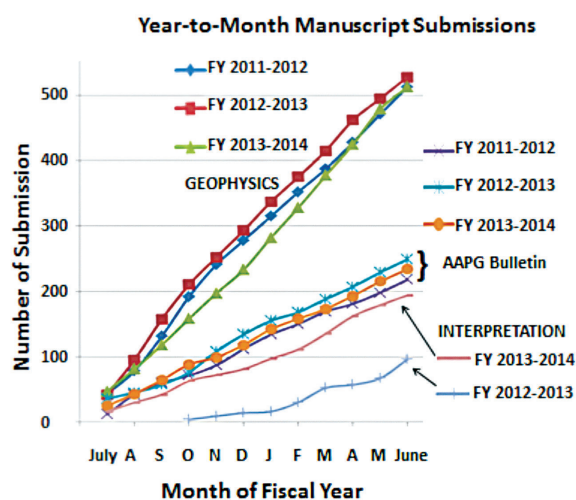
Yonghe Sun, editor-in-chief

This is the second *Interpretation* annual report since its launch in October of 2012. The journal is now publishing the August 2014 issue, its fifth quarterly issue. The Editorial Board members are Yonghe Sun, editor-in-chief; Robert Randolph Ray, deputy editor-in-chief; Karen Sullivan Glaser; Alistair R. Brown; Kurt J. Marfurt; Hongliu H. Zeng; Steve Laubach; Stephen A. Sonnenberg; Bob A. Hardage; Donald A. Herron; William L. Abriel; David H. Johnston; John O'Brien; Bruce S. Hart; and Linda R. Sternbach.

During this past year, the Editorial Board formulated a draft operating procedure for the journal. The journal has significantly ramped up the pace of its fundamental special section activities, from one topic per quarter to a couple of topics per month scheduled up to the August 2015 issue. The journal staff has implemented a new workflow to include the Assistant Editor (ASE) level for peer review of manuscripts. Each special section has an organizer who serves as the ASE. The ASE distributes the papers to the special section editors who serve as the Associate Editors in peer review. This arrangement allows the organizer to monitor the overall submission and review status and to participate in the editorial decision of every paper submitted to the special section.

Table 1. Monthly number of new manuscript submissions to *GEOPHYSICS*, *AAPG Bulletin*, and *Interpretation*.

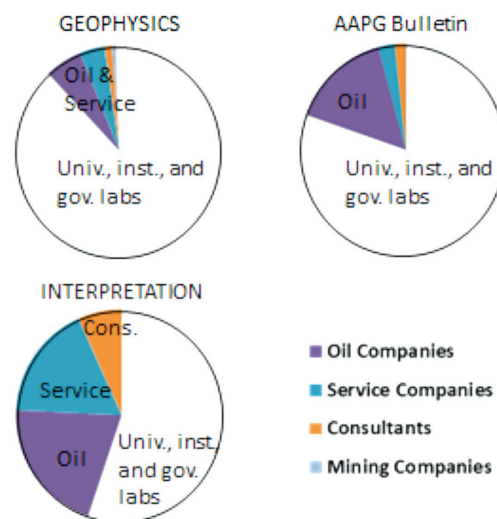
FY	GEOPHYSICS			AAPG Bulletin			Interpretation		
	2011–2	2012–3	2013–4	2011–2	2012–3	2013–4	2011–2	2012–3	2013–4
Jul	43	42	47	12	36	25			16
Aug	35	53	34	30	9	18			14
Sep	53	62	37	18	12	21			12
Oct	61	53	40	11	19	24		4	21
Nov	49	42	39	16	32	11		5	9
Dec	37	41	36	25	26	19		5	9
Jan	37	44	49	22	21	24		2	16
Feb	37	38	46	16	13	16		14	14
Mar	35	40	49	19	20	15		22	24
Apr	41	47	48	12	19	20		5	27
May	43	33	54	17	22	22		10	17
Jun	42	33	42	20	20	19		29	15
Total	513	528	521	218	249	234		96	194

**Figure 1.** Cumulative number of monthly manuscript submissions to *GEOPHYSICS* and *AAPG Bulletin* during the past three years compared to *Interpretation* since its launch in October 2012.

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 that the ruling will be favorable.

This is the first year for which the journal has a full year of statistics. I would like to use them to reflect on two points regarding the launching of the new journal.

A few years back, when the idea of a new journal was being discussed and before *Interpretation* was formally pro-

Figure 2. Distribution of FY 2013–2014 Manuscripts by Employer of First-Authors**Figure 2.** Comparison of *GEOPHYSICS*, *AAPG Bulletin*, and *Interpretation* manuscript distribution versus first-author employer type. The charts use data in Table 3 to highlight *Interpretation*'s strong engagement of industry authors.

posed, one of the concerns in the SEG community was that a new journal would adversely impact *GEOPHYSICS*. AAPG was similarly concerned a couple of years ago when deliberating copublishing the journal with SEG. Figure 1 plots the year-to-month number of *GEOPHYSICS* and *AAPG Bulletin* manuscript submissions during the past three fiscal years. Table 1 lists the data used in the plot. The data show that the rates of new *GEOPHYSICS* and *Bulletin* manuscript submissions have remained

Table 2. Number of technical articles published in each issue of The Leading Edge.

FY	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Jul	14	13	15	8	10	11
Aug	13	11	13	14	14	11
Sep	16	14	13	12	11	14
Oct	17	12	11	12	6	11
Nov	17	12	9	12	14	12
Dec	14	14	10	12	14	11
Jan	17	12	11	11	12	6
Feb	15	14	11	11	10	11
Mar	12	15	13	10	10	11
Apr	12	11	13	13	11	9
May	13	13	13	10	8	9
Jun	16	12	10	17	13	8
Total	176	153	142	142	133	124

Table 3. GEOPHYSICS, AAPG Bulletin, and Interpretation manuscript distribution versus first-author employer type for fiscal year 2013–2014.

First-Author Employer Type		GEOPHYSICS			AAPG Bulletin			Interpretation		
Academia	Universities	382	459	88%	147	188	80%	83	107	55%
	Research institutes	53			32			14		
	Governments	24			9			10		
Industry	Oil and gas companies	30	59	11%	36	46	20%	40	87	45%
	Services/manufacturers	20			6			34		
	Consultants	6			4			13		
	Mining companies	3			0			0		
Other	Retired	3	3	1%	0			0		
Total		521	521		234	234		194	194	

stable within the past three years, unaffected by the launch of the new journal nearly two years ago.

The analysis with Table 1 and Figure 1 includes only the peer-reviewed journals of SEG and AAPG. SEG's magazine *The Leading Edge* (TLE) does not have an online submission system to capture submission data. Most technical submissions go to the guest editors for the special sections, with only those accepted passed to the staff for production. Table 2 shows the number of technical articles published in each issue of TLE since 2008. The number of TLE articles has experienced drops both before and after the launch of *Interpretation*, making it difficult to identify any impact of the new journal on TLE. We do see an unusually low TLE publication count of 6 in the issue of October 2012, the launch month of *Interpretation*. This is a coincidence, however. The new journal could only possibly

impact TLE submissions after the launch and TLE publications a few months (for editing and production) after the launch.

A primary motivation for launching *Interpretation* was to promote peer-reviewed publications by geoscientists working in the oil, gas, and service companies. By having interpreters contribute papers, it keeps the journal focused on applied techniques and tools currently used by industry. It has long been recognized that GEOPHYSICS and AAPG *Bulletin* receive a significant number of papers from authors in academia with a strong publication culture (See Figure 2, Table 3, and data in past annual reports of SEG Editors). Table 3 and Figure 2 show that 87 papers of the 194 (45%) *Interpretation* submissions during FY2013–2014 are by industry authors employed by resource/service companies. The corresponding numbers are 59 of 521 (11%) for GEOPHYSICS (slightly lower this year than the 15%

average over the past 7 years) and 46 of 234 (20%) for *Bulletin*. This suggests that *Interpretation* has provided a strong attraction of authorship by geoscientists from resource companies.

Additional details of the manuscript data are summarized in several tables below. A total of 194 papers were submitted for publication in *Interpretation* 1 July 2013–30 June 2014. Table 4 illustrates the first-author distribution by country although the distribution is dominated by North American authors. This distribution will likely evolve once the journal is included in the Science Citation Index, an important consideration by authors from some countries. Tables 5 and 6 for the first-review and production turnaround times have only one row each—one row per year. Because special sections provide the bulk of the journal's technical content, the turnarounds for a majority of the papers are predetermined by the special section scheduling:

- From call-for-papers to manuscript submission: 5–6 months;
- From submission to acceptance: 5–6 months for peer reviews and revisions; and
- From acceptance to publication: 2.5 months (Table 6).

Thus for most papers, the turnaround from submission to publication is 8 months.

Table 4. Origin of papers submitted for publication in *Interpretation* by country 1 July 2013–30 June 2014.

USA	97
Canada	18
United Kingdom	10
China	9
India	9
Saudi Arabia	8
Brazil	5
Nigeria	5
Norway	5
Australia	4
Egypt	4
Austria	3
France	3
Denmark	2
Japan	2
Mexico	2
Netherlands	2
Germany	1
Israel	1
Malaysia	1
Poland	1
Spain	1
Vietnam	1
Total	194

Table 5. Manuscript-handling statistics.

Year submitted 1 July–30 June	Average number of days required for first review
*2013–14	61

*First reviews have not been returned for all papers.

Table 6. Manuscript-handling statistics.

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

Meetings Review and Planning

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 SEG.

SEG staff, in concert with the Global Relations Department, the Meetings Department, 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.

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 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 and 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 (Latin America, Middle East, and China), from SEG standing committees (Earth Model, Research, Development and Production, Gravity and Magnetics,

Oil and Gas Reserves, and Mining and Geothermal), and from intersocietal/cooperative committees (OTC, Intersocietal Relations, Arctic Tech, Global Affairs, and Meetings Pricing and Policy Task Force).

To date, the slate of proposed meetings mirrors the changing face of SEG: 60% of the meetings are international, 50% are intersocietal or jointly sponsored meetings, and nearly 20% involve student-focused meetings. While the international geoscience meeting schedule appears ever increasingly crowded, we encourage our membership to submit ideas and proposals to SEG.

Membership

Wafik Beydoun, chair

SEG’s membership numbers indicate a downward trend for the second year, and on 31 May 2014, the Society had approximately 28,000 members (see Figure 1)—a decline of 11% from the previous fiscal year. Data indicates that the drop is attributed primarily to a continued decline in new member recruitment as well as the steady increase in member attrition due to factors such as retirement, career change, lack of member engagement with SEG, ROI/economic aspect, etc.

Data also continues to indicate that Student and Associate Members are the main categories affected.

- 40% of those who left are students and 43% are Associate Members, totaling 83% of SEG members who have allowed their membership to lapse this year. Active Members appear much less prone to leaving.
- 67% of those who left had three years or less membership with SEG, whereas only 23% of those who left belong to the 4–10 year membership range. The committee’s observation from last year that membership retention is easier after three years of tenure remains true.

The Membership Committee (MC) and SEG staff are watching these issues very carefully and remain committed to finding ways to reverse this trend by continuing to develop and implement strategies to retain current members and recruit new members.

The two-fold challenge stated in the 2013 report remains the same. SEG needs to:

- 1) increase the retention rate of current professional members (strength of SEG).
- 2) increase the number of new members (growth of SEG).

What is the SEG Membership Committee doing about this? We highlight in what follows key actions that MC has been and is currently undertaking, bearing in mind that several other initiatives also are being investigated.

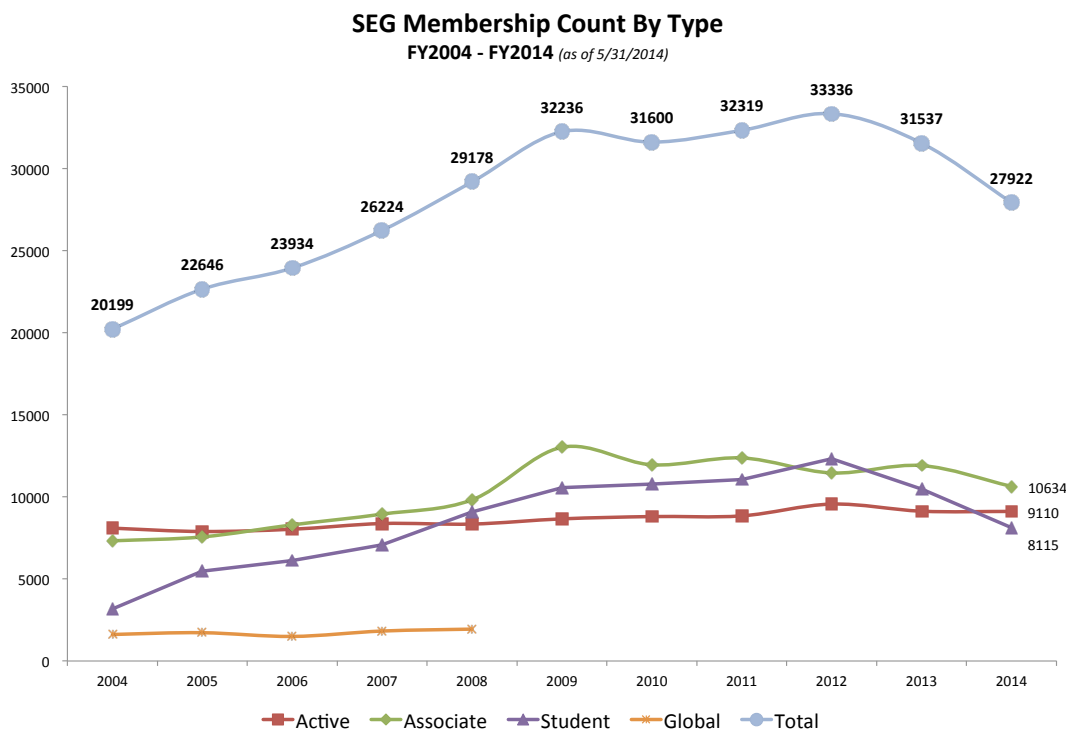


Figure 1. SEG membership count by type. Numbers for 2014 are as of 31 May 2014.

1. Increase the retention rate of current professional members (strength of SEG)

Since Active Members appear much less prone to leaving than then Associate Members, the first MC action should be to accelerate Associate Members to become Active Members, while ensuring that benefits of being an Active Member are better communicated/marketed to the geophysical community. The intent is to increase the number of individuals admitted into the Active Member class by lowering barriers for qualified applicants.

To this effect, MC proposed in mid 2013 amendments to the SEG Bylaws (Article III, Sections 1 and 5) that streamline the Active Member application, review, and approval process primarily by removing the requirement that the applicant submit references, in favor of a stipulation that an applicant must officially declare (self-certify) that they meet the eligibility criteria for admission into Active Membership, while maintaining the existing membership type eligibility criteria/policy virtually intact.

The initial version of the proposal, which was crafted with the assistance and consent of the Bylaws Committee, was presented to the SEG Board of Directors, who voted to approve it. Following procedures, the SEG Board of Directors notified the general membership and prepared the proposal for Council submission and approval by publishing it in the September 2013 *TLE* issue.

Council members voted to postpone action on the proposal when it was formally presented to the SEG Council at its September 2013 meeting held in Houston pending improvements. The proposal was amended by restoring language that defines Active Membership qualification but left the self-certification language intact. The Council, in a webinar-style meeting in December 2013, approved a rewritten paragraph on membership and self-certification criteria as well as the Bylaws amendments. The Council further amended the proposal in the February 2014 meeting, also with a supermajority, by restoring from the current Bylaws the paragraph specifying Board approval of Active and Corporate Member applicants.

The Council with an affirmative vote submitted the final version of the amendment by ballot to the entire Active Membership of the Society. The 60-day balloting period concluded 12 May 2014, and a majority of the ballots returned were in favor of the proposed amendment, which became effective at the expiration of sixty days and was reported in the June 2014 *TLE* issue.

The approved amendments to the SEG Bylaws will streamline the Active Member classification application, review, and approval processes by providing that all applicants who have been actively engaged in practicing or teaching geophysics or a related scientific field for the amount of time specified shall

be eligible for admission into Active Membership without the current requirement that they submit references but with the requirement that they self-certify that they meet the criteria for Active Membership—allowing the Society the right for further inspection. SEG staff is developing the implementation plan, related membership application procedures, and a comprehensive communication plan, with an expected deployment of July 2014. MC is also discussing a few other initiatives to retain members, some with the GAC, and SEG's marketing department, that will end up being proposed as motions at upcoming Board meetings.

2. Increase the number of new members (growth of SEG)

A strong source for increasing the number of new members is students. In FY2014, student members account for approximately 30% of all SEG members (about 8500 SEG Student members) from all corners of the globe. Sixty percent of student members are benefiting from free student membership through the Corporate Student Dues Sponsorship program. Thirty-eight percent have allowed their membership to lapse for various reasons, and only 2% are self-paying their SEG student dues. It is worth mentioning that even with the availability of free student membership dues, only three out of every 10 students benefiting from free membership will renew their membership the following year. This means that more than 60% of student members are new to SEG every year.

Despite the high student attrition rate of 64%, about 400 student members who have graduated will become Associate Members every year. Note that 75% of these members receive free Associate Membership dues for the first year after graduation.

MC's effort in 2014–2015 is focused in increasing the low percentages of student joining as full members. We are addressing the challenge in two ways. First, we intend to organize a Forum at the 2014 Annual Meeting in Denver with representative student members and their faculty advisors to better understand why so many students (especially those with free membership) are leaving SEG. The committee is looking for ways to incentivize faculty advisors to become more involved with their student sections so that they can provide more feedback about the status of graduating students and current student members. Such a forum would serve as a platform for advisors to express their ideas, suggestions, and concerns and for MC to formulate an action plan. Second, MC is “brainstorming” to revisit the offer of free membership to students: Can we be more selective when we offer free membership to students? Could we in some way target new Student Members who have some motivation to retain their membership once they graduate and have to pay for it?

Other initiatives to increase the number of new members are being considered, such as gathering data and attacking this issue from two fronts: academia and industry.

These initiatives will provide the opportunity for the Membership Committee to establish a strategy in line with SEG's strategic planning and propose motions at future Board meetings.

Mining and Geothermal

Mark Shore, chair

Mark Shore, José Arce, and Sean Walker continued in their second year as committee chair, vice chair, and technical session key contact respectively.

As has been past practice in odd-numbered years, the 2013 Annual Meeting was less active for the committee and its members, who collaborated on a single e-poster session. Members attending the meeting were predominantly service providers and contractors, with a smaller proportion of consultants, company geophysicists, and academics than in even-numbered years.

Committee meetings were held at mineral-exploration trade shows and conferences, specifically the Cordilleran Roundup in Vancouver in January and the Prospectors and Developers Association of Canada (PDAC) in Toronto in March. The latter was well attended and, for the first time, the costs of a meeting room and light lunch were supported by the SEG, which helped turnout.

Our preferred method of communicating with our global group of committee members and others with interests in mining geophysics (currently more than 200 members) is via the SEGMIN list server, hosted and sponsored by Geosoft Ltd. The committee also maintains a close relationship with KEGS (an SEG section), including relaying Mining Committee announcements to its own extensive and global e-mail list. Members of the committee also explored the possibility of building closer informal ties with the Society of Economic Geologists.

Over the course of the year, the committee's focus was dominated by mining and mineral-exploration geophysics, with little activity on the geothermal side of affairs. With respect to the mineral industry, mining and mineral-exploration activities remained in the second year of a deep slump, which has affected work and employment opportunities for many geophysicists working in the exploration field, whether employed by mining companies, contractors, or consulting firms.

Key committee activities included planning for a special mining-themed section in a 2015 issue of *Interpretation* (committee members acting as special editors: Bob Lo, Mark Shore, Richard Smith, José Arce, and Yaoguo Li). Planning for the 2014 Annual Meeting includes three technical sessions, a luncheon, committee meeting, a workshop on 3D induced polarization, and a post-meeting field trip to a gold mine south of Denver. Key contact Sean Walker oversaw the review of approximately 50 mining and geothermal abstracts for the 2014 Annual Meet-

ing and for the first time in recent memory was able to schedule the Mining and Geothermal technical sessions so as to avoid all conflicts with those of Gravity and Magnetics.

Nominations

Alfred Liaw, chair

While serving the last year as a director at large on the SEG Board of Directors, I have been honored to chair the Committee on Nominations. This committee has been charged to provide a slate of the most qualified candidates who are willing to serve on the SEG Board in the next few years. Committee members consist of three SEG past-presidents, Klaas Koster, Bob Hardage, and David Monk; the chair of the Council, Mike Graul; Section/Associated Society Representatives Toru Mogi of SEG Japan, Joseph Ebeniro of SEG Nigeria, Chuandong (Richard) Xu of Pacific Coast Section, and Farkhod Zunnunov of Uzbekistan SEG; and Edith Miller, who will chair the committee next year. These candidates identified will fill the positions of president-elect, second vice president, treasurer, two directors at large, and 11 district representatives.

The committee set the goal of identifying the most qualified candidates who will improve the diversity of the SEG Board of Directors, such as technical specialties, global representation, academia versus industrial, genders, and resources companies versus service providers. To this end, the committee first profiled all Board members to identify the deficiencies of the future Board. The results of this exercise had anticipated future deficiencies in finance as a skill set and area of expertise; near-surface and service sector as areas of geophysical specialty; female gender; and Asian, Middle East, and Africa geographic representation. A master file of qualified candidates was updated constantly based on the previous nominations, recent self-nominations, and SEG Sections and Associated Societies, as well as input from the current members of the SEG Committee on Nominations. The committee established the following set of criteria to qualify candidates:

- SEG Active Member
- previous candidates on SEG election ballot(s)
- SEG committee chairs
- SEG committee members
- Organizing Committee of SEG Annual Meetings, workshops, or forums
- served as officers on SEG sister professional societies
- willing to serve

Before 1 March 2014, the committee informed the SEG Board of Directors of the following list of candidates:

President-elect:

- Peter Annan
- John Bradford

Treasurer (2014–16)

- Alison Small
- Bob Tatham

Second vice president (2014–16)

- Eve Sprunt
- Rocco Detomo

Directors at large (2014–17)

- Maurice Nessim
- Tariq Alkhalifah
- Jie Zhang
- Xianhuai Zhu

In addition to the above candidates for the Board of Directors, Mike Graul and Richard Xu worked with SEG Sections and Associated Societies to nominate candidates to fill the Council seats for Districts 1, 2, 3, 4, 6, 8, 9, and 12. The nomination process for district representatives had identified a challenging issue on how to maintain an up-to-date and accurate membership database for district representatives.

I would like to take this opportunity to express my sincere appreciation to all members of the committee who worked hard during the nomination process to develop a process and contributed to the teleconferences every other week between November 2013 and March 2014. On behalf of the SEG Committee on Nominations, I congratulate all of the well-qualified candidates nominated who, when elected, will serve the SEG Board in the next few years.

Online Technical Content Board

Kris Innanen, chair

The SEG Online Technical Content Board (OLTCB) was formed in 2010 by the Online Committee with a mandate to review and solicit online technical content and to ensure that the technical content is abundant, appropriate, and useful. The technical content referred to does not include the SEG books, abstracts, and journals already available online.

The current members of the OLTCB include: Kris Innanen, Matt Hall, Rob Stewart, Bill Dragoset, John Stockwell, Frank Dumanoir, Karl Schleicher, Kai Zhang, Whitney Emerick, Isaac Farley, Andrew Geary, and Ted Bakamjian, with Innanen chairing the Board as Online Technical Editor for the second of two years. In November 2014, Innanen will complete his two-year term as Online Technical Editor. A volunteer is being sought to become the new Online Technical Editor. Innanen will remain a Board member. Frank Dumanoir, who is retiring from PGS this year, is also stepping back from his role. He is thanked for his significant contributions.

Whitney Emerick is the OLTCB's liaison to the SEG staff, with Chris Posey stepping in as needed. Being an offshoot of the SEG Online Committee, the OLTCB works with that committee in a complementary fashion.

The Board's major efforts during the 2013–2014 year were geared toward the SEG Wiki of Applied Geophysics. This product is a fully functional wiki that uses the same software platform as Wikipedia. The SEG Wiki can be viewed by anyone, but only SEG members have editing privileges. The original content of the Wiki consists of definitions extracted from Robert Sheriff's *Encyclopedic Dictionary of Applied Geophysics*. John Stockwell is the Wiki administrator, and he manages a team of volunteers who moderate the Wiki to ensure that added/modified content meets professional standards. Isaac Farley and Andrew Geary are making major strides in increasing the functionality of the Wiki, and perhaps using it to help Karl Schleicher's growing efforts in the SEG Open Data Initiative.

In the coming year, a key issue will be to increase the profile and exposure of the Wiki to the SEG membership, with focus on a Wikithon at the Annual Meeting in Denver.

Publications

Sergey Fomel, chair

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

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

During fiscal year 2014, SEG published the following books:

- *Encyclopedia of Exploration Geophysics* articles "Seismic characterization of fractured reservoirs," by Vladimir Grechka and "Wide-azimuth amplitude-variation-with-offset analysis of anisotropic fractures reservoirs," by Andreas Rüger and David Gray
- *Geological Interpretation of Aeromagnetic Data—A Practical Manual*, by David Isles and Leigh Rankin (copublished with ASEG)
- *Hydrocarbon Seepage: From Source to Surface*, edited by Fred Aminzadeh, Tim Berge, and David Connolly
- *Microseismic Imaging of Hydraulic Fracturing: Improved Engineering of Unconventional Shale Reservoirs* (2014 DISC), by Shawn Maxwell

Titles due for publication in the second half of 2014 include the following:

- *AVO*, by Satinder Chopra and John P. Castagna
- *Classical and Modern Diffraction Theory*, by Kamill D. Klem-Musatov, Henning Hoerber, Tijmen Jan Moser, and Michael A. Pelissier
- *Remote Sensing in Action: The Curious Case of Sherlock Holmes and Albert Einstein*, by Enders A. Robinson and Dean Clark
- *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
- *Seismic Diffraction*, by Kamill D. Klem-Musatov, Henning Hoerber, Tijmen Jan Moser, and Michael A. Pelissier
- *Understanding Seismic Anisotropy in Exploration and Exploitation*, second edition, by Leon Thomsen

Publications Policy

Kees Wapenaar, chair

The Publications Policy Committee (PPC), now in its eighth year, addresses 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. The committee recommends actions to the SEG Board of Directors as necessary.

Committee members are Kees Wapenaar, chair; Sergey Fomel, Publications Committee chair; Tad Smith, *The Leading Edge* Editorial Board chair; Long Jin, Translations Committee chair; Mauricio Sacchi, GEOPHYSICS assistant editor; Kris Innanen, Online Technical Content Committee chair; Yonghe Sun, *Interpretation* editor; Tamas Nemeth, 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.

Committee activities since last year's report was published included the following:

- recommending a comprehensive open-access policy that was adopted by the SEG Board of Directors. The policy is presented on this page: <http://www.seg.org/resources/publications/openaccess>.
- affirming that the viability of a new near-surface journal would be tested through special sections in GEOPHYSICS. The first of these is a special section titled "Near-surface geophysics in the dynamic coastal environment: Crossing the land/sea interface," planned for May–June 2015 publication. The investigation into near-surface journal viability was prompted by merger negotiations between SEG and the Environ-

mental and Engineering Geophysical Society (EEGS). It is anticipated that testing through GEOPHYSICS special sections will continue despite that merger negotiations have ended with no merger planned.

It is anticipated that in the final months of the SEG year, the PPC will review and make recommendations with respect to several publications systems improvement proposals being developed by the staff.

Research

Cengiz Esmersoy, chair

The Research Committee (RC) currently has 131 geographically dispersed members from a variety of industry segments and academia. We have added six new members and retired a number of ex-members who did not want to continue or could not be contacted.

2013 Annual Meeting Special Sessions:

- Recent advances and the road ahead
- Arctic exploration challenges

2013 Annual Meeting Postconvention Workshops:

- Grand Challenges and Research Opportunities in Applied Geophysics
- Gulf of Mexico Imaging Challenge Part II: FWI, WEMVA, Workflows, &...
- Monitoring with Microseismic: Does it Work?
- DAS (Distributed Acoustic Sensing)
- Tools and Methods for Internal Multiple Elimination: Recent Advances and Practicality
- Multicomponent Revisited: Providing New Insight or Business as Usual?
- Advances in Model Building, Imaging, and FWI
- Integration of Petrophysics, Rock Physics, and Lab Measurements
- Seismic Data Acquisition with Simultaneous Sources
- Use of Borehole and Surface Seismic Measurements to Understand the Geomechanical Behavior of Unconventional Reservoirs
- Are We Able to Detect and Characterize Fractures?
- Advances in Computational Mathematics for Geophysics
- Geo-Modeling at Basic Scale—A Multidimensional Approach

2015 SEG Summer Research Workshops:

- FWI—Elastic approaches and issues with anisotropy, non-shallow inversion, poor starting model
- Unconventionals

2015 SEG-EAGE Forum:

- Integration of different types of geophysical data for reservoir characterization

Other Activities/Updates:

We have formed a subcommittee on RC membership with objectives to grow the membership, to keep it current with the new directions in applied geophysics, and to increase the percentage of members who are actively contributing to the RC activities. We want to be welcoming rather than forming an elite club. The subcommittee will work on ways of recognizing top performing members every year (SEG awards, plaques, website postings, etc.). We are asking financial resources to carry out this critical task.

Two other subcommittees, CO₂ and unconventional, are continuing their tasks.

Reviews

David C. Bartel, chair

The Reviews Committee publishes reviews of recently published books of geophysical interest in *The Leading Edge*. Not only do these books help keep the SEG membership current with recent geophysical publications, but we also review books in other geoscience disciplines and of more general interest to geoscientists. The monthly column in *TLE* provides the committee with a continuing presence to interact with the entire SEG membership. For the 2013–14 year, 25 book reviews were published in *TLE*. The lower number of reviews in the past year is due in part to the lower number of books being offered by publishers for review. Another recent change is the availability of books for review in an electronic format. Given the increasing popularity of e-books, this trend can be expected to continue.

We are a global committee. One-third of our members are from outside the United States. Because the committee operates entirely by e-mail, members from around the globe easily can participate. Members come from all parts of the geophysical industry including service companies, petroleum companies, consultants, government agencies, academia, and research companies.

Book lists are sent to members of the committee several times a year. SEG staff sends the reviewer the selected books, and the reviews are sent by e-mail back to me for forwarding to the SEG office and publication. Many of the reviewed books are sent to SEG by publishers seeking a review. Members also can suggest books to review. Additionally, we work closely with the SEG Publications Department to provide timely review of new SEG publications.

I would like to thank Merrily Sanzalone of the SEG Publications Department for all her help in handling the logistical side

of the review process, mailing out the books to reviewers, and for her efforts in obtaining review copies of new books. Thanks also to Rowena Mills for her excellent editing of the reviews for final publication in *The Leading Edge*. Finally, thanks to all the contributors to the “Reviews” column. Without you, the committee could not fulfill its purpose.

Any member who would like further information or would like to add their talents to the committee is welcome to contact me via e-mail: DBartel@chevron.com.

SEG Oil & Gas Reserves

Pierre-Louis Pichon, chair

General. The Oil and Gas Reserves Committee (OGRC) currently has 19 members. The committee represents the global geophysical community, including geographic diversity with multinational participation and different facets of the industry with large integrated companies, mid-sized and small E & Ps, academics, and third-party consulting firms.

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 OGRC is observer at the SPE, OGRC, and Society of Petroleum Evaluation Engineers [SPEE] RDC).
- through exchange with other geophysics and geology sister societies (CGF, EAGE, and AAPG have observers at the OGRC).

PRMS-AG. SEG is a formal sponsor of the Petroleum Resources Management System Application Document (PRMS-AG), and OGRC actively supports the rolling out of the PRMS-AG guidance to the broader industry through SEG Reserves Workshops and SPE Applied Technology Workshops. OGRC had a representative at the UNFC (UNECE) until mid-2013. As PRMS is considered as the reference with bridging document, it is the SPE that remains representative for the PRMS.

SPEE monograph 4 and PRMS update. The OGRC has reviewed the SPEE monograph 4 and provided its comments for SPEE to finalize. The committee is in the loop for future PRMS update.

SEG Reserves Workshops. A half-day workshop was organized by the OGRC during the SEG Annual Meeting (Houston, September 2013). Three main themes have been discussed actively:

- 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 confirms its yearly appeal with more than 40 attendees and interesting discussions. The next SEG Reserves Workshop is planned for the upcoming SEG Annual meeting in Denver (October 2014).

SPE Applied Technology Workshops (ATW). Within these workshops, OGRC chaired and led the presentation on the seismic chapter of the PRMS-AG. Two workshops have been held in 2013: one in Houston (August 2013) on PRMS Applications Guidelines Document, followed in October 2013 by the Dubai PRMS workshop. In 2014, two workshops have been held: one in London (March 2014) on applications guidelines document and case studies, and one in Moscow (May 2014) as a SPE-OERN joint workshop on “Petroleum Reserves and Resources estimation: Sharing the Vision.”

Joint workshop on Reserves estimation for unconventional reservoir. An intersociety joint workshop with SPE and another society is planned for the end of 2014–2015. Subject ongoing.

Special section. A special section in *Interpretation*, the SEG-AAPG peer-reviewed journal, is contemplated for early 2015. It will be a great occasion to present case studies with the use of geophysics in reserves estimation, integrated in global geosciences approach.

Training and JCORET. SEG is a formal sponsor of the Joint Committee on Reserves Evaluator Training. JCORET reviews and approves courses directed to engineers and geoscientists in the areas of recommended evaluation practices, reserves and resources definitions, and ethics training.

As a result, an hour-and-a-half SEG Webinar, proposed jointly within SPE Webinars, was held in March 2013 (72 attendees, with very positive feedback). A one-day class would have to be considered to progress on this educational aspect.

SEG Online

Matt Hall, chair

Through its online presence, SEG can reach a wider audience than through its traditional activities alone. The Society must continue to share information that maintains its standards of excellence and promotes geophysics. In support of this and per its charter, the Online Committee (OC) solicits, identifies, and selects strategic issues (e.g., new or enhanced SEG.org fea-

tures, relationships, and content) for assessment, planning, and implementation. SEG then evaluates and implements those services that advance its objectives.

Last year, we continued to build on the SEG Wiki. Because that is a mostly tactical concern now, especially with the recent attention from dedicated SEG staff, the committee will leave the continuing effort to maintain and grow the content to the Online Technical Content Board. Also relevant here are new relationships with other societies (especially AAPG and SPE) and corporations with technical wikis.

This year, the area of greatest potential for the committee is gaining clarity and purpose around the issue of “open data.” The committee has been concerned with this topic for more than a year, and there are ongoing efforts to move the community forward, but we have so far not produced any formal recommendations or strategy around it. SEG has an opportunity to help the community find and document open geophysical data sets, and perhaps to host some of them. The issue of licensing also is of central importance.

Goals for the coming year include:

- research the question of open data from a technical and legal point of view, and recommend an open data strategy to SEG.
- support the Online Technical Content Board and other committees in their work, where it makes sense.
- continue to explore ways to open up the committee to the membership.

The OC members for 2014 include Bill Barkhouse, Joe Delinger, Asmaa Khalil, Brian Frehner, Matt Hall (chair), Tony Sabatino, Karl Schleicher, Jose Antonio Sierra, John Stockwell, Emilio Torres, and Richard Verm. Rob Stewart is the Board of Directors liaison, and Brian Frehner is the Historical Preservation Committee liaison. Kris Innanen connects us to the Online Technical Content Board. Ted Bakamjian, Jennifer Crockett, Dan DeMellier, Whitney Emerick, and Isaac Farley are the vital connections to SEG staff and systems.

The OC meets three times a year, usually in spring, summer, and at the Annual Meeting. It welcomes and invites input from all SEG members to help SEG make SEG Online an even better platform for applied-geophysics collaboration.

SEG-SPE Collaboration

Gene Narahara, cochair

The SEG-SPE Collaboration Committee, formed out of a 2009 MOU between the two societies, is designed to encourage and promote closer collaboration on topics of mutual

interest. The committee initially formed in 2010 with three SEG representatives and three SPE representatives. Initial SEG representatives were Brad Birkelo, Jamie Rector, and Terry Todd. Initial SPE representatives were Gene Narahara, Sid Smith, and Mark Rubin. In 2014, the representation on the Collaboration Committee was updated with Birkelo, Smith, and Rubin rolling off. These were replaced by Bryant Mueller for SPE and Vikram Sen for SEG. Gene Narahara assumed the chair for 2014.

Joint events spawned by Collaboration Committee efforts include an Induced Seismicity workshop held in September 2012 in Colorado. This highly attended workshop led to a second workshop on Injection-Induced Seismicity scheduled for 15–18 September 2014 in Banff, Alberta, Canada. Committee effort also has led to a postconference interactive forum on Multidisciplinary Assessment in Unconventional Resource Development in Denver, Colorado, 28 August 2014 following the 2014 Unconventional Resources Technology Conference.

In the Middle East, outside the effort of the Collaboration Committee, SPE and SEG are conducting a joint workshop 23–25 February 2015 on Giant Oil Fields in Abu Dhabi, UAE. Two collaborative efforts involving multiple societies, one past and one future, include:

- SPE/AAPG/SEG Pore Pressure Workshop, 11–12 March 2014, San Antonio, Texas
- SEG/SPE/AAPG/SPWLA/EAGE Summer Research Workshop: Multidisciplinary Static and Dynamic Reservoir Modeling: Best Practices, Opportunities and Challenges, 3–8 August 2014, San Diego, California
- SPE, SEG, and other professional societies also are partners in several conferences that cover different topics and have a global reach:
 - Unconventional Resources Technology Conference (URTeC), United States
 - International Petroleum Technology Conference (IPTC), Middle East and Southeast Asia
 - Four different Offshore Technology (OTC) conferences (OTC itself in Houston, Arctic Technology Conference, OTC Asia, OTC Brasil)

The SEG-SPE Collaboration Committee will continue to examine other areas of collaboration between the societies and will make appropriate recommendations to both societies.

Technical Standards

Bill Rimmer, chair

Committee members include Bill Rimmer (chair), Stewart Arthur Levin (vice chair), Nils Aatland, Rune Hagelund, Robert John Firth, Alexander Sokolov, Peter Green, Friedrich Roth, Jill C. Lewis, and Barry D. Barrs.

OGP Liaisons are Rune Hagelund and Barry D. Barrs. Energistics liaisons are Rune Hagelund and Jerry Hubbard.

No new standards or updates to standards were published by the Technical Standards Committee (TSC) in the last year.

The continued focus of the TSC has been the initiative to update the SEG-Y format. The subcommittee (formed at the 2012 Annual Meeting) has been met with continued interest from the industry. The initial focus of the subcommittee was to define the scope of the new format. This work is not yet completed, but significant contributions have been made, several variations have been suggested, and the discussions remain very active. The OGP positioning standards continue to be used as input to the development of the updated SEG-Y and SPS standards to ensure compatibility. More information on the SEG-Y Rev 2 subcommittee and the ongoing discussions, including the latest updated standards proposals, can be found at www.seg.org/tsc in the Documents/Standards Development area and in the SEG-Y discussion forum.

Energistics has continued with the Standards Leadership Council initiative and has been instrumental in the formation of a work group to develop standard for microseismic data exchange. The primary goal of this group is to define an exchange format for microseismic metadata. This does not affect the actual seismic data format, which remains SEG-D or SEG-Y, or the positioning of that seismic data, which remains with OGP Geomatics Group. Bill Rimmer represented TSC at several of the meetings in the initial phases to ensure there would be compliance to the current SEG standards. More information can be found at www.energistics.org/production/microseismic-workgroup. Ties between Energistics and SEG were strengthened with the execution of a standards-development cooperation agreement between the two organizations.

The development of an update to the SPS standard continues and was very active in late 2013, with the formation of a work group sponsored by Peter Green/Saudi Aramco. Some initial progress was made and technical writers assigned, but additional support is needed from industry to move this forward. Any interested parties should contact then technical committee.

Other ongoing activities include the development of an electromagnetic data standard and two workgroups focused on creating recommendations for seismic data storage and exchange. Those interested in joining any of the teams may submit an application at www.seg.org/tsc.

The committee plans to hold two official meetings next year to speed up format development. The minutes and presentations from past meetings plus information on other committee work are publicly available at www.seg.org/tsc.

During the forthcoming year, the work on updating the SEG-Y and SPS formats is expected to continue to be the major focal points for the committee.

Tellers

Kim Guyer, chair

The ballot tabulation for the membership vote on the proposed Bylaws housekeeping amendments as approved by the SEG Council at its September 2013 meeting was completed in December. Survey and Ballot Systems, Inc. (SBS) was contracted to conduct the ballot mailing and tabulation. Official paper ballots were sent out on 28 October 2013 to 8388 Active Members eligible to vote. All votes were received, tabulated, and verified by SBS and results were submitted to the SEG business office. The vote on the Bylaws had a participation rate of 20.1%. The final results include 1686 returned ballots received on or before 26 December 2013. The SEG Tellers Committee verified the count provided by SBS and the Bylaws amendments were approved by a majority vote of the Active SEG membership.

The ballot tabulation for the membership vote on the proposed Bylaws amendments, approved by the SEG Council in February 2014, was designed to facilitate the admission process for professional members seeking Active Member status and was completed in May. SBS sent official ballots on 14 March 2014 to 6158 Active members eligible to vote. All votes were received, tabulated, and verified by SBS and results were submitted to the SEG business office. The vote on the Bylaws had a participation rate of 24.5%. The final results include 1509 returned ballots received on or before 12 May 2014. The SEG Tellers Committee verified the count provided by SBS and the Bylaws amendments were approved by a majority vote of the Active SEG membership.

SBS also was contracted to conduct the SEG election for the new 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 2014 to 7735 Active members eligible to vote in this year's election. The annual election had a participation rate of 31.9%. The final results include 2467 returned ballots received on or before 31 July. Of those ballots, 2043 were submitted via Web voting, and 424 paper ballots were returned by mail.

The election results are as follows:

2014–2015 SEG Board of Directors
 President-elect: John Bradford

Second vice president: Eve Sprunt
 Treasurer: Alison Small
 Directors at large: Maurice Nessim and
 Xianhuai Zhu

District Representatives

District #1: Arthur Weglein
 District #2: Kathy Hardy, Susan Minkoff,
 and Glenn Winters
 District #3: Biondo Biondi
 District #4: Enders Robinson
 District #6: Paul Cunningham
 District #8: Dirk Gajewski and
 Jean-Jacques Postel
 District #9: Iyabo Sindiku
 District #12: Tom Ridsdill-Smith

The Leading Edge Editorial Board

Tad Smith, chair

The time since the 2013 SEG Annual Meeting has been one of change, development, and continued excellence for *The Leading Edge*. With few exceptions, our special sections have had an ample supply of excellent submissions; of particular note are the special sections on 4D (February 2014), rock physics (March 2014), attenuation dispersion (June 2014), and the special section on China (August 2014). We have had a few issues with low numbers of submissions (e.g., the January 2014 special section on the Middle East), but for the most part we are happy to report that we have managed to fill up most special sections with relevant and interesting papers.

One of the biggest changes to occur in 2014 was the retirement of Dean Clark. Dean was the editor of *The Leading Edge* since 1985 and made the decision toward the end of 2013 to spend his time pursuing his passion for all things related to Sherlock Holmes. Dean left rather large shoes to fill, but Jenny Kucera, our new managing editor, stepped in and continues to ensure timely publication and excellence in all we do. *The Leading Edge* Editorial Board also benefits from the guidance and oversight by Ted Bakamjian. My job as board chair would be exceedingly difficult were it not for the support and professionalism of Jenny and Ted.

The Editorial Board for this past year has consisted of Ezequiel Gonzalez, John Lane, Shuki Ronen, Julie Shemeta, Tracy Stark, and Carlos Torres-Verdin. Shuki and I will be rotating off the Board at the beginning of this year's SEG Annual Meeting, and Carlos Torres-Verdin will take my place as chair. We will announce our two new board members at the SEG Annual Meeting in Denver. It has been a pleasure serving with these people, all of whom have really stepped up to the plate and ensured that our special sections were filled with interesting and excellent papers.

We also have had numerous guest editors helping during the course of the year, and to them I extend my deepest appreciation. It takes a lot of work to prepare our special sections, usually involving numerous evenings and weekends. Quite frankly, our special sections wouldn't be possible without these guest editors. They are too numerous to mention by name, but the Editorial Board deeply appreciates their help.

The Best Paper for 2013 is "A new, fully integrated method for seismic geohazard prediction ahead of the bit while drilling" by Cengiz Esmersoy, Arturo Ramirez, Sharon Teebenny, Yangjun Liu, Chung-Chi Shih, Colin Sayers, Andy Hawthorn, and Maurice Nessim. This paper appeared in the October 2013 issue.

Honorable Mention for 2013 was "Breaking the limit of seismic resolution: a synthetic example based on Tunu shallow gas development" by P. Thore and P. Spindler. This paper appeared in the November 2013 issue.

Congratulations to these authors on a job well done!

The Editorial Board added some new content to *TLE* during the 2014 term (for additional background, please see my column in the December 2013 issue). First, we have started publishing a tutorial column every other month, which covers a wide variety of topics that are of interest to practicing geophysicists; this column is managed by Matt Hall (Agile Geoscience). Second, we are in the process of adding a series in which we interview technology leaders from various operators and service companies; this program is managed by Ken Tubman (ConocoPhillips). I'm pleased to announce that the tutorial series is successful and well under way, and the interviews with technology leaders will be starting in mid-June. We hope to begin publishing our first series of interviews before the end of 2014. We look forward to feedback on both of these additions to *TLE*. In addition to these items, the Board also is evaluating other potential content to add to *TLE*.

Finally, the Board has been working with SEG staff this spring in an effort to design a membership survey. We would like to do this to build a better understanding of how we can better serve the needs of our members. We recognize that competition for their reading time is fierce, and we therefore need to make sure we are aware of how we can better reach out to the SEG community. We hope to run the survey by the end of 2014.

It has been my pleasure to serve on the Editorial Board for *The Leading Edge*, and I look forward to the continued growth and development of this excellent journal.

Translations

Long Jin, 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 Long Jin (chair), Yunyue Li (vice chair), Wei Liu, Ilya Tsvankin, Vladimir Grechka, Chaoshun Hu, Eike Rietsch, Tadeusz J. Ulrych, Edson Sampaio, Gabriel Perez, Louise Pellerin, Sergio Chavez-Perez, Juan C. Soldo, Michael Stylianou Arvanitis, Evgeny Landa, Dennis Yanchak, and Toshifumi Matsuoka. Committee activities since last year's report include the following:

- a team of translators led by Hua-wei Zhou completed the translation of Qing-zhong Li's book on *High-resolution Seismic Exploration* in Chinese. Timothy Barker and Jeff Messtayer, as volume editors, completed editing of the translated version. Wei Liu as managing editor and Merrily Sanzalone and Jennifer Cobb as SEG staff coordinated the translation and volume editing process. The book is ready to be published.
- a book titled *The Seismic Signal and its Meaning* is under review.
- a book proposal *Practical Tasks in Geometrical Seismic* is under review.

SEG Women's Network

Maria Angela Capello, chair

In November 2010, SEG President Klaas Koster formed a task force charged with providing a recommendation on forming a professional women's network in SEG. The task force was then converted into a standing committee, active since 2011.

The mission of the SEG Women's Network Committee (WNC) is to:

- promote greater participation and leadership of women in geophysics worldwide.
- promote greater female engagement in SEG activities, on local, regional, and global scales.
- create a community for mutual support among female SEG members.
- enhance recruiting of women to the profession and mentoring of young female professionals.
- envision and recommend strategies to retain women in the industry.
- elevate awareness of the value a diverse workforce brings to business.

The WNC pursued the following main goals during 2013–14:

- expand the WNC to a more global outreach, including regions outside of the United States.
- raise the awareness on the WNC goals in the SEG media, particularly enhancing the presence of contributions on the SEG site, LinkedIn SEG WN Group, and Facebook SEG Women Network Group.
- launch activities in other regions than the United States.
- collaborate with other sister societies in activities related to the women promotion and retention strategies.
- engage in surveys of the SEG membership to address matters related to the hiring, retention, and promotion of women (academia and industry), as well as matters associated with dual-career couples.
- organize the SEG WN breakfast at the 2014 Annual Meeting in Denver.
- expand the WNC membership to include more young professionals, students, and academics.
- expand the WN.

Achievements of 2013–14

- publication of an article about the 2013 SEG survey on women's and dual-career couple's issues.
- the SEG WNC endorsed, launched, and analyzed the results of a survey addressed to all SEG membership, addressing dual careers' and women's concerns. Results published in *TLE* in two portions. (Part 1 was published in April 2014. Part 2 will be published in August 2014.) This effort was led by Eve Sprunt, ex-chair of the WNC in collaboration with the WNC.
- coorganized, endorsed, and participated in the Workshop on Women's Leadership, "Breaking Glass Walls" with AAPG and AWG. Workshop held in Houston, Texas, on 5 April 2014.
- keynote address at the second Students and Faculty Symposium of SEG held in Abu Dhabi, UAE, May 2013.
- updating of the membership of the WNC including adding two academics and a student.
- active liaisons with SEG China office, with two new members contacted and invited to the SEG WNC; and SEG Middle East: Initiated several activities, most particularly, participation in the II Student Symposium and in the upcoming SEG Forum.
- WNC cosigned as a group a complaint letter about a "workforce" billboard sign from a recruiting campaign in the principal oil centers in the United States.
- led a campaign to eliminate inappropriately attired "booth babes" at the upcoming SEG Annual Meetings.
- coordinated the nomination of five women for SEG awards, with two winning nominations, namely: Susan Webb, Educator Award 2014 and Louise Pellerin, Lifetime Membership 2014.
- WNC column in *TLE*: The committee proposed a monthly column in *TLE* (title to be decided), about issues impacting women and dual-career couples, strategies to enhance the

hiring and retention of women, and gender diversity-related matters. The Editorial Board of *TLE* and the WNC are in conversations to move ahead with the proposal.

- monthly conference calls on the last Wednesday of every month. These virtual meetings are attended by an average of eight people from the United States (all regions), and the Middle East; and from academia, operating and service companies, and self-employed members. The discussion is summarized and shared by e-mail.
- WNC members have shared eight relevant articles, white papers, and reports on women's empowerment, leadership, promotion, retention strategies, and other matters with the WN at large during 2014.

Future Path

WNC in 2014–15 is keen to continue the efforts to assist female SEG members by:

- expanding the membership of the committee to include more young professionals, students, and members residing outside the United States.
- launching a survey of faculty and students to identify gender-related barriers and issues.
- publishing several short articles in *TLE* to raise the awareness of SEG issues adversely impacting female geophysicists.
- promoting the nomination of female geophysicists for SEG Awards.
- promoting the participation of women geophysicists in SEG committees and SEG leadership.
- continuing to organize activities to promote female self-empowerment and to nurture open discussion of barriers to women in the workplace that negatively impact career progression.
- promoting a more active presence of women in social media and the online resources of SEG.
- increasing the understanding of women's issues at work, through surveys, articles, research, articles, and discussion workshops.
- seeking the expansion of WNC to Latin America and Africa.

Youth Education**Hendratta Ali, chair**

The Youth Education Committee (YEC) focuses on sharing our passion for geosciences and geophysics with youth and educators. We aim to inspire young students to pursue further education and careers in the geosciences by providing resources for geoscientists and educators to use in educating youths about geoscience and the field of exploration geophysics.

Nine members of the committee met at the 2013 Annual Meeting. Gary Robinson, the outgoing chair, chaired the meeting. At this meeting, committee members gave updates on their efforts in youth education and outreach during the year: Below are some highlights of some of the committee member activities

during the year

- Gary Robinson attended the Boy Scouts Jamboree in West Virginia where he and others offered geology merit badges to the Boy Scouts. These events have been successful at steering students to the geosciences in their college tenure.
- John Delaughter launched a blog of citizen science opportunities, targeting youths and others, where he has published several different science opportunities including geosciences.
- Lisa Buckner continues to do a lot of work with middle school students in the Houston area and participated in the science and engineering fair in Houston. She also attended several high school and career fairs for middle schools and gives Geology 101 presentations to youths.
- Marc Sbar works on engaging students and teachers in the Tucson area in Arizona through his participation in several events: the Gem and Mineral Show, Science Saturday Program, and a Middle East study program.

The YEC also recruited some new members and plans to continue membership drive to recruit more members. During regular meetings, the committee brainstormed ideas and decided on efforts to focus on and concentrate efforts. Here are some of the ideas and suggestions for the future focus of the committee:

- revive the “magic suitcase” initiative. The committee created a subcommittee to work on this activity, drafted a proposal to the SEG Board, and included a funding request in the committee budget request.
- increase YEC collaboration with other committees notably the Committee on University and Student Programs (CUSP), International Science and Engineering Fair (ISEF), etc.
- expand YEC activities beyond the United States for a more global outreach and promote outreach to low-income students around the world.
- encourage outreach to other youth groups like 4-H, etc.
- participate at the Kids’ World International Festival in Tulsa, November 2014, to promote the SEG geosciences activities.

- publicize the youth education and outreach activities to the SEG membership by submitting advertisement and articles to *The Leading Edge* and posting on the SEG Web pages, e.g., Facebook page for student chapters.
- organize educator and student activity fair in the future at SEG Annual Meetings with the support of Annual Meeting planning group.

Committee members are actively involved in youth education at all levels, making presentations to schools, scout groups, educators, reaching out to potential collaborators, and appearing at other youth activities, as well as participating in the judging of the International Science and Engineering Fair. Committee members hope to participate in engaging with student activities at the 2014 Annual Meeting in Denver and also participate at the Kids’ World International Festival in Tulsa come November 2014. The Youth Education Committee also plans to extend outreach activities to reach and involve global low-income students.

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 2015 ISEF will be held 10–15 May 2015 in Pittsburgh, Pennsylvania.

Activities:

The 2014 ISEF was 11–16 May 2014 in Los Angeles, California. Louie Pellerin (Green Geophysics), Karen Sherlock (Sherlock Geophysics), and I (Oilfield Review, Schlumberger) made up the SEG judging team at the 2014 ISEF. The SEG judging team selected the following projects to receive awards or honorable mentions, listed in the table below. An article about the 2014 ISEF will be published in *The Leading Edge*.

Award	Awardee	Project	Title
First	Yongpeng Tang	EA007	Data Sonification with the Seismic Signature of Ocean Sur
Second	Min Jean Cho	MA047	Applying Bayes’ Theorem to DNA Sequence for Identification of Pathogenic Bacteria
	Naomi Benson	EA008	Tsunami Mitigation as a Function of Alterations in Bottom Friction
Third	Ben Ross	EA010	An Optimized Analysis of Wind Flows in the Urban Environment and the Identification of Feasible Building Augmented Wind Turbine Sites
	Michael Litt	CS036	A Novel Filter for Tracking Trends in Noisy Real-Time Data
	Daniel Pflueger	PH077	Measuring Water Waves
Honorable Mention	Nebras Djemel	CS012	Using Artificial Intelligence and Computer Vision in Creating an Operating System for Head-Mounted Displays
	Boyd Kane	EA012	Using an Underwater Trench to Limit the Energy of a Tsunami

Reports of the Representatives

Joint Committee on Reserves Evaluator Training **Fred Aminzadeh, representative** **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.

JCORET was originally formed in response to a belief in the oil and gas industry that reserves evaluators were going to be required to be licensed or accredited by government entities; hence, there would be a need for formal, certified continuing-education courses for which *JCORET* would be the quality control group. This licensing/certification requirement by government regulatory agencies has not materialized to date. Consequently, *JCORET* has evolved to an intersociety group supporting the training of reserves evaluators as a self-directed, voluntary activity rather than as a requirement for government licensing.

Much of the past year has been devoted to discussing the training material from the five societies as we see *JCORET* improving training across various technical skills required for expert reserves evaluation including knowledge of reserves and resources definitions, recommended geologic and engineering evaluation practices, and ethics. SEG representatives to *JCORET* have assumed the responsibility of preparing training material on geophysical aspects of reserves estimation and certification. The discussion has produced agreement on the following actions.

1. *JCORET* will peer-review and approve courses related to reserves/resources estimation and reporting and will list the approved courses on its Web site (www.jcoret.org).
2. *JCORET* will serve as a clearinghouse for reserves evaluator

training by listing all relevant courses on its Web site regardless of whether the provider of the course is interested in a peer-review by *JCORET*.

3. *JCORET* will identify gaps in training where no suitable course is currently offered to evaluators and then encourage its appropriate sponsoring societies to develop a relevant course to overcome the deficiency. In this regard, the SEG representatives have noted that there is no *JCORET*-approved course on how to use 3D and 4D seismic data and other geophysical data in structured reserves evaluation and have encouraged the SEG Oil and Gas Reserves Committee and SEG Continuing Education Committee to foster the development of a new SEG course on this subject. Another area of concern to SEG is in the use of geophysical methods to evaluate reserves in unconventional reservoirs, i.e., shale gas.
4. If requested by the sponsoring societies, *JCORET* will provide intersociety feedback on single-organization events (like workshops on the Petroleum Resources Management System) to maintain joint organizational consistency.

SEG representatives to *JCORET* will continue their effort to prepare suitable course(s).

NAPE Expo Advisory Committee **Allen Gilmer, representative**

The first NAPE Expo was held in 1993 in a hotel in the Galleria area in Houston, Texas. Originally, the American Association of Petroleum Landmen (AAPL) was the sole owner. In 1995, the Independent Petroleum Association of America (IPAA) came in as a partner. NAPE grew and it moved to its location in the George R. Brown Convention Center in downtown Houston in 1998. The Society of Exploration Geophysicists (SEG) and the American Association of Petroleum Geologists (AAPG) joined as partners in 2004. The first summer NAPE, again 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.

Winter NAPE is the hallmark event, with more than 1600 booths and 16,000 attendees. NAPE's recent focus has been regional NAPEs. Summer NAPE in Houston, which draws about

half that of Winter NAPE, became NAPE South in August 2013. Attendance of these long established Expos does fluctuate through the years depending on the state of the oil and gas industry. Through the years, the NAPE format has evolved to a “business” conference preceding the Expo itself. For Winter NAPE, there also is an International Expo preceding the business conference.

NAPE continued its focus on the national/regional NAPE model, adding NAPE East in Pittsburgh, Pennsylvania, in April 2013 and NAPE Rockies in Denver, Colorado, in December 2013. Economic viability of these much smaller Expos, 2700 at NAPE Rockies 2013 and even less at NAPE East, still is being established.

NAPE Schedule for FY14 and FY15

- NAPE South 2013, 14–16 August 2013, Houston, TX
- NAPE Rockies 2013, 11–13 December 2013, Denver, CO
- Winter NAPE 2014, 4–7 February 2014, Houston, TX
- NAPE East 2014, 9–11 April 2014, Pittsburgh, PA
- NAPE South 2014, 20–22 August 2014, Houston, TX
- NAPE Rockies 2014, 10–12 December 2014, Denver, CO
- Winter NAPE 2015, 10–13 February 2015, Houston, TX
- NAPE East 2015, 15–17 April 2015, Pittsburgh, PA

With additional NAPE Expos, avoiding date conflicts with other conferences the partners are involved with becomes challenging, and some conflict becomes inevitable. Coordination and flexibility among partners is essential.

NAPE Governance and Management

NAPE is a limited partnership with AAPL as the general partner. The partnership agreement outlines a nine-person Advisory Committee with each partner appointing members according to its ownership interest. SEG has one appointee. Per the agreement, the Advisory Committee shall (1) review (and later approve) the budget and (2) provide advice. The Advisory Committee’s recent focus has been on attendance and geographic expansion.

OTC Board of Directors

Wafik Beydoun, representative

Founded in 1969, the Offshore Technology Conference (OTC) is the world’s foremost event for the development of offshore resources in the fields of drilling, exploration, production, and environmental protection. As a sponsoring organization since 1969, SEG is entitled to appoint one of the 14 members to the OTC board of directors. The SEG and its members accrue tangible benefits through participation in the OTC events. The end of this article provides a background about OTC and its relationship to SEG, as well as forward looking opportunities.

For OTC’s fiscal year that ends 31 July 2014, all four OTC events were held for the first time in the same year. That will not be the case for fiscal year 2015 as there will only be the Arctic Technology Conference and OTC (Houston). Here’s a look ahead for the next editions of each OTC event.

- 23–25 March 2015: Arctic Technology Conference, Copenhagen, Denmark
- 4–7 May 2015: Offshore Technology Conference, Houston, Texas, USA
- 27–29 October 2015: OTC Brasil, Rio de Janeiro, RJ, Brazil
- 22–25 March 2016: OTC Asia, Kuala Lumpur, Malaysia
- 3–6 May 2016: Offshore Technology Conference, Houston, Texas, USA

There are a few changes to OTC events that you might be interested in knowing. For OTC 2015, the Board approved adding a new element that is called “OTC d5”. It will be held on Friday, 8 May 2015. It is a new type of conference session designed to spark creativity and innovation in the offshore energy industry. It will bring together the brightest minds in E & P for talks that inspire participants to discover unique connections and solutions. Also, all OTC events will begin recognizing significant industry achievements. The popular Spotlight on New Technology awards that highlight exhibitors that have recently introduced new products or services that are expected to have significant impact on the E & P industry will be expanded to all OTC events. All OTC events will begin capturing information about individuals and companies that are candidates for the OTC Distinguished Achievement Awards. Committees for each event will work collaboratively with the OTC board committee on awards to pick winners of this recognition.

This rest of this article highlights the status of these four OTC Conferences (OTC Houston, OTCB, ATC, and OTCA) as of May 2014. Other accounts in this Annual SEG report provide details on the role of SEG and its members in the Program Committees’ organization of OTC Houston, thus helping make OTC the success that it is.

OTC Houston 2014—Record-breaking

OTC Houston closed this year with the 2014 edition breaking all previous records. There were 108,300 participants that viewed the largest ever exhibition with 680,025 net square feet of exhibits. Attendance at OTC reached the highest in the show’s history and was a 3.3% increase over last year. The exhibition represented 2,568 companies from 43 countries, including 163 new exhibitors. International companies made up 44% of exhibitors.

On Wednesday, 6 May, SEG and AAPG organized for the first time during OTC a Geosciences Reception in an effort to increase networking and recognition of geoscience activities in OTC. Lance Cole (SEG’s Inter-Society Collaboration Manag-

er) was instrumental in getting the idea implemented in OTC 2014. Nearly 100 persons attended, including the SEG and AAPG presidents. We are currently learning lessons from this event and evaluating how to enhance such networking in future OTC events.

On Thursday, 7 May, OTC focused its energies towards a safety program. OTC's program committee worked closely with the United States Bureau of Safety and Environmental Enforcement and the Center for Offshore Safety organizations to deliver a full day program on safety. Top executives from both agencies were present and made presentations. The day ended with an awards presentation at a luncheon.

There is another report in SEG's 2014 AR from the 2014 OTC Program Committee providing more details on the impressive Technical Program, consisting of 11 Topical Breakfasts, 11 Topical Luncheons, 47 Sessions, and nine Panels – and SEG's input to this program.

OTC Brasil 2013 Report—29–31 October 2013, Rio de Janeiro, Brazil

Chair of SEG's Technical Program Subcommittee: Paulo Johann

Close to 15,000 industry professionals, executives, and experts from around the globe assembled 29–31 October in Rio de Janeiro for OTC Brasil 2013. The three-day conference and exhibition, organized by the Offshore Technology Conference (OTC) and Brazilian Petroleum, Gas and Biofuels Institute (IBP), featured 192 peer-selected technical papers, a 40% increase over the first OTC Brasil, held in 2011. OTC Brasil 2013 had an exhibition with 400 exhibitors, including key service and operating companies with majority stakes in the Brazilian market. Demonstrating the excitement surrounding Brazil's emergence as a key player in the global E & P arena, the exhibition, which covered 9,000 m², contained seven international pavilions – the United States, Germany, The Netherlands, China, the United Kingdom, Sweden, and France. Net surplus to SEG from this successful conference was about \$91K.

The comprehensive technical program (192 papers, eight panels, five luncheons), which focused on Brazil's offshore deep-water sector, assessed all aspects of offshore drilling and well systems, floating structures, and advanced subsea production, as well as the increasingly complex integrity management used to keep them operating.

The OTC Brasil luncheon series (five of them) provided delegates with the opportunity to hear the views of top-level executives and experts who discussed regional and international issues. Graça Foster, CEO, Petrobras, was the keynote speaker for the opening-day topical luncheon where she discussed the company's need to double in size in the next six years to meet growing energy demand, as well as the increasing importance of the production side of E & P.

A first time event in the OTC activity was organized in conjunction with the OTC Brasil 2013 general program: The Professional Societies Leadership Summit held Monday–Wednesday, 28–30 October. Its objective was to facilitate international and Brazilian professional societies to share ideas and initiatives to foster greater collaboration and interaction between these societies. The Leadership Summit agenda provided the opportunity for leaders to meet informally and participate in a very interesting panel session discussion on “The Role of Professional Societies in Disseminating Knowledge and Technology.”

Another initiative was the Student Professional Program (Tuesday–Thursday, 29–31 October). This event offered a special program for more than 1500 students throughout the three-day conference, covering an overview of the industry as well as technical and soft skills.

OTC Brasil 2015, to be held in Rio de Janeiro 27–29 October 2015, will continue the focus on deepwater developments. Orlando Ribeiro, Petrobras, chairs the Program Committee. Fernando Frimm with GustoMSC serves as vice chairperson. The Call for Papers is anticipated in the November 2014 time frame. Plans are to again include a Society Leadership Summit in OTC Brasil 2015.

ATC 2014—10–12 February 2014 in Houston

Chair SEG Technical Program Subcommittee: Bill Goodway

The Arctic Technology Conference (ATC), held 10–12 February 2014 at the George R. Brown Convention Center in Houston, Texas, brought together 1266 attendees from 26 countries. Attendance was basically on par with that of ATC 2013. ATC is a highly focused, international conference that addresses the cutting-edge technologies and innovative practices needed for exploration and production in the Arctic. This conference is a part of the Houston-based Offshore Technology Conference portfolio of events. In Houston about 70% of attendees are from the United States, with Canada, Finland, Norway, and the United Kingdom rounding out the top five countries.

The technical program contained 23 sessions, 130 technical presentations, four panel discussions, and four topical lunches. Seismic-oriented content included:

- Tech Session: Arctic Frontier Basins: Applications of Technology (Session cochairs: Azra Tutuncu and Don Gautier)—six papers.
- Tech Session: Arctic Geophysics: Seismic Acquisition, Processing and Interpretation (Session Co-Chairs: Michael Enaschescu and David Schoderbek)—seven papers.
- Topical Breakfast: Rolling the Dice on the Ice—Acquiring Underway Geophysical Data in the Arctic Ocean, Bernard Coakley, Geophysical Institute, University of Alaska.
- Topical Breakfast: A Tale of Two Icebreakers: Geophysical

Surveying in the High Arctic, David Mosher, Geological Survey of Canada

OTC recognizes that the Arctic Technology Conference, at least in the current political and economic environment, is about the science and not about high attendance and high net surplus. Net surplus to OTC was \$266K for ATC 2014 (approximately \$20K to SEG). Estimated net surplus for ATC 2015 (23–25 March 2015, Copenhagen, Denmark) will be lower with higher operating costs with a European location. With a European location, most attendees will come from Europe rather than the U.S.—so there is also the reality that a new audience must be nurtured. OTC will launch the Arctic Technology Conference’s Distinguished Achievement Award with the Copenhagen conference. OTC’s Board of Directors has approved St John’s, Newfoundland and Labrador, Canada as the location for Arctic Tech 2016 in a September-October time frame.

OTC Asia 2014 (25–28 March 2014, Kuala Lumpur, Malaysia)

Chair of SEG’s Technical Program Subcommittee: David Pitcher with contribution by Charles Knobloch, member, OTC Asia Oversight Committee

This inaugural OTC Asia conference attracted more than 25,000 delegates and visitors from 88 countries, far exceeding a working expectation of 7500. Correspondingly, net surplus projections of \$2.5 million to OTC far exceeded early estimates of \$1.5 million. SEG’s distribution for OTC Asia 2014 will be \$189K. Strong financial and logistical support from Petronas was a key contributing factor to this success. It should be noted that OTC Asia’s success has led the society partners (AAPG, EAGE, SEG, and SPE) in the International Petroleum Technology Conference (IPTC) to plan discussions on whether OTC Asia’s success should impact the future rotation of IPTC conferences in Southeast Asia.

There were two plenary sessions, 10 panel discussions, and 53 technical sessions. Country sessions, especially Myanmar and Mexico, were big successes. SEG’s Technical Program Subcommittee was led by Chair David Pitcher and Vice Chair Deva Ghosh. Charles Knobloch, who represented SEG on OTC’s Oversight Committee for OTC Asia 2014, assisted Program Committee Chair Robert Ziegler of Petronas. Due to the efforts of Pitcher and Knobloch working collaboratively, SEG had a presence on two of the panel discussions, both of which were well attended. There were three geosciences technical sessions, two from geology and one from geophysics. The geophysics session was chaired by Arthur Cheng and Deva Ghosh. Attendance at this session exceeded the average technical session attendance. Technical quality was good and the venue was more than adequate. Pitcher supported AAPG’s effort, co-chairing one of their geology sessions.

Knobloch visited Indonesia ahead of the conference to work with two CEO’s and the executive director of the Indonesian

Petroleum Association to insure the success of the Indonesian Country Session, which became an SRO event. Knobloch and Allan Magee (Head of Innovation & Technology for Technip) assembled and hosted a panel session on “Barriers to Technology Implementation and Global Intellectual Property”. The focus was on government, regulatory, commercial, and cultural barriers, with examples of successes in overcoming these barriers. The panel featured global leaders in technology, including senior executives from Petronas, Shell, and Baker.

The main issues with this conference were attracting quality geosciences papers and later abstract withdrawal, not uncommon issues for both SEG and AAPG at all OTC conferences. Part of this is undoubtedly the perception of the OTC as being more engineering-oriented. Society presence and membership in the region could also be a contributing factor. There were the usual challenges getting appropriate time/space venues for the geosciences sessions. Considering the challenges in attracting papers, SEG should strongly consider increasing its Subcommittee size for OTC Asia 2016. More volunteers would mean more networking connections to attract papers, and to develop geo-oriented special events. Opportunity also exists for SEG and AAPG to work more collaboratively, across the board for all OTC conferences, in resonance with the ongoing collaboration initiative between SEG and AAPG.

Background about OTC and its relationship to SEG

OTC Board of Directors is composed of 14 members from Supporting and Regional organizations.

Sponsoring organizations. In addition to SEG, other sponsoring organizations are: AAPG (American Association of Petroleum Geologists), AIChE (American Institute of Chemical Engineers), AIME (American Institute of Mining, Metallurgical, and Petroleum Engineers), ASCE (American Society of Civil Engineers), ASME-IPTI (International Petroleum Technology Institute), IEEE-OES (Institute of Electrical and Electronics Engineers), OES (Oceanic and Engineering Society), MTS (Marine Technology Society), SME (Society for Mining, Metallurgy, and Exploration Inc.), SNAME (Society of Naval Architects and Marine Engineers), SPE (Society of Petroleum Engineers), and TMS (The Minerals, Metals, and Materials Society).

Regional sponsoring organization (new, starting fall 2013): IBP (Brazilian Petroleum, Gas and Biofuels Institute). SEG is a sponsoring organization of the Offshore Technology Conference. The relationship dates to 1969 when SEG accepted an invitation to join with AIME and seven other engineering and scientific societies to establish OTC as an interdisciplinary meeting on technology related to offshore resources. As a sponsoring organization, SEG is entitled to appoint one of the 14 members to the OTC board of directors.

The SEG and its members accrue several benefits through participation in the Offshore Technology Conference. First, it is an event where one can broaden her/his view of the technology and technical advances that are required to make the oil and gas industry what it is. Second, besides the big-time hardware that's on view and being discussed in technical sessions, there are strong reservoir engineering and geosciences technical sessions that are, without question, relevant to what most geoscientists are working on today. Third, as with almost any well-attended industry meeting, it's a good place to network. Fourth, OTC events alone provide nearly 5% of the total annual income for SEG.

Forward-looking opportunities

Looking forward through the next 10–30 years, the oil and gas industry recognizes that major sources of future reserves will be coming from the offshore (particularly deepwater), unconventional resources, and the Arctic regions. SEG participation in OTC gives it a tangible presence in at least in two of these regions. And that presence reaches out to more than 100,000 people each year, encompassing North America, South America, Southeast Asia, and Arctic countries. If nurtured appropriately, such an impressive network would provide SEG the opportunity to strengthen ties with Sections and Associated Societies in these regions (including the Houston area)—such as contributing to Technical Program Subcommittees for the different OTC events. This networking would not only increase SEG's visibility worldwide, but would strengthen geosciences content in OTC events, engaging more geophysicists attending which in turn should have a positive impact on SEG membership (with new members and/or retaining existing ones).

One last point: enhancing the visibility and identity of the geoscience 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. Collaborating in the OTC realm strengthens each society's impact and geosciences in general. All involved, volunteers and support staff alike, are already proposing and implementing such opportunities.

OTC Technical Program

Charles Knobloch, chair

From 5–8 May 2014, the Offshore Technology Conference (OTC) came again to Houston, where it has been held annually since 1969. OTC is sponsored by thirteen (13) industry organizations and societies, of which SEG is one, who work cooperatively each year to develop the technical program and other functions as directed by the OTC Board. OTC is the world's foremost event for development of offshore resources in

the fields of drilling, exploration, production and environmental protection. Attendance at OTC 2014 reached a 46-year high of 108,300, the highest in show history and up 3.3% from the prior year. The sold-out exhibition was the largest in show history. The event had 2568 companies representing 43 countries, including 163 new exhibitors in 2014. International companies made up 44% of exhibitors. OTC 2015 will take place 4–7 May 2015 at Reliant Park, and will be followed by a new initiative "d5" on 8 May. "d5" will bring together the best thinking and creativity from inside and outside the E & P industry to stimulate innovation and creativity towards the biggest challenges facing the offshore industry. ("d5" is symbolic for "day 5" – adding a fifth day to the 2015 Offshore Technology Conference.)

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 2014, Technical sessions developed by the SEG Technical Program Subcommittee included:

- Emerging Offshore Geosciences Technologies (Panel Session): SEG developed this special "blue ribbon" panel session to provide an executive summary look at emerging technology trends in geosciences, those possessing significant future commercial impact. Topics addressed included permanent reservoir monitoring, ocean bottom acquisition, microseismic monitoring, and new streamer technologies. Speakers were Paulo Johann, Petrobras; Shuki Ronen, Seabed Geosolutions; Peter Duncan, Microseismic, Inc.; Rocco DeTomo, Shell; and David Monk, Apache. (Charles Knobloch, chair) This session was featured on the front page of the OTC event magazine.
- Geoscience Projects: Session co-chairs were Aurora Castelan, Schlumberger and Jim Kreamer, Global Geophysical.
- Geoscience Developments: Session co-chairs for this SEG/AAPG-developed session were Aurora Castelan, Schlumberger and Jim Kreamer, Global Geophysical.

There were also four special events that SEG played a role in developing:

- Ethics Breakfast: Geoethics: A Way of Thinking and Practicing Geosciences (organized by AAPG and SEG): Salvatore Barba presented on behalf of Silvia Peppoloni, National Group for the Defense Against Earthquakes and the Istituto Nazionale di Geofisica e Vulcanologia (Italy). The presentation discussed the value of geoethics in joining humanistic and scientific visions as the search continues for socio-economic solutions to practical problems that are compatible with respect of the environment and protection of nature and land. (Charles Knobloch, facilitated audience discussion)
- Topical Breakfast: Indonesia's Offshore Future (SRO): Susilo

Siswoutomo, vice minister of Energy and Mineral Resources; Edy Hermantoro, director general oil & gas, Ministry of Energy and Mineral Resources; Agus Tjahajana (director general, Industrial Cooperation); Teddy Sianturi, director of manufacturing, Ministry of Industry; Syamsu Alam, senior VP Pertamina; Muhamad Husen, upstream director of PT Pertamina; Isman Pasha, acting consul general; Gde Pradnyana, secretary of SKK Migas; Hendra Fadli, director of Upstream Business at the Directorate General of Oil and Gas. (Charles Knobloch, moderated)

- Topical Luncheon: Increasing Production in an Anti-Hydrocarbon Era (organized by SEG): John Hofmeister, founder and CEO, Citizens for Affordable Energy, Inc. (retired CEO of Shell). (Phil Grossweiler and Dan Heinze, moderated)
- Topical Luncheon: Serving Global Energy Industry for the Future (SRO) (organized by ASME and SEG): Jeffrey Immelt, chairman of the Board and CEO, GE. Jeff Immelt shared his perspectives on the toughest challenges facing the global energy industry today and in the future. He gave his views on the importance of rigorous policy and regulation, the advantages of fuel diversity and the role of technology in driving growth and competitiveness. He also reflected on the need for continued investment in education, engineering and R & D in order to solve the world's toughest challenges. (Charles Knobloch, moderated)

Special Initiative:

- Geosciences Day Reception: To highlight the geosciences content within OTC and strengthen the sense of community within geoscientists working in the offshore, SEG and AAPG held a reception at Reliant Park on Tuesday, 6 May, following the day's technical program. Beyond building community, the reception provided the opportunity to gain feedback from attendees about topics of high interest to them, to be considered by future Technical Program Subcommittees. This initiative was spearheaded by Lance Cole, who deserves great credit, and was well received in the face of competing events, scheduling and logistical limitations that one would expect in introducing a new event.

Facilitation for advancement of OTC through SEG:

- The Indonesian Ministry of Industry asked Mr. Knobloch to meet with them in Jakarta, ahead of 2014 OTC, which he did. Through a number of years of efforts, some via the OTC-SEG role, it appears that the importance of OTC is now being realized – and that realization is now extending beyond the traditional Energy Ministry and their national oil company. At their request, a special meeting was arranged with some of the OTC Board for representative officials from the Ministry of Energy and Ministry of Industry to discuss strategy for increased participation and presence of Indonesia at future OTC's, beginning in 2015. This initiative appears to extend also to OTC—Asia 2016, at least through

increased alignment of interests with the Indonesian Petroleum Association.

It is hoped that SEG continues to support the hard work of its OTC 2014 Program Subcommittee. Members included Charles Knobloch (chair), Rocco Detomo (vice chair), Jim Kreamer (vice chair), Aurora Castelan, Dan Heinze, Larry Scott, Kidane Araya, Ashwani Dev, Ali Mese, Wei Yang, and Joe Sonnier.

SEG's Technical Program Subcommittee for OTC 2015 has been formed and is already working to develop sessions for OTC 2015.

IPTC Management

Joseph Reilly, board member

Philippe Doyen, board member

The International Petroleum Technology Conference (IPTC) has become the largest multi-society, multidisciplinary oil and gas event in the Eastern hemisphere with sponsorship from 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 event rotates annually between the Middle East and Asia.

Following the 6th IPTC held in Beijing in 2013, the 7th IPTC was held 19–22 January 2014 in Doha. The conference was hosted by Qatar Petroleum with ExxonMobil as co-host organization. The event attracted more than 5000 oil and gas professionals representing 71 countries and 850 different organizations. The record attendance was more than twice that of the previous IPTC held in Doha in 2009. The conference was held at the state-of-the-art Qatar National Conventional Centre and featured 6500 sqm of exhibition space with 121 exhibitors, a record number.

The opening ceremony featured an impressive list of speakers, including Sheikh Abdulla bin Nasser bin Khalifa Al Thani, prime minister and interior minister of Qatar; Mohammed bin Saleh Al-Sada, minister of energy and industry of Qatar; Saad Sherida Al Kaabi, director, oil and gas ventures, Qatar Petroleum; Andrew P. Swiger, senior vice president, ExxonMobil; and senior executive from a spectrum of national and international oil and gas oil companies.

Under the general theme of “Unlocking Energy through Innovation, Technology and Capability,” the conference program covered the latest technical developments across disciplines including drilling and completions, E & P geoscience, engineering projects and facilities, field development and production operations, mid-stream gas, unconventional resources, and reservoir management. The conference program included 67 tech-

nical sessions featuring more than 200 oral presentations as well as almost 200 e-posters. The Doha event also included six panel sessions on themes such as “The Future of Integrated Project Management in a Cyclic Environment,” “Fundamentals of the Natural Gas Revolution,” “Growing the Resource through Upstream Technology,” and “Delivering on Evolving Stakeholder Expectations.” The successful panel sessions, which have become one of the highlights of the IPTC, featured a number of senior executives from the oil and gas industry. Another high point at the Doha event was the “Excellence in Project Integration” award, which was presented to Shell for their development of the Pearl gas-to-liquid (GTL) facility in Qatar.

In continuing the IPTC’s tradition of providing a platform for education, the Doha event offered a number of activities for students and young professionals. More than 110 students from 31 countries, 67 universities and 13 degree disciplines—together with 20 local Qatari students—participated in a week-long education program. This Education Week is designed to give an insight into the oil and gas industry to the best final year university students from around the world, and to allow them to interact directly with oil and gas professionals. The exhibition floor also featured a dedicated Youth Pavilion where various competitions took place.

Following the successful Doha event, the eighth International Petroleum Technology Conference will be held 10–12 December 2014 in Kuala Lumpur. Returning to Kuala Lumpur (KL) for the second time, this event will be hosted by PETRONAS, Malaysia’s national oil company, and co-hosted by both Shell and Schlumberger. More than 1700 abstracts representing 300+ organisations and 58 countries have been submitted for the KL IPTC under the general theme of “Innovation and Collaboration: Keys to Affordable Energy.” Following the Programme Selection Meeting held in April, the IPTC has announced that the KL technical programme will include 67 technical sessions of which 52% will be dedicated to geosciences, a first in the history of IPTC. The large number of geosciences technical sessions should help increase the participation of geologists and geophysicists, which might in turn increase SEG members’ attendance sufficiently in order to maintain its 20% ownership interest.

An IPTC Board of Directors’ meeting was held in Doha on 23 January 2014, directly after the conference. The outcome of the Doha event was discussed. A net surplus of about \$2.2M was announced, taking into account a 10% increase of the SPE management fee as presented by Mark Rubin, IPTC Executive Director, and approved by the Board. Attendance statistics showed that only 10% of full conference registrants in Doha indicated on their registration forms that they are members of the SEG, well below the 20% target corresponding to the SEG ownership interest in IPTC. Nevertheless, as this percent is calculated based on a small sample of 608 people compared to the

5000+ total number of event attendees, the Board requested that the IPTC provide more information about the number of delegates that attended the different technical sessions. The board also reviewed and approved the preliminary budget for IPTC KL, which projects a total income of \$5.3M and expenses of \$4.2M, resulting in a forecasted event surplus of \$1.1M. The budgeted management fee for KL is \$1.1M. A report from the Governance Subcommittee was also made during the Doha board meeting. Further changes to the IPTC Operating Manual were recommended. This document includes both operational and conference organization guidelines, aimed at ensuring good business practice for IPTC staff and volunteers. Finally, the board reviewed the dates and locations of future IPTC events after the KL conference scheduled in December 2014. The plan is to hold the 9th IPTC in Doha, Qatar, 8–10 December 2015 and the 10th IPTC in Bangkok, Thailand, 14–16 November 2016.

Unconventional Resources Technology Conference (URTeC) Management Committee

Bob A. Hardage, SEG industry representative

The Unconventional Resources Technology Conference (URTeC) is a cooperative effort by the American Association of Petroleum Geologists (AAPG), Society of Exploration Geophysicists (SEG), and the Society of Petroleum Engineers (SPE) to establish an annual conference dedicated strictly to technologies involved in exploiting unconventional reservoirs. A Management Committee of representatives from each of the three societies, as established by the operating agreement, is the governing body. The AAPG industry representative on the Management Committee, Lee Krystinik, currently serves as chair. AAPG operates URTeC under a Management Services Agreement through 2017. Sponsor ownership for this conference is proportioned as: SPE 40%, AAPG 30%, and SEG 30%. The concept for this joint-society conference is patterned after the successful Offshore Technology Conference where attendance is now exceeding 100,000.

URTeC 2013. The inaugural URTeC 2013 conference was held 12–14 August 2013 in Denver, CO. More than 4100 individuals attended. Net surplus was \$604K, with SEG’s 30% share being \$181K. The attendance breakdown by society was AAPG 37%, SPE 32%, and SEG 13% with 18% not noting any of these society affiliations. Demographics of accepted abstracts by society roughly paralleled attendee demographics. SEG member participation (abstracts, attendance) was about half that needed to support its 30% ownership position—so increasing SEG member participation became high priority for

URTeC 2014. High-level lessons learned for SEG to stimulate higher participation were: (1) tailored messaging, (2) increased marketing frequency, and (3) more personal networking by involved SEG volunteers.

URTeC 2014 (25–27 August 2014, Denver, CO). The conference budget approved by the Management Committee projects a modest increase in net surplus, from \$604K to \$882K. R. Randy Ray, R3 Exploration Company from the Denver area, chairs SEG’s Technical Program Subcommittee. Great effort was spent increasing the geophysical “presence” in the Call for Papers. When the Call for Papers was open, beyond the standard marketing/promotion efforts, Ray networked with appropriate SEG Sections and Associated Societies to promote abstract submissions. Despite the increased effort, abstract submissions by SEG members still significantly lagged SEG’s ownership position. To address this issue, Ray created a half-day special session, Geophysical Strategies and Techniques to Optimize Unconventional Resource Plays—Seismic Playbook for Non-Geophysicists, with invited speakers to encourage geophysical speakers to address the multidisciplinary audience of the conference. URTeC’s Technical Program Committee added short courses and field trips as new elements for URTeC 2014. Shawn Maxwell, SEG DISC instructor, will present his “micro-seismic” course. An interactive forum, “Multidisciplinary Assessment of Unconventional Resources,” was developed by the SPE/SEG Cooperation Committee and also will be presented by URTeC as a post-conference workshop.

URTeC 2015 (20–22 July 2015, San Antonio, TX). Because the Offshore Technology Conference has a fixed venue (Houston) and a fixed annual meeting date (early May), this same conference model was established for URTeC. For URTeC, it was agreed that the fixed venue would be Denver and that the fixed annual meeting date would be early August. This model worked well for URTeC 2013 and 2014. However, the unavailability of the Denver convention center facilities led to switching the 2015 meeting to San Antonio, TX, and moving the date to a July time frame to reduce conflict with NAPE

South. The URTeC model will return to its venue (Denver) and date (August) parameters as soon as the convention hall schedule at Denver allows. Gene Sparkman, Lumina Technologies, Inc., chairs SEG’s URTeC 2015 Technical Program Subcommittee. Subcommittee members were in place by end of SEG FY2014.

Global interest. Although URTeC targets a North American audience, there is strong interest in unconventional resources in China and the Middle East where SEG has global offices well networked with the NOCs. The Chinese NOCs in particular own large positions in North American shale gas and oil plays.

Management Committee comments. Not unexpectedly, some attendees and exhibitors at the inaugural 2013 URTeC were cautious about this startup conference. Thus considerable effort was taken by SEG, AAPG, and SPE personnel at that meeting to poll attendees and exhibitors for their opinions. The conclusions of SPE, AAPG, and SEG were that attendees were enthused about the experience. The approval of the conference by the exhibitor community was evidenced by the fact that most exhibitors signed up for the 2014 conference before leaving the exhibit hall. It seems obvious that URTeC will become a successful annual conference, with its value being enhanced by the cooperative efforts of SPE, AAPG, and SEG. Attendance and exhibitor responses at the second URTeC conference in 2014 will provide a better insight into industry acceptance of this new joint-society effort. The low involvement of SEG members in attendance and participation will need continued analysis and promotion within SEG. The selection and early involvement of the SEG co-chair for the next year’s meeting is vital to the success of the event for SEG. Immediate committee action in September is critical to achieve the best participation in the Call for Papers due on 1 December, 90 days after the August meeting is held. Full support includes SEG advertising the upcoming meeting and Call for Papers in October, November, and December issues of *TLE* and the November issue of *Interpretation* to attract SEG speakers to the URTeC conference.

SEG Foundation

Foundation Board of Directors

Tom Smith, chair

The SEG Foundation Board of Directors thanks donors and volunteers for a successful 2013. We offer a wholehearted “thank you!” Through the hard work, generosity, and dedication of all the 2013 donors, our volunteers, and our business staff, the SEG Foundation continues its work in “Advancing Geophysics Today—Inspiring Geoscientists for Tomorrow!”

The 2013 SEG Foundation Board of Directors consisted of: Tom Smith (chair), Dominique Robert (vice chair), Frank Brown (treasurer), Arthur Cheng, Peter Duncan, Michael Forrest, Hank Hamilton, Mike Loudin, Magne Reiersgard, Jeff Springmeyer, Robert Talley, Cung Vu, and Sally Zinke.

The Technical Program chairs were Steven Roche, Scholarship Committee; Jeff Shragge, Travel Grants Committee; Rachel Newrick, Field Camp Grants; and Roelof Snieder, Geoscientists *Without* Borders® (GWB). Their respective committees were responsible for the selection of all grant recipients, and we are grateful for their outstanding service. All are keenly aware of their serious responsibilities, as these awards have an effect on people’s lives in direct and indirect ways. In total, combining the Board and the grant committees, 49 dedicated volunteers deserve our accolades. If someone who reads this report is moved to consider adding his or her efforts to ours, we encourage him or her to let us know. We will gladly discuss the many opportunities available. Our reach is worldwide, and our mission is worthy of your attention.

How does the work of the Foundation relate to SEG? To put it simply, the Foundation raises philanthropic funds for SEG programs benefitting members and future members (our student membership). Since being established in 1987, the Foundation donors have contributed to strengthen existing programs and to start new programs. With our help, SEG remains one of the premier professional societies in the world by offering members opportunities to benefit and grow professionally. We work to communicate effectively with our membership and corporate constituents, engage in fundraising with a purpose, and continually apply best practices. We maintain sound policies and

procedures, exercise effective financial management, and oversee the assets entrusted to the Foundation.

The core activity of the SEG Foundation is fundraising and donor stewardship, or “development.” Foundation assets topped \$24 million in 2013, and donations exceeded \$4.2 million. In 2013, the Foundation introduced a new giving level, “Sustaining Trustee Associate.” Sustaining Trustee Associates recognizes donors who are Trustee Associate donors and continue to give at least \$2000 per year. Their support is critical to ongoing Foundation operations. Sixteen Trustee Associates were added along with 30 Sustaining Trustee Associates, and over 250 Annual Fund Donors. A complete list of donors is available at www.seg.org/foundation.

The Foundation continues to support 18 different SEG programs including the Honorary Lectures (HL) and Distinguished Lectures (DL), Geoscientists Without Borders®, Field Camp Grants, Scholarships, SEG Student Membership Dues, SEG On Demand (formerly eLearning), Distinguished Instructor Short Course (DISC), University Excellence Program (UEP), SEG Wiki, Student Chapter Book Program, Challenge Bowl World Finals, Student Travel Grants, SEG/ExxonMobil Student Education Program (SEP), SEG/Chevron Student Leadership Symposium (SLS), Intel International Science and Engineering Fair (ISEF) Awards, International Geosciences Student Conference (IGSC), and SEG Online. Because of donors, these 18 programs are able to benefit SEG members.

Several corporate donors provided financial support to SEG programs. As a multi-program supporter, CGG made a second, five-year commitment of \$250,000 to the Distinguished Lecture Program. Shell, currently our largest single-gift donor, made another five-year commitment of \$1.25 million to the Honorary Lecture Program. TGS made a second five-year commitment of \$500,000 to the Field Camp Grants program, creating opportunities for students to have a hands-on geophysics field experience. ExxonMobil, made a commitment to students through SEG’s Student Education Program.

The generosity of individuals and corporate support to the Foundation allows the SEG to have a global educational impact on the geophysical community. The Foundation’s quarterly

newsletter *Carrying the Torch* is delivered to all donors and available online. Articles celebrate the success of our volunteers' efforts and donations as they impact our global community.

Along with raising funds, the Foundation is charged with providing excellent stewardship of these funds. Last year (2013) more than US\$2.2 million dollars supported SEG programs. They were divided between funds supporting Honorary Lectures, Distinguished Lectures, SEG Online, SEG On Demand (formerly eLearning), the SEG Wiki, and grants to inspire geoscientists for tomorrow including student membership dues, many student-focused programs, field camp grants, travel grants for students, Geoscientists Without Borders®, and scholarships.

Four programs provide grants directly to the geophysical community rather than to SEG. They are scholarships, field camp grants, travel grants, and Geoscientists Without Borders®. We employ recognized best practices assigning independent committees, which represent the global membership, to review and recommend awards to deserving qualified candidates. SEG Foundation Policy and Procedures, including our conflict of interest policy, extends to all committee members. We are confident that our committees are well positioned to carry out the donors' intent, as well as meet our legal obligations as a 501(c)(3) non-profit.

Scholarships

From the applications that were started, 301 were found to be complete and eligible and were passed on to the Scholarship Committee for review. Committee members reviewed and ranked each independently. A composite forced ranking was compiled for each of the six classifications (freshman, undergraduate, and graduate, each divided into international and North American classes.) In 2013, the SEG Foundation Board approved \$474,392 in total scholarship awards. Funding for the SEG Foundation Scholarship Program comes from many sources, including gifts from SEG members, friends, corporations, SEG Sections and Associated Societies, and memorial funds to honor respected colleagues.

Field Camp Grants

Field camps are integral to the preparation of the next generation of geophysicists. Hands-on experience cannot be synthesized in a classroom. The critical thinking necessary in the field on the use of equipment in real-world cases can be taught only where geophysical data begins. The 2013 Field Camp Grant Review Committee examined 21 applications, recommending 15 for awards totaling \$105,248. The awards included camps in Canada, Indonesia, Kenya, Romania, Russia, Serbia, South Africa, and the United States. In total, 867 students participated in Field Camps supported in whole or in part through funding provided by donors.

Travel Grants

The SEG Foundation provides travel grants that allow students to participate in specific programs such as the SEG/Chevron Student Leadership Symposium, the SEG/ExxonMobil Student Education Program, the SEG Challenge Bowl, the SEG Annual Meeting, and Student Expos. For many recipients it was the first trip outside their local area.

Geoscientists Without Borders®

The Geoscientists Without Borders®(GWB) program made significant advances in several aspects during 2013. The SEG Foundation Board of Directors approved the GWB Business Plan for 2013–2015. The plan identifies expansion goals and actions necessary to achieve increased funding, outreach and marketing growth, and development of robust metrics to evaluate projects' efficacy.

Two new projects were selected through the work of the GWB Technical Committee, SEG staff, and the SEG Foundation Board. Targeted research was conducted during the spring to focus on a region in Australia with restricted funding. The first project, managed by the University of Adelaide, is unique in its approach to protecting an endangered species while cooperating with farmers, ranchers, and Australian Zoo experts. The second project, led by Stanford University in partnership with Australian universities, will address critical water shortage.

Review of six project proposals was under way at the close of the year; new selections were not approved until early 2014. The number of proposals submitted as well as their quality, continues to increase each year. At the close of 2013, we had 10 active projects. The SEG Foundation Board approved an expansion of the GWB Technical Committee to a maximum of 12 volunteer members to ensure broad representation of expertise and geographic diversity.

Thank You

The Foundation Board of Directors, each of our grant committee members, and the Foundation's staff including Erin Nelson, Linda Ford, Bernadette Ward, Barb Conine, Mishell Thatcher, Paul Allison, and Rhonda Jacobs, have advanced SEG programs and the Foundation's mission. Our thanks go out to each of our donors, large or small, corporate or individual, who have supported our good work. Each gift is given with purpose and personal consideration to support the SEG Foundation and the vision of a vibrant geophysical community. We receive and honor the intent of each and every gift. Together we are "Advancing Geophysics Today and Inspiring Geoscientists for Tomorrow." Thank You.

Editor's note: Geoscientists Without Borders is a registered trademark of the SEG Foundation.

SEG Subsidiaries

SEAM

Kevin Bishop, chair

The SEG Advanced Modeling Corporation (SEAM) was established in 2007. In August 2013, SEAM restated its Certificate of Incorporation as a not-for-profit corporation under Section 501(c) (6) of the Internal Revenue Code of 1986. SEG is the sole member of SEAM. Please see the Web site for details: <http://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 consortium 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 2014 SEAM board consists of Kevin Bishop (chair), Bill Abriel (vice chair), Yaoguo Li (treasurer), Kamal Al-Yahya, Steve Danbom, Henri Houllé, Roy Kligfield, and Scott Morton. New board member and treasurer, Sean Gore, resigned due to job-related conflicts. The Board has five committees focused on the business aspects including finance, business development, execution, commercialization, and SEG strategic planning liaison. During the first half of 2014, Business Development has been the major effort due to the need to initiate another consortium for SEAM's sustainability. The Board continues to ensure that the operations of SEAM are conducted in a fiscally and legally responsible manner.

SEAM Current Projects

- SEAM Phase I Deep Water Gulf of Mexico (GOM) completed project activity on 30 June 2013. The final Research Partnership to Secure Energy for American (RPSEA) report was completed after significant review revisions in January 2014. The final Phase I, part II report is complete and undergoing final edits before printing.
- SEAM Phase II consortium "Land Seismic Challenges", which started in 2011, constructed three digital geologic

models for 3D numerical simulations of land-seismic exploration. Firstly, 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 final QC is being performed. Secondly, 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. Thirdly, 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. Rock physics properties are being defined prior to simulations.

SEAM Business Development. A number of optional projects have been proposed and are in various maturity stages. Three projects at the top of the list are:

- Interpretation Data Set—Create an imaged volume from the SEAM Phase I data set to be distributed free to the interpretation community. This volume will be imaged using a perturbed velocity model in order to create varying degrees of interpretation difficulties.
- Pressure Prediction and Hazard Avoidance—This project has been in the planning and design stages since first proposed in August 2012. A special breakfast meeting was held during the SEG in Houston in 2013 and another planning meeting on 16 April 2014. The project has been selected to receive a \$1.9MM contract from RPSEA stimulating the project to move forward to being realized. A RPSEA and Department of Energy requirement is that the consortium must be formed and the project initiated by 30 September 2014. SEAM is planning a three-year project with RPSEA support for 2 years.
- Life of Field—This project is aimed at providing reservoir specific modeling from discovery through production. It will stimulate communication and integration through several disciplines within the oil and gas organizations. Champions

have been identified and a pilot project is underway to gain insight on the design for a full scale SEAM project. Current planning is to initiate the Life of Field project in 2015.

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

- Phase I Final Progress report by Project Manager Michael C. Fehler was published in *The Leading Edge* in August 2013 marking the completion of Phase I. This article supplements earlier progress reports from 2007 through 2013. Phase I Participants shared their views on the value of SEAM in an article published in *The Leading Edge* in March 2014.
- Phase II Progress reports by Project Manager Michael Oristaglio were published in *The Leading Edge* in September 2013, December 2013, April 2014, and July 2014. These supplement earlier articles. A complete listing of articles is available at: www.seg.org/SEAM.
- A call for participation to the Pressure Prediction and Hazard Avoidance consortium was announced in *The Leading Edge* in June 2014.
- An organizing committee has proposed and been accepted to conduct a half-day workshop (W-21), following the Denver SEG on Friday, 31 October titled, Past, Present, and Future of SEAM.

SEAM Data Sales. A detailed description of the data sets and license fees is available on the SEG 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. For more information, companies and academic institutions interested in purchasing the models or specific data sets should visit <http://www.seg.org/SEAM/Data>. 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.

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 Executive Committee 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 Fernandes (chair), Jie Zhang (vice chair), Rick Miller (treasurer), Igor Eltsov, Brian Evans, Said S. Mahrooqi, Sue Webb, Brian Williams, and Jie Zhang (Beijing).

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 Eurasian and Sub-Saharan African opportunities, risks, and internal challenges. The process consists of four phases: 1) preliminary research, 2) brainstorming, 3) strategic analysis, and 4) financial analysis. Initial steps have been taken to conduct assessments on Latin America and Central, South, and Southeast Asia, including stakeholder interviews, surveys, and political and economic risk assessments.

SEG China. SEG China, in collaboration with CPS, conducted the Beijing 2014 Geophysical Conference. Upcoming workshops with Chinese partners include GEM Chengdu 2015 (CGS), VMB/FWI (PetroChina/BGP), Deep Water Geophysical Exploration (COSL), and Envisioning Future Geophysics (CNPC). Student activities include the Geophysical Student Contest (a data processing competition sponsored by BGP), the SUM (Stanford, USTC, and MIT) Student Entrepreneurship event hosted by USTC, and the upcoming China Geophysical Student Conference co-hosted by RIPED (CNPC) with support from the 18 SEG student chapters in China. Dave Hale's Distinguished Lecture (DL) tour is scheduled to be presented at CNOOC, CUP, Tongji University, and Sinopec GRI, and Shawn Maxwell's Distinguished Instructor Short Course (DISC) is scheduled at BGP and Sinopec GRI.

Middle East Office. The Middle East Office has greatly increased its activity over the past year, supporting workshops on sub-salt exploration, unconventional resources, and near-surface modeling and imaging, and conducting a Geoscience Student Symposium. The office also supported efforts at the International Petroleum Technology Conference (IPTC) and GEO Bahrain. It aided SEG's provision of training at Kuwait Oil Company (KOC) and Zakum Development Company (ZADCO), and with DISC, DL/HL, and public courses in Bahrain, United Arab Emirates (UAE), and Saudi Arabia. To support the increased activity, the Middle East Office has hired a part-time contractor for accounting and a full-time contractor for event management.

SEG Real Estate Corporation

Bob Wyckoff, chair

The SEG Real Estate (RE) Corporation was established in 2011 as a subsidiary of the Society of Exploration Geophysics (SEG). The purpose(s) of the corporation shall be to oversee the activities associated with the property at 8801 South Yale, Tulsa, Oklahoma, called the Geophysical Resource Center (GRC). These activities are (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. All funds, whether income or principle, shall be devoted to said purposes.

The RE Board of Directors has the maximum seven members: Bob Wyckoff, chair; Steve Simmons, vice chair; Keith Willson, treasurer; Steven Davis, secretary; and Tom Harrold, Bill Underwood, and Kim Guyer are additional members. The Finance Committee is chaired by Keith Willson with Bill Underwood and Lynzi Black Rice, CPA. The Audit Committee is chaired by Tom Harrold with Ben Chenoweth and Steve Ornelas, CPA. Gary Servos, SEG Board of Directors, is our liaison. Aimee Jarvis is our SEG staff representative for keeping records and assisting with all logistics relating to RE activities.

RE Board meetings were convened on 3 January, 7 March, and 23 May 2014. In addition to formal agenda items, reports were presented on the new building project on the SEG/GRC Tulsa campus and leasing activity both for the existing building and the new building. The building project has a \$20 million cap and a metric to have 95% of total office space leased. The scheduled completion date for the new four story building (+/- 80,000 sq.ft.), and parking garage (150 spaces) is June 2015.

RE Board meetings are scheduled for 11 July, 5 September, 27 October, and 12 December 2014. Agenda items for discussion going forward will include RE goals, objectives, and strategy in alignment with SEG initiatives.

Julie Reynolds with Program Management Group (PMg) is our RE representative and Project Team Lead. She is doing an excellent job with keeping the overall new building project on target. NewmarkGrubb provide the leasing services with encouraging reports of having long term leases for current and new office space. Credit for keeping momentum with bank financing and other legal attributes for the new building project has been a frustrating task at times for the SEG staff, Gary Servos (SEG), and the RE Board. I appreciate their hard work in resolving the many issues allowing the building project to move forward.

We are well on our way working together to support the SEG Real Estate Corporation mission.

SEG Consolidated Financial Statements

**Society of Exploration Geophysicists 30 June 2014 and 2013
(With Independent Auditors' Report Thereon)**



Howerton, Morris, Simpson & Smith P.L.L.C.
C E R T I F I E D P U B L I C A C C O U N T A N T S

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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 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 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 2014 and 2013, 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.

Houder Morris Surgen & Smith, P.L.L.C.

23 September 2014

SOCIETY OF EXPLORATION GEOPHYSICISTS

Consolidated Statements of Financial Position

30 June 2014 and 2013

	<u>2014</u>	<u>2013</u>
<u>Assets</u>		
Current assets:		
Cash and cash equivalents	\$ 5,258,479	2,853,156
Short-term investments	4,047,732	3,786,845
Accounts receivable, less allowance for doubtful accounts of \$105,933 in 2014 and \$60,287 in 2013	1,073,510	3,254,899
Accounts receivable - SEG Foundation	405,059	256,632
Inventories	710,088	696,169
Prepaid expenses	722,597	535,855
Accrued interest receivable	<u>3,041</u>	<u>5,030</u>
Total current assets	<u>12,220,506</u>	<u>11,388,586</u>
Investments	7,527,005	7,576,083
Property and equipment:		
Land	489,605	489,605
Construction in progress	2,844,911	534,036
Building and leasehold improvements	9,278,879	9,342,627
Application development	2,893,195	2,853,399
Furniture, fixtures and equipment	<u>1,637,537</u>	<u>2,468,542</u>
	17,144,127	15,688,209
Less accumulated depreciation	<u>10,199,380</u>	<u>10,496,364</u>
Net property and equipment	<u>6,944,747</u>	<u>5,191,845</u>
	<u>\$ 26,692,258</u>	<u>24,156,514</u>

See accompanying notes to consolidated financial statements.

SOCIETY OF EXPLORATION GEOPHYSICISTS

Consolidated Statements of Financial Position (Continued)

30 June 2014 and 2013

	<u>2014</u>	<u>2013</u>
<u>Liabilities and Net Assets</u>		
Current liabilities:		
Accounts payable and accrued liabilities	\$ 2,084,245	1,662,037
Deferred revenue	<u>8,232,649</u>	<u>8,731,267</u>
Total current liabilities	10,316,894	10,393,304
Construction loan payable	687,126	-
Deferred revenue – long term	<u>41,130</u>	<u>66,189</u>
Total liabilities	<u>11,045,150</u>	<u>10,459,493</u>
Unrestricted net assets	<u>15,647,108</u>	<u>13,697,021</u>
	\$ <u>26,692,258</u>	<u>24,156,514</u>

See accompanying notes to consolidated financial statements.

SOCIETY OF EXPLORATION GEOPHYSICISTS

Consolidated Statements of Activities

For the Years Ended 30 June 2014 and 2013

	<u>2014</u>	<u>2013</u>
Revenues:		
Membership dues	\$ 1,464,319	1,491,293
Conferences and meetings	10,334,417	9,141,828
Publication sales and advertising	3,948,105	3,973,271
Professional development	1,011,761	821,212
Global relations	108,581	169,197
Investment income (loss)	931,667	155,615
Building lease operations	1,145,230	1,207,480
SEAM research and data revenues	1,695,957	2,482,262
Contributions from Foundation	1,078,855	1,103,659
Other	<u>8,633</u>	<u>8,226</u>
Total revenues	<u>21,727,525</u>	<u>20,554,043</u>
Expenses:		
Program expenses		
Membership record services	626,958	488,019
Conferences and meetings	3,760,288	3,992,097
Publications and advertising	3,168,182	3,080,404
Professional development	2,281,059	2,376,389
Research	1,664,552	2,484,982
Other	<u>4,835</u>	<u>13,263</u>
Total program expenses	<u>11,505,874</u>	<u>12,435,154</u>
Support expenses		
General and administrative	3,072,639	2,978,529
Building lease operations	1,275,757	1,325,840
Communications	2,128,513	2,331,492
Global relations	<u>1,316,395</u>	<u>1,379,523</u>
Total support expenses	<u>7,793,304</u>	<u>8,015,384</u>
Total Expenses	<u>19,299,178</u>	<u>20,450,538</u>
Increase (decrease) in net assets before contributions to Foundation	2,428,347	103,505
Contributions to Foundation	<u>(478,260)</u>	<u>(593,028)</u>
Increase (decrease) in net assets	1,950,087	(489,523)
Unrestricted net assets, beginning of year	<u>13,697,021</u>	<u>14,186,544</u>
Unrestricted net assets, end of year	\$ <u>15,647,108</u>	<u>13,697,021</u>

See accompanying notes to consolidated financial statements.

SOCIETY OF EXPLORATION GEOPHYSICISTS

Consolidated Statements of Cash Flows

For the Years Ended 30 June 2014 and 2013

	<u>2014</u>	<u>2013</u>
Cash flows from operating activities:		
Increase (decrease) in net assets	\$ 1,950,087	(489,523)
Adjustments to reconcile increase (decrease) in net assets to net cash provided (used) by operating activities:		
Depreciation and amortization	706,312	1,231,340
Loss on disposal of assets	10,581	-
Net realized/unrealized (gain) loss on investments	(563,977)	21,954
(Increase) decrease in assets:		
Accounts receivable	2,181,389	(1,651,035)
Accounts receivable-SEG Foundation	(148,427)	30,935
Inventories	(13,919)	(16,148)
Prepaid expenses	(186,742)	196,677
Accrued interest receivable	1,989	48,939
Increase (decrease) in liabilities:		
Accounts payable and accrued liabilities	422,208	247,820
Deferred revenues	(523,676)	994,859
Net cash provided by (used in) operating activities	<u>3,835,825</u>	<u>615,818</u>
 Cash flows from investing activities:		
Purchases of property and equipment	(2,469,795)	(702,815)
Purchases of investments	(8,732,566)	(12,496,159)
Proceeds from sale of investments	<u>9,084,733</u>	<u>10,647,547</u>
Net cash used in investing activities	<u>(2,117,628)</u>	<u>(2,551,427)</u>
 Cash flows from financing activities:		
Proceeds from construction loan	<u>687,126</u>	-
Net cash provided by financing activities	<u>687,126</u>	-
 Net increase (decrease) in cash	2,405,323	(1,935,609)
Cash, beginning of year	<u>2,853,156</u>	<u>4,788,765</u>
Cash, end of year	\$ <u>5,258,479</u>	<u>2,853,156</u>
 Taxes paid	\$ <u> -</u>	<u>14,313</u>

See accompanying notes to consolidated financial statements.

SOCIETY OF EXPLORATION GEOPHYSICISTS

Notes to the Consolidated Financial Statements

For the Years Ended 30 June 2014 and 2013

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Nature 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.

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 2014, 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.

The Society provides for probable uncollectible amounts through a provision to bad debts expense and a corresponding amount being added 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.

(continued)

SOCIETY OF EXPLORATION GEOPHYSICISTS

Notes to the Consolidated Financial Statements

For the Years Ended 30 June 2014 and 2013

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Accounts Receivable (continued)

At 30 June 2014, management estimates that the allowance for uncollectible accounts of \$105,933 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.

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 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 in 2014.

Furniture, fixtures and equipment and accumulated depreciation were reduced by \$931,900 for assets fully depreciated and no longer in service based on a comprehensive review of property and equipment during the year ended 30 June 2014.

(continued)

SOCIETY OF EXPLORATION GEOPHYSICISTS

Notes to the Consolidated Financial Statements

For the Years Ended 30 June 2014 and 2013

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Construction in Progress

Costs of construction are capitalized in Construction in progress. Depreciation will begin when the property is completed and placed in service.

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.

Direct costs associated with the development of SEG Online are capitalized and amortized over the estimated product life of five years on the straight line basis. SEG Online was fully amortized in 2013.

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 2014 and 2013.
- **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 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 2014 and 2013.
- **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 2014 and 2013.

(continued)

SOCIETY OF EXPLORATION GEOPHYSICISTS

Notes to the Consolidated Financial Statements

For the Years Ended 30 June 2014 and 2013

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Income Taxes

The Society is exempt from federal income tax under Section 501(c)(6) of the Internal Revenue Code. Income from consolidated for-profit subsidiaries and advertising not directly related to the Society's tax-exempt purpose is subject to taxation as unrelated business income. We estimate no unrelated business income taxes due for the year ended 30 June 2014.

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 2014 and 2013.

Revenue Recognition

Membership dues and publication subscription revenues are recognized ratably over the applicable membership or subscription period. Revenues relating to meetings are recognized as revenue at the time of the meeting.

Building Lease Operations

The land and building where the Society administrative offices are located in Tulsa, Oklahoma were transferred from the Society to SEG Real Estate Corp during the year ended 30 June 2013. SEG Real Estate Corp utilizes a real estate management and leasing company to manage operations, leasing and maintenance of the building. Office space that is not used by the Society is leased to other organizations.

(continued)

SOCIETY OF EXPLORATION GEOPHYSICISTS

Notes to the Consolidated Financial Statements

For the Years Ended 30 June 2014 and 2013

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

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 2014 and 2013

NOTE 2 – INVESTMENTS

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

	<u>2014</u>	<u>2013</u>
Certificate of deposit	\$ 2,163,155	2,658,146
Equities	3,419,495	2,781,192
Government and corporate bonds	<u>5,742,087</u>	<u>5,673,590</u>
Subtotal – Total Level 1 Assets	11,324,737	11,112,928
Joint ventures (Level 3 Assets)	<u>250,000</u>	<u>250,000</u>
Total investments	11,574,737	11,362,928
Less short-term investments	<u>4,047,732</u>	<u>3,786,845</u>
Long-term investments	\$ <u><u>7,527,005</u></u>	<u><u>7,576,083</u></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 \$7,666,659 at 30 June 2014 and were held in certificates of deposit maturing in less than one year and mutual funds invested in corporate and government bonds.

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

	<u>2014</u>	<u>2013</u>
Interest and dividend income	\$ 212,242	177,569
Gain (loss) on investments	<u>719,425</u>	<u>(21,954)</u>
	\$ <u><u>931,667</u></u>	<u><u>155,615</u></u>

Fees charged by investment advisors totaled \$85,137 and \$47,696 for the years ended 30 June 2014 and 2013, respectively.

(continued)

SOCIETY OF EXPLORATION GEOPHYSICISTS

Notes to the Consolidated Financial Statements

For the Years Ended 30 June 2014 and 2013

NOTE 3 – RELATED PARTY TRANSACTIONS

The Society and Foundation support each other with contributions and the Society provides services for which they are reimbursed by the Foundation. Those transactions for the years ended 30 June, are as follows:

	<u>2014</u>	<u>2013</u>
Contributions to the Foundation	\$ 100,000	-
In-kind contributions to the Foundation (administrative services and costs)	\$ 378,261	593,028
Contributions from the Foundation	\$ 1,078,855	1,103,659
Reimbursement from the Foundation for fundraising services	\$ 346,165	201,711
Reimbursement from the Foundation for program administrative services	\$ 215,866	144,747

Accounts receivable due from the Foundation was \$405,059 and \$256,632 at 30 June 2014 and 2013, 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 \$481,228 and \$470,859 for the years ended 30 June 2014 and 2013, respectively.

(continued)

SOCIETY OF EXPLORATION GEOPHYSICISTS

Notes to the Consolidated Financial Statements

For the Years Ended 30 June 2014 and 2013

NOTE 5 – LEASING ARRANGEMENTS

SEG Real Estate Corp leases approximately 68% of the office space in its building to unaffiliated parties under non-cancelable operating leases. The following is a schedule of minimum future rental revenues from those tenants as of:

Year Ending <u>30 June</u>	<u>Amount</u>
2015	\$ 928,281
2016	817,074
2017	404,266
2018	<u>233,620</u>
	\$ <u>2,383,241</u>

NOTE 6 – CONSTRUCTION IN PROGRESS AND LOAN PAYABLE

SEG Real Estate Corp is constructing a four story building and parking garage on the same site as its existing building. Construction costs have been capitalized as Construction in progress. Upon completion of the new building, the assets will be 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. The loan for the construction phase matures August 15, 2015. Permanent financing options are available at that date.

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 7 – SUBSEQUENT EVENTS

The Society has reviewed subsequent events and transactions which occurred after 30 June 2014 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 2013 and 2012
(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, 2013 and 2012, 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, 2013 and 2012, 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.

August 12, 2014

SEG FOUNDATION
STATEMENTS OF FINANCIAL POSITION

December 31, 2013 and 2012

	2013	2012
Assets		
Cash	\$ 812,312	\$ 942,433
Pledges receivable, net	6,646,018	6,641,781
Due from affiliate	16,588	83,419
Investments	17,238,182	13,885,040
Exhibits and office equipment, net	131,802	133,117
Other assets	32,664	35,819
	<hr/>	<hr/>
Total assets	\$ 24,877,566	\$ 21,721,609
	<hr/> <hr/>	<hr/> <hr/>
Liabilities and Net Assets		
Liabilities:		
Due to affiliate	\$ 349,581	\$ 229,584
Accounts payable and accrued liabilities	17,201	1,013
	<hr/>	<hr/>
Total liabilities	366,782	230,597
Net assets:		
Unrestricted:		
Undesignated	1,080,845	186,068
Board-designated	2,780,587	2,033,587
	<hr/>	<hr/>
Total unrestricted	3,861,432	2,219,655
Temporarily restricted	9,412,218	9,059,705
Permanently restricted	11,237,134	10,211,652
	<hr/>	<hr/>
Total net assets	24,510,784	21,491,012
	<hr/> <hr/>	<hr/> <hr/>
Total liabilities and net assets	\$ 24,877,566	\$ 21,721,609

See accompanying notes to financial statements.

SEG 2014 Annual Report

SEG FOUNDATION

STATEMENT OF ACTIVITIES

Year ended December 31, 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
Net assets released from restriction	3,265,943	(3,265,943)	-	-
Total revenues	<u>5,684,282</u>	<u>352,513</u>	<u>1,025,482</u>	<u>7,062,277</u>
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	<u>2,449,331</u>	<u>-</u>	<u>-</u>	<u>2,449,331</u>
Supporting services:				
Management and general	505,557	-	-	505,557
Fundraising	408,414	-	-	408,414
Investment fees	104,203	-	-	104,203
Provision for uncollectible contributions	575,000	-	-	575,000
Total supporting services	<u>1,593,174</u>	<u>-</u>	<u>-</u>	<u>1,593,174</u>
Total expenses	<u>4,042,505</u>	<u>-</u>	<u>-</u>	<u>4,042,505</u>
Change in net assets	1,641,777	352,513	1,025,482	3,019,772
Net assets, beginning of year	<u>2,219,655</u>	<u>9,059,705</u>	<u>10,211,652</u>	<u>21,491,012</u>
Net assets, end of year	<u>\$ 3,861,432</u>	<u>\$ 9,412,218</u>	<u>\$ 11,237,134</u>	<u>\$ 24,510,784</u>

See accompanying notes to financial statements.

SEG FOUNDATION
STATEMENT OF ACTIVITIES

Year ended December 31, 2012

	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
Revenues, gains and other support:				
Contributions	\$ 162,390	\$ 4,373,555	\$ 183,746	\$ 4,719,691
In-kind support from affiliate	606,917	-	-	606,917
Interest and dividends	18,808	250,098	-	268,906
Net gain on investments	677,863	374,214	60,364	1,112,441
Net assets released from restriction	2,460,309	(2,460,309)	-	-
Total revenues	3,926,287	2,537,558	244,110	6,707,955
Expenses:				
Program services:				
Grant awards to affiliate	852,973	-	-	852,973
Other grant awards	645,885	-	-	645,885
Scholarships	353,587	-	-	353,587
Program administrative expenses	238,014	-	-	238,014
Total program services	2,090,459	-	-	2,090,459
Supporting services:				
Management and general	659,702	-	-	659,702
Fundraising	237,800	-	-	237,800
Investment fees	82,039	-	-	82,039
Provision for uncollectible contributions	151,000	-	-	151,000
Total supporting services	1,130,541	-	-	1,130,541
Total expenses	3,221,000	-	-	3,221,000
Change in net assets	705,287	2,537,558	244,110	3,486,955
Net assets, beginning of year	1,514,368	6,522,147	9,967,542	18,004,057
Net assets, end 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 December 31, 2013 and 2012

	2013	2012
Cash Flows from Operating Activities		
Change in net assets	\$ 3,019,772	\$ 3,486,955
Adjustments to reconcile change in net assets to net cash provided by (used in) operating activities:		
Contributions restricted for endowment	(313,059)	(183,746)
Net gain on investments	(1,892,836)	(1,112,441)
Depreciation	1,315	1,641
Provision for uncollectible contributions	575,000	151,000
Change in assets and liabilities:		
Pledges receivable	(484,412)	(1,011,819)
Due to and due from affiliates	186,828	(869,824)
Other assets	3,155	(10,550)
Accounts payable and accrued liabilities	16,188	(209,101)
Net cash provided by operating activities	<u>1,111,951</u>	<u>242,115</u>
Cash Flows from Investing Activities		
Proceeds from sale of investments	3,300,434	5,222,461
Purchase of investments	(4,760,740)	(6,458,304)
Net cash used in investing activities	<u>(1,460,306)</u>	<u>(1,235,843)</u>
Cash Flows from Financing Activities		
Proceeds from contributions restricted for endowment	<u>218,234</u>	<u>565,295</u>
Net decrease in cash	(130,121)	(428,433)
Cash, beginning of year	<u>942,433</u>	<u>1,370,866</u>
Cash, end of year	<u>\$ 812,312</u>	<u>\$ 942,433</u>

See accompanying notes to financial statements.

SEG FOUNDATION

NOTES TO FINANCIAL STATEMENTS

December 31, 2013 and 2012

Note 1 – Nature of Operations and Summary of Significant Accounting PoliciesNature 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, 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 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.

The Foundation's activities consist of the following:

- Professional Development Programs: Programs that support practicing geophysicists and further the science of applied geophysics.
- Student Support Programs: Programs that encourage and inspire the participation of university and college students in the geosciences.
- Youth Outreach Programs: Programs designed to engage youth from 6 to 17 years of age in the geosciences.
- Geoscientists *Without Borders*: A program designed to assist not-for-profit organizations in humanitarian projects throughout the world.
- IQ Earth: A program to change how the geophysicist and related professions visualize and interpret subsurface structure, rock and fluid properties.

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. At times, cash may exceed 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.

Unrestricted, temporarily and permanently restricted net assets

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 restrictions.

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).

Contributions that have neither permanent nor temporary donor imposed restrictions are recorded 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 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.

Reclassifications

Certain reclassifications have been made to the prior year financial statements to conform to the current-year presentation. These reclassifications had no effect on the Foundation's 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 2010.

Subsequent events

Management has evaluated subsequent events through August 12, 2014, the date the financial statements were available to be issued.

Note 2 – Pledges Receivable

Pledges receivable consist of the following unconditional promises to give at December 31:

	2013	2012
Due in less than one year	\$ 2,172,261	\$ 2,387,530
Due in one to five years	4,591,510	4,490,911
	6,763,771	6,878,441
Allowance for doubtful accounts	(50,000)	(150,000)
Unamortized discount	(67,753)	(86,660)
	(117,753)	(236,660)
	<u>\$ 6,646,018</u>	<u>\$ 6,641,781</u>

Subsequent to December 31, 2013, the Foundation and two donors that previously pledged to support SEG's University Excellence Program have agreed to terminate their pledge agreements. As of December 31, 2013, the pledge balances totaled \$600,000. Both donors made payments subsequent to the balance sheet date totaling \$200,000. The remaining pledges to be written off in 2014 total \$400,000.

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, 2013 and 2012.

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Investments measured at estimated fair value at December 31 are summarized as follows:

2013	Assets			Total
	Level 1	Level 2	Level 3	
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
	<u>\$ 12,838,400</u>	<u>\$ 3,067,096</u>	<u>\$ 1,332,686</u>	<u>\$ 17,238,182</u>

2012	Assets			Total
	Level 1	Level 2	Level 3	
Money market funds	\$ 1,887,255	\$ -	\$ -	\$ 1,887,255
Equity securities	6,586,875	-	-	6,586,875
Corporate bonds	-	1,392,379	-	1,392,379
Asset-backed securities	-	248,204	-	248,204
Government securities	-	1,413,107	-	1,413,107
Mutual funds	862,298	-	-	862,298
Alternative investments	-	-	1,494,922	1,494,922
	<u>\$ 9,336,428</u>	<u>\$ 3,053,690</u>	<u>\$ 1,494,922</u>	<u>\$ 13,885,040</u>

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:

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>		

2012	Cost	Estimated Fair Value	Redemption Frequency	Redemption Notice Period
Hedge funds (a)	\$ 1,011,097	\$ 1,074,890	Quarterly	30 - 90 days
Managed futures fund (b)	418,845	420,032	Monthly	Three business days prior to month-end
	<u>\$ 1,429,942</u>	<u>\$ 1,494,922</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.

The table below sets forth a summary of changes in the fair value of the Foundation's Level 3 alternative investments:

Balance, December 31, 2011	\$ 1,423,122
Purchases	8,097
Unrealized gain	<u>63,703</u>
Balance, December 31, 2012	1,494,922
Sales	(270,000)
Unrealized gain	88,010
Realized gain	<u>19,754</u>
Balance, December 31, 2013	<u><u>\$ 1,332,686</u></u>

Note 4 – Exhibits and Office Equipment

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

	2013	2012
Furniture and fixtures	\$ 3,736	\$ 3,736
Computer equipment	<u>10,830</u>	<u>10,830</u>
	14,566	14,566
Less: accumulated depreciation	<u>(14,500)</u>	<u>(13,185)</u>
Exhibits	66	1,381
	<u>131,736</u>	<u>131,736</u>
	<u><u>\$ 131,802</u></u>	<u><u>\$ 133,117</u></u>

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

Note 5 – Net AssetsUnrestricted

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

	2013	2012
General operating fund	\$ 1,080,845	\$ 333,523
Endowment losses in excess of original gift	-	(147,455)
Board-designated matching funds	2,780,587	2,033,587
	<u>\$ 3,861,432</u>	<u>\$ 2,219,655</u>

Contributions of \$2,780,587 were designated by the Foundation Board of Directors to match permanently restricted contributions received from donors. 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:

	2013	2012
Professional development	\$ 2,375,579	\$ 1,786,646
Student support	4,127,878	3,760,914
Youth outreach	30,315	26,261
Geoscientists <i>Without Borders</i>	1,949,367	2,145,926
IQ Earth	235,922	899,295
Other	693,157	440,663
	<u>\$ 9,412,218</u>	<u>\$ 9,059,705</u>

Permanently restricted

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

	2013	2012
Professional development	\$ 412,478	\$ 415,096
Student support	8,003,607	7,193,480
Youth outreach	310,929	222,575
Geoscientists <i>Without Borders</i>	1,105,813	997,298
General	1,404,307	1,383,203
	<u>\$ 11,237,134</u>	<u>\$ 10,211,652</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 endowment assets 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 of the endowment assets as well as to provide additional real growth through new gifts and investment returns.

Due to actual investment performance, the Board of Directors lowered the distribution rate to 1% of the average endowment fund balance for the years ending December 31, 2013 and 2012. A 2% supplement to the annual spending rate was approved by the Board on May 1, 2013, for distribution from a particular contribution received in the current year. The total allocations of the annual distribution from underwater funds were limited to interest and dividends and the shortfall was funded from the general operating fund.

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New donor agreements for contributions greater than \$25,000 allow for a portion of the earnings of permanently restricted contributions to be used for grant administration expenses. Funds released from temporarily restricted net assets to unrestricted net assets for management fees were \$30,483 and \$21,674 for the years ended December 31, 2013 and 2012, respectively.

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

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>
2012	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
Donor-restricted endowment funds	\$ (147,455)	\$ 535,674	\$ 10,211,652	\$ 10,599,871
Board-designated endowment funds	2,009,536	-	-	2,009,536
	<u>\$ 1,862,081</u>	<u>\$ 535,674</u>	<u>\$ 10,211,652</u>	<u>\$ 12,609,407</u>

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

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>

2012	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
Endowment net assets, beginning of year	\$ 1,199,506	\$ 159,830	\$ 9,967,542	\$ 11,326,878
Investment return:				
Interest and dividends	-	250,098	-	250,098
Net realized and unrealized gains on long-term investments	650,256	374,216	60,364	1,084,836
Total investment return	650,256	624,314	60,364	1,334,934
Contributions	-	-	183,746	183,746
Appropriation of endowment assets for expenditure	-	(248,470)	-	(248,470)
Fund adjustments and transfers	12,319	-	-	12,319
Endowment net assets, end of year	<u>\$ 1,862,081</u>	<u>\$ 535,674</u>	<u>\$ 10,211,652</u>	<u>\$ 12,609,407</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:

	2013	2012
Cash contributions from the Society	\$ -	\$ 161,487
In-kind support from the Society	489,406	606,917
Total support from the Society	<u>\$ 489,406</u>	<u>\$ 768,404</u>
Grant awards to the Society	<u>\$ 1,289,066</u>	<u>\$ 852,973</u>
Reimbursement to the Society for fundraising expenses	\$ 294,430	\$ 158,025
Reimbursement to the Society for grant administration expenses	169,440	137,135
Total reimbursements to the Society	<u>\$ 463,870</u>	<u>\$ 295,160</u>

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

	<u>2013</u>	<u>2012</u>
Administrative expenses	\$ 476,667	\$ 590,268
Rent	12,739	16,649
	<u>\$ 489,406</u>	<u>\$ 606,917</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 and rent support to the Foundation for the foreseeable future.