2012 Annual Report of the Society of Exploration Geophysicists

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Bob Hardage, president

Because of the timings of the 2011 and 2012 Annual Meetings, I have been fortunate to serve a longer term (14 months) than have many SEG presidents. Past President Klaas Koster passed a vibrant SEG organization to me in 2011. Progress made during my presidential term will allow me to pass a strong Society to President-elect David Monk in 2012. Activities and accomplishments that indicate the organizational growth, financial health, and expanding scope of SEG in 2011–2012 include the following:

- **Governance:** Last year as President-elect, I worked with a select group called the Council Ad Hoc Committee to develop consensus on Bylaws language that would allow new SEG governance to be implemented. This consensus effort created a united support of new Bylaws that resulted in perhaps the shortest Council meeting in history at the 2011 Annual Meeting (38 minutes). The election of the first SEG Board of Directors has now been completed, and 13 Board officers are ready to start service at the conclusion of the Las Vegas Annual Meeting.

  The 14th member of the Board will be the Chair of the Council. At the time of this writing, the selection of this last Board officer is under way in an election in which only Council members vote. The person who will fill this Chair position will be known before the 2012 Annual Meeting convenes so she/he can join the 13 officers elected by SEG Active Members to complete the 14-person SEG Board.
- **Intersociety cooperation:** Significant strides were made in intersociety cooperation this past year. A historic first joint meeting of the executive committees of SEG and AAPG occurred in February 2012 to initiate the planning of cooperative actions between our two societies. Joint meetings of SEG and AAPG executive committees will now occur in February of each year to review how cooperation efforts are progressing and to update strategies.

  Planning continued toward the goal of SEG strengthening its global position in near-surface geophysics. Discussions with the Environmental and Engineering Geophysical Society (EEGS) during the year should result in increased interaction between our two societies. SEG committed to establishing a circum-Pacific meeting of near-surface groups involving ASEG (Australia), KSEG (South Korea), SEGJ (Japan), and CGS (China) societies. Several options for interacting with the near-surface component of the American Geophysical Union (AGU) are being considered.

  A significant step was made in SEG Foundation's popular Geoscientists *Without* Borders® (GWB) program when a Memorandum of Agreement was signed with the Geological Society of America (GSA) as the program's first partner according to guidelines that define how other societies can participate in GWB activities.

  I had the pleasure of working with officers of the European Association of Geoscientists and Engineers (EAGE) during the year to create a new Memorandum of Understanding (MOU) between SEG and EAGE that should lead to immediate and expanded cooperative efforts between our two societies. This MOU was signed at the 2012 EAGE Conference & Exhibition.
- **Meetings:** The number of meetings involving SEG continued to grow. In 2012, SEG will be involved in 27 meetings at various levels of sponsorship. The statistics for our 2012 Annual Meeting at Las Vegas are record-setting numbers. For the Technical Program, 1535 expanded abstracts were received, a historic high. The goal of corporate sponsorship support was $422,000. As of the date of this writing, the sponsorship is $526,000, another historic high. On the exhibit side, the meeting was based on the assumption that 1205 booths would be sold. By June, 1228 booths had been purchased, and 21 booths were on a waiting list.

  A significant advance in meeting strategy has been implemented for the 2012 SEG Annual Meeting by introducing several electronic-meeting experiments. The purpose of these experiments is to decide how SEG can increase meeting attendance, attendee interaction, and member benefits as electronic communication technology expands. Among the experiments to be evaluated are e-Posters, satellite rooms where overflow attendance at hot-topic papers can be accommodated, Wi-Fi connectivity across the exhibit floor and in all meeting rooms, and expanded mobile applications.

  A particularly important step was taken when SEG, AAPG, and SPE joined forces to establish the Unconventional Resources Technology Conference (URTeC), a meeting that is envisioned to become the onshore equivalent of OTC, the popular Offshore Technology Conference. The first URTeC meeting will be held in Denver in 2013.
- **International offices:** SEG's decision to establish international offices has been shown to be a sound strategy. Our China office progressed from being a combination of SEG

staff and contractor staff to being a 100% SEG staff operation. The office provided expanded services to our Chinese membership and still realized positive net revenues, verifying that Beijing was a wise choice for SEG's first international office. SEG's intent will be to refocus China-based revenues into expanded services to SEG China-based members.

Our international footprint was expanded by establishing SEG's second international office in Dubai in March 2012. This office will serve our Middle East membership. The decision to establish an office in Dubai was quickly justified by a block group of more than 300 Aramco geoscientists becoming SEG members. An important aspect of this Middle East office is that it is a joint office shared by SEG and AAPG, another indication of the expanding cooperation between our two societies.

- **Financial strength:** The budget the Executive Committee approved for SEG operations in fiscal year 2012–2013 was slightly less than $19 million, a 12% increase compared to the last fiscal year. Revenue exceeded expenses at the end of the fiscal year by more than $600,000, which is a testimony to good stewardship and good business operations by staff and elected officers. This overage was used to provide modest bonuses to SEG office staff, to assist the Foundation's operating budget, and to increase SEG's reserve fund. As of the date of this writing, SEG's reserves exceed $11 million. These funds will allow SEG to continue normal operations even if a major shortfall, such as a canceled annual meeting, occurs.
- **Member services and professional development:** Record highs were set in professional development with more than 1000 people attending 46 short courses, more than 1200 attending 36 DISC presentations in 26 countries, approximately 11,000 hearing Honorary Lectures at 165 locations in 68 countries, and approximately 5000 being present at Distinguished Lectures at 85 locations in 35 countries.

  A new SEG Wiki was created using Sheriff's *Encyclopedic Dictionary of Applied Geophysics* as its inaugural material. A board of experts was established to monitor material put forward by SEG members to expand Wiki content so that the SEG Wiki is factual and as accurate as possible.
- **Student programs:** Strengthening and expanding student programs were key SEG issues during the year. The number of student chapters expanded to 267 in 62 countries. Our flagship Student Leadership and Student Education programs engaged 140 students at three venues (San Antonio, Istanbul, Belgrade). For the first time in SEG history, a student will receive a major SEG award (Special Commendation) at our 2012 Honors and Awards ceremony, a testament to the effectiveness of our expanding student programming.
- **Publications:** SEG publications grew during the year. Five new books were added to SEG's inventory. The number of papers published in Geophysics was 281, slightly below our historic high. An important decision was made to start a new SEG journal titled Interpretation. The number of SEG members engaged in interpreting geologic, rock, and fluid information from various forms of geophysical data has increased to the point that a journal that focuses on the interests of our large interpretation community was warranted. This new journal will be published quarterly, with the first issue expected to appear in second quarter of 2013.
- **Subsidiary business units:** SEG's subsidiary corporations are critical to our organizational and financial strengths. Our SEAM program allows SEG to engage in seismic modeling research that benefits many facets of our members' interests as well as providing research data for students, academics, and any scientific effort that studies seismic wave propagation in real-Earth media. Current SEAM research focuses on producing synthetic 3C-3D data for the Gulf of Mexico deep water and that allow physical properties of onshore unconventional reservoir plays to be studied.

  SEG Global, Inc. is invaluable in advising SEG how to expand our international operations. The vetting processes implemented by SEG Global, Inc. are the reasons why SEG's first international offices have been established in Beijing and Dubai. SEG Global, Inc. is now engaged in deciding where and when SEG's third international office should be established.

  I appointed the members of the Board of Directors for our new SEG Real Estate Corporation. This Board will be responsible for the stewardship of all SEG real estate holdings and for the planning and construction of a new SEG office building on our Tulsa campus. Our current Tulsa building is one of the most desired office locations in the city, and the leasing of available floor space provides SEG significant rental income. The construction of a new office building on our Tulsa campus should start in 2013.

  The SEG Foundation is a supporting organization of SEG, not an SEG subsidiary, but it is convenient to include comments on Foundation operations in this overview of SEG subsidiaries. The Foundation expanded its corpus to $18 million at year-end 2011 and has approved a 2012 budget that involve grants of $2.7 million in direct support of students (e.g., scholarships, travel grants, Geoscientists *Without* Borders®) and in direct support of SEG programs (e.g., Honorary Lecturers, SEG Online). The newest SEG program to be fully funded by the Foundation is "University Excellence," which was launched March 2012. This five-year effort will raise the standard of geophysical education around the world. Programs such as these have become such critical parts of SEG's fabric; SEG would not be SEG without its healthy Foundation.
- **Conclusions:** The accomplishments summarized here are the results of the cooperative efforts of approximately 90 people who staff SEG business offices, 56 committees involving several hundred volunteer members, more than 50 volunteers who manage our subsidiary corporations and Foundation, our Council of more than 100 people, a seven-person Executive Committee, and the support of approximately 33,000 global members. SEG is truly a large, complex, and thriving Society that promotes the development and use of applied geophysics around the globe. It has been an honor to serve as SEG President during the growth and advancement that has occurred in 2011–2012.

David Monk, president-elect

We have seen more changes in the structure of the SEG over the last 12 months than in many of the previous decades. The membership voted to approve the new Bylaws and the fundamental structure of the governing body of the SEG will change as I take office as President in November. A year to prepare sometimes doesn't seem long enough! The elected leadership team will be bigger through the addition of new Directors and Chair of the Council, and acting as President-elect has helped me understand the activities of the SEG in a way that will hopefully guide me in the future. At the time of writing, the elections for the new Board of Directors have not been completed, so I do not know whom I will be working with next year. Luckily the new Bylaws also add the post of Past President to the board, so I will be able to call on Bob's wisdom next year.

This year, I've had an opportunity to see more closely the running of the SEG Foundation and SEAM Corporation as well as SEG Global, Inc. which I have been involved in before, and the fledgling SEG Real Estate Corporation. I've also been able to get involved in some of the more strategic directions involving some of our sister corporations and hope that this will in the long-term lead to more meaningful relationships between SEG and other societies. SEG added a new overseas office in Dubai this year as a joint office with AAPG. This is an indication of the future, where I believe that our network of overseas connections will be critical to the future of not only SEG but also other related societies.

I was able to represent SEG at several venues and functions. Perhaps the most rewarding was as a keynote speaker at the annual meeting of the Australian SEG, which led to other opportunities for SEG to participate in activities in the Far East which may not have happened otherwise. I hope to be able to cement the relationships formed during this first year of office, as President next year.

Finally, I have some goals related to bringing the SEG Annual Meeting into the digital age. Bob Hardage shares this vision, and we have pushed hard on the staff of SEG to develop some of the ideas into reality. This is no small task, but I believe you will see some of the results of this in Las Vegas before we roll out a new type of Annual Meeting in 2013.

Bill Abriel, first vice president

During 2012, I've had the pleasure of working with the professional staff of SEG, a number of dedicated volunteers in the organized committees, and the Executive Committee. This has been rewarding personally. Being part of such a cooperative and well-functioning team is a wonderful experience.

One part of my responsibilities relates to helping committees of SEG. The committees I will note here are publishing their reports for the year so I will simply make a few personal observations. Firstly, the Continuing Education Committee has advanced the number and delivery methods of SEG courses. Its forward plan is inspiring and is effectively aimed at our membership needs. Secondly, the Distinguished Lecture Committee continues to identify and deploy great speakers on an international front with a rich offering of current and exciting topics. As the primary SEG connection to reservoir engineering professions, the Development and Production Committee has generated a new focus on the support of resource plays. It sees a need for SEG to be of greater service to the resource exploitation community, which continues to increase in importance on the world petroleum scene.

On another topic, there is an emerging focus on Arctic geophysics. SEG will be engaged in the Arctic Technology Conference December 2012 in Houston, helping to coordinate a technical session and encouraging exhibitors. It is possible this may lead to the initiation of an Arctic special interest group which could share challenges and best practices.

Another committee making progress is the Youth Education Committee. Primarily focused on outreach to high school students, this committee has assembled materials suitable for members to use in communicating geophysics to the greater youth community. It is currently using these materials and can help interested members and student sections do the same.

In the area of reserves booking, the SEG Oil & Gas Reserves Committee has an aggressive program outlined to have impact on the needs of our member community, primarily in the areas of standards and education. The committee arranged for publication of a special section in the September *TLE* and has a plan in place to develop a one-day course designed for geophysical practitioners and nongeophysicists on the topic of geophysics in reserves determination.

On a personal note, I've had the pleasure of helping plan the new SEG Interpretation journal which I believe has great potential for our membership and associated professions. I have also been able to help SEG in a small way in its plans to expand its global footprint. Focusing on Eurasia, I will be helping "show the flag" at the SEG International Meeting in Istanbul in September, and at the Azerbaijani conference in October. We also may be able to bring one or more of the prior DISC courses to the region.

Finally, it is with great expectations that we can look forward to some important organizational changes. SEG has instituted a formal process for planning and interacting with other professional organizations. This is a major step in the right direction and will provide great benefits to our membership. And also to come shortly are the organizational benefits from governance with the newly reformed SEG council.

It has been a great pleasure to serve on the Executive Committee during the year. I hope that you will join with me in continuing to work for the good of our finest professional organization—SEG.

Rick Miller, second vice president

It has been a privilege to serve the members of SEG as the Second Vice President on the 2011–2012 Executive Committee (EC), at it turns out, one of the last in a long history of

seven-member executive committees. As SEG advances under a mission focused on addressing the needs of the global applied geophysics community, the timeliness of and associated need for our new 14-member Board has never been more dire. Efficiency within the SEG volunteer leadership is best accomplished under the year-to-year continuity provided by the increased terms of Board positions established under the new governance. As well, the overall increase in the number of Board members relative to the current EC provides opportunities to spend more quality time with specific assignments or individual Society endeavors.

One principal expectation of EC members is to be the liaison to key member committees and task force groups. I had the opportunity and privilege to be the EC liaison to the Committee on University Student Programs (CUSP), Continuing Education (CE), Online Committee (OC), Online Technical Content Board (OTCB), Near-Surface Task Force, Mining and Geothermal, SEG/AGU Collaboration Committee, SEG/EEGS Cooperation Committee, and the AGI Environmental Geoscience Advisory Committee. Chairperson summaries for each of these committees and task force are provided in this Annual Report. These summaries detail the focus and accomplishments of each during the period beginning at the 2011 Annual Meeting and ending with the 2012 Annual Meeting. I highly recommend you check out each of these individual reports to get a flavor of each group's activities and accomplishments during the year.

Several notable advancements have been made over the last year within my collection of committees. A few that rise to the top of my list include discussions and planning with the Environmental and Engineering Geophysical Society concerning merger opportunities, launch of the SEG Wiki, addition of nine CE courses (the most ever), initiation of the Student Chapter Enhancement Program, and sunsetting of the Intersociety Collaboration Task Force in lieu of the formation of an Inter-Society Relations Committee. These accomplishments are consistent with where SEG is headed.

During Bob Hardage's presidency, EC members helped develop and review new initiatives and expand existing services. Most of these improvements came in response to recommendations from volunteer members of the more than 50 hard-working SEG committees and task force groups. Several of the most significant undertakings of this EC revolved around governance implementation, vetting and approving requests for 10 new SEG staff, proactive efforts to increase intersociety collaboration opportunities and then take advantage of those opportunities, enhance member-focused online services, evaluate and support key strategic global initiatives, promote near-surface growth, expand publication offerings to more fully capture membership interests, and evolve the SEG budget process to allow quicker response to unforeseen and rapidly emerging opportunities.

The monthly "President's Page" in *TLE* was divided among the members of the EC, with each member having one or two opportunities to bring forward to the membership topics of potential interest or concern. Bob's instructions were simple—find a topic you are interested in and write about it, the sky is the limit (paraphrased there a bit). I chose global growth opportunities for SEG, which was published in February 2012 *TLE* and in the July issue of *TLE*, I wrote about the value of a division model within SEG governance.

As a direct result of the hard work of a few very dedicated SEG members, the new Board will take the SEG reins at the Annual Meeting in Las Vegas. At the close of that meeting, I will end my term as Second Vice President and I will continue my service to the membership for an additional year as the First Vice President.

Wafik Beydoun, vice president

It was a pleasure serving this year as an officer of the Society, and particularly as the Executive Committee (EC) liaison to the following SEG committees and organizations: Research Committee, Global Affairs Committee, Oil and Gas Reserves Committee, Technical Standards, Gravity and Magnetics Committee, Offshore Technology Conference (OTC) Board of Directors Representative 2011–2014, 2012 OTC Program Committee (SEG Subcommittee of OTC Program Committee), and OTC Conduct Committee.

This report is structured in three sections: the first captures some highlights of activities for committees with which I was a liaison; the second concerns the important role that volunteers play for SEG; and the last section concludes with the some personal remarks regarding serving SEG as an officer.

Highlight of SEG committees and organizations activities as EC liaison

In the pages that follow, committee and organization representatives provide their detailed reports (which I encourage you to read to have the full report of their activities). Here, I will simply summarize how some of the committees are doing an excellent job serving SEG:

- Research Committee: Very dynamic, talented, and dedicated committee. RC is in the top tier of committees as far as actively mobilizing their members to address a wide variety of topics for SEG (e.g., R&D topics, governance, processes, student participation, etc.). At the request of the EC, they are currently updating the list of hot topics which will contribute to SEG's strategic planning.
- Global Affairs: At the heart of the Society's globalization initiatives, the GAC is seeking a greater impact in promoting SEG internationally. At the request of the EC, one of its key challenges this year is to kick off a regional assessment of SEG's positioning in the short and long term, in coordination with SEG's Global Relations staff. The first two regions to be assessed are Africa and the FSU.
- Oil & Gas Reserves Committee: Talented volunteers who are handling very well the complex and multidisciplinary topic of reserves estimation with other professional societies. OGRC is successfully promoting the impact and value of geophysics in reserves estimation (e.g., September 2012 issue of *TLE*, sponsorship of JCORET).
- Technical Standards: This committee does an excellent job adapting the existing standards with new developments in

the industry, while coordinating such revisions with other international standards organizations. It is a reference not only for SEG but also for the entire geophysical community.
- OTC Board of Directors representative: Starting in 2011, OTC has expanded internationally (ATC, OTC Brasil, OTC Asia). This growth requires more volunteers from sponsoring organizations (SEG being one of them). We need to remain engaged with OTC as revenues from its events rank in second place for SEG after the SEG Annual Meeting.

Critical role of volunteers for SEG

The level of membership involvement in programs and committees is what makes SEG strong. Growing, retaining members, and enhancing association programs clearly indicate the strength of SEG. But the point I would like to make here is the critical role of volunteers. They not only extend SEG resources valuably (they are not paid for their contributions) but they are also a key component in building its strength. Volunteering is a personal choice, not one's job. It is amazing how many extra days (including weekends) each volunteer devotes, in addition to her/his daytime job, to selflessly help the Society become what it is today.

You may ask yourself, what does one get from being an engaged volunteer? From my point of view, I can answer this question with at least three reasons: (1) as a visible advocate you gain a sense of ownership for the Society; (2) you can engage in peer-to-peer discussions and promote the Society because you believe in it; and (3) you have an unmatchable credibility compared to paid staff or consultants.

Benefit of serving SEG as an officer

Serving on the Executive Committee this year allowed me to appreciate even further SEG's role and impact for the Society. This is the central nervous system of SEG's governance. Activities include measuring the Society's objectives versus accomplishments, evaluating proposals from operational teams (e.g., SEG committees, other volunteers, and staff), as well as preparing SEG's future to better serve its members.

To give an example, I was very interested in the Society's engagement in strategic planning (ref: May 2012 *TLE*, "President's Page"). I believe it is a key process that, if embedded in the Society's culture, will help SEG handle future challenges and opportunities. Overall, the experience of serving as an officer has been rewarding, even if sometimes I wished I had more time available for SEG. For those interested in a rough breakdown in my volunteered (extra) time and effort for SEG in 2011–2012, it would be: 50% on EC-related matters, 40% on duties of serving on the OTC Board, and the remaining 10% as liaison with SEG committees. In summary, if (or better say when) you have the opportunity to serve SEG on a committee or as an officer and want to make a difference—seize it and get involved!

Nancy House, secretary-treasurer

It has been a pleasure for me to serve as SEG Secretary-Treasurer for the past year, which allowed me to learn about the inner workings and appreciate the complexity of SEG as major changes were taking place. The Society is very healthy financially despite the struggling economy. Consolidated audit reports indicate that the combined total assets of SEG and its subsidiaries (SEG Real Estate, SEG Global Inc., and SEAM Corporation) total more than US $23 million. The recent bylaws changes allowing longer terms for board members will improve the continuity and enable better implementation of recommendations made by current and previous members of the Finance, Audit, and Executive committees, and the Secretary-Treasurer. Expanding educational and other programs, increased global membership, along with the associated financial obligations have made duties of the Treasurer, finance director, and accounting staff more complicated than when SEG assets, membership, and global presence were much smaller. Budgeted revenues and expenditures for 2013 are set around $18,700,000, up more than 15% from $15,700,000 in 2012.

Overall, the financial health of SEG is good with total assets and liabilities valued at more than $23,403,357, (SEG Audit Report, 25 September 2012). The budget revenues for FY 2012 of $15,501,546 were more than budgeted expenditures of $15,063,478 with projected net revenue of $438,068. The actual net revenue was $340,463—$98,000 less than budgeted, with expenditures of $15,576,711 and revenues of $15,917,174. Major program revenues came in close to budget while publications and joint meeting revenues were well over budget, making up for lower-than-expected revenues from eLearning and SEG eBooks. Level IV, Level V, and joint meetings ended up significantly over budget. SEG will pay an estimated $160,000 in taxes based on advertising income considered taxable by the IRS. Continued low returns on investments due to economic conditions require that SEG programs continue to be revenue-positive or at least neutral to be offered. Budgeted revenues and expenditures for 2013 are set around $18,900,000 with a small projected loss of around $60,000. The expanded budget reflects increases in program offerings to the global membership of SEG.

Over the past year, the SEG Executive Committee has worked diligently to fund worthwhile projects identified and proposed by members, committees, and staff. Projects were proposed using standard formats under specific guidelines with detailed budgets. These were prioritized by the Executive Committee and approved for funding or sent back to the relevant committee for further analysis. This fiscal year saw the beginning of implementation of the Invested Reserves Above Target (IRAT) policy approved by the previous Executive Committee (2010–2011). The IRAT funding policy allows for "expenditure outside of the budgeting cycle for activity that meets policy

criteria and that complies with funding request procedures and is deemed to be time-sensitive. Qualifying expenditures would be defined as opportunities that would be lost, or whose delay would diminish SEG's ability to perform mission-critical services. (Note: IRAT funding requests will not be accepted during the budgeting cycle to ensure that budgeting discipline is enforced during the budgeting process.)" Further modifications to the IRAT funding systems suggested by the Finance Committee in April 2012 included the ability to modify budget to access IRAT funds during the budget cycle if excess funds above target became available.

The Green Tower Building and land were transferred to the SEG Real Estate Corporation from SEG. The net result to SEG's finances was a reduction in total assets of nearly $9,000,000. SEG Real Estate Corporation has commissioned a study to evaluate the feasibility and economics of constructing a second building on the property to maximize value of the assets and provide more space to SEG staff as the Society grows and space requirements increase.

The SEG Foundation, though a separate entity, remains closely tied to SEG and its finances. Several of the Foundation's endowed programs are "under water" and the unrestricted funds are being used to administer programs and in part make up for the shortfalls in reserves of several of the endowed programs. As a result, SEG made a one-time unrestricted gift of $150,000 (to be matched by future unrestricted gifts to the Foundation through 31 December 2012) which will be used to reduce the shortfall in some of the Foundation programs and administrative costs.

This year was a challenging year for finance and accounting staff, as a number of significant changes to the accounting system were implemented. While it has been a challenging year operationally as the Society takes on more complex and varied global projects, SEG continues to deliver programs and services to its members at levels commensurate with its assets and liabilities and in line with the nonprofit status of the Society. SEG staff (Steven Davis, Nancy Carter, and Tracie Rodrequez), the Finance Committee (John Eastwood and Anna Shaughnessy), and the SEG Foundation board have worked diligently to provide financial stewardship of the Society and maintain fiscal health while expanding programs and benefits to the members as the charter requires. It has been my pleasure to work with all the dedicated SEG staff and volunteers in this capacity for the past year.

Tamas Nemeth, editor

This report summarizes the main developments in Geophysics during 2011–2012, the first year of the efforts of the new Editorial Board. The editorial team includes Assistant, Associate, Special, SWAT, and Department editors; Guest Editors associated with special sections, and SEG's Publications Department staff. The new board is comprised mostly of returning experienced editors plus the appointment of 12 new Associate Editors who bring fresh views and energy to the peer-review process. Additionally, James Rickett has agreed to serve as Assistant Editor for Geophysics Letters and Ivan Vasconcelos is the new Assistant Editor for Special Sections. Jose Carcione, Evert Slob, and Mauricio Sacchi continue as Assistant Editors as well. We also have eight new Special Editors in addition to the returning eight editors, and our four SWAT Editors are continuing to serve for another two years. I thank all of them for volunteering and for their dedication.

I've taken the opportunity to rebalance the number of Associate Editors according to the changing number of submissions to the various publication categories. Submissions are increasing in Electromagnetic Methods, Seismic Inversion, and Seismic Modeling and Wave Propagation categories. We have also added a new category, Interdisciplinary Studies, to better serve the growing number of papers addressing multidisciplinary issues. Michael J. Tompkins is Associate Editor for this category.

Geophysics Digital Access: The number of Geophysics article downloads for 2011 reached about 500,000, in contrast with approximately 3000 individual and institutional subscribers for hard-copy journal delivery. Recognizing this shifting preference for digital delivery, a number of improvements were made to enhance the digital experience. The publishing vendor change in the second half of 2011 allowed Geophysics to streamline the manuscript production preparation process, resulting in shorter publication delays. Importantly, the upcoming implementation of the semantic enrichment tools will allow a more complete access to our published content.

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

The **Subsalt Exploration and Development** special section is an excellent example of addressing recent challenges presented at a successful SEG workshop in a full-scale Geophysics format. The 20 papers of the special section were published in the September-October 2011 issue of Geophysics. We thank the efforts of special section Guest Editors Dimitri Bevc, Ian Jones, Bin Wang, and especially Jacques Leveille who was instrumental to the success of this special section. These papers cover various subsalt geophysical challenges including illumination, imaging, velocity analysis, and estimation of seismic anisotropy.

The **Microseismic Monitoring** special section was published in the November-December 2011 issue of Geophysics and featured 16 papers. Guest Editors Leo Eisner, Gillian Foulger, Michael Kendall, Zachary Lawrence, and Shawn Maxwell worked hard to provide a fair and fast peer-review process to this group of papers. The manuscripts cover the wide and evolving range to microseismic applications from source mechanism studies to reservoir monitoring. "Investigation of injection-induced seismicity using a coupled fluid flow and rate/state friction model" by Mark W. McClure and Roland N. Horne has won the 2011 Geophysics Best Paper Award.

The **Multiphysics Borehole Geophysics** special section was an initiative of Associate Editor Carlos Torres-Verdín. Guest Editors André Revil, Michael Oristaglio, and Associate Editor Tapan Mukerji joined Carlos to prepare an exciting review of the topic that was published in the May-June 2012 issue of Geophysics. A total of 16 papers were published in this special section that "showcased some emerging trends in the acquisition, processing, and interpretation of borehole geophysical measurements, with emphasis on multiphysics and multiscale applications that integrate geologic information, petrophysical properties, rock physics, and core measurements" as described in the special section Introduction.

The **Near-Surface Electromagnetic Induction** special section was proposed by Associate Editors Colin Farquharson and Mark Everett, and they were so dedicated that they volunteered to be the only two special section editors. The special section resonated with authors, and 22 papers were published in the July-August 2012 issue of Geophysics. The papers provide an excellent overview of this rapidly evolving discipline with some good case studies.

The **Seismic Methods in Mineral Exploration and Mine Planning** special section summarizes the current status of applying seismic methods to crystalline subsurface problems. A total of 20 papers were published in the September-October 2012 issue of Geophysics, with many excellent case studies. The special section was proposed by Alireza Malehmir, and Christopher Juhlin, Bernd Milkereit, Milovan Urosevic, and Gilles Bellefleur joined him and Colin Farquharson as Guest Editors.

There are several special sections and supplements in preparation. The **Broadband Seismology in Oil and Gas Exploration and Production** special section is planned for the March-April 2013 issue and edited by Johan Robertsson, Shuki Ronen, Satish Singh, and Roald van Borselen. The **Assessing Uncertainty in Geophysical Problems** special section will follow in May-June 2013. Guest Editors Luis Tenorio, Malcolm Sambridge, Klaus Mosegaard, Aime Fournier, and Henning Omre are awaiting contributions to it. The recently held 15th International Workshop on Seismic Anisotropy materials will be published under the **Seismic Anisotropy in Oil and Gas Exploration and Development** special section in the July-August 2013 issue and will be edited by Abdulfattah Aldajani, Dirk Gajewski, Andrey Bakulin, and Claudia Vanelle.

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

Statistics: The number of papers submitted to Geophysics has increased in recent years from 427 (1 July 2008–30 June 2009), 411 (1 July 2009–30 June 2010), and 441 (1 July 2010–30 June 2011) to 513 (1 July 2011–30 June 2012). This substantial uptick in the number of submitted papers is mostly because of increased international submissions and submissions based on recent SEG abstracts. Approximately 73% of the contributions last year came from non-U.S.-based authors. The broad geographical distribution of the papers reflects the international character of SEG and Geophysics (Table 1). The involvement of oil and service companies continues to be relatively small at approximately 10% (Table 2).

The manuscript peer-review turnaround times are essentially flat in the past few years, mostly because of the switch to a Web-based peer-review process implemented by my predecessors. The average time required for first review is approximately two months (Table 3). The average time between acceptance and publication decreased by nine days in comparison with last year (Table 4). We do expect further decline in this metric in the coming years, though, because of the change in publishing-vendor platform and increased digital assembly.

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 June 2012, Geophysics' impact factor is 1.418. The current impact factor is our third highest 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 11 months. The impact factors were 1.228 in 2006, 1.167 in 2007, 1.349 in 2008, 1.662 in 2009, and 1.404 in 2010. Table 5 presents the impact factors of Geophysics from 1975 to 2011.

GEOPHYSICS by country 1 July 2011—30 June 2012

USA	136
China	87
Canada	40
Norway	27
Australia	24
United Kingdom	18
France	16
India	14
Brazil	13
Saudi Arabia	13
Germany	11
Netherlands	11
Iran, Islamic Republic of	9
Korea, Republic of	9
Sweden	9
Switzerland	8
Japan	6
Turkey	6
Denmark	5
Egypt	5
Finland	5
Italy	5
Greece	4
Russian Federation	4
South Africa	4
Argentina	3
Mexico	3
Belgium	2
Czech Republic	2
Mauritania	2
United Arab Emirates	2
Ghana	1
Hungary	1
Israel	1
Jordan	1
Kuwait	1
Libya	1
New Zealand	1
Poland	1
Spain	1
Total	**513**

Table 2. Origin of papers submitted for publication in GEOPHYSICS by employer, 1 July 2011—30 June 2012

Universities	369
Research Institutes	62
Oil Companies	27
Governments	21
Service Companies and Manufacturers	19
Consultants	11
Mining Companies	2
Retired	2
Total	**513**

Table 3. Manuscript-handling statistics

Year submitted 1 July–30 June	Average number of days required for first review
1991–92	172
1992–93	157
1993–94	184
1994–95	182
1995–96	211
1996–97	186
1997–98	205
1998–99	214
1999–00	212
2000–01	211
2001–02	178
2002–03	133
2003–04	141
2004–05	105
2005–06	66
2006–07	53
2007–08	57
2008–09	55
2009–10	66
2010–11	61
2011–12	63

Table 4. Manuscript-handling statistics

Year published 1 July–30 June	Average number of days between acceptance and publication
1991–92	176
1992–93	181
1993–94	178
1994–95	210
1995–96	N/A
1996–97	N/A
1997–98	180
1998–99	177
1999–00	202
2000–01	208
2001–02	213
2002–03	195
2003–04	161
2004–05	158
2005–06	181
2006–07	143
2007–08	82
2008–09	111
2009–10	122
2010–11	135
2011–12	126

Table 5. Impact factor

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

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

Reports of the Standing Committee Chairmen

Advisory
Stephen Hill, chairman

According to the SEG Constitution, 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. This year's members were Stephen J. Hill (chairman), Klaas Koster, Larry R. Lines, Fred Aminzadeh, and Leon Thomsen. Steven H. Davis is the Staff Liaison. Bob A. Hardage is the Executive Committee Liaison.

No advice was requested by President Bob A. Hardage.

Annual Meeting Steering
John Louie, chairman

Steering Committee formation began in September 2011 in San Antonio, and a few positions remained open into March 2012. Several members expressed interest in serving as Exhibitor Chair, but none was able to make suitable arrangements with an employer, so that position is unfilled. We very much appreciate the local help we are getting from a number of Nevada- and California-based members of the steering committee. The first meeting was held in March, and the most recent on 7 June 2012.

The entire steering committee offered suggestions for the meeting theme, and we selected "Geophysicists Empower the World." Las Vegas is an international tourist destination, which helped inspire this theme. It also recognizes the global nature of the revolution in unconventional energy resource production over the last several years. We want to make special note of the leading role that geophysics and our Society has played in this revolution, unique among all the essential science, engineering, and economic disciplines.

New for 2012 will be a student gathering area in the Exhibit Hall called the Student Pavilion, next to the interview and recruitment complex. The Student Pavilion will allow presentations from industry human resources recruiters on resumes, interviewing skills, and curriculum paths. In addition, for the first time SEG is building a Smartphone "app" for the Annual Meeting, with maps, schedules, a personal agenda builder, and a searchable Technical Program. For the growing number of tech-savvy attendees, the app will greatly ease planning for, and navigating the Annual Meeting.

For 2012 we are retaining one of the changes to the Annual Meeting format made in 2011. International exhibitors will continue to be located throughout the Exhibit Hall this year. One Global Technical Session, organized by the Global Affairs Committee and the Technical Program Committee, will be a regular part of the Technical Program. Global Affairs Chair Sergio Chávez-Pérez is organizing special international events that will be held in parts of the Exhibit Hall, such as in the Student Pavilion. But the Honors and Awards Ceremony will move back to 4:30 on Sunday afternoon.

Don Steeples accomplished a tremendous task as Chair of the Technical Program Committee. It received 1535 paper submissions, the highest number ever by more than 400. Due to the limited number of presentation slots, the committee had the unenviable task of rejecting 45% of the submissions, twice as many as usual. Subsequent to the 2008 Annual Meeting in Las Vegas, the committee decided to locate all of the posters within the Exhibit Hall, which was already packed full. Luckily, the 2012 meeting will be a trial run for new "e-Poster" technology, where authors can present posters to small audiences on a large flat-screen monitor. With space on the sides of the Exhibit Hall for 189 paper posters plus 11 screens for e-Posters, we could accommodate more than a hundred additional presentations, as 114 e-Posters. Effective use of very limited space required cutting back the space allowed for paper posters to just one 8-foot-long board. There will be 576 standard oral presentations, with accommodations for quickly directing overflow crowds to standby rooms with live video feeds. Nineteen workshops will follow the technical sessions on Thursday and Friday.

The SEG Mining and Geothermal Committee has organized a three-day pre-meeting field trip to several large gold mines in northeastern Nevada. Although this will be an official Annual Meeting function, the trip has a limited capacity of only 24, and it is already full. Thus, this trip will not be advertised in the Annual Meeting materials. SEG staff and Nevada SEG member Dr. Catherine Snelson of National Security Technologies have organized a general-interest field trip to the Nevada National Security Site (NNSS, a.k.a. the Nevada Test Site) for Friday, to view the results of some of the largest geophysical experiments in history. This field trip will be advertised as usual, and is expected to be as popular as it was in 2008.

SEG staff report that for the Exhibition we have 1228 booths rented to 266 companies. There are 74 booths that still need to be assigned to a location, and 17 booths on a waiting

list. The Exhibit Hall is full already, so the SEG staff have more than made up for the lack of an Exhibitor Chair.

SEG's Near-Surface Section has played a critical role in planning this year's SEG Forum on Monday, with terrific help from Louise Pellerin of the NSS. We were fortunate to be able to recruit James Irving as SEG Forum Committee Chair, and the committee quickly settled on "Corporate and Academic Social Responsibility: Engagement or Estrangement?" as the Forum's topic. The committee was able to recruit noted seismologist Dr. Mary Lou Zoback of Stanford University to serve as moderator. Academic panelists will be Dr. Jonathan Nyquist of Temple University and Dr. Steve Silliman of Gonzaga University. Michael Oxman of Business for Social Responsibility (BSR) will bring special expertise to the panel. The panelist from the oil industry is Isabelle Lambert of CGGVeritas.

The Applied Science Education Program on Wednesday may well attract hundreds of high-school students from Las Vegas schools, thanks to Chair Jim O'Donnell. Dr. Catherine Snelson of National Security Technologies will inspire the participants with her presentation on "Exploration Seismology with Explosives." This will be a memorable talk. Advertisements went to local science teachers before school ended in June, and will be sent again when school starts in September. The Mandalay Bay has bent over backward to accommodate this important service program, allowing the students to bring their own sack lunches into their venue, and providing space for them to eat.

Sponsors are proving once again their amazing support for the Annual Meeting. Sponsorship Chair Jason Tinder has been so effective that total sponsorship has rocketed past the $422,000 goal to a spectacular $526,000. And there are still more than four months to go before the meeting, with sponsorship opportunities still available!

Heidi Kuzma has kindly stepped forward as Volunteer Chair, to help recruit these people who are so vital to the success of the Technical Program. She will organize 125 volunteers to be technical and poster-session monitors, and to help herd students during the Applied Science Education Program. Heidi, Cathy Snelson, Jim O'Donnell, General Vice Chairman Fred Aminzadeh, and John Louie are publicizing the meeting and our need for volunteers with local professional societies and university geological sciences departments in Nevada and California. My department at the University of Nevada, Reno has local industry sponsorship for the travel and accommodation costs for two dozen of our students to attend the Annual Meeting, and volunteer.

The Annual Meeting Golf Tournament, ably chaired by Jim Gaines, will be at Desert Pines Golf Club. Tee off is Saturday morning before the official convention opening. Transportation, breakfast, lunch, contests, and door prizes will enhance the day at this beautiful "urban oasis" golf course, with 18 new bent-grass greens. It promises to be a sellout.

The Wednesday Night Gala will take place right in the Mandalay Convention Center, with a theme of "Old Las Vegas." Roaming impersonators of classic and campy entertainers who made their careers in Vegas days gone by, excellent food, and fun will be on tap. For 2012, we will offer Gala tickets to students at a special rate, to encourage additional engagement with their future employers.

Pat Thomsen is generously chairing the Spouse Program Committee, and they have been active, already holding several meetings in Houston. They have organized seminars and some special tours of local monuments like Hoover Dam, Red Rock Canyon, and the Las Vegas Mob Museum. It is not an easy task to create a program appealing to both the traditional female spouse, and the younger male professional spouse. With these types of tours, in my opinion, they will succeed. This year, the spouse hospitality area will be within the same building as the Annual Meeting, in a comfortable, screened-off area with a wall of windows overlooking the Mandalay's scenic wave pool.

The Steering Committee and I are grateful to the capable and professional SEG staff: Cassidy Coleman, Kristi Smith, Amy Watson, Elise Cunningham, Kristi Wann, Peggy Pryor, Mel Buckner, Kathy Gamble, Kerry Cosby, and of course Steve Emery. With their help, the 2012 Annual Meeting will be a great success. "All in" for Las Vegas!

Annual Meeting Technical Program
Don Steeples, chairman

A record 1535 abstracts were submitted for the 2012 Annual Meeting, breaking the previous all-time high by nearly 400 abstracts.

There were 576 oral presentation slots and 189 poster spots available. Consequently, we had to reject 45% of all submitted abstracts, which is nearly twice as many as usual.

The venue and the large number of submissions in Las Vegas posed challenges for us. The last time the Annual Meeting was there in 2008, the Poster Sessions were in the exhibit hall and a room across the corridor from the Exhibit Hall. Consequently, several SEG members asked us to put all the posters in the Exhibit Hall. Given that the Exhibit Hall was sold out with a waiting list for potential exhibitors, we were allocated space for 200 paper posters with one board each. The decision was made to cut the number of boards in half in order to accept more posters.

Because of the large number of abstracts submitted, we decided to incorporate electronic poster presentations, which are oral presentations in the poster area of the Exhibit Hall using PowerPoint and a flat-screen monitor. When the opportunity for e-Posters presented itself, it allowed us to reconfigure the poster area to 189 poster papers and 114 e-Posters. The net effect was to increase the number of accepted abstracts by 103.

The committee expresses appreciation to the hundreds of volunteers who helped with abstract reviews.

Audit
Richard Verm, chairman

The main activity of the SEG Audit Committee this year was to review the Independent Auditors' Report. The committee approved the report. No other issues were brought before the committee.

Bylaws
Louise Pellerin, chairperson

The Council unanimously passed the revised Bylaws at the September 2011 meeting in San Antonio, Texas. They were subsequently approved by the active membership in December 2011. The Bylaws Committee has provided advice to President Bob Hardage, President-elect David Monk, and Council Ad Hoc Committee Chair Lee Lawyer as discrepancies in the new Bylaws, particularly with respect to the transition period, are identified. A list of housekeeping items is being complied to be addressed in a revision next year.

The Constitution and Bylaws Committee reviewed the German Geophysical Society (Deutsche Geophysikalische Gesellschaft—DGG) Bylaws and verified there are no conflicts with the SEG Bylaws as part of DGG's application to become a SEG Section/Associated Society.

Modification to the Bylaws for a division model to accommodate a Near-Surface Division was drafted but not accepted by the Executive Committee.

Committee on University and Student Programs
Aaron Girard, chairman

In 2011, the Committee on University and Student Programs (CUSP) continued its efforts in growing both committee scope and participation. The current committee has 30 students, nine faculty, and 20 industry members. This year, CUSP focused on being able to include more students and faculty members as committee members while extending the opportunities for recruitment and interconnectivity of universities to a larger spread of students worldwide.

The Student Chapter Program enhancement proposal for phase 1 was approved at the December Executive Committee meeting. This program will increase the impact of Student Chapters in the work of CUSP by giving them greater opportunity to lead student activities at their university, in their community, and in their region. Three recognition tiers have been established: Base, Ridge, and Summit. The Student Chapters submitted applications in April-June 2012 and a CUSP subcommittee for Student Chapters was established to evaluate and rank active student chapters. The initial list of Ridge and Summit Chapters will be announced by Annual Meeting.

One of the deciding factors in the Student Chapter program enhancement ratings is the organization of geosciences events such as the International Geosciences Student Conferences (IGSC) in their local regions. In 2011, the Second IGSC took place in Krakow, Poland with 158 students from 16 countries in attendance. The 2012 IGSC took place in Belgrade, Serbia with 220 students from 40 different universities and 43 countries. For calendar year 2013, student geosciences conferences are planned for Medellin, Colombia; Berlin, Germany; and Lagos, Nigeria. The collaboration of these student chapters to continue the IGSC idea has been outstanding and we look forward to the continued expansion of the program.

The fifth SEG/Chevron Student Leadership Symposium (SLS) took place in 2011 at the SEG Annual Meeting, with 49 students in attendance from 28 countries. The students participated in discussions with the SEG Executive Committee and presented the results of those conversations focusing on options to improve collaboration and communication in the SEG student community. SLS is in the process of a reevaluation to strengthen the quality and efficiencies of the program. The reevaluation team is composed of SEG and Chevron staff to ensure a comprehensive and relevant product for Las Vegas 2012.

The SEG/ExxonMobil Student Education Program (SEP) also continued to reap success stories in 2011/2012 with five courses taking place in three geographic regions, allowing 125 students to participate and get hands-on experience in industry-related problems. The 2012 event for students in the former Soviet Union was held in Serbia in May 2012 in conjunction with IGSC. The SEP program is expected to continue to flourish with sessions planned in Istanbul, Turkey for European students in September and the North American session in Las Vegas during the SEG Annual Meeting.

The international presence of the Challenge Bowl program has continued to grow in 2011, with 13 competitions taking place in 10 countries. The finalists who competed at the SEG Annual Meeting in San Antonio represented the most diverse group of participants of the championship so far, attesting to the international growth of the program. The team for Brigham Young University, Utah, USA narrowly defeated the team from the Federal University of Technology, Nigeria.

A membership assessment identified a significant decline in student membership from 2010 to 2011, by almost 1000 members. The business office is researching this decline to narrow the potential causes and establish action items. Current action items include regular reporting of SEG student numbers, a student member survey, marketing campaigns, and increased evaluation of SEG participation in student events worldwide.

New developments for the 2012 Annual Meeting will be anchored by the new Student Pavilion in the exhibition hall. The Student Pavilion is conceived as the place to find focused career advancement, learn the best student practices worldwide and be part of unique networking opportunities advancement while learning about the new programs for students being offered by SEG. The intended audience is not only students, but also corporate recruiters, faculty advisors, and volunteers.

CUSP continues to look for opportunities to cooperate with other organizations and professional associations for the advancement of geosciences worldwide. Good examples are the ongoing discussions for joint student activities with the American Geophysical Union (AGU) for the 2012 AGU Fall Meeting, joint student conferences with AAPG and EAGE, the exploratory discussions with the International Association of Geophysical Contractors (IAGC) for the Geophysics Rocks! project, member and staff participation in third-party interviews and speaking opportunities, as well as outreach to faculty and industry leaders to contribute to the student newsletter *Anomaly*.

Continuing Education
Edith Miller, chairperson

The Continuing Education (CE) Committee's task is to guard the high-quality standard of the Continuing Education curriculum by attracting new courses and new instructors, reviewing courses and course materials, and working with SEG staff to develop a curriculum that meets the needs of SEG members. As the technology landscape—and demographic landscape—changes, the curriculum will have to evolve to meet the shifting needs. This concerns not only new topic material, but also the geographical locations of course offerings.

Course offerings 2011–2012

In the 2011–2012 SEG year, 23 courses were publicly offered, 15 of which were offered at the Annual Meeting in San Antonio. Two courses were offered in Pittsburgh in May 2012, two at the GEO Bahrain conference in March 2012, and four in Houston. The courses were well attended, with an approximate number of 20 students per course, on average. In addition, there were 13 private course offerings at locations worldwide. The offering of courses at international events such as GEO Bahrain is part of an ongoing effort to globalize the CE curriculum, providing better access to SEG courses outside of North America.

New courses

This year, a record number of nine new courses were added to the CE curriculum. All taught by knowledgeable and well-renowned instructors, these courses mostly cover topics that have gained prevalence in recent years, such as seismic interferometry, broad-band technology, CO_2 monitoring, and EOR, as well as fundamental topics taught at an entry level to serve SEG's early-career members.

Virtual classes and computer-based formats

Keeping up with industry trends, there is a continued effort to offer computer-based courses in addition to the face-to-face format—either as recordings of traditional courses, specially designed online learning modules, or interactive online formats.

Since August 2011, virtual classes are an integral part of SEG's class offerings. The virtual class is an online live seminar that students can attend from anywhere in the world by logging on through the Web. The 90-minute duration, live interaction, and remote participation make the virtual class a convenient and popular education format. At the time of writing, six virtual classes have been offered so far, with 100 attendees each on average.

Another new and promising format is a modular online multimedia course. Instructor Leon Thomsen has been working with SEG staff and courseware provider ICS to create such a course, consisting of modules of increasing learning level. The first two modules of the course have been completed and will be released in 2012.

Through SEG's partnership with International Human Resources Development Corporation (IHRDC), the Continuing Education curriculum is augmented with 32 online courses that offer fundamental geophysics instruction, rounding off SEG's broad suite of education opportunities.

Thanks

Last but not least, the committee would like to acknowledge the exceptional job of the staff of SEG's Professional Development department in realizing and executing the CE program: Professional Development Director Tom Agnew, and his outstanding staff members, Jill Abbott, Becky Keith, Ceci Martin, and Jenny Cole.

SEG DISC
Baishali Roy, chairperson

The Distinguished Instructor Short Course (DISC) Committee consists of Baishali Roy (Chair), Tad Smith (Apache), Ronny Hofmann (Shell), Mita SenGupta (Schlumberger), Ali Tura (ConocoPhillips), Shuki Ronen (CGGVeritas), James Schuelke (Devon), and Stephan Gelinsky (Shell).

2012 is the first year for SEG to organize and administer the global DISC lecture without the partnership of EAGE. The SEG staff has been proactive in ensuring that all the standards and requirements in the new locations are met well in advance. Congratulations to SEG staff for a wonderful job.

The 2011 DISC by Dr. Julien Meunier from CGGVeritas was on *Seismic Acquisition: From Yesterday to Tomorrow.* The DISC was held in 30 locations with total of approximately 1540 attendees.

The 2012 DISC instructor is Dr. Chris Liner from University of Arkansas. Dr. Liner's DISC has been well received in all locations to date. His DISC lecture topic is *Elements of Seismic Dispersion: A somewhat practical guide to frequency-dependent phenomena.* A summary of his course outline follows:

The classical meaning of the word dispersion is frequency-dependent velocity. Here we take a more general definition that includes not just wave speed but also interference, attenuation, anisotropy, reflection characteristics, and other aspects of seismic waves that show frequency dependence. At first impression, the topic seems self-evident: Of course everything is frequency dependent. Much of classical seismology and wave theory is

nondispersive: the theory of P- and S-waves, Rayleigh waves in a half-space, geometric spreading, reflection and transmission coefficients, head waves, and so forth. Yet when we look at real data, strong dispersion abounds. This course is a survey of selected frequency-dependent phenomena that routinely are encountered in reflection-seismic data.

The 2013 DISC instructor will be Dr. David Johnston from ExxonMobil, and his topic will be *Making a Difference with 4D: Practical Applications of Time-Lapse Seismic Data*. His manuscript is currently under preparation.

The 2014 DISC instructor will be Dr. Shawn Maxwell from Schlumberger, and the topic will be *Microseismic Imaging of Hydraulic Fracturing: Improved Engineering of Unconventional Shale Reservoirs.*

Development and Production
Mark Houston, chairman

This past year, the Development and Production (D&P) Committee conducted the 2011 D&P Forum in Beijing (July). At the SEG Annual Meeting in San Antonio (September), we held our annual committee meeting, hosted a D&P Luncheon, and organized a workshop, "Best of the Best from the Beijing Forum." The D&P Committee has organized the 2012 D&P Forum (July) and has begun early planning for the 2013 D&P Forum to be held in Krakow, Poland (Summer 2013).

The 2011 D&P Forum was held in Beijing, China at the end of July through early August. Zandong (Sam) Sun, professor at China University of Petroleum, and Enru Liu of ExxonMobil Upstream Research were the cochairs of the organizing committee. The forum topic, "Opportunities and Challenges in Unconventional Resources," attracted a strong slate of international presenters for the five-day forum with 140 registered attendees. Six papers presented at the forum were repeated in a workshop titled "Best of D&P Forum" at the 2011 SEG Annual Meeting. These talks were selected for this venue to provide a flavor of the forum.

At the 2011 Annual Meeting in San Antonio, we hosted the D&P Luncheon with Elliot Bouillion speaking on "Developing Assets in Environmentally Sensitive Areas." Elliot's presentation focused on the scope and magnitude of environmental impacts to waters of the United States, including wetlands. He pointed out that each shale play in the United States has similar requirements for permitting. For unavoidable impacts to wetlands and streams, the Clean Water Act (CWA) is the guiding regulation. Wetlands are defined differently by different agencies. The key point was made that it is important to know up front if operations will cause impacts and that satisfactory ecological offsets are available prior to beginning field operations. The costs of after-the-fact penalties, cease and desist orders, and enforcement actions are just too high.

The 2012 D&P Forum was held in Banff (July) in a four-day meeting with the theme "Multiscale, Multidisciplinary Integration of Data." More than 40 speakers and posters at the Forum addressed more than 75 attendees to discuss advances and examples in the area of reservoir characterization and performance prediction as applied to unconventional resources.

A selection of papers presented at the Banff forum will be repeated in a workshop titled "Best of D&P Banff Forum" at the 2012 SEG Annual Meeting in Las Vegas. These talks will be selected to provide a flavor of the forum. The D&P Committee will also host a luncheon at the Annual Meeting. Our speaker will be Eric von Lunen, senior technical manager, Nexen, who will present "Challenges and Solutions in Estimating Reserves in Unconventional Resource Plays."

We will hold the 2013 D&P Forum in Krakow, Poland the week of July 8. Leo Eisner is chairing the forum committee. Leo has designated a Vice Chair, Jarzyna Jadwiga, AGH University of Technology and Science, and has gathered a core organizing committee. Potential titles for the forum such as "Integrated Geophysics for Unconventional Resources" and "Unconventionally Conventional" were proposed but not finalized.

Distinguished Lecture
Guillaume Cambois, chairman

Following years of success with the Distinguished Lecture program, the Honorary Lecture program is now firmly established. The Distinguished Lecture (DL) program honors outstanding individuals who are recognized for the high quality of their contributions to geophysics on an international level and who are outstanding communicators of ideas and concepts. Paradigm has recently joined CGGVeritas in support of the program through the SEG Foundation.

The Honorary Lecture (HL) program focuses on the transfer of knowledge within a region and/or topic, recognizing prominent geophysicists and strengthening the services SEG provides to its expanding global membership. The program is fully supported by Shell through the SEG Foundation, enabling the organization of six regional HL tours per year. Last year, the SEG Executive Committee approved the creation of a topical HL tour on near-surface geophysics. This tour will cover approximately 20 locations worldwide and will occur yearly starting in the fall of 2012.

Andrey Bakulin, the 2011 Spring DL, gave his lecture titled *"Virtual source method for imaging and monitoring below complex overburden"* in 30 locations reaching 1559 geoscientists worldwide. The feedback was excellent as illustrated by Gary Mercado of BP/ADMA-OPCO in Abu Dhabi: "The subject matter was very thought-provoking and resulted in many questions from the attendees. Virtual sourcing will be an accepted technique in the near future."

Doug Oldenburg's 2011 Fall DL tour, titled *"Imaging the Earth's near surface: The why and how of applied geophysics for the 21st century"* is still in progress, having reached 1450 geoscientists in 36 locations thus far. Anthony Torlucci of the University of Houston provides an example of the positive feedback we received: "The lecture was fantastic! It has sparked some interests and possibly new research opportunities for our students."

The 2011 Fall AAPG/SEG DL tour was organized by the American Association of Petroleum Geologists (AAPG)—as is the case every other year. The lecture was *"Seismic detection of faults and fractures"* by Satinder Chopra. We did not receive quantitative feedback from AAPG, but by all accounts the tour went well.

Sam Gray served as the 2012 Spring DL. His lecture titled *"A brief history of depth … and time seismic imaging"* was presented in 36 locations, reaching approximately 2000 geoscientists and students worldwide. Jonathan Weiss of the University of Hawaii said, "We enjoyed hosting and interacting with Dr. Gray. He delivered a lively and interesting lecture that drew a large audience."

The 2012 Fall SEG/AAPG DL tour will be organized by SEG, and Manika Prasad will present *"Shales and imposters: Understanding shales, organics, and self-resourcing rocks."* The itinerary is in the planning stage.

The 2011 HLs were:

- Central and South America: Julian Cabrera with *"The state and future directions of prestack depth migration"* reached 650 geoscientists in 14 locations. "We especially appreciated that Dr. Cabrera delivered his presentation in Spanish—as the students could understand it better," noted Maria del Carmen Fuentes, professor at the Universidad Pedagogica y Technologica de Colombia.
- Europe: Lucy MacGregor with *"Integrating well log, seismic, and CSEM data for reservoir characterization"* reached 1012 geoscientists in 25 locations. "Many of the attendees told me that Lucy's lecture was the best SEG lecture ever. I totally share this opinion," commented Aurelian Roeser from Freie Universitaet in Berlin, Germany.
- Middle East and Africa: Tariq Alkhalifah with *"Seismic imaging: Kirchhoff, Beam, WEM, RTM, Anisotropy, What is Next?"* reached 1083 geoscientists in 22 locations. Rocco Detomo of Shell Oil Nigeria said "Tariq had a great rapport with students and he displayed excellent flexibility. Great presentation."
- North America: Tad Smith with *"Practical seismic petrophysics: The effective use of log data for seismic analysis"* reached 1671 geoscientists in 25 locations. "It was the only petrophysics lecture I have attended where the speaker was able to explain petrophysical concepts in a way easily understood by geologists, geophysicists, and petroleum engineers" said Oswaldo Davogustto of the University of Oklahoma.
- Pacific South: Richard Lane with *"Building on 3D geological knowledge through gravity and magnetic modeling workflows at regional to local scales"* reached 602 geoscientists in 14 locations. "Richard was animated and gave a good talk. He answered questions from the students and stayed 30 minutes after the presentation to answer further questions," revealed Maria Seton, University of Sydney, Australia.
- South and East Asia: Jung-Ho Kim with *"Incorporating the fourth dimension into geophysical data interpretation"* reached 1154 geoscientists in 17 locations. "This was the first time we had an international speaker from SEG to come and give a lecture. It was very good and gave us an opportunity to get acquainted with the latest development in geophysics. We would like to host such lectures in the future," said Mahendra Shukla, India Institute of Technology, Kharagpur, India.

Overall, the HL program has been attended by more than 6000 geoscientists worldwide (many of them students) through 117 lectures. The feedback has been overwhelmingly positive. A webcast of many of these lectures is available online through the SEG Web site, along with tour photos.

The 2012 HL program is:

- Central and South America: Eduardo Filpo, *"Image ray time-to-depth conversion and model ray applications."*
- Europe: Ian Jones, *"From imaging to inversion."*
- Middle East and Africa: Rocco Detomo, *"4D time-lapse seismic reservoir monitoring of African reservoirs."*
- North America: Shuki Ronen, *"Ocean-bottom acquisition and processing: Past, present, and future."*
- Pacific South: Peter Hatherly, *"A role for geophysical methods in meeting the resource requirements of the 21st century."*
- South and East Asia: Sam Z. Sun, *"The cheapest elastic information: How rock physics models and amplitude processing affect prestack PP inversion."*
- Near Surface: Rick Miller, *"Near-surface seismic: More than a problem of scale."*

None of these lectures would happen without the diligent work of the SEG business staff in Tulsa. Jenny Cole has moved on to new responsibilities and we wish her the best. Tom Agnew and Judy Wall have now been joined by Karline Threadgill, whom we welcome to the program. All lecturers have expressed nothing but praise for the organization of their tours, and this is all to the credit of the Tulsa team.

Global Affairs
Fela Aromolaran, chairman

The Global Affairs Committee (GAC) worked to overcome the challenges of communicating within a large committee spread over a broad geographical area through the new Online Collaboration tools on the SEG Web site. Revised committee policies and procedures were approved by the committee in June 2011 and were approved in August 2011 by the Executive Committee. The GAC held a meeting in San Antonio, Texas at the SEG Annual Meeting in September in which topics like the online collaboration, SEG strategic planning, SEG global offices, and committee luncheons were discussed. Implementation of the revised committee policies and procedures occurred after the committee held its meeting in San Antonio.

The goals set for the committee year included getting more participation from certain regions of the world and better representation and involvement of faculty advisors in SEG programs. The committee's mid-year meeting was held in June 2012 before the European Association of Geoscientists and Engineers (EAGE) meeting in Copenhagen, Denmark. Topics of discussion included

the committee luncheons held at the Annual Meeting, regional assessments, Africa engagement, used equipment exchange, student activities, lecturers, translations, meetings, intersociety cooperation, membership, and how each of these can serve the global SEG membership. The committee is currently collaborating with SEG Global, Inc. on an assessment of the Africa and FSU regions for expanded SEG activities. These regional assessments will be presented to the Executive Committee in February 2013.

Gravity and Magnetics
Tim Grow, chairman

The Gravity and Magnetics Committee focuses on activities within the Society dealing with gravity and magnetics, and promotes the knowledge and use of these potential field methods. The Committee met in the spring (April 2012) and will meet again at the Annual Meeting—Wednesday, 6 November 2012 at 5 p.m. at the Convention Center in Las Vegas. More than 50 members serve on this committee. They are instrumental in organizing Annual Meeting sessions and activities, providing input to *The Leading Edge*, advising on technical standards, and overseeing the Gravity and Magnetics dedicated list server, which includes geophysicists outside SEG.

The 2012 Annual Meeting features technical oral and poster sessions, a luncheon, and a workshop. Chuck Campbell has organized the technical oral and poster sessions, with abstract-reviewing assistance from committee members. A postconvention workshop titled "Mapping the Moho: Interpretations and Implications " is being organized by Rao Yalamanchili and Tim Grow. This workshop will feature speakers from Norway, South Africa, England, and the United States. There will be both oral and poster presentations.. The presentations will be scheduled to facilitate maximum interaction and discussions among the participants. The luncheon, organized by Neda Bundalo and Tim Grow, will feature Erik Scott of Marathon Oil as speaker. The title of his talk is "Effect of the K/Pg boundary Chicxulub impact on the northern Gulf of Mexico."

The committee is involved in SEG publication activities. An editorial column in *The Leading Edge* titled "The Meter Reader" focuses on different issues involving potential fields. The publication of this column is coordinated by Robert Pawlowski. The Publication Committee consists of Dale Bird and Alan Reid. Bimonthly dinner discussions were organized by committee member Alex Blacque through the Potential Fields SIG of the Geophysical Society of Houston. Continuing education activities are spearheaded by Michal Ruder who coordinates and teaches a gravity and magnetics methods and interpretation short course several times through the year.

Historical Preservation
Bob Wyckoff, chairman

The Historical Preservation Committee (HPC) was established to continue the preservation of important artifacts, instruments, and documents that previously had been part of the SEG Geoscience Center which closed in 2009. Despite its relatively brief existence, HPC has completed several projects and others are moving forward.

Exhibits detailing various aspects of applied geophysics have been created at various locations. The first, at the University of Oklahoma, includes documents by and about John C. Karcher, a graduate of the university. The exhibit is in Sarkey's Energy Center, part of the ConocoPhillips School of Geology and Geophysics, which is also the home of the Oklahoma Geological Survey. The second exhibit is at Oklahoma State University in the Noble Research Center, Boone Pickens School of Geology. A third exhibit, the vintage gravity instruments known as the Robert M. "Ivy" Iverson Collection, is on display at Fugro's offices in Houston thanks to a partnership between SEG, the Geophysical Society of Houston Museum Committee as custodian, and Fugro Gravity and Magnetic Services.

HPC members meet during SEG's Annual Meeting to review progress and formulate the next steps for the coming year. At the 2011 meeting, a proposal was drafted to initiate a research project by Brian Frehner, an associate professor of history at Oklahoma State University. The project will result in museum-quality displays depicting the 1920s–1930s history of geophysical exploration, the pivotal role of geophysicists, and the technological advances they have innovated to locate hydrocarbons.

Current plans are to present the displays at the 2012 SEG Annual Meeting in Las Vegas. HPC members will meet to review progress, and next steps will be discussed for year 2013. This will include continuing our research project with Brian Frehner to collect historical data for digital virtual attributes from the 1940s and beyond, then uploading to SEG Wiki.

Geophysical historians often mention the Doodlebugger statue standing in the atrium of the Cecil and Ida Green Tower, home of SEG's business office in Tulsa, USA. "It is to those people who have played such an integral part in the successful application of geophysical methods that this statue is dedicated."

Additional information on the Doodlebugger is in Lee Lawyer's editorial column, "From the Other Side, in the July 2002 issue of *TLE*.

Finally, my sincere thanks to everyone who has helped preserve our geophysical heritage, in particular to the GSH Museum Committee for its commitment to our success.

Honors and Awards
Leon Thomsen, chairman

The Committee on Honors and Awards consists of five past presidents of SEG, one appointed each year by the current president to a five-year term. Traditionally, this committee has consisted of the five most-recent past SEG presidents. This year's committee members were: Leon Thomsen, Fred Aminzadeh, Larry Lines, Steve Hill, and Klaas Koster.

Beginning at the 2011 Annual Meeting in San Antonio, nominations were solicited from the membership at large to be

considered for honors and awards at the next Annual Meeting. The Technical Program Committee of the 2011 Annual Meeting, the Editor of GEOPHYSICS, and the Editorial Board of *The Leading Edge* provide nominations for the various awards associated with oral presentations, poster papers, and published articles and papers. The decision process flows through the Honors and Awards Committee, and involves extensive research by each of these groups. Nominations approved by the H&A Committee are submitted to the Executive Committee where they must also be approved. The nominations by the 2012 Honors and Awards Committee were approved by the Executive Committee at its meeting 16 May 2012.

In addition to the SEG Honors and Awards, cited specifically below, the H&A Committee nominated SEG member Sven Treitel to the American Geosciences Institute for its **Marcus Milling Legendary Geoscientist Medal.** This nomination was endorsed by SEG President Bob Hardage and was eventually approved by the AGI. Treitel received this prestigious award at an AAPG meeting in April 2012.

The following Honors and Awards will be conferred by SEG in 2012 at the 82nd Annual Meeting in Las Vegas. Full citations for these awards will be published for the Honors and Awards Ceremony in Las Vegas and, subsequently, in *The Leading Edge*.

The Maurice Ewing Medal: George McMechan

Honorary Membership: Kurt Marfurt, Mark Zoback

Virgil Kauffman Gold Medal: Yu Zhang

Cecil Green Enterprise Award: KMS Technologies

Reginald Fessenden Award: Xianhuai Zhu, Jie Zhang

J. Clarence Karcher Award: Jyoti Behura, Pawan Dewangan, Alison Malcolm

Life Membership: John Bradford, Frank Brown, Bob Wyckoff

Distinguished Achievement: Edinburgh Anisotropy Project

Special Commendation: Cezar Iacob

Best Paper in GEOPHYSICS:

"Investigation of injection-induced seismicity using a coupled fluid flow and rate/state friction model"
Mark McClure and Roland Horne

Honorable Mentions:

"Full-azimuth subsurface angle domain wavefield decomposition and imaging Part I: Directional and reflection image gathers"
Zvi Koren and Igor Ravve

"Focused-source electromagnetic survey versus standard CSEM: 3D modeling in complex geometries"
Sofia Davydycheva and Nikolai Rykhlinski

"Quest for consistency, symmetry, and simplicity—The legacy of Albert Tarantola"
Klaus Mosegaard

"Scale properties of the seismic wavefield perspectives for full-waveform matching"
Margherita Maraschini, Daniele Boiero, Sebastiano Foti, and Laura Valentina Socco

Best Paper in *The Leading Edge*:

"Seismic anisotropy in microseismic event location analysis"
Richard Van Dok, Brian Fuller, Les Engelbrecht, and Marc Sterling

Honorable Mentions:

"Resolution on multiples: Interpreters' perceptions, decision making, and multiple attenuation"
Lee Hunt, Scott Reynolds, Mark Hadley, Scott Hadley, Ye Zheng, and Mike Perz

"Hydrogeophysical investigation for groundwater at the Dayspring Children's Village, South Africa"
Susan J. Webb, David Ngobeni, Michael Jones, Tamiru Abiye, Nirocca Devkurran, Racheal Goba, Lewis D. Ashwal, Madeline Lee, Darren Burrows, and Louise Pellerin

Best Paper at the Annual Meeting:

"Multi-level continuous active source seismic monitoring (ML-CASSM): Mapping shallow hydrofracture evolution at a TCE contaminated site"
Jonathan Ajo-Franklin, Thomas Daley, Belinda Butler-Veytia, John Peterson, Yuxin Wu, Bob Kelly, and Susan Hubbard

Honorable Mention:

"An improved gradient computation for adjoint wave-equation reflection tomography"
Uwe Albertin

Best Poster at the Annual Meeting:

"Compensating for time stepping errors locally in the pseudo-analytical method using normalized pseudo-Laplacian"
Chunlei Chu

Honorable Mention:

"Hydrogeophysics and the settlement of San Marcos Pueblo, NM: Investigations by the SAGE geophysical field course"
John Ferguson, Daniella Rempe, Anna Nowicki, Kate Talaksen, Nathaniel Lindsey, Jason Chang, and Louise Pellerin

Best Student Paper at the Annual Meeting:

"Long period, long duration seismic events during hydraulic fracture stimulation of a shale gas reservoir"
Indrajit Das, coauthored by Mark D. Zoback

Awards of Merit:

"Seismic characterization of the Woodford shale in the Anadarko basin"
Nabanita Gupta, coauthored by Supratik Sarkar and Kurt J. Marfurt

"Sensitivity analysis of time-lapse images obtained by differential waveform inversion with respect to reference model"
Amir Asnaashari, coauthored by Romain Brossier, Stephane Garambois, Jean Virieux, Francois Audebert, and Pierre Thore

Best Student Poster at the Annual Meeting:

"Comparison of methods for modeling phase variation with angle"
Xinfa Zhu, coauthored by George McMechan

Award of Merit:

"Low rank finite-differences for wave extrapolation"
Xiaolei Song, coauthored by Sergey Fomel, Lexing Ying, and Tian Ding

Inter-Society Relations
Brad Birkelo, chairman

The Inter-Society Relations Committee (ISRC) was formed in 2012 by President Bob Hardage who transformed the Inter-Society Cooperation Task Force (ICTF) into an ad hoc committee. Members of the ICTF were Brad Birkelo, Rick Miller, Wafik Beydoun, Robert Talley, Ralph Bridle, Doug Wyatt, Ken Beeney, Mike Payne, and Terry Todd. The task force proposed and the Executive Committee accepted a five-part strategy to guide SEG collaboration efforts with other professional societies.

The ISRC members are the chairs of the four major collaboration committees: Bill Barkhouse (AAPG), John Bradford (AGU), Rick Miller (EEGS), and Brad Birkelo (SPE). The group's mission statement is: The Inter-Society Relations Committee will monitor, evaluate, and coordinate the activities of all SEG Inter-Society Cooperation committees to ensure SEG applies appropriate and consistent policies in interactions with all professional societies. ISRC will recommend actions to the Board of Directors that will result in intersociety programs and activities that will benefit SEG, support the global geophysical community, and minimize SEG intersociety conflicts.

The ISRC will function as a resource for the Executive Committee and the various collaboration committees to facilitate discussion and ideas.

SEG-AAPG Cooperation
Lee Billingsley, chairman

The SEG-AAPG Cooperation Committee was established to advance cooperation and collaboration between SEG and the American Association of Petroleum Geologists (AAPG). The SEG-AAPG Cooperation Committee is a subcommittee of the Inter-Society Relations Committee chaired by Brad Birkelo. Current Chair of the SEG-AAPG Cooperation Committee is Lee Billingsley and the Vice Chair is Bill Barkhouse.

A significant milestone occurred in 2012 with the inaugural meeting of the AAPG/SEG Joint Summit which will be held annually at the winter North American Prospect Expo (NAPE) event. Executive Committee leaders, executive directors, and senior directors selected from both organizations agreed to a working agenda of nine topics for study and possible collaboration. Two examples for increasing value to membership could be joint Student Memberships and combined committees; others could be a joint Distinguished Lecture (DL) program, and an editorial effort for the Presidents of both SEG and AAPG to write joint Presidential columns in *The Leading Edge* and *The Explorer*.

The committee meets twice a year at the SEG and AAPG and annual meetings. 2012 members include Lee Billingsley, Bill Barkhouse, Bill Abriel, Dick Baile, Tim Berge, Brad Birkelo, Mike Forrest, Elwyn Peacock, R. Randy Ray, Eugene Syzmanski, Jim Tucker, and Eva-Maria Rumpfhuber. More detailed and lengthy committee reports are readily available upon request.

SEG-AGU Collaboration
John Bradford, cochair
Louise Pellerin, cochair

The SEG-AGU Collaboration Committee (SACC) was established as part of the SEG-AGU Alliance Memorandum of Understanding (MOU) signed in 2010. In that MOU, the SACC 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. Members of the 2012 SACC are John Bradford (SEG cochair), Louise Pellerin (AGU cochair), Rick Blakely, John Hole, Walt Snyder, and Christina Tapia.

During this reporting period, we've held quarterly conference calls as well as face-to-face meetings at the 2011 SEG Annual Meeting and AGU's fall meeting in December 2011. The SEG and Geoscientists *Without* Borders booths at the AGU fall meeting garnered a good deal of positive attention as many AGU members were introduced to the broad range of SEG programs. SEG and AGU provide complementary support for geophysical sciences with SEG focusing on methodology development in applied geophysics while AGU primarily supports geophysics as applied to broader scientific questions. There is obvious overlap between the two communities including active and passive seismology, gravity and magnetics, electrical and electromagnetic methods, near-surface geophysics, geothermal exploration, and basin analysis.

In 2011, 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 two cooperative workshops will be held this year, the first on Hydrogeophysics in July 2012, and the second on Cryosphere Geophysics in January 2013. Additionally, we are working to hold joint sessions at the major annual meetings of each organization. Kamina Singha, chair of AGU's Hydrogeophysics Technical subcommittee and Klaus Holliger, past-president of the SEG Near-Surface Section are co-convening this 2012 special session on Hydrogeophysics at the 2012 SEG Annual Meeting. We are working to secure a special slot for the SEG Near-Surface Honorary Lecturer in the 2012 AGU Annual Meeting program as well as establishing additional joint sessions. Potential fields, full-waveform seismic inversion, and basin analysis are topics currently under consideration.

We see solid potential for joint publications between the

two organizations as well, growing either out of the joint workshops or independently. The first book published jointly between SEG and AGU, *Advances in Near-surface Seismology and Ground-penetrating Radar,* was published in 2010 and a second book on electrical and electromagnetic hydrogeophysics is currently in the works.

Our primary focus this year has been in the area of student programs. Of course, improved scientific communication in the long term begins with the students. Both SEG and AGU have large student populations. SEG has a set of well-developed student programs while AGU is currently in the process of building its student offerings. We have been working to determine ways that both organizations can cooperatively engage the joint student populations. Some concrete progress has been made. As a first step, SEG and AGU are working to jointly operate mentoring programs. This has several benefits including giving employers an opportunity to engage a larger student group, as well as introducing student members of each organization to the offerings of both. We've been considering the potential of offering an SEG Challenge Bowl competition at the AGU annual meeting.

We welcome additional ideas and input on any of the issues above or any other area in which SEG and AGU might collaborate. If you have an idea for a joint meeting, workshop, or publication, please contact the committee chairpersons and we can assist in routing the proposal through the organizations.

SEG-EEGS Cooperation
Rick Miller, chairman

The SEG/EEGS Cooperation Committee was established to advance cooperation and collaboration between the SEG and the Environmental and Engineering Geophysical Society (EEGS). The SEG/EEGS Cooperation Committee is a subcommittee of the Inter-Society Relations Committee (chaired by Brad Birkelo) which was previously the Inter-Society Task Force. In September 2011, the Executive Committee approved the following strategic goal for the SEG/EEGS Cooperation Committee:

SEG should strengthen its position as the undisputed global leader in applied geophysics by establishing a strong position in the expanding field of near-surface geophysics, through strong programming and volunteer organization. Pursue collaboration activities aligned with the longer-term goal of a friendly merger with EEGS.

The committee currently includes the following members: Rick Miller, John Stowell, Bruce Smith, John Nicholl, Doug Laymon, John Bradford, Peter Annan, Mark Dunscomb, Bill Doll, Peter Pangman, and Kerry Cosby. From this committee and other members of EEGS, a task force was formed and populated with members from both SEG and EEGS. The task force was cochaired by John Bradford (representing SEG) and Bill Doll (representing EEGS). This task force was charged with assessing, detailing, and documenting the pros and cons of an EEGS-SEG merger and a stepped range of enhanced cooperation opportunities. This task was in addition to the standing goal of searching for opportunities to collaborate on meetings, workshops, forums, and student activities.

The task force produced a white paper addressing governance, management, meetings, publications, finances, membership, and the EEGS foundation, as well as approaches to membership communication, approval marketing, and implementation of any new collaborative entity/program. Throughout this detailed study, the primary focus was to define a path that would best serve the global near-surface applied geophysics community. At the conclusion of an almost yearlong study, merger was determined by both task force groups to be a viable, and the ultimate, best path forward.

The task force forwarded a motion that was approved by the SEG Executive Committee during its May 2012 meeting that charged the task force with drafting a Memorandum of Understanding with EEGS to work in good faith to develop by 30 October 2012 a draft agreement for a potential merger. The MOU is to include detailed plans for governance, management, meetings, publications, finances, membership benefits, foundations, communication to the membership, and merger implementation.

The EEGS/SEG Task Force is charged with providing a draft agreement detailing all merger responsibilities and obligations in time to allow the Executive Committee an opportunity to determine if an EEGS/SEG merger is in the best interest of the membership.

SEG-SPE Collaboration
Brad Birkelo, cochair

The SEG-SPE Collaboration Committee was formed out of a 2009 Memorandum of Understanding signed by the two societies designed to encourage and promote closer collaboration between the two societies on topics of mutual interest. The committee was formed in 2010 and consisted of three SEG representatives and three SPE representatives. SEG representatives were Brad Birkelo, Mike Payne, and Terry Todd. SPE representatives were Gene Narahara, Sid Smith, and Mark Rubin.

The major initiative to date is an Events Steering Task Force charged with generating ideas for SEG-SPE joint-meeting topics. John Waggoner and Robert Withers chaired this task force. The Joint Events Task Force (JETF) met in April 2012 in Houston and via teleconference. It generated and examined 20 potential topics for meetings and ranked eight topics for business-office and committee consideration. Along with the topics, the task force suggested champions to lead the organization of each meeting topic and potential locations for initial meetings.

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

IQ Earth
Ron Masters, chairman

At the 2011 Annual Meeting, the IQ Earth Committee set ambitious targets for two new ongoing programs starting in 2012. Members were asked to volunteer for working groups—the Curator Crew and the Forum Crew—to execute the two programs. Significant funding is being provided through a Statoil "sustaining investment" with SEG Foundation.

SEG and the Curator Crew will support rich multidisciplinary data sets, including interpretation and analysis products, in the public domain. We're working with Statoil to accept data from the Gullfaks Field as the inaugural case, and plan to solicit additional donations in future. We're collaborating with the AAPG Geophysical Integration Committee, which plans to develop interpretation courses based on these data sets. We are contributing to the SEG Online Committee's recently launched *SEG Wiki—An Encyclopedia of Applied Geophysics,* starting with a bibliography of Gullfaks publications. We're developing a network of companies to validate the received data by loading it into projects in standard and proprietary formats. We're working with SEG staff to engage a dedicated program manager for the public domain data. We plan that SEG will provide a validated copy in standard formats on a hard disk through the SEG e-Commerce online store at nominal cost, because the whole data set is likely to be on the order of a terabyte or more. We will encourage workers to add interpretation and analysis products to the distribution set, under a "creative commons" license. SEG will be responsible for the validity of its distribution, including appropriate metadata, so that Statoil's Gullfaks unit and subsequent donating organizations will not be burdened by questions about the data or interpretations. Although no one will have the resources to repeat the comprehensive analysis performed by the donor, we expect that "virtual teams" will appreciate the opportunity to learn from the data and test diverse innovative techniques. We plan to have the initial distribution available by the 2012 Annual Meeting.

In addition, the Curator Crew has identified a problem with the prestack data provided by RMOTC for the Teapot Dome Field in Wyoming, located a valid copy, and plans to restore that to the public domain. We are also consulting with BP and the Bureau of Economic Geology (BEG) to determine if we can assist with supporting the Horn Mountain data set, which BP recently donated to BEG. Recent contacts with RPSEA (Research Partnership to Secure Energy for America) have identified a potential cooperation opportunity involving a comprehensive Marcellus Shale data set. RPSEA has rights to the data and is looking for a way to make these data selectively available to the research community.

The Forum Crew and SEG staff members worked on the first annual IQ Earth Summer Forum, in Avon, Colorado, the third week in August. Ads were placed in the *AAPG Explorer,* the Houston Geological Society newsletter, the Geological Society of Houston newsletter, and the Petroleum Exploration Society of Great Britain (PESGB) newsletter. Modeled on the D&P Forum, it addresses the challenge of 21st Century Interpretation: To create, visualize, and analyze quantitative 3D Earth models, informed by many disciplines. ExxonMobil, Total, Anadarko, Apache, and Schlumberger/WesternGeco made keynote talk commitments. Bob Hardage, SEG President, delivered a keynote. More than 30 talks were presented by a broad mix of oil and service companies. This will be followed by a "Best of IQ Earth" workshop at the Las Vegas Annual Meeting.

Membership
Fela Aromolaran, chairman

The 2011–2012 Membership Committee members include: Adefela Ayotunde Aromolaran, Chairman; Gustavo Jose Carstens, Past-Chair; Nancy Jo House, Liaison to the Executive Committee; Rino Isma Aditya Saputra; Djafar Aitsaadi; Ralph M. Bridle; Michael John Andrew Burianyk; Joseph O. Ebeniro; Amr Ibrahim; Alejandro Esteban Juranovic; Alfred Liang-Chi Liaw; Dmytro Oleksandrovych Petrovsky; and Aldo L. Vesnaver.

The Membership Committee continued to focus on broad representation from SEG's diverse membership, ethnic and linguistic minorities, early career interests, and governance newcomers when composing slates for election to the Membership Committee.

Total SEG Membership in 2012	
Active Members	9557
Associate Members	11454
Student Members	12309
Junior Members	16
TOTAL	33336

Mining and Geothermal
Bob Lo, chairman
Mark Shore, vice chairman

Mark Shore will be taking over as chairman at the committee meeting at the 2012 Annual Meeting. A new cochair will be voted in at the meeting.

The mining geophysicist community is relatively small, but well organized. For a number of years, we have concentrated on actively promoting and organizing technical sessions and workshops every other year.

The 2011 Annual Meeting was one of the nonactive years in which we did not actively promote submission of talks nor organize workshops or a luncheon. Nevertheless, we realize that mining-related papers will be submitted from groups and individuals unable to wait a year. These would include graduate students or groups with research grants encouraged to publish before the grants end. To serve this portion of our constituents, we assigned a key con-

tact, Jose Arce, for the 2011 Annual Meeting. Arce organized an oral technical session of eight papers and chaired the session.

For the 2012 Annual Meeting, Mark Shore is the key contact, and we have organized two oral sessions, one poster session, one half-day workshop and a full-day workshop. We are organizing a luncheon and a committee meeting during the Annual Meeting. And finally, we have enough support from mining companies donating mine tours and interest from people that we will have a field trip prior to the Annual Meeting. We are working out the details to offer this as an official SEG event.

The Mining Committee list server, sponsored by Geosoft Ltd., currently has more than 200 members. This is our method of communicating with our global group of committee members and others who have a mining interest. We also have a close relationship with KEGS (an SEG section), which has helped by broadcasting some of our announcements to their extensive and global e-mail list.

Committee meetings were held at mining and exploration trade shows, such as the Cordilleran Roundup in Vancouver and the Prospectors and Developers Association of Canada (PDAC) meeting in Toronto this year.

The geothermal portion of the community has been trying to organize itself for a number of years but has not yet achieved sufficient momentum to operate as an entity independent of the committee.

Near-Surface Task Force
John Bradford, chairman

For more than a decade, SEG has maintained that near-surface geophysical applications are an important component of its mission and vision. For example, a primary mission identified in the 2001 SEG Strategic Plan was to "promote and expand the use of geophysical science in engineering and infrastructure development and for environmental purposes." Since 2010, the near-surface community has seen unprecedented support from SEG with SEG seeking to become the premier global professional society for applied near-surface geophysics. This effort recognizes that the community of near-surface geophysicists is fragmented and not currently well served on a global scale; SEG is perhaps the one organization that has the global reach, resources, and reputation to effectively unite this large and growing community of geophysicists. Success in bringing this diverse community together will improve scientific communication leading to true advances in a number of areas that have a substantial and growing impact on society including hydrogeophysics, resource development and exploration, environmental characterization and remediation, geotechnical engineering, infrastructure evaluation, forensics, archeology, and national security. To increase SEG's relevance and visibility to the near-surface community, the 2010 SEG Executive Committee approved a strategic plan with the intent to grow the near-surface membership and provide an exciting portfolio of programs and services. In May, the 2012 Executive Committee reiterated support for the near-surface strategic plan. Key components of the plan are:

- **Leadership:** Establish a Near-Surface Task Force (NSTF) to refine and lead the implementation of the strategic plan. Provide budgetary and staff support to support the task force and advance the plan.
- **Communication:** Work to ensure that SEG is recognized by the near-surface community as the leading organization for applied theory and technology development.
- **Structure:** Create SEG structure and administration that enables and ensures a stronger voice for the SEG near-surface community.
- **Global:** Ensure that the suite of programs and member benefits meets the needs of SEG's growing global membership and are accessible to all members.
- **Meetings and publications:** Establish high-visibility, ongoing programs at the Annual Meeting such as a standing special session or regular forums. Actively work to engage and partner with local or regional organizations internationally to hold joint meetings, workshops, and forums and to develop publications from those activities.
- **Continuing Education:** Establish a program of lecturers and continuing education for near-surface geophysics.
- **Water:** Establish a high profile for hydrogeophysical applications.
- **Nontraditional:** Establish communication outreach to groups that currently do not have a significant presence at SEG including engineering, infrastructure, forensics, and archaeology.

The Near-Surface Task Force (NSTF) members include Klaus Holliger, Jan van der Kruk, James Irving, Peter Annan, Rick Miller, Jianghai Xia, and John Bradford (Chair). This year, our first task was to evaluate progress toward strategic plan implementation in 2011 and establish goals for 2012, the final year of the task force.

Accomplishments in 2011 included establishing the Near-Surface Honorary Lecturer (the first tour will begin in the fall of 2012) and establishing a standing special session at the SEG Annual Meeting devoted to hydrogeophysics. Additionally, the 2011 SEG Executive Committee approved a permanent staff position to support SEG's near-surface programs. This position was recently filled and the new staff member is getting up to speed on SEG's broad-ranging near-surface agenda.

As part of our efforts to improve member services in North America, the NSTF identified closer collaboration with the Environmental and Engineering Geophysical Society as an important first step in growing SEG's near-surface membership and programs. A joint EEGS/SEG task force (Collaboration Committee) was formed in June 2011 to evaluate collaboration potential in detail with a subset of the NSTF representing the SEG. This task force determined that a merger of SEG and EEGS had substantial potential to maximize community benefits and service and make the best use of volunteer time. During the spring of 2012, the SEG Executive Committee and EEGS Board agreed to further

pursue formal merger negotiations. As of the writing of this report, we are actively engaged in a careful and detailed evaluation of the benefits and potential pitfalls of a merger, and are considering all aspects of the association including governance, meetings, publications, financial and association management, membership management, student programs, foundations, and professional development programs. More information is available in the Collaboration Committee report prepared by Rick Miller. The NSTF is optimistic that this effort will reach a positive conclusion. A final recommendation from the merger task force is due to the respective boards no later than 1 December 2012.

As part of the effort to improve member services internationally, members of the NSTF met with the leadership of the Australian SEG, SEG Japan, Korean SEG, and Chinese Geophysical Society in late 2011. The objective was to establish the framework for a joint biennial meeting on near-surface geophysics to serve the western pacific region. In May 2012, all partner societies agreed to enter into a collaborative arrangement, and as of this writing, the final memorandum of understanding has been drafted and final signatures are being obtained. The first meeting is planned for summer of 2013 in eastern China. A 2015 pan-Pacific meeting is planned and will likely be held in Hawaii. The location of subsequent meetings will rotate among the cooperating societies' countries. Additionally, SEG cosponsored the International Workshop on Advanced GPR in Aachen, Germany, 2011, the International Conference on Environmental and Engineering Geophysics in Changsha, China, 2012, and GPR 2012 in Shanghai, China.

We have been working to develop a suite of professional development programs. We envision a three-tiered approach: Tier 1 will be developed as low- or no-cost offerings targeted primarily at students and professionals in the developing world, Tier 2 consists of low-cost Web offerings targeted at professionals looking to advance technical understanding in a particular topical area, and Tier 3 consists of full-cost short courses targeted to professionals for the purpose of satisfying licensing requirements. Tiers 2 and 3 fall within the scope of current SEG programs and the first near-surface geophysics webinar, on full waveform inversion of GPR data, was held in March, 2012 and drew around 80 participants. Additional courses are in the works. We are continuing to work on an implementation and funding strategy for a Tier 1 program.

These are the first of what we expect will be a number of exciting new activities and member services to come out of the NS strategic planning and implementation process. The NSTF is scheduled to complete its work by the 2012 SEG fall meeting.

Nominations
Klaas Koster, chairman

The Committee on Nominations for 2011–2012 consisted of Klaas Koster, Stephen Hill, Larry Lines, Gary Mercado, Agnes Jikelo, Richard Mongan, and John Bradford. The committee held its first teleconference in December. To communicate with the maximum number of members, a Call for Nominations was published both in *The Leading Edge* and on the SEG Web site. Our teleconference meetings and e-mail communications were held throughout the winter and early spring. The task for this year's Nominations Committee was exceptionally big because candidates needed to be identified for all six Directors at Large in the new governance model. Subsequent committees should have to find only two new Directors at Large annually.

After a series of meetings, we were able to recommend the following slates of excellent candidates for the Board and District Representation as published in the April 2012 issue of *TLE*.

The Committee on Nominations recognizes that candidates have made an important commitment to SEG by allowing their names to stand in nomination. In view of this commitment and today's increased workload for exploration geophysicists, we are grateful to these dedicated individuals.

Nominees for the Board:

Executive Committee Nominees	
President-elect	Brad Birkelo Don Steeples
Second vice president	Dennis Cooke Joe Reilly
Secretary-treasurer	Gary Servos Jesse Perez
Editor	Tamas Nemeth

Director at Large Nominees	
Near-surface expertise 1-year term	Peter Annan Jan van der Kruk
Latin America expertise 1-year term	Elsa Jaimes Gustavo Carstens
China expertise 2-year term	Alfred Liaw Jie Zhang
Middle East expertise 2-year term	Samir Abdelmoaty Kamal Al-Yahya
General expertise 3-year term 2 seats	Edith Miller Rocky Detomo Christine Krohn Aldo Vesnaver

We recommended that the information provided to the members clarifies that four of the six Directors at Large were selected because of their expertise in the specific areas mentioned above. The remaining two seats do not have that requirement and we believe that it is important that all possible combinations of the four candidates we nominate for these seats can be elected. We have therefore declined to split our four candidates into two pairs competing for one seat each. Instead, the two candidates with the highest numbers of votes should both get a seat.

Nominees for District Representatives:

District Representative Nominees		Number of representatives to be elected
District 2	Greg Partyka William Brumbaugh Luc Ikelle Maria Donati	4
District 4	Doug Wyatt Randy Keller	2
District 5	John Eastwood	1
District 6	Jörg Schleicher Bernard Verdu	2
District 7	Olav Barkved Guillaume Cambois Rune Hagelund Karl-Andreas Berteussen	4
District 8	Oz Yilmaz Erik Verschuur	2
District 10	Carlos Planchart Philip Fontana	2
District 11	Sam Sun	1

Districts 2, 7, and 10 have two seats to fill and Districts 4, 5, 6, 8, and 11 have one seat to fill. The results of the election are published in the Tellers Committee report.

SEG Online
Stephan Gelinsky, chairman

Through its online presence, SEG can reach a far wider public audience than through its traditional activities alone (print publications, meetings, and live continuing education). Therefore, SEG has a vested interest in obtaining and sharing online information that maintains SEG's standards of excellence and promotes the science of geophysics. In support of this and per its charter, the Online Committee (OC) solicits, identifies, and selects online strategic issues (i.e., new or enhanced SEG Online features, processes, relationships, content, etc.) for assessment of user value, strategic alignment, and implementation planning. As online technologies mature and with help from the OC, SEG then evaluates and implements those online services that advance its objectives in service to all of its constituencies.

Building on the momentum of the 2011 launch of the enhanced SEG Online Web site, 2012 saw another Online milestone with the launch of the SEG Wiki. The Wiki leverages the wealth of concise geophysical knowledge compiled in Robert Sheriff's *Encyclopedic Dictionary of Applied Geophysics* and aspires to give SEG members a platform to systematically collect and share geophysical reference information. The idea for the Wiki and its initial design originated from an OC task force—subsequently, the Online Technical Content Board has finalized the Wiki operating procedures and now administers its operations through a network of volunteers.

The OC continues to support SEG staff with expanding online collaboration to facilitate the interaction of our members in virtual global teams. Task force activities continue around data and software sharing and the OC continues to support the SEG Application Development team with advice on prioritization of projects in the development funnel.

The OC meets three times a year (typically 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 applied geophysics communication platform.

Online Technical Content Board
Bill Dragoset, chairman

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: Yonghe Sun, Frank Dumanoir, Kris Innanen, John Stockwell, Matt Hall, and Bill Dragoset, with Dragoset chairing the Board as Online Technical Editor. During the year, Rebecca Latimer and Rick Miller resigned from the Board. The Board thanks them for their efforts during its formative years. In November 2012, Bill Dragoset will complete his two-year term as Online Technical Editor, at which time Kris Innanen will become the new Online Technical Editor. Bill will remain a Board member for another year to ensure continuity.

Whitney Emerick is OLTCB's liaison to the SEG staff, and Rick Miller serves as the Board's liaison to the SEG Executive Committee. Being an offshoot of the SEG Online Committee, the OLTCB works with that committee in a complementary fashion.

The Board's major accomplishment during the 2011–2012 year was the roll-out of 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.

Goals for the coming year include:

- Generate the final version of a design document for an SEG Technical Discussion Forum
- After official approval of the Forum, create a plan for its implementation by the SEG IT Staff

- Recruit an administrator and a team of moderators for the Forum
- Roll-out the Forum and publicize it to SEG members
- Work with the SEG Technical Standards Committee to install the current standards documents into a special section of the SEG Wiki
- Pursue the development of additional online content as opportunities arise

Publications
Vladimir Grechka, chairman

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 Vladimir Grechka (chairman), Michael Pelissier, Louise Pellerin, Ian Jones, Rebecca Latimer, Lianjie Huang, Sergey Fomel, and Wei Liu, Translations Committee chair and ex-officio member. Editor Tamas Nemeth is the Executive Committee liaison, and Publications Director Ted Bakamjian is the staff liaison.

During fiscal year 2012, SEG published the following five books:

- *Elements of Seismic Dispersion: A Somewhat Practical Guide to Frequency-dependent Phenomena* (2012 DISC), by Christopher L. Liner
- *First Steps in Seismic Interpretation,* by Donald A. Herron
- *Interpretation of Three-Dimensional Seismic Data,* seventh edition, by Alistair Brown (copublished with AAPG)
- *Multicomponent Seismic Technology,* by Bob A. Hardage, Michael V. DeAngelo, Paul E. Murray, and Diana Sava
- *SEAM Phase 1: Challenges of Subsalt Imaging in Tertiary Basins, with Emphasis on Deepwater Gulf of Mexico,* by Michael Fehler and P. Joseph Keliher

Titles due for publication in the second half of 2012 include the following:

- *Fundamentals of Gravity Exploration,* by Thomas R. LaFehr and Misac N. Nabighian
- *Numerical Modeling of Seismic Wave Propagation: Gridded Two-way Wave-equation Methods,* edited by Johan O. A. Robertsson, Joakim O. Blanch, Kurt Nihei, and Jeroen Tromp
- *Seismic Signatures and Analysis of Reflection Data in Anisotropic Media,* third edition, by Ilya Tsvankin
- *3D Seismic Survey Design,* second edition, by Gijs Vermeer

Publications Policy
Michael Schoenberger, chairman

The Publications Policy Committee (PPC), now in its sixth 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 Executive Committee as necessary.

Committee members are Michael Schoenberger, chairman; Alan Jackson, *TLE* Editorial Board chairman; Vladimir Grechka, Publications Committee chairman; Wei Liu, Translations Committee chairman; Mauricio Sacchi, Geophysics representative; Bill Dragoset, Online Technical Content Board chairman; Kees Wapenaar, at-large member; Sven Treitel, at-large member; Tamas Nemeth, Editor, ex-officio member and Executive Committee liaison; and Ted Bakamjian, publications director and staff liaison.

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

- Developed and submitted for approval to the Executive Committee a proposal for SEG to publish a new journal focused on interpretation. Yonghe Sun, the chief architect of the proposal, agreed to be the journal's first editor.
- Recommended enhancements to the SEG Digital Library and to online search capabilities via semantic enrichment of content.
- Discussed how SEG might best approach incorporating the Environmental and Engineering Geophysical Society's journal into SEG's near-surface geophysics publications effort if EEGS and SEG were to merge.
- Supported a proposal to have authors elect to have open access to their papers (for a fee).

The Executive Committee acted in accordance with all recommendations submitted to it from the Publications Policy Committee.

Research
Christine Krohn, chairperson

The SEG Research Committee serves to improve communication among Earth scientists interested in applied research, to advise the SEG Executive Committee on research matters, and to identify research topics worthy of a focused workshop and to organize these workshops. It has more than 200 members. SEG active members who wish to volunteer and become active on the committee are encouraged to join.

The committee meets formally twice each year. One meeting occurs in conjunction with the Annual Meeting, while the winter meeting is traditionally hosted in January by a member

of the committee at his or her company or university. In 2012, Cengiz Esmersoy hosted the meeting at Schlumberger WesternGeco. The format of the Research Committee meeting held in conjunction with the 2011 Annual Meeting in San Antonio was a success and will be continued for 2012. We will hold a short business meeting at the convention center immediately after the Thursday workshops, followed by a dinner at a local restaurant. The dinner now is an SEG event and part of convention registration.

The most visible activity of the committee is organizing Summer Research Workshops, often in conjunction with other professional societies, and the postconvention workshops and special sessions at the Annual Meeting. In May 2012, the Research Committee successfully petitioned the SEG Executive Committee to create a task force to recommend revised workshop procedures, including pricing, for SEG workshops and forums, because of the many changes in recent years—in the proliferation of workshops, the globalization of workshops, and the approach of many societies to see them as revenue makers instead of member service. Bob Tatham, member of the Research Committee will chair this task force.

Getting students and younger geophysicists more involved in committee activities is a goal of the committee. In 2011, we invited through the SEG University and Student Programs staff, three students to join the meeting and dinner. We have a number of student members, and they are organizing workshops. In 2012 at Las Vegas, we will sponsor with the Committee on Universities and Student Programs the first Student Research Workshop organized by and for students. We are also working with the SEG Foundation to fund student travel both for postconvention workshops and summer workshops.

In addition to workshop organization, the Research Committee takes on new initiates and activities. At the request of the SEG Executive Committee, a task force was created to update the list of hot topics for use in planning SEG products. It also currently has two active subcommittees: one on CO_2 and one on unconventionals, and an initiative to develop data and code sharing for use in research.

The committee is sponsoring the following upcoming convention workshops and special sessions and research workshops:

2012 Annual Meeting Special Sessions:
- Recent advances and the road ahead
- Environmental challenges in fracturing of unconventional resources

2012 Annual Meeting Research Workshops:
- Exploiting new technologies for research and careers in geoscience: Past, present and future (Student Research Workshop)
- Gulf of Mexico imaging challenges: What can full waveform inversion achieve?
- Full wavefield analysis for active and passive 4D seismic reservoir monitoring
- Improving data quality in noisy land areas
- Integration of seismic and EM: Where do we stand?
- Sub-basalt imaging with a focus on deep water
- Physics of rocks
- Inversion-based high-resolution imaging of reservoirs
- Seismic diffraction methods for fault and fracture detection
- Geo-Informatics: Integrated data mining and fusion of diverse geoscience data sets
- 3D VSP—recent trends and the road ahead
- Application of new and advanced materials to E&P
- Subsea technologies and seafloor property characterization

2013 SEG/EAGE Summer Research Workshop:
- Integrated approach for pore pressure and in-situ stress evaluation

2013 SEG Summer Research Workshop:
- Unconventional resources: the role of geophysics
- Understanding Earth model uncertainty—structure and formation properties—and impact
- SEG/SPE workshop—seismic while drilling

Reviews
David Bartel, chairman

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 regular column in *TLE* provides the committee with a continuing presence to interact with the entire SEG membership.

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 can easily participate. Members represent all parts of the geophysical industry including service companies, petroleum companies, consultants, government agencies, academia, and research companies.

Book lists are sent to committee members 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 for publication. Many of the reviewed books are sent to SEG by publishers seeking a review. Members can also 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 Dean Clark and Spring Harris for the quick transition from e-mailed reviews to finished product 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 his or her talents to the committee is welcome to contact David at DBartel@chevron.com.

Technical Standards
Rune Hagelund, chairman

Committee members include Rune Hagelund (Chairman), Stewart Arthur Levin (Vice Chair), Barry D. Barrs, Peter Green, Friedrich Roth, Nils Aatland, and Jill Lewis.

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

The Technical Standards Committee (TSC) announced the publication of an update of the SEG-D Rev 3.0 standard. The updated standard was officially released at the TSC meeting at the EAGE conference in Copenhagen in June.

The update enables the SEG-D measurement block, allowing storage of common measurements. The measurement block utilizes the Energistics Unit of Measure system allowing full flexibility in the selection of units for the measurements. In addition, the update contains some smaller changes and typographic corrections. The updated standards document is available at www.seg.org/ts. Note that the update does not change the binary storage format itself.

The work to update the SEG-Y standard has been launched. A subcommittee led by Stewart Levin has started preliminary work on the new SEG-Y Rev 2.0 standard, and a preliminary draft has been put onto seg.org/tsc for review. The initial work has focused on updating the standard to support the range of parameters found in SEG-D Rev 3.0, but the work now continues on other high-priority requirements like supporting efficient storage on modern tape devices. Individuals and companies interested in the development of the new SEG-Y standard are encouraged to contact the TSC and join the subcommittee.

The committee continues to cooperate with the International Association of Oil and Gas Producers (OGP) on the development of the new positioning standards. New P1/11 and P2/11 standards are now in final draft, and will be ratified by the end of the year. The OGP is also working on an updated P6 (grid definition) standard to be released later this year. The new positioning standards affect the development of SEG standards, including SPS, SEG-D, and SEG-Y, and this is expected to be a topic of discussion at the upcoming Annual Meeting in Las Vegas.

The update of the SPS standard has been awaiting the publication of the updated positioning standards from OGP. As the P1/11 and P2/11 standards are now in final draft, the work on the SPS 3.0 has picked up again. A draft of the new standard hopefully will be available for comments at the Annual Meeting.

The Electromagnetic (EM) subcommittee reached an agreement with the HDF group regarding the usage of the HDF5 data format in SEG standards. This removes an important hurdle using existing EM data formats as the basis for an SEG EM data standard, and will prove useful for the development of other future SEG standards as well. The agreement opens up for anyone using the SEG standards the ability to utilize HDF5 in his or her data storage.

The committee continues to cooperate with other international standards bodies like OGP and Energistics to align metadata among the various formats, exploit commonalities, and promote the idea of "standards within standards" where possible.

To increase format awareness, Jill Lewis continues to promote the work of SEG and the importance of exchange formats, and she has given presentations at various trade shows and data-management conferences.

Two official open committee meetings were arranged the previous year—one at the SEG Annual Meeting in San Antonio September 2011, and one at the EAGE conference in Copenhagen in June 2012. The committee plans to continue with two official meetings next year to effectively speed up format development. The minutes and presentations from these meetings plus information on all other committee work are publicly available at www.seg.org/tsc.

During the forthcoming year, the committee will continue to align the existing standards with the new developments in the industry, in additon to the ongoing work on new standards. The committee will also continue its work to promote common solutions across the industry, and the idea of "standards within standards." The work on SEG-Y 2.0 and the update of SPS are expected to be major focus points in the forthcoming year.

Tellers
Sherwin Eskew, chairman

The ballot tabulation for the membership vote on the proposed Bylaws approved by the SEG Council at its September 2011 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 18 October 2011 to 8249 Active members eligible to vote. All votes were received, tabulated, and verified by SBS and results were submitted to the SEG Business Office. The Bylaws vote had a participation rate of 20.6%. The final results include 1696 returned ballots received on or before 16 December 2011. The SEG Tellers Committee verified the count provided by SBS and the Bylaws were approved by a majority vote of the Active SEG membership.

SBS also was contracted to conduct the SEG election this year. SBS designed and distributed a Web ballot and a paper ballot to each voting SEG 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 5 June 2012 to 7773 Active members eligible to vote in this year's election. In addition to receiving a paper ballot, 7531 eligible voters received e-mail from SBS with personalized login information and specific instructions to vote electronically if they preferred.

The annual election had a participation rate of 31.1%. The final results include 2496 returned ballots received on or before

31 July. Of those ballots, 1,965 were submitted via Web voting and 531 paper ballots were returned by mail.

The election results are as follows:

2012–2013 SEG Board of Directors

President-elect:	Don Steeples
Second vice president:	Dennis Cooke
Treasurer:	Gary Servos
Directors at large:	Peter Annan, Elsa Jaimes, Alfred Liang-Chi Liaw, Samir Abdelmoaty, Edith Miller, and Christine Krohn

District Representatives

District #2:	Greg Partyka and William Brumbaugh
District #4:	Randy Keller
District #5:	John Eastwood
District #6:	Bernard Verdu
District #7:	Olav Inge Barkved and Karl Berteussen
District #8:	Erik Verschuur
District #10:	Carlos Planchart and Philip Fontana
District #11:	Sam Zandong Sun

The Leading Edge Editorial Board
Alan Jackson, chairman

This is a banner year for *The Leading Edge*, as it celebrated its 30th birthday in June. I can remember when it first appeared; my manager of geophysics told me, "Finally—a geophysics magazine that I can get some useful information out of." Not to disparage our sister publications, but I think that is a testament to the need which *TLE* fulfilled, an outlet for reaching the whole Society in a somewhat less rigorous but practical fashion, providing ongoing education for the average geophysicist.

Truly amazing, *TLE* still has one of its original editors, Dean Clark, whose patience, organization, and accumulated wisdom are invisible to most of the Society but well-known to members of the *TLE* Editorial Board who have served with him. Also supporting the publication of the magazine are Associate Editor Jenny Kucera, Assistant Editor Spring Harris, Publications Director Ted Bakamjian, Graphic Design Manager Kathy Gamble, Graphic Production Designer Robert Miller, and Advertising Sales Representative Mel Buckner. *The Leading Edge* lives on tight deadlines, with turnaround of articles from reception to publication often as short as three months, so it requires a lot of coordination and planning on the part of this excellent team.

This Editorial Board currently consists of Chris Liner as a Special Editor, Greg Baker, Bill Goodway, Shuki Ronen, Tad Smith, and (new this year) Carlos Torres-Verdín. One of the key activities for the editorial board is to do some crystal-ball gazing to determine two years out what are likely to be hot topics for special sections. Sometimes we are more successful than others. But the main task for the members is shepherding special sections through the process of securing special-section editors, finding authors, nagging them to complete their papers, and reviewing and critiquing the papers. All on tight deadlines.

For the 2012, the special sections have been: near-surface measurements in exploration geophysics, carbonate research in China, mining geophysics, marine and seabed technology, seismic inversion for reservoir properties, the 30th anniversary edition, Mediterranean region, archaeology, geophysics in reserves estimation, and passive seismic and microseismic. The anniversary edition included a series of invited papers that not only examined the past 30 years of applied geophysics but also looked a bit ahead to the future, in addition to a peek inside the sausage factory of the *TLE* editorial process.

The award for Best Paper published in *TLE* in 2011 went to Richard Van Dok, Brian Fuller, Les Engelbrecht, and Marc Sterling for "Seismic anisotropy in microseismic event location analysis." Honorable mentions went to Lee Hunt, Scott Reynolds, Mark Hadley, Scott Hadley, Ye Zheng, and Mike Perz for "Resolution on multiples: Interpreters' perceptions, decision making, and multiple attenuation"; Susan J. Webb, David Ngobeni, Michael Jones, Tamiru Abiye, Nirocca Devkurran, Racheal Goba, Lewis D. Ashwal, Madeline Lee, Darren Burrows, and Louise Pellerin for "Hydrogeophysical investigation for groundwater at the Dayspring Children's Village, South Africa"; and to Indrajit Das and Mark D. Zoback for "Long-period, long-duration seismic events during hydraulic fracture stimulation of a shale gas reservoir."

There are many challenges ahead for *TLE*, such as the continuing struggle between the print and electronic editions, the expansion of the readership outside the United States, how to fully take advantage of new electronic formats and capabilities (video anyone?), and many more. But the core mission remains the same—to propagate geophysical knowledge to the members of the Society in a timely and practical fashion. That should easily carry us for another 30 years and beyond.

Translations
Wei Liu, chairman

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 Wei Liu (Chairman), Long Jin (Vice Chairman), Sergey Fomel, Ilya Tsvankin, Vladimir Grechka, Chaoshun Hu, Yunyue Li, Eike Rietsch, Tadeusz J. Ulrych, Edson Sampaio, Gabriel Perez, Louise Pellerin, Sergio Chavez-Perez, Juan C. Soldo, and Toshifumi Matsuoka.

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

- A team of translators led by Dr. Hua-wei Zhou have completed translation of Dr. Qing-zhong Li's book on *High-resolution Seismic Exploration* in Chinese. The committee further

appointed Timothy Barker and Jeff Mestayer as volume editors for the book.
- The committee is near completing the review of Aleksei Shevchenko's book proposal of translating his *Borehole Seismic Measurements* book published in Russian.
- The committee has reviewed Dr. Hong Liu's book proposal on *Seismic Imaging and Demultiple through GPU/CPU Co-processing Parallel Computing* in Chinese. The book proposal is under revision.
- New book proposals to be considered are Dr. Georgiy Lisny's two books in Ukrainian: one on the theory of processing of geophysical data, and the other on migration theory.
- Other books under consideration include the translation of Sheriff's *Encyclopedic Dictionary* into Spanish and *Inverse Problems in Geophysics* from Russian to English.
- In collaboration with the regional SEG offices such as the Beijing office, the committee continues to discuss possible translation of selected SEG materials from English into other languages, such as publication brochures to Chinese, with the goal of making SEG publications accessible to more geoscientists.

SEG Women's Network
Eve Sprunt, chairperson

The Women's Network Committee (WNC) has existed as a standing committee for about 15 months.

The mission of the committee is to:

- promote greater participation and leadership of women in geophysics worldwide
- promote greater female engagement in SEG activities on a local, regional, and global scale
- 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's first event was a breakfast meeting at the Annual Meeting in San Antonio on 21 September 2011. The breakfast was a big success involving many students who were recruited to serve as leaders of the discussions at each of the tables in the room. Alexandra Herger, director of international exploration and new ventures at Marathon Oil, was the speaker. Chevron and Nexen sponsored the breakfast, making it possible for students to attend at no charge. The breakfast was followed by a face-to-face committee meeting with attendance open to all who attended the breakfast.

There was overwhelming support for repeating the event in 2012 in Las Vegas. Marcia McNutt, director of the U.S. Geological Survey, agreed to be the speaker. The large student turnout at the last event encouraged five companies to offer to sponsor the second breakfast, (ExxonMobil—$5000, Chevron—$2000, Statoil—$2000, Anadarko—$1000, and Fugro—$1000).

The committee holds monthly conference calls, but is largely energized by projects. An example was the group collaborating to gather endorsements for the nomination of Alison Malcolm for the J. Clarence Karcher Award. There was a very short time fuse and the group rallied to gather material. The WNC has been collecting names of other women to nominate for awards.

The WNC also worked to nominate more women for SEG Board positions. A list of potential officers is being collected.

One of the goals of the committee is to gather data on the status of women in the industry. To learn more about factors that impact the career decisions of energy and petroleum industry professionals including work-life balance, the WNC created a list of survey questions. The survey was approved by the Executive Committee, but is still waiting in the SEG survey queue. The results of this type of survey benefit women because the data collected can be used by women to refocus discussions with management from individual to group behavior.

The WNC also maintains an online presence in facebook and LinkedIn, but there is limited activity.

Youth Education
Lisa Buckner, chairperson

The Youth Education Committee consists of 11 globally distributed industry and education professionals. We all share a passion for sharing our knowledge of geophysics and geosciences in general with youth and their teachers to bring about awareness of our field and thus ensure its continuance for generations to come.

A small group of dedicated and enthusiastic committee members met at the 2011 SEG Annual Meeting in San Antonio. Vice Chair Gary Robinson conducted the meeting in my absence due to illness. The committee members shared experiences, brainstormed ideas, and established the following three goals:

1. Empower SEG members who are interested in outreach. Provide SEG materials so the members can go to schools and get involved.
2. Get students interested in geosciences. Geoscience is a viable career.
3. Have a measurable impact.

The Denver Geophysical Society contacted me in October asking for any youth education information and materials that SEG could provide to local societies in support of their getting involved in outreach activities. I sent them a packet of materials including a thumb drive full of files, CD, DVDs, posters, AGI Earth Science Week toolkit, etc.

I also provided materials and suggestions to the SEG Wavelets, University of Houston student chapter, which started an outreach program. They visited a local high school and hosted

a booth at the Earth Science Week event at Houston Museum of Natural Science.

The committee met via telephone conference several times and exchanged e-mails to brainstorm a list of potential projects that would support our goals. We came up with seven and voted to select the top three we could effectively work on this year.

1. Web site for students, teachers, and parents with exercises, videos of exercises, general information, FAQs, links to other resources, etc.
2. New classroom or at-home activities (experiments) to add to our Web site
3. "Magic suitcase" of materials (props) which any SEG member could check-out from his or her local society or student chapter and take to a school classroom or organized group like a Scout Troop to give an effective presentation

We are in the process of developing age-appropriate guidelines and supporting materials for any SEG member to utilize when preparing to educate pre-university students, teachers, and parents about geophysics and geophysical careers. Outreach opportunities include: classroom presentations, school career fairs, science fairs, teacher workshops, and community events (e.g., Boy Scouts, Girl Scouts, Earth Science Week, museums). We are collaborating with the SEG Committee on University and Student Programs to distribute AGI/SEG geosciences careers brochures. We plan to propose the development of a physics or geophysics workshop for high school teachers.

International Science & Engineering Fair
Richard Nolen-Hoeksema

The theme for the 2012 International Science and Engineering Fair (ISEF) was "Inspired to change our world" and this year's SEG honorees emulated this theme. They tackled problems of early warning systems for earthquakes, atmospheric and occupational air pollution, sound-source identification and location, georeferencing or geotagging photographs, biodiversity, water salinity, nanotechnology for oil production, and soundscape quality of rooms.

ISEF occurs every May and is the premier competition for science and engineering projects developed by high school students from around the world. To participate at ISEF, students must compete successfully in a local or high school science fair and then at a regional or state ISEF-affiliated science fair. This year, more than 1500 high school students—future entrepreneurs, innovators, and scientists—competed in the ISEF. They came from about 70 countries, regions, and territories.

SEG has supported ISEF since 1965. The ISEF Subcommittee is the group with primary responsibility for this support, which is accomplished mainly via recognition of outstanding high school science and engineering projects that relate directly or indirectly to geophysics and the Earth sciences. Each year SEG awards US $6000 in cash, plaques, certificates, and *TLE* subscriptions to its winners.

The 63rd Intel ISEF, 13–18 May, was in Pittsburgh, USA. SEG judges were Chuck Meeder, Doug Wyatt, and myself.

We selected Ananya Mukundan, a senior at International Academy East (Troy, Michigan) to receive our highest honor, the Distinguished Achievement Award. She won $2000 and a trip to the 2012 SEG Annual Meeting for "Nano-Tesla Magnetic Field Sensors for an Early Warning System for Earthquakes." The 11 March 2011 Tohoku-Oki magnitude 9.0 earthquake and subsequent tsunami in Japan motivated her to find an early warning system for earthquakes. She knew from her studies that low-frequency (0.1–10 Hz), low-intensity magnetic fluctuations, 10–100 nano-Tesla (nT) in magnitude, can occur hours or days before an earthquake. She wondered if she could develop an ultrasensitive, low-cost, room-temperature sensor for detecting these magnetic field fluctuations. She designed sensors based on magnetoelectric composites that convert a hard-to-measure magnetic field to an easy-to-measure electrical voltage. The composites have ferromagnetic layers interleaved with piezoelectric layers. The ferromagnetic layers convert magnetic fluctuations to mechanical strain and piezoelectric layers convert mechanical strain to voltage. Her data suggest that her sensors are capable of detecting magnetic field fluctuations as small as 0.1 nT at 1–10 Hz, well within the range of the fluctuations reported before earthquakes. She would like to build sensors capable of detecting 0.01 nT. Her knowledge and attention to detail impressed the judges. Her poster and presentation were outstanding.

Her presentation, which also received a third award of $500 from the American Association of Physics Teachers and the American Physical Society, is published in the October issue of *TLE*.

We awarded two second-place Awards of Merit worth $1000. Serena Zadoo, a senior at L. C. Anderson High School (Austin, Texas), won for "Determination of Rayleigh Scattering Measurements for Global Warming Counteracting Atmospheric Aerosols R-14, HFC-125, HFC-216, HFC-227ea, and Halocarbon C-318." She was interested in the measurement of pollution caused by aerosols and particles dispersed in the atmosphere. Her instrument was an integrated nephelometer, an instrument used for measuring light scattering in the atmosphere. This requires calibrating the nephelometer with filtered air and a reference gas of known optical properties. Halocarbon gases have become popular gases for this purpose. However, these are ozone-depleting gases and it would be better to find substitutes for them. Carbon dioxide is a substitute but its scattering properties do not span the complete range of interest to atmospheric scientists. Serena wanted to find better substitute calibration gases for halocarbon gases. She focused on hydrofluorocarbons and hydrofluoroolefins, which are not ozone-depleting gases. She succeeded in measuring the nephelometric properties of her gases. In particular, she found hexafloropropene (HFC-216) to be an excellent candidate for nephelometer calibration because of its short residence time in the atmosphere. Serena had an excellent poster and gave an excellent presentation. She was a delight to talk to, knew her subject matter, and answered questions well and completely.

She also received a fourth award of $500 from Intel for Environmental Sciences.

Kelles Gordge, a senior at Great Mills High School (Great Mills, Maryland), won for "Direction Detection: A Novel Device for Detecting the Approach of Emergency Vehicles." Traffic accidents have occurred because drivers are unaware of or get confused as to the location of an approaching emergency vehicle and make wrong decisions to get out of its way. She wanted to create a driver-alert system to recognize the sound of an approaching emergency vehicle siren and determine its direction of approach. Her system used three microphones mounted in an orthogonal array on a vehicle. She designed the spacing of her array to optimize working with 500–2500 Hz signals. Her method used directional phase shifts between the microphone signals to triangulate on the direction or angle of approach. She has also developed algorithms for recognizing various siren calls from their frequency characteristics and distinguishing them from other prevalent road noises. She tested her prototype design using a certified emergency vehicle at distances of 50–300 ft and angles of 0–360° from the direction of travel in 45° increments. The results in her poster showed promising results, but she is working to improve her system to work at greater distances and to reduce false positive alerts. She sees her device having application for all vehicles but especially for luxury vehicles with superior sound insulation, vehicles from which there is limited visibility, and vehicles operated by hearing-impaired drivers. In addition, she thinks her device could have uses for military, law enforcement, and rescue operations. Her poster and presentation were excellent. She understood her subject matter and answered the judges' questions well.

Kelles also received a First Award of $1500 from the International Council on Systems Engineering (INCOSE) and Third Award of $1000 from Intel for Electrical and Mechanical Engineering.

We awarded four third-place Awards of Merit worth $500. Connor Tom, a freshman at John W. North High School (Riverside, California), won for "Using the Temperature Dependence of the Speed of Sound to Detect Volatile Organic Compounds in Air." He wanted to create a volatile organic compound (VOC) detector based on the principle of the temperature-dependence of the speed of sound in air. Because the composition of air is mostly gases that behave like ideal gases (nitrogen, oxygen, hydrogen, noble gases, and carbon dioxide), then air must behave like an ideal gas. However, the ideal gas law fails for many heavier gases like water vapor and VOCs. These non-ideal gases should be detectable based on their deviation from the temperature-dependence for the speed of sound in an ideal gas. Connor thought this would work even for dilute concentrations of VOCs in air. He constructed a closed, PVC pipe system for containing his mixtures of VOC and air. He could vary the temperature of the system from −20° to +20°C. He measured sound velocity from the resonance of the tube. He used mixtures of acetone and air for his experiments and was able to detect acetone in concentrations as small as 2000 ppm (0.2%) of acetone in air. He wants to improve his system to detect acetone concentrations as low 100–1000 ppm and to work with other gases. He gave an excellent presentation with a firm command of his subject matter.

Connor also received an all-expenses-paid trip to tour CERN from CERN, the European Organization for Nuclear Research, and a second award of $150 from the Patent and Trademark Office Society.

Samuel Pritt, a junior at Pritt Home School (Walkersville, Maryland), won for "Geolocation of Photographs by Horizon Matching with Digital Elevation Models." Photographs of events, landscape and field observations for science, espionage, and law enforcement often need to be located to specific geography. Doing this manually is impractical when handling a large quantity of photographs. Samuel wanted to automate the process. He developed a method and wrote a Java script for comparing the horizon profile in a photograph and matching it against topographic profiles from digital elevation models (DEM); digital elevation models are available free to the public from sources like the U.S. Geological Survey. He tested more than 100 photographs from the eastern and western United States that portrayed outdoor landscapes and beach scenes, views from car windows, and indoor scenes with the horizon viewed through a window. The horizons varied in length, orientation, distinctiveness, visibility, and vegetation cover. Samuel reported an 83% success rate, with a mean error of about 300 m. During his work, he learned to take into account the curvature of the Earth, atmospheric refraction and DEM errors. The execution time depends on the computer and DEM search area. He would like to speed up his search algorithm and foresees uses for his method for law enforcement, counter terrorism, photo tourism, community remote sensing, and autonomous vehicle navigation. Samuel was well prepared and enthusiastic. His presentation was clear. He was comfortable and answered questions well.

He also received a first award of $1000 from the Association for Computing Machinery, a second award of $1500 from Intel for Computer Science and an offer of a scholarship award of $15,000 per year, renewable annually, from the Florida Institute of Technology.

Aimee Turner, a junior at Ballard High School (Louisville, Kentucky), won for "Record Flood Impacts on Biodiversity in Upper Green River, Kentucky." This is the third year of her studies along the Green River near her home. During May 2010, a record flood affected the Green River Basin. As Aimee had been studying biodiversity there, she was interested to know how that flood affected and changed biodiversity. She chose to document the change in autumn detritus litter and woody debris from riverbank landslides after the flood and compare this change above and below the Green River Dam. She hypothesized that a large change could affect the nutrients feeding mussels and other species in the river. Her study showed that the May 2010 flood did increase the amount of debris in those areas affected by the flood; large woody debris increased measurably. The flood had little effect on areas that experienced no flooding. She concluded changes in detritus levels have both short-term and

long-term positive impacts on biodiversity. Large woody debris has beneficial impacts through increased variety in aquatic habitat and long-term release of nutrients from decaying wood. Landslides change the contour and habitat of streams and are agents for the transport of large woody debris. Her poster and presentation were excellent. She understood her subject matter and answered questions well.

Aimee also received a third award of $1000 from Intel for Environmental Sciences and offers of a scholarship award of $15,000 per year, renewable annually, from the Florida Institute of Technology and a full-tuition scholarship from Drexel University.

Jessica Williams, a sophomore at Ocean Springs High School (Ocean Springs, Mississippi), won for "The Effect of Water Location on Salinity Based upon Index of Refraction." Jessica recently moved from Germany to Ocean Springs, when her father took a new military assignment near Biloxi, Mississippi. She was interested in investigating how salinity changed with location within the area of the tidally affected Biloxi Bay. To do this, she measured the index of refraction of samples of water from a variety of locations throughout the Bay and along inland waterways. She made her own index-of-refraction measurements. She constructed a short, equilateral triangular glass prism, filled the prism with water samples, shone a laser pointer through the midpoint of one side of the precisely positioned prism, and measured the angle of minimum deviation of the laser beam that exited the prism. From the angle of minimum deviation, she calculated the index of refraction. Measurements were repeated to determine reproducibility. To calibrate her field results, she prepared concentrated salt solutions and measured their index of refraction. As expected, salinities in the bay environs varied with location; her highest value was from water near the bridge from Ocean Springs to Biloxi and her lowest value was from the Keesler Marina. Her presentation was clear and well organized. She understood her subject matter and answered questions very well.

This year we awarded Honorable Mention Recognition Awards to two projects. The team of Elkhan Mammadov and Orkhan Mammadov won for "New Approach in Oil Industry: Development of Nanosystems to Increase Efficiency of Production." Elkhan and Orkhan are sophomores at the school named after Academician Zarifa Aliyeva in Baku, Azerbaijan. The team of Paul Chassagne, Alban Teytaud, and Nofoume Ben Ahmed Aly won for "Setting Up a Measuring Protocol of the Reverberation Time of a Room to Improve Its Soundscape Quality." Paul is a senior and Alban and Nofoume are juniors at the Lycee Isaac Newton School in Clichy, France.

The 2013 Intel ISEF will be in Phoenix, Arizona, on 12–17 May 2013. For more ISEF information and list of winners go to *http://www.societyforscience.org/isef/*.

Reports of the Ad Hoc Committee Chairmen

Council Ad Hoc
Lee Lawyer, chairman

The Council Ad Hoc Committee (CAHC) has been active for two years. Its first year was chaired by Bob Hardage with the task of modifying the Bylaws to such an extent to gain acceptance of the Council in the 2011 Annual Meeting. This was accomplished with dispatch, which resulted in the Council's unanimous approval of the new Bylaws.

The CAHC continued under the auspices of President Hardage with Lee Lawyer as Chair. The committee was tasked to produce the procedures of the Council and get Executive Committee approval. This involved specifying a process by which the Council would select the Chair of the Council. The election process was left to the Council by the new Bylaws. After considering alternatives, the timing was set for an open nominating period and a subsequent electronic vote of the Council, i.e., nominations in April-May and an election in June.

Because this was the first year for the new Council procedures and because the Annual Meeting is late this year, it was decided to delay the nomination and election to August-September. This also would allow the newly appointed and elected Council Representatives to be involved with the selection process. The newly elected Chair would be installed at the annual Council meeting in Las Vegas.

Consistent with the desire to involve more fully the Council in SEG affairs, a Council eCommunity was formed, which will be a sounding board for the new Chair. There has been a consistent complaint from the District Representatives that they do not know whom they represent and the members do not know who represents them on the Council. To address this problem, an eCommunity (700 members) was set up for District 1 to evaluate the feasibility of using it as a vehicle for intra-District coordination. The results of that effort will be on the agenda of the Council meeting in Las Vegas. If successful, eCommunities will be considered for other Districts.

It is anticipated that the CAHC will dissolve after the Council meeting in Las Vegas.

SEG Oil & Gas Reserves
Henk Jaap Kloosterman, chairman

General: The SEG Oil & Gas Reserves Committee (OGRC) currently has 18 members. The committee represents the global geophysical community, including geographic diversity with multinational participation and different facets of the industry with large integrated companies, midsized and small E&Ps, academics, and third-party consulting firms. OGRC is seeking more effective collaboration with geophysical sister societies on the role of geophysics in resource and reserves estimation through inviting relevant individuals as observers to the OGRC. The committee presently includes two observers (CGF and EAGE) whereas efforts are ongoing to identify an AAPG observer.

PRMS-AG: SEG has become a formal sponsor of the Petroleum Resources Management System Application Document (PRMS-AG), together with SPE, WPC, AAPG, and SPEE. The PRMS-AG document was issued in November 2011. OGRC members have made a significant contribution to the definition of PRMS-AG Chapter 3: "Seismic Applications." The PRMS-AG is considered a key guidance document to the industry at large on resource volumes estimation and classification. SEG sponsorship of the PRMS-AG reflects the increasingly more important role for Geoscientists in this process. OGRC actively supports the rolling out of the PRMS-AG guidance to the broader industry through SEG Reserves Workshops, SPE Applied Technology Workshops (ATW) and through publications in *The Leading Edge* (*TLE*), all of which are discussed below.

SEG Reserves Workshops: OGRC conducted a successful workshop on "Use of Seismic Technology in Petroleum Resources Estimation and Classification" at the 2011 SEG Annual Meeting in San Antonio. More than 45 people attended the workshop. Emphasis was placed on the roll-out of the PRMS Application Guidelines (PRMS-AG) and its implications for the geophysical community, supplemented with five relevant case study examples (XoM, Chevron, Total, Shell, University of Houston). The next SEG Reserves workshop is planned for the upcoming SEG Annual Meeting in Las Vegas (November 2012).

SPE ATW Workshops: In May 2012, a SPE Applied Technology Workshop (ATW) on "Petroleum Reserves and Resources Estimation—PRMS Applications Guidelines Document" was held in

Lima, in which a specific session on seismic applications was chaired and led by OGRC. Seismic case study material from several IOCs (XoM, CoP, Chevron, BP, Total, Shell) was made available at the workshop. Additional ATWs are planned in Mexico (September 2012) and tentatively in Houston, Australia, and Singapore (2013), London and Calgary (2014), as well as Moscow and United Arab Emirates (2015).

Special section in *The Leading Edge*: A special section of *TLE* on the role of geophysics in reserves estimation was published in September 2012. The focus of the *TLE* special section was on PRMS-application guidelines roll-out, relevant case studies, and future developments.

JCORET: SEG sponsorship of the Joint Committee on Reserves Evaluator Training (JCORET) was formalized during the last year. The objectives of JCORET are to review and approve courses designed to bring industry-approved training to engineers and geoscientists in the areas of recommended evaluation practices, reserves and resources definitions, and ethics training. JCORET has suggested for SEG to create a training course specifically addressing the role of geophysics in resources and reserves estimation. This request has been put on hold for the time being, in view of all other ongoing activities as described above. A report of the SEG representatives on JCORET has been submitted separately.

Reports of the Representatives

AGI
Louise Pellerin, representative

After several years of relative inactivity on the American Geosciences Institute (AGI) member council, SEG is becoming reengaged. AGI has several activities and programs that complement those of SEG although AGI addresses U. S. national issues and SEG has a global view.

The member council met in April 2012, at the AAPG meeting in Long Beach, California. At this meeting, the 2012 Strategic Plan was announced:

- Education and Outreach — The geosciences must improve their efforts to educate students and the public about the importance of geosciences to their daily lives.
- Geoscience Information – The effective delivery of geoscience information requires marketing, coordination, and use of technological advances.
- Public Policy — The geosciences are essential to informed public policy for the benefit of society and the planet.
- Workforce — The issue of human capital in the geosciences is at an unprecedented critical juncture.
- Member Services — Formally uniting professional geoscience organizations through AGI increases geoscience effectiveness and communication.

Our own Dr. Sven Treitel received the AGI Marcus Milling Legendary Geoscientist Medal. The Marcus Milling Medal is awarded to senior geoscientists who have contributed consistent, high-quality, scientific achievements and service to the Earth sciences with lasting, historic value. David Monk, SEG President-Elect, accepted this prestigious award on behalf of Dr. Treitel as part of the awards ceremony at the AAPG Annual Meeting in Long Beach, California on April 22.

I have joined the AGI Ad Hoc Academic Classification Committee, chaired by AGI President Wayne Pennington, to examine the overall issue of geoscience accreditation. This complements the new SEG University Excellence program which commenced in March 2012.

AGI's Member Society annual leadership forum will be held in September 2012. This year's topic is "Media in the Geosciences: Trends and Tools for Publication, Education, and Outreach." SEG staff members will attend in a public-relations capacity to get a sense of the importance of this annual forum.

AGI Environmental Geoscience Advisory
Azra Tutuncu

The activities of the AGI Environmental Affairs Program are guided by the Environmental Geoscience Advisory Committee (EGAC), established to help identify and emphasize the high-priority environmental informational needs and challenges to be addressed by the geosciences community. Representatives of AGI's member societies serve on the EGAC along with liaison representatives from selected government agencies, academic institutions, and the industry. Approximately 30 geoscientists are actively involved in various aspects of environmental research and industrial applications, and the EGAC provides a forum for developing broad consensus concerning the role of geosciences in key environmental issues.

A portal within the SEG Web site created in 2010 relays relevant environmental information to interested SEG members in a timely manner (http://www.seg.org/SEGportalWEBproject/portals/SEG_Online.portal?_nfpb=true&_pageLabel=pg_gen_content&Doc_Url=prod/SEG-About-SEG/About-Related-Organizations/about-related-organizations.htm).

Two years ago, AGI introduced a new outreach publication for the public as well as the scientific and engineering communities. *EarthNotes* are summaries of interesting and timely information about Earth and Earth scientists. They are standalone, short illustrative reports about how Earth is a part of our lives. The reports are contributed by knowledgeable Earth scientists on a wide range of topics, from understanding the health risks associated with wildfire ash to explaining how deepwater oil drilling is accomplished. *EarthNotes* are one way that AGI works to increase public awareness of the vital role the geosciences play in society's use of resources and interactions with the environment. Since the program was established in 2010, six *EarthNotes* have been published. The first ones published were on The National Research Council's Oil in the Sea Studies—Oil in the Sea: Sources, Oil in the Sea: Weathering, and Hydraulic Fracturing and Shale Gas Production. This year, four more *EarthNotes* have been added:

- Japan's March 11, 2011 Earthquake and Tsunami
- The Earthquake-Groundwater Connection
- Environmental Issues Related to Coalbed Methane Production
- Critical Minerals

SEG members can subscribe to *EarthNotes* at http://www.agiweb.org/environment/earthnotes/updates/index.html.

The technical reviews of the EAS *Remote Sensing and the Environment* book have been completed by one of the EGAC representatives, and editing and formatting of the manuscript is in progress for an anticipated publication this year.

In a recent EGAC meeting, the members decided to invite member societies to include a student member in addition to their regular EGAC representatives. I believe this will further spread the goodwill EGAC brings to the geoscience community.

AGI organizes an annual Leadership Forum in Washington DC in mid-September for presidents and executive directors of AGI member societies to discuss shared concerns of the geosciences community and develop ideas or plans to help our societies. SEG is represented every year at this forum. Environmental concerns have been at the top of the agenda for the past two years, and we've been collaborating with all member societies to find reliable solutions to these challenges.

In pushing the integration of geoscience and engineering efforts to meet the many challenges the oil and gas industry faces in the United States and globally, EGAC helped organize a special session titled "Environmental Challenges of the Hydraulic Fracturing" for the SEG Annual Meeting in San Antonio in September 2011. The SEG Research Committee endorsed the special session and because of its success, the SEG Annual Program committee, with the endorsement of the SEG Research Committee, has added another special session. The session on unconventional resources will include papers not only on geoscience and engineering, but also on environmental challenges for unconventional shale reservoirs—and will be offered at the 2012 SEG Annual Meeting in Las Vegas. The papers presented last year have been summarized in an article by the organizers and the SEG, AGI, EGAC representative and published in *The Leading Edge* (*TLE*). The AGI EGAC representatives of the member societies are also joining efforts to organize educational workshops on the environmental aspect of hydraulic fracturing on a scientific and engineering basis. Last year, the National Ground Water Association (NGWA) sent a speaker to discuss common interests at the SEG special session, "Environmental Challenges of Hydraulic Fracturing." The SEG Research Committee also endorsed the 1st Unconventional Resources Geomechanics workshop organized jointly by UNGI and ARMA (Unconventional Natural Gas and Oil Institute and American Rock Mechanics Association, respectively) preceding the 45th U.S. Rock Mechanics and Geomechanics Symposium held in San Francisco last June. Because of the success of the workshop which also included speakers from NGWA and SEG, UNGI and ARMA have organized the 2nd Unconventional Resource Geomechanics Workshop preceding the 46th U.S. Rock Mechanics and Geomechanics Symposium held on 22 June 2012 in Chicago. Speakers came from academia, government, and the oil and gas industry with various backgrounds to discuss the environmental, technical, and educational challenges in unconventional resources. AGI Executive Director Patrick Leahy was among the speakers at the 2nd UNGI/ARMA Workshop discussing the geoscience educational challenges. As unconventional resources are going to be a major energy effort for the foreseeable future, the role EGAC plays is immense and a collaborative effort and leadership offered by AGI EGAC deserves applause.

International Association of Oil and Gas Producers Geomatics
Rune Hagelund, representative and liaison
Barry Barrs, liaison

Rune Hagelund attended the International Association of Oil and Gas Producers Association (OGP) Geomatics Committee meeting in London (November 2011) but was not able to attend the meeting in Calgary (May 2012).

The OGP Geomatics Committee currently is working on several new standards and various other guidelines and recommendations. Primary concern for SEG is the new positioning standards P1/11 and P2/11, which are currently in final draft and are expected to be ratified before the end of 2012. These two standards will affect various parts of the industry including SEG standards such as SEG-Y, SEG-D, and SPS. The SEG Technical Standards Committee (TSC) is working closely with OGP on these issues.

In addition, the P6 grid definition standard is being revised and is expected to be completed before the end of the year. The new P6/11 3D seismic bin grid standard promises to add the flexibility missing from the previous P6 standard and shares definition of common attributes such as coordinate reference systems with the P1/11 and P2/11 standards. The new grid format is expected to affect the grid definition in the new SEG-Y Rev. 2.0 standard currently under development.

Tom Owen of the OGP Geomatics Committee attended the Technical Standards Committee meetings at the SEG Annual Meeting in San Antonio (September 2011) and at the EAGE conference in Copenhagen (June 2012), and he presented an overview of the new OGP standards to the attendees.

The Geospatial Integrity of Geoscience Software (GIGS) guidelines, a major effort of the Geomatics Committee over the past few years, was completed this year and are now available. The guidelines consist of three parts—guidelines, checklist, and test data set—and define how to classify software with geospatial engines into four categories (gold, silver, bronze, none).

The other major product of the OGP Geomatics Committee, the EPSG Geodetic Parameter Dataset, has been updated a couple of times in the past year and is currently in version 7.11. This data set is offered to the industry free of charge and is globally used by most geodetic software packages.

A Geo-information Subcommittee of the OGP Geomatics Committee was launched this year to look into standardizing information and procedures in the geographic information/GIS domain.

Work on the Seabed Survey Data Model (SSDM) continues, and a usage guideline document was published earlier this year. Version 1 of SSDM can be downloaded from http://info.ogp.org.uk/geomatics/.

The OGP Geomatics Committee also has published several guidelines and recommendations and is working on various other issues. Please refer to http://www.epsg.org/ and http://www.ogp.org.uk/ for more details of the work of the committee.

Joint Committee on Reserves Evaluator Training
Fred Aminzadeh, representative
James Robertson, representative
Robert Withers, 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 (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 debating the details of this revised mission. The representatives from the five societies see JCORET as a useful vehicle for improving training across the various technical skills required for expert reserves evaluation including knowledge of reserves and resources definitions, recommended geological and engineering evaluation practices, and ethics. 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 & 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.

JCORET is now in the process of finalizing a revised statement of its new business model suitable for review by the executive committees of its sponsoring societies. This statement, and the subsequent high-level feedback from the societies, will define how JCORET operates in the future.

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 13 members to the OTC board of directors. SEG and its members accrue tangible benefits through participation in the OTC events—the end of this report provides a background of OTC and its relationship to SEG.

As of 2011, OTC has launched major initiatives to be more global and closer to regional interests. In addition to its annual event in Houston, it has now expanded with three new events: Arctic Technology Conference (ATC) every 18 months approximately (the inaugural event was 7–9 February 2011 in Houston); OTC Brasil (OTCB) every two years (the inaugural event was 3–6 October 2011 in Rio de Janeiro); and OTC Asia (OTCA), also intended to be a biennial event, with the inaugural event to be 10–12 March 2014 in Kuala Lumpur. To fully benefit from these new initiatives, the OTC Board of Directors is currently revisiting the OTC governance and bylaws. Several opportunities are available for OTC-sponsoring organizations (such as SEG) to enhance their engagement and involvement in all these new OTC events. These include: SEG volunteers can of course attend these events, submit an abstract for presentation, and/or join SEG Program subcommittees to help shape the technical content of the events. Indeed, for each of these new events, OTC is soliciting its sponsoring organizations to provide more volunteers for the Program Committee and a representative on the Standing Committee. The ball is then in our court to seize these opportunities and meet this challenge.

This rest of this report highlights the status of these four OTC Conferences (OTC Houston, ATC, OTCB, and OTCA) as of June 2012. Other accounts in this Annual Report provide details on the role of SEG and its members in the Program Committee's organization of OTC Houston and ATC, thus helping make OTC the success that it is.

OTC Houston

Experts from the offshore energy industry around the world came together 30 April–3 May for the 2012 Offshore Technology Conference at Reliant Park in Houston. Conference attendance reached a 30-year high of 89,400, the third highest in show history and up 14% from last year. Attendance surpassed the 2011 total of 78,645, and the sold-out exhibition was the largest in event history at 641,350 ft² with the addition of the outdoor pavilion, up from 603,000 ft² in 2011. The exhibition had 2,500 companies representing 46 countries, including 200 new exhibitors that included exhibitors from Bahrain, Hungary, Israel, Lithuania, New Zealand, and Taiwan.

This year's event featured eight panel sessions, 29 executive keynote presentations at luncheons and breakfasts, and 300 technical papers. Speakers from major, independent, and national operators; global government officials; and academia presented their views on the current challenges and future directions of the industry. Technology is always at the forefront of OTC and was evident by the 13 technologies winning "OTC Spotlight on New Technology" awards. The recipients were recognized for their innovation in allowing the industry to produce offshore resources.

OTC also introduced new technical topics and ways to connect through two focused networking events—one on health, safety, and environment professionals and the other on women working in the industry.

The OTC Annual Dinner was attended by approximately 900 industry leaders and conference attendees, and raised $225,000 for Engineers Without Borders USA. OTC also presented its 2012 Distinguished Achievement Award to Joe Burkhardt and the Distinguished Achievement Award for Companies, Organizations, or Institutions to Shell's Perdido Development project in the sold-out event at the George R. Brown Convention Center.

The 2013 OTC takes place 6–9 May 2013 at Reliant Park in Houston.

ATC

The inaugural Arctic Technology Conference (ATC) was 7–9 February 2011 at the George R. Brown Convention Center in Houston, Texas under the theme Challenges for Today, Opportunities for Tomorrow. ATC was created to keep energy professionals on the cutting edge of exploring and producing in the world's harshest climate. ATC 2011 by the numbers: 52 exhibitors from 9 countries (in 78 booths); more than 1,300 attendees from 23 countries; more than 130 technical presentations in four tracks; 14 endorsing and sponsoring organizations.

ATC will convene 3–5 December 2012 in at the George R. Brown Convention Center with Chair John Hogg, MGM Energy Corporation.

OTC Brasil

This inaugural Brazilian event, 3–6 October 2011 in Rio de Janeiro, was organized by the OTC. The conference welcomed three new supporting organizations: Associação Brasileira de Engenharia Química, Associação Brasileira de Geólogos de Petróleo, and Sociedade Brasileira de Geofísicos. It also gained the support of Rio Negocios, the Rio Business Agency, and attracted speakers from Brazil's Agencia Nacional do Petroleo (ANP), office of Foreign Trade of the Ministry of the Development, Industry and Foreign Trade (MDIC), and the U.S. Commerce Department. Attendance at the 2011 OTC Brasil conference surpassed 10,000 attendees, exceeding organizers' expectations with more than 400 companies from 23 countries represented in the exhibition. Two exhibit halls held 11,500 net square meters of exhibits showcasing the latest in technology from the global offshore E&P community. Ninety Brazilian companies exhibited, showing the support and interest from the region.

On 1 May 2012, the OTC Board of Directors announced a partnership with IBP-Instituto Brasileiro de Petróleo, Gás e Biocombustíveis (the Brazilian Petroleum, Gas, and Biofuels Institute, IBP) for the second OTC Brasil event, 8–10 October 2013 in Rio de Janeiro.

OTC Asia

The inaugural OTC Asia will be 10–12 March 2014 in Kuala Lumpur, Malaysia. OTCA will bring industry professionals to Asia's oil and gas hub to meet, share knowledge, and discover cutting-edge technologies. OTC Asia is a must-attend event, offering a peer-selected technical program which focuses on the full spectrum of offshore technology in drilling, exploration, production, and environmental protection. It is intended to be a biennial event located in prominent cities throughout the region.

OTC background and its relationship to SEG

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 13 members to the OTC board of directors. To provide an idea of how interdisciplinary the OTC is, a list of the other 11 sponsoring organizations follows: AAPG; American Institute of Chemical Engineers; American Institute of Mining, Metallurgical, and Petroleum Engineers; American Society of Civil Engineers; Institute of Electrical and Electronics Engineers—Oceanic Engineering Society; International Petroleum Technology Institute (formerly ASME-PD); Marine Technology Society; Society for Mining, Metallurgy, and Exploration Inc.; Society of Naval Architects and Marine Engineers; Society of Petroleum Engineers; and The Minerals, Metals and Materials Society.

SEG and its members accrue several benefits through participation in OTC. First, it is an event where one can broaden her/his view of the technology and technical advances required to make the oil and gas industry what it is. Second, besides the big-time hardware on display and 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, this meeting alone provides about 5% of the total annual income for SEG.

OTC Technical Program
Charles Knobloch, chairman

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 resources. This year marked the 43rd year of OTC.

OTC ranks among the 200 largest trade shows held annually in the United States and is among the 10 largest meetings in terms of attendance. Attendance at the 2012 OTC reached a 30-year high of 89,400. Attendance surpassed the 2011 total of 78,150, and the sold-out exhibition was the largest in its history, 641,350 square feet, up from its record-breaking 603,000 square feet in 2011, filled with well over 2500 companies. Two hundred new exhibitors were added, representing 46 countries, including Bahrain, Hungary, Israel, Lithuania, New Zealand, and Taiwan.

"OTC 2012 was the most successful event we've had since the early 1980s," said Steve Balint, OTC Chairman. "In terms of strength of the technical sessions and technology on display, OTC reached a record-breaking number of people and offered the most ways to connect, educate, and conduct business. The industry is on the rise and challenges are ahead, making it more important than ever to collaborate and share best practices with colleagues all over the world. OTC is the place to do that."

SEG is one of 12 sponsoring professional societies of the technical program. The technical program features four full days of presentations, in eight concurrent sessions, covering the latest and most important topics, technologies, and innovations in today's exploration and production industry.

The OTC-SEG subcommittee is proud of this year's SEG-sponsored geophysics technical sessions and industry-influencing events, as well as the EAGE's invited technical session.

For 2012, the spotlight SEG-sponsored geophysics technical sessions included:

- Invited Session: Advances in Offshore Resource Characterization (1 May, 14:00–16:30). This EAGE-sponsored session covered topics such as technological challenges of UK Atlantic margin exploration; geohazards and ocean hazards for deepwater drilling; marine EM methods for gas hydrate detection; integration of seismic, CSEM, and well log data for reservoir characterization; 4D and lithology prediction in the Norwegian North Sea; time-lapse seafloor gravity for reservoir monitoring; and high-resolution full waveform inversion. Speakers included: M. Quinn, British Geologic Survey; D. Stow, Herriot-Watt University; K. Weitemeyer, Scripps Institute Oceanography; L. MacGregor, RSI; D. Johnston, ExxonMobil; M. Zumberge, University of California; and S. Lazaratos, ExxonMobil. Pierre Alain Delaittre of Total and Joseph Reilly of ExxonMobil cochaired this session.
- Recent Updates in Offshore Geosciences (2 May, 14:00–16:30). This session covered topics such as exploitation strategies in mature gas fields; reservoir geophysics in presalt oil fields; challenges and solutions of seismic pore pressure prediction; frequency-based interpretations of passive EM data; emerging applications for EM methods; using simulation to address subsalt imaging challenges; and high-resolution seismic imaging for drilling risk and production management. Speakers included: G. L. Riveros, consultant; P. R. Johann, Petrobras; K. Qiu, Schlumberger; M. J. Mes, Norwegian EM Technology; D. Ridyard, EMGS; M. Fehler, SEAM; and J. H. Yu, Geotrace. Aroura Castelan of Schlumberger and Jim Kreamer of Weinman Geoscience cochaired this session.

SEG-sponsored topical luncheon:

- The Nexus of Energy, Environment, and Climate Change Issues (Thursday Luncheon, 3 May, 12:15–13:45). Philip Grossweiler, principal consultant at M&H Energy Services addressed this convergence of factors that vitally impact not only the energy industry, but also the quality of life of everyone on the planet. Dan Heinze and Jim Kraemer, Weinman Geoscience moderated this exciting luncheon.

Other key OTC events made possible through our OTC-SEG subcommittee included:

- Adaptive Thinking To Create New Opportunities (30 April, 9:30–12:00). This panel session was championed by Cornelia Noel of Shell. It was well received and had high attendance. Cornelia and Charles Knobloch chaired this session.
- PetroVietnam—Future Plans and Projects, presented by Tien Dung Nguyen, vice president, PetroVietnam (Topical Breakfast, 2 May, 7:30–9:00). Charles Knobloch moderated this breakfast presentation.
- Partnering to Win in an Increasingly Complex Oil and Gas Environment, presented by Dan Heintzelman, CEO, GE Oil and Gas (2 May, 12:15–13:45). Charles Knobloch hosted this topical luncheon.
- Value Creation Through Global Technology (3 May, 9:30–12:00). This panel session focused on the changing role of technology development in value creation. Traditional centers for offshore research and technology development are giving way to thought leadership migrations around the world. This globalization of technology value-creation is occurring at all levels throughout the industry, borne by various social, political, and economic drivers. As the industry shifts from the traditional centers, this panel helped explain what, how, and why this migration promises to bring greater value to the industry. In particular, this panel addressed the new roles of importing technology from other industries; the move for technology centers in the Middle East, South America, and Australasia; the diversification and sourcing of

thought leader resources; the economies of globalized R&D; the political and global social benefits; and the need to adapt multinational intellectual property strategies and technology management paradigms to reap and protect the value created. Panelists included: Matt Rogers, director McKinsey; Mike Bahorich, EVP and CTO Apache; Satish Pai, CTO Schlumberger; Mark Little, VP GE; Gary Rich, VP Global Sales, Baker; Bob Peterson, VP CRA Marakon. Charles Knobloch, IP Firm Arnold and Knobloch, and Bob Peterson, vice president—CRA Marakon cochaired this session.

Members of the 2011–2012 SEG-OTC OTC.11 Technical Program Subcommittee included: Charles Knobloch (chairman), Rocco Detomo (vice chair), Jim Kreamer (special coordinator to the chair, 2012), Aurora Castelan, Dan Heinze, William Barkhouse, Larry Scott, Dave Ridyard, Don Herron, John MacDonald, Gene Sparkman, and Dan Ebrom. Past subcommittee Chair, Joseph M. Reilly led the overall technical program as chair for Technical Program Committee.

IPTC Management
Philippe Doyen, board member
Joseph Reilly, board member

The International Petroleum Technology Conference (IPTC) is a multidisciplinary international oil and gas technical conference and exhibition. The event rotates annually between the Middle East and Asia. IPTC has become one of the world's largest professional-society-based oil and gas conferences 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 synergies among these four leading professional societies result in the most comprehensive, multidisciplinary technical program among oil and gas conferences worldwide.

The IPTC event planned in Bangkok was postponed due to the catastrophic flooding situation in Thailand. Instead of November 2011, the conference was held in Bangkok on 7–9 February 2012. Despite the postponement, the conference was highly successful with more than 4000 participants from 57 countries and more than 300 papers presented in 60 technical sessions. PTT Exploration and Production Plc (PTTEP) hosted the Bangkok meeting, providing outstanding support for the event despite the difficult flooding circumstances. The IPTC features an important Industry Award for "Excellence in Project Integration." This award is for a company, organization, or institution that has made an outstanding achievement in integrated project management. At the Bangkok IPTC, the award was presented to Shell Brazil Ltd. for the project, Parque das Conchas. The Thailand event postponement impacted the scheduling of subsequent events. In particular, the IPTC conference scheduled originally on 5–7 December 2012 in Beijing has been rescheduled to 26–28 March 2013. This sixth IPTC will be hosted by China's largest oil and gas producer, China National Petroleum Corporation (CNPC), and cohosted by Exxon Mobil. Early estimates indicate participation could be in excess of 5000 people. The 7th edition of IPTC planned for Doha, Qatar, is also postponed and will now be held 20–22 January 2014 with Qatar Petroleum as host. The 8th IPTC will be held as originally scheduled on 9–11 December 2014 in Kuala Lumpur, hosted by Petronas.

Board of directors meetings were held 8 July 2011 in Beijing, 16 November 2011 in Bangkok, and 7 June 2012 in Copenhagen. Following the Bangkok board meeting, an audit committee was established with representatives from each society to examine audit reports for each IPTC event before approval by the full board. The audit committee met for the first time in Copenhagen before the full board meeting. A governance committee was also created following the November board meeting. Saif Al-Hinai submitted his resignation from the IPTC Board of Directors, effective 15 December 2011. He was replaced by Al-Jaidah from QP as the SPE representative.

Following the IPTC Bangkok conference, each society's ownership interest in the IPTC Company is coming under review. Ownership interest is determined by the number of paid attendance from each society over the two most recent IPTC events. The issue of ownership interest was discussed during the Copenhagen board meeting. A report prepared by IPTC indicates that SEG may not have met its target attendance level and that its ownership interest could be reduced from 20% to 18.75%. However, the directors from all societies potentially affected by the change in ownership interest (including SEG) have requested a review of the attendance data. In Copenhagen, the board also agreed that the ownership interest clause included in the IPTC membership agreement should be reexamined and an alternative formula, more representative of actual attendance, should be considered.

Arctic Technology Conference Program
Bill Abriel, cochair
Azra Tutuncu, cochair

The Arctic Technology Conference (ATC) is a subproject of the Offshore Technology Conference (OTC) which is run primarily by the professional organizations SPE, AAPG, and SEG. The intent of the ATC is to present state-of-the art problems and solutions regarding the operations of working in Arctic conditions both onshore and offshore. The 2012 ATC will be held in Houston, December 3–5 at the George R. Brown Convention Center. The Houston venue allows for a significant participation from the USA-based petroleum sector, but also attracts presenters, exhibitors, and attendees from relevant Arctic countries including Norway, Canada, and Russia. The expectation is that the conference will meet or exceed the attendance level of the first ATC held in February 2011 when there were 1300 attendees and 52 exhibitors.

The ATC will offer breakfast and lunch talks, technical presentation sessions, and exhibitor space.

The SEG committee to the ATC has worked with the organizing committee to identify relevant and topical talks for the conference. The topic of Arctic geophysics will have one technical session concentrating mainly on seismic acquisition. Geology will have two sessions focused on basin potential, while the remaining sessions focused mainly on engineering and logistics—much like the OTC covering from drilling to production and pipeline installation. Additional special topics cover ice properties, arctic spill preparedness, regulatory governance, and the future direction of R&D between industry and academia.

The ATC is an event that may prove useful for building communications and professional links between geophysicists interested or active in Arctic operations. There is potential for SEG to initiate an Arctic special interest group for sharing experiences and ideas. It is hoped that the geophysics talks from the technical session can be coordinated into a special *TLE* publication shortly after the conference.

Details and registration information can be reviewed at the ATC Web site: http://www.arctictechnologyconference.org/

SEG Foundation

Foundation Board of Directors
Tom Smith, chairman

The SEG Foundation Board of Directors expresses its thanks to the donors and volunteers for a successful 2011. We offer a wholehearted thank you! Through the hard work, generosity, and dedication of all the 2011 donors, our volunteers, and our Tulsa staff, the SEG Foundation continues its work in Advancing Geophysics Today—Inspiring Geoscientists For Tomorrow!

Your 2011 SEG Foundation Board of Directors consisted of 12 directors. The SEG Executive Committee appointed Frank Brown, Peter Duncan, and Tom Smith to new, three-year terms on the Board. The continuing directors were Bill Barkhouse (who resigned mid-year to take up fundraising responsibilities with the American Geological Institute), Gary Servos, Frank Brown, Peter Duncan, Michael Forrest, Robert Talley, Mark Gregg, Hank Hamilton, Susan Mastoris Peebler, and Sally Zinke. While SEG operates on a July-to-June schedule, the Foundation schedule is based on the calendar year. At year-end, officers were Tom Smith (Chair), Dominique Robert (Vice Chair), and Jeff Springmeyer (Treasurer). The Board committees active in 2011 were Audit, Development (fundraising), Finance, Program, and Nominations. The Program Committee was created in 2011 to provide guidance to staff and the grant committee chairs on broader program-related issues.

The Scholarship Committee was chaired by Catherine Thibault; Travel Grants was chaired by Rocco DeTomo; Projects of Merit/Field Camps was chaired by Rachel Newrick; and Geoscientists *Without* Borders® was chaired by Roelof Snieder. They were responsible for the selection of all grant award recipients, and we are grateful for their outstanding service to SEG. All who serve are keenly aware of their serious responsibilities, as these awards affect peoples' lives in direct ways. In total, combining the Board and the grant committees, 47 dedicated volunteers deserve our accolades for what they have achieved on your behalf. If someone who reads this report is moved to consider adding to our dedicated efforts, we encourage you to let us know. We will gladly discuss the many opportunities available to you. Our outreach is worldwide and our mission is worthy.

How does the work of the Foundation relate to SEG? To put it simply, the Foundation was established in 1987 as a charitable and educational supporting organization for SEG, and the Foundation exists to raise funds and to align grants with SEG's mission. We raise the money to make SEG one of the premier professional societies in the world by offering our members opportunities to benefit and grow professionally. To successfully do this, we must communicate effectively with our membership and corporate constituents, engage in fundraising and grant best practices, codify our activities through sound policies and procedures, and exercise effective financial oversight of the assets entrusted to us.

The core activity of the SEG Foundation is fundraising and donor stewardship, or "development." We continued expanding our annual giving donor clubs' opportunities, High Velocity (gifts of US$1000–$5000), and the popular Doodlebugger Society (gifts of US$50–$900). The Foundation's premier donor club, Trustee Associates, is open to individuals who have made cumulative lifetime gifts of US$10,000 or greater. All donors receive our quarterly newsletter *Carrying the Torch* (available at www.seg.org/foundation), which provides insight into the programs made possible by their support.

As of 31 December, the Foundation had the support of 459 Doodlebuggers and 73 High Velocity contributors! We also added 11 new Trustee Associates in 2011, bringing the total to 202. The complete list of donors is available at www.seg.org/foundation. Your generosity provides the essential sustaining funding that enables all the activities of the Foundation. Without your commitment, our impact on the geophysical community would be diminished considerably. We thank you again and always value your comments on our work.

Our goal is not only to raise money but also to be good stewards and use this money wisely. Our 2011 grant expenditures of $1.7 million were divided among grants to community (see details below) and grants to SEG. This latter category was close to $1.2 million for programs including Honorary Lectures, Distinguished Lectures, SEG Online, student membership dues, and several dynamic student programs. These essential SEG programs share technology advances with our global members, providing role models for students and young professionals, and drive the growth and engagement of student members. Individual program updates may be found in this Annual Report under their respective committees.

We operate under the principle that award recipients of grants to the broader geophysical community will always be selected by independent committees, that these grants will represent our global membership, grants will be determined according to policies of best practice and transparency. Our conflict of

interest policy includes grant committee members. The Board is confident that our grant committees are now well-positioned to carry out our donors' intent, as well as meet our legal obligations as a recognized 501(c)(3) charity. Our four programs providing grants to the broader geophysical community are summarized below:

Scholarships: The Scholarship Committee reviewed applications from nearly 500 qualified students as it deliberated how to allocate scholarships from 68 different donor funds. Ultimately, the committee chose 140 students to share in the distribution of $459,237. Many scholarships are restricted, and vary widely in their terms, amounts, and focus. Therefore, part of the committee's challenge was to match the most deserving students to the appropriate scholarships, commensurate with their ranking.

Funding for the SEG Foundation Scholarship Program comes from many sources, such as gifts from SEG members, their employers, SEG Sections and Associated Societies, and memorial funds in honor of respected colleagues. An exciting 2011 example is the memorial endowment established in honor of Michael T. Spradley.

Anadarko Petroleum Corporation deserves special recognition for the program's growth. This is the fifth year that Anadarko's annual contribution provided more than 30% of the scholarship funding. Even better, this year Anadarko renewed its commitment to the SEG Foundation Scholarship program originally started with a pledge in September 2006 for an additional five years. Apache Corporation, another far-sighted corporate leader, established a $500,000 scholarship endowment in 2008, and Seismic Exchange Inc. is currently building an endowment in honor of founder P.C. Havens through annual contributions.

Geoscientists *Without* Borders®: Our newest program, Geoscientists *Without* Borders, supports the humanitarian application of geosciences around the world. Kicked off in 2008 with a visionary five-year investment of $1 million by Schlumberger, Geoscientists *Without* Borders® has made great progress in program development and has enjoyed significant project successes. Four projects were completed in 2011: India, Thailand, Honduras, and Romania. Projects currently underway are in Australia, Jamaica, South Africa, Brazil, Sweden, and Greece. New awards in 2011 are related to landslide risk assessment (Sweden) and geophysical archaeology (Greece). See www.seg.org/gwb for details.

The SEG Foundation proudly thanks Santos, Schlumberger/WesternGeco, Global Geophysical, Kiwi Energy, and CGGVeritas and Geophysical Pursuit for support critical to the success of Geoscientists *Without* Borders®. We are also grateful for grassroots support from passionate individuals who donated and from employee groups that have banded together to raise funds or chosen the program for special support such as Weinman GeoScience, ION Geophysical, Geosoft Inc., and NEOS Geosolutions.

Along with these supporters, we are very grateful to Debra and Mark Gregg (KiwiEnergy, Ltd.) for their extraordinary investment to the program and subsequent launching of the first Geoscientists *Without* Borders® endowment challenge in December 2010. During this time, Debra and Mark issued a challenge to the SEG Foundation: "Raise $125,000, and we will match it." In less than two weeks, more than $250,000 total was committed to the new endowment. Thrilled by the results, Debra and Mark came back with another challenge: "Raise an additional $125,000, and we will match that too!" To realize their vision, a number of SEG members have committed to this endowment challenge. More are needed! The Foundation announced a goal of building a $1 million endowment at the San Antonio Annual Meeting We encourage you to join the effort by donating online (www.seg.org/donate) or by mail, and indicating "GWB endowment" in the memo field of the online donation form or check.

Projects of Special Merit and Field Camps: Field camps are an integral part of the educational journey for young geophysicists. The hands-on experience gained in the field provides a critical supplement to the theoretical knowledge learned in the classroom. Applications in 2011 reflected an expansive array of field camps and projects from Africa, Asia, Europe, and North America. With the help of our supporters, the SEG Foundation provided grants totaling $100,200 to 11 field camps worldwide. Individual grants range from $4,000 to $20,000.

The Foundation Board of Directors is particularly pleased by how our committed donors have enabled the field camp grant program to grow over the past five years. Historically limited to annual grants of $10,000 to only two field camps and both based in the United States, the program is now both larger as well as international in scope, reflecting the truly global nature of SEG's student membership. Five of the ten field camps in 2011 were outside of the United States: in Africa, Europe, and the Pacific. In addition to benefits such as educational and skills development, many students also find that these field experiences validate geophysics and strengthen their commitment to applied geophysics as their chosen profession.

The Field Camps program has grown out of the long-standing Projects of Special Merit grant program. With priorities and limits on funds, the Board discontinued the Projects of Special Merit Program.

Travel Grants: The Travel Grant program is funded by the SEG Foundation through donations from individuals, corporations, organizations, and grants from other sources. Recipients of travel grants may be awarded travel grants named for individual donors, designated for a specific meeting, or awarded for attendance at an educational program or symposium. This year, 141 students receiving more than $210,000 in travel grants were selected to attend one of the five programs that provide grant opportunities for students: SEG/ExxonMobil Student Education Program, SEG/Chevron Student Leadership Symposium, Student Expos, Annual Meeting Travel Grant Program, and Best Student Paper at the SEG Annual Meeting. We received 443 applications from students around the globe competing for one of the 141 grants available.

Year-end net assets increased to $18,004,057 of which 62% are endowed. Grants totaled $2,127,001. Donor contributions were $3,323,296. The fundraising ratio of development expenses to contributions received, a generally accepted measure of nonprofit financial performance, was 9.4% for Year 2011. According to the American Institute of Philanthropy, the Better Business Bureau and the Wise Giving Alliance, the ratio should be less than 35%. The SEG Foundation considers a best-practice benchmark to be 15%.

This past year has been one of continued progress to elevate the SEG Foundation to excellence. We thank all who have contributed, from $25 student Doodlebuggers to major gift donors. Our thanks go to the dedicated Board of Directors, members of grant committees, and hard-working staff in the SEG business office led by Executive Director Steven Davis, Foundation Director Peter Pangman, and Grant Programs Manager Rhonda Jacobs. Together, we are advancing geophysics today and inspiring geoscientists for tomorrow in a tangible way.

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

SEG Subsidiaries

SEAM
Walter Lynn, chairman

The SEG Advanced Modeling (SEAM) Corporation was established in 2007 as a wholly owned subsidiary of SEG. Our purpose is to advance the science and technology of applied geophysics though cooperative industry efforts focused on subsurface model construction and generation of geophysical data sets for problems of importance to the resource-extraction industry. Please see the Web site for details: http://www.seg.org/SEAM.

SEAM provides opportunities for companies to share the high costs 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 in phases with each lasting approximately two to three years by an industry consortium assembled around a geophysical challenge of great current relevance.

SEG Past President Klaas Koster appointed Kevin Bishop, Henri Houllevigue, and Yaoguo Li to three-year terms on the SEAM Board of Directors, effective 1 January 2012. They joined Craig Beasley, Sheldon Breiner, Dennis Cooke, Walter Lynn, Jesse Perez, and Manik Talwani. The Board elected as officers Lynn (Chair), Talwani (Vice Chair), and Perez (Treasurer). Perez chairs the Finance Committee, consisting of Talwani, and nonboard members Robert Corbin, Leigh House, Prasad Narayan, and Deborah W. Walker.

The Board has been occupied this year with completing SEAM Phase I, continuing the tasks on the Research Partnership for Security of Energy in America (RPSEA) portion of the project, and successfully implementing our newest project—SEAM Phase II. The Board continues to ensure that the operations of SEAM are conducted in a fiscally and legally sound manner.

SEAM Phase I: Seismic data sets from the variable-density, acoustic free surface and the variable-density, absorbing upper surface modeling of the Phase I project have been delivered to Participants, with the model delivered in 2008 and the first waveform data delivered in 2009. The data produced under Phase I will remain proprietary for two years, until May 2013, when it will be made available to the general public. A comprehensive final report was published in September 2011 and is available as an eBook to the full SEG membership. This phase focused on the challenges of subsalt imaging in tertiary basins, with particular relevance to the deepwater Gulf of Mexico. The project had a budget of US $2.45 million and was supported by 24 Participants: Anadarko, BHPBilliton, CGGVeritas, Chevron, ConocoPhillips, Devon, Eni, EMGS, ExxonMobil, Geotrace, GX Technology, Hess, Landmark, Maersk, Marathon, Nexen, Petrobras, PGS, OHM/RockSolidImages, Repsol, Sigma3, Statoil, Total, and WesternGeco. A representative from each company makes up the Project Management Committee.

A large geologic model representative of a 60-block area of the deepwater Gulf of Mexico is a core product already receiving extensive use by the Participants. The model was constructed in a form that easily enabled extension to other complex imaging challenges by adding the rock properties necessary to account for nonseismic, elastic, anisotropic, and viscoelastic behavior. Approximately 65,000 acoustic shot records, containing as many as 450,000 traces each, were simulated by Tierra Geophysical LLC (now Halliburton). Quality control was conducted by Nexus Geosciences Inc. (now WesternGeco). Eleven "classic" data sets were extracted and will provide useful subsets that can be easily accessed for industrial and academic research.

The simulated data sets and Earth models are stored at Landmark Graphics "PetroBank" for up to 10 years. They are distributing copies to Participants and will fill orders from the global geophysical community once the two-year period of proprietary usage by Participants has passed.

SEAM Phase I-RPSEA: SEAM announced in June 2009 the successful conclusion of negotiations with RPSEA for a $2 million award for the project "Geophysical Modeling for Studying Acquisition and Processing Methods in the Deepwater Gulf of Mexico." The Phase I group of Participants contributed an additional $500,000 from the Phase I budget. A RPSEA contract extension was executed in August 2010 to add $800,000 for a TTI anisotropic simulation over a portion of the model (for a total of 35,747 shots). Eighteen of the Participants have joined the TTI task and are providing supplemental funding of $15,000 each, resulting in total project funding of $5.7 million for the SEAM Phase I and Phase I-RPSEA projects. The project has been extended to 30 June 2013.

The SEAM Phase I-RPSEA project manager is Mike Fehler, who coordinates the various activities of the SEAM project,

participant subcommittees, and contractors. Mike is currently a senior research scientist at the Massachusetts Institute of Technology. His qualifications include a career as scientist and division leader at the Los Alamos National Laboratory, editor and president of the Seismological Society of America, and principal investigator on numerous U.S. Department of Energy research projects. The Management Committee for the Phase I-RPSEA project is chaired by Scott Morton, Hess Corporation. Mike and Scott are supported by the SEG staff consisting of Jan Madole, SEG research programs manager and Peter Pangman, SEAM director of geophysics.

With the added RPSEA funding, synthetic data are being acquired over the SEAM Phase I numerical Earth model. The SEAM Earth model has been updated with anisotropic and dip parameters. All SEAM simulations are oversampled relative to current field acquisition schemes. This approach provides the opportunity for decimation testing and acquisition design improvement. The status of the simulations and data sets are:

Simulation Approach	Status at 6/30/12
Variable-density acoustic free surface	Completed by Tierra Geophysical (now part of Landmark)
Variable-density acoustic absorbing upper surface	Completed by Tierra Geophysical (now part of Landmark)
Gravity (free air and Bouguer)	Completed by Marathon
Controlled-source electromagnetic (CSEM)	Completed by EMGS
Tilted Transverse Isotropy (TTI) variable-density acoustic free surface	Simulations completed by AGT; QC in progress by WesternGeco
Magnetotelluric (MT)	Acquisition design complete; RFB pending
Isotropic elastic	Contract awarded to AGT; simulations initiated

SEAM Phase II: The three-year project, Land Seismic Challenges, launched in 2011 with a kick-off meeting in March 2011 and a Management Committee meeting in April 2011. Twenty-two companies have committed to participating in Phase II at $60,000 per year. The current Participants include Anadarko, BGP, BHPBilliton, BP, CGGVeritas, Chevron, Eni, ExxonMobil, Global Geophysical, GX Technology, Hess, Marathon, Occidental, Repsol, SaudiAramco, Shell, Sinopec, Statoil, Talisman Energy, Total, Tullow, and WesternGeco. Additional companies are still welcome. Technical committees for Near-surface Modeling, Subsurface Modeling, Acquisition and Processing, and Numerical Design have been established. All Participants agree that Phase II will require significant elastic modeling. The experience of the Phase I-RPSEA project will be highly relevant.

The SEAM Phase II Project Manager is Michael Oristaglio. Mike is currently a senior research scientist at Yale University. His qualifications include a career as project manager at Schlumberger Research, recent consulting on high-performance computing issues with Laurence Livermore National Lab, and co-principle investigator on a current Department of Energy carbon sequestration grant. The Management Committee for Phase II is chaired by Gladys Gonzales, Repsol. Mike and Gladys are supported by the SEG staff consisting of Jan Madole, SEG research programs manager, and Peter Pangman.

The Management Committee has decided to focus on three initial models:

- an unconventional (shale-gas) model, championed by BP and Chevron
- an arid model, championed by Saudi Aramco and Chevron
- a foothills/thrust model, championed by Repsol and Total

The Acquisition and Processing Committee has begun to design simulation parameters for the unconventional model, which has been constructed by BP and is nearly completed. A contract has been finalized with Midland Valley to complete the construction of the foothills/thrust model, and completion of that model is expected in the fall of 2012. Construction of the arid model will follow.

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

- Phase I Progress reports by Project Manager Michael C. Fehler were published in *The Leading Edge* in September 2011, January 2012, and May 2012. These supplement earlier progress reports from 2007 through 2011. A complete listing of articles is available at: www.seg.org/SEAM.
- Phase II Progress reports by Project Manager Michael Oristaglio were published in *The Leading Edge* in March 2012 and June 2012. A complete listing of articles is available at: www.seg.org/SEAM.
- An active presence at the SEG Summer Research Workshops and the SEG Annual Meeting Sessions.
- An overview presentation by Phase I Project Manager Michael C. Fehler at the Offshore Technology Conference (OTC) in May 2012.

SEG Global, Inc.
Samir Abdelmoaty, chairman

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 include Samir Abdelmoaty (Chairman), Ricardo Rosa Fernandez (Vice Chair), Jerry Dresner (Treasurer), Abdullatif A. Al-Shuhail, Igor Eltsov, Sue Webb, Guillaume Cambois, Jie Zhang (Abu Dhabi), and Jie Zhang (Beijing).

Regional prioritization: SEG Global, Inc. has ranked areas (outside of China and the Middle East) for which SEG staff will conduct regional assessments to determine if there is a basis for SEG to develop a business plan for increased activities and, eventually, the opening of an office in the region. A primary driver in the assessment was: "Where can SEG make the biggest difference?"

Regional assessments: SEG Global, Inc. has developed a process for conducting regional assessments that will involve the GAC, SEG Global, Inc., and SEG staff. The assessments will be conducted on two geographical regions at a time: 1) former Soviet Union and Africa, and 2) Latin America and Central, South, and Southeast Asia. The process consists of four phases: 1) preliminary research, 2) brainstorming, 3) strategic analysis, and 4) financial analysis.

SEG China: SEG China relocated to a new stand-alone office, now fully operational. The SEG President, SEG Executive Director, and other staff members have visited China to finalize planning of events and promote and develop new events.

The SEG China Advisory Committee has been rejuvenated. Based on an SEG Global, Inc. recommendation, the SEG President has appointed members of the committee with Jie Zhang as Chairman and Huasheng Zheng as Vice Chairman.

Middle East office: Since the SEG Executive Committee approved opening an SEG office in the Middle East, Yogaani Bhatia has been hired by SEG Global, Inc. as SEG regional representative based in Dubai. A new office, shared with AAPG, is now in operation. SEG and AAPG launched the office at the GEO2012 conference. An SEG ME advisory committee has been established to help determine the primary needs of the regional constituents from SEG's existing products and services. The committee is chaired by Ahmed Al-Eidan, manager exploration, KOC with members from Saudi Arabia, Oman, United Arab Emirates, Qatar, and Egypt. These committee members represent E&P companies, service providers, and academia. SEG is planning a second SPE/SEG Giant Fields Workshop in September 2012 and a workshop with KOC in December 2012.

Other regional activities: The joint SEG-SPE-SBGf Rio workshop will be held in the fall of 2012. The technical committee is working actively on the technical program.

A Memorandum of Understanding for the Asia Pacific Near-surface Conference has been sent to the leaderships of SEG, ASEG, SEGJ, KSEG, and the Chinese Geophysical Society for approval.

SEG Real Estate Corporation
Gary Servos, chairman

The SEG Real Estate Corporation was formed in 2011 and the board had its first meeting in January 2012. The primary mission of the corporation and its board is the oversight of SEG's largest asset, the Geophysical Resource Center (GRC) in Tulsa, Oklahoma. The GRC consists of almost 12 acres and has one building, the Green Tower, which provides office space for the SEG business staff and multiple tenants. Gross revenues from total outside leasing activities cover all expenses to maintain the building in its Class A status. In addition, by owning the building, our parent corporation, SEG, saves more than half a million dollars in rent expense each year. The board is currently in the process of assessing the feasibility of putting a second building on the property. The GRC is currently platted for a second 30,000-square foot building; however, it is possible to build a larger building to further increase lease revenues. Concept discussions with various construction companies, project managers, leasing agencies, attorneys, and city council representatives have taken place during the first half of 2012. The intent is to make a formal recommendation to the SEG Board by the end of 2012. I want to thank Vice Chair Bob Wyckoff and Treasurer Mary Fleming for their participation this year. Their commitment to ensuring that the Real Estate Corporation makes the best possible decision for maximizing the value of the GRC is inspiring.

SEG Consolidated Financial Statements

Society of Exploration Geophysicists 30 June 2012 and 2011 (With Independent Auditors' Report Thereon)

HMS S Howerton, Morris, Simpson & Smith P.L.L.C.
CERTIFIED PUBLIC ACCOUNTANTS
8282 S. Memorial Drive, Suite 110 • Tulsa, Oklahoma 74133
Phone: 918 / 481-5949 • Fax: 918 / 481-8453

INDEPENDENT AUDITORS' REPORT

To the Board of Directors of
Society of Exploration Geophysicists

We have audited the accompanying consolidated statement of financial position of the Society of Exploration Geophysicists (the "Society") as of 30 June 2012 and 2011, and the related consolidated statement of activities and cash flows for the years then ended. These consolidated financial statements are the responsibility of the Society's management. Our responsibility is to express an opinion on these consolidated 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 our audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the consolidated financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall consolidated financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of the Society of Exploration Geophysicists as of 30 June 2012 and 2011, and the changes in its net assets and its cash flows for the year then ended in conformity with accounting principles generally accepted in the United States of America.

Howerton, Morris, Simpson & Smith, P.L.L.C.

7 September 2012

SOCIETY OF EXPLORATION GEOPHYSICISTS

Consolidated Statements of Financial Position

30 June 2012 and 2011

		2012	2011
Assets			
Current assets:			
Cash and cash equivalents	$	4,788,765	3,806,156
Short-term investments		2,633,087	483,732
Accounts receivable, less allowance for doubtful accounts of $31,465 in 2012 and $10,849 in 2011		1,603,864	937,106
Accounts receivable SEG Foundation		287,567	1,141,530
Inventories		680,021	645,151
Prepaid expenses		732,532	659,987
Accrued interest receivable		53,969	32,334
Total current assets		10,779,805	7,705,996
Investments – long term		6,903,182	6,913,019
Property and equipment:			
Land		489,605	489,605
Building		9,332,769	8,726,923
Application development		2,853,399	2,853,399
Furniture, fixtures and equipment		2,309,621	2,029,253
		14,985,394	14,099,180
Less accumulated depreciation		9,265,024	8,128,249
Net property and equipment		5,720,370	5,970,931
	$	23,403,357	20,589,946

See accompanying notes to consolidated financial statements.

SOCIETY OF EXPLORATION GEOPHYSICISTS

Consolidated Statements of Financial Position (Continued)

30 June 2012 and 2011

	2012	2011
Liabilities and Net Assets		
Current liabilities:		
Accounts payable and accrued liabilities	$ 1,414,217	600,924
Capital lease obligation	-	1,513
Deferred revenue	7,736,996	6,118,873
Total current liabilities	9,151,213	6,721,310
Deferred revenue – long term	65,600	5,919
Total liabilities	9,216,813	6,727,229
Unrestricted net assets:		
Undesignated	14,055,544	13,731,717
Board designated	131,000	131,000
Total net assets	14,186,544	13,862,717
	$ 23,403,357	20,589,946

See accompanying notes to consolidated financial statements.

SOCIETY OF EXPLORATION GEOPHYSICISTS

Consolidated Statements of Activities

For the Years Ended 30 June 2012 and 2011

		2012	2011
Revenues:			
Membership dues	$	1,424,143	1,458,413
Conferences and meetings		8,282,716	7,137,584
Publication sales and advertising		3,819,673	3,166,927
Professional development		762,755	614,803
Global relations		35,995	-
Investment income (loss)		(56,816)	1,146,170
Building lease operations		1,121,603	1,018,764
Management fees/support		1,825,871	1,591,781
Other		64,043	65,383
Total revenues		17,279,983	16,199,825
Expenses:			
Program expenses			
Membership record services		422,719	413,060
Conferences and meetings		2,850,665	2,863,374
Publications and advertising		3,085,487	3,056,952
Professional development		2,240,250	1,561,232
Research & other		789,342	689,336
Total program expenses		9,388,463	8,583,954
Support expenses			
General and administrative		2,204,612	1,968,466
Building lease operations		1,117,093	1,083,854
Communications		2,396,262	2,020,773
Global relations		1,073,747	886,629
Total support expenses		6,791,714	5,959,722
Total expenses		16,180,177	14,543,676
Increase (decrease) in net assets before contributions to Foundation		1,099,806	1,656,149
Contributions to Foundation		(775,979)	(461,453)
Increase in net assets		323,827	1,194,696
Unrestricted net assets, beginning of year		13,862,717	12,668,021
Unrestricted net assets, end of year	$	14,186,544	13,862,717

See accompanying notes to consolidated financial statements.

SOCIETY OF EXPLORATION GEOPHYSICISTS

Consolidated Statements of Cash Flows

For the Years Ended 30 June 2012 and 2011

		2012	2011
Cash flows from operating activities:			
Increase in net assets	$	323,827	1,194,696
Adjustments to reconcile increase (decrease) net assets to net cash used by operating activities:			
Depreciation and amortization		1,136,775	1,089,715
Net realized/unrealized (gain) loss on investments		300,177	(955,584)
(Increase) decrease in assets:			
Accounts receivable		(666,758)	(194,812)
Accounts receivable SEG Foundation		853,963	(584,173)
Inventories		(34,870)	(140,738)
Prepaid expenses		(72,545)	51,919
Accrued interest receivable		(21,635)	1,722
Increase (decrease) in liabilities:			
Accounts payable and accrued liabilities		813,293	(69,538)
Deferred revenue		1,677,804	1,427,390
Net cash provided by operating activities		4,310,031	1,820,597
Cash flows from investing activities:			
Purchases of property and equipment		(886,214)	(518,239)
Purchases of investments		(8,692,067)	(1,161,151)
Proceeds from sale of investments		6,252,372	991,000
Net cash used in investing activities		(3,325,909)	(688,390)
Cash flows from financing activities –			
Principal payments on capital lease obligation		(1,513)	(19,664)
Proceeds from capital lease obligation		-	-
Net cash used by financial activities		(1,513)	(19,664)
Net increase in cash		982,609	1,112,543
Cash, beginning of year		3,806,156	2,693,613
Cash, end of year	$	4,788,765	3,806,156

See accompanying notes to consolidated financial statements.

SOCIETY OF EXPLORATION GEOPHYSICISTS

Notes to the Consolidated Financial Statements

For the Years Ended 30 June 2012 and 2011

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 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, 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 Corporation 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. The Society maintains cash balances at several banks. Accounts at each institution are insured by the Federal Deposit Insurance Corporation up to $250,000. At 30 June 2012, and 2011, the Society and SEAM had deposits in excess of the federally insured limit.

Accounts Receivable

Accounts receivable consists of uncollateralized billings for memberships, sponsorships, 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 valuation 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 2012 and 2011

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Accounts Receivable (continued)
At 30 June 2012, management estimates that the allowance for uncollectible accounts of $31,465 is adequate to absorb any losses which might arise from non-payment. 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 un-discounted 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 2012.

(continued)

SOCIETY OF EXPLORATION GEOPHYSICISTS

Notes to the Consolidated Financial Statements

For the Years Ended 30 June 2012 and 2011

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Application Development
Direct costs associated with the development of SEG Online are capitalized and are amortized over the estimated product life of five years on the straight line basis. 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 & reported as follows:

- ***Unrestricted*** – Unrestricted net assets represent those resources that are not restricted by donors. Board-designated net assets represent amounts that our Executive Committee has set aside for future use. The Executive Committee of the Society has designated $131,000 of net assets for future building improvements as of 30 June 2012.

- ***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.

- ***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 2012 and 2011.

(continued)

SOCIETY OF EXPLORATION GEOPHYSICISTS

Notes to the Consolidated Financial Statements

For the Years Ended 30 June 2012 and 2011

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. The 2012 Statement of Activities includes, in Publication and advertising, $284,000 as expenses for estimated taxes related to advertising income.

The accounting standard on accounting for uncertainty in income taxes addresses the determination of whether tax benefits claimed or expected to be claimed on a tax return should be recorded in the financial statements. Under that guidance, the Society may recognize the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by taxing authorities based on the technical merits of the position. Examples of tax positions include tax-exempt status of the Society and the various positions related to the potential sources of unrelated business taxable income. There were no unrecognized tax benefits identified or recorded as liabilities for fiscal year 2012 and 2011.

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 Society is transitioning ownership of the land and building where the "Society" administrative offices are located in Tulsa, Oklahoma to the SEG Real Estate Corporation. This process should be complete in early fiscal 2013. Office space which is not used by the Society is leased to other companies.

(continued)

SOCIETY OF EXPLORATION GEOPHYSICISTS

Notes to the Consolidated Financial Statements

For the Years Ended 30 June 2012 and 2011

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.

NOTE 2 – INVESTMENTS

At 30 June 2012 and 2011, investments at fair value were as follows:

		2012	2011
Certificates of deposit	$	4,526,578	1,358,782
Equity investments		1,367,579	4,260,089
Government and corporate bonds		3,392,112	1,527,880
Subtotal – Total Level 1 Assets		9,286,269	7,146,751
Joint ventures (Level 3 Assets)		250,000	250,000
Total investments		9,536,269	7,396,751
Less short-term investments		2,633,087	483,732
Long-term investments	$	6,903,182	6,913,019

(continued)

SOCIETY OF EXPLORATION GEOPHYSICISTS

Notes to the Consolidated Financial Statements

For the Years Ended 30 June 2012 and 2011

NOTE 2 – INVESTMENTS (CONTINUED)

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.

The fair value of fixed income securities at 30 June 2012 by maturity, are shown below:

Due in less than one year	$ 2,630,044
Due after one year through five years	4,025,884
Due after five years through ten years	1,262,762
	$ 7,918,690

Investment income (loss) in the accompanying consolidated statements of activities includes the following:

		2012	2011
Interest and dividend income	$	243,361	190,328
Gain (loss) on investments		(300,177)	955,584
	$	(56,816)	1,145,912

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:

		2012	2011
Contributions to the Foundation	$	165,987	16,600
In-kind contributions to the Foundation (administrative services & rental revenue)	$	609,991	443,670
Contributions from the Foundation	$	1,060,180	920,528
Reimbursement from the Foundation for fundraising services	$	145,693	123,618

Accounts receivable due from the Foundation was $287,567 at 30 June 2012 and $1,141,530 at 30 June 2011.

SOCIETY OF EXPLORATION GEOPHYSICISTS

Notes to the Consolidated Financial Statements

For the Years Ended 30 June 2012 and 2011

NOTE 4 – PENSION AND SALARY REDUCTION PLANS

The Society sponsors a defined contribution pension plan which does not allow employee contributions. The Society makes contributions to the Plan based upon 4.5% of the employees' eligible wages. As of August 1, 2011 this plan was frozen and the Society no longer make contributions.

The Society also 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 these plans was $425,260 in 2012 and $447,104 in 2011.

NOTE 5 – LEASING ARRANGEMENTS

The Society leases approximately 75% of the office space in its headquarters building to unaffiliated parties under non-cancelable operating leases. The following is a schedule of minimum future rental revenues from those tenants as of 30 June 2012:

Year Ending 30 June		Amount
2013	$	1,021,395
2014		757,853
2015		577,942
2016		558,047
2017		260,265
2018		36,693
2019		13,016
	$	3,225,211

SOCIETY OF EXPLORATION GEOPHYSICISTS

Notes to the Consolidated Financial Statements

For the Years Ended 30 June 2012 and 2011

NOTE 6 – SUBSEQUENT EVENTS

The Society has reviewed subsequent events and transactions which occurred after 30 June 2012 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 2011 and 2010 (With Independent Auditors' Report Thereon)

INDEPENDENT AUDITORS' REPORT

To the Board of Directors of
SEG Foundation

We have audited the accompanying statements of financial position of SEG Foundation (a not-for-profit corporation) as of 31 December 2011 and 2010, and the related statements of activities and cash flows for the years then ended. These financial statements are the responsibility of the management of SEG Foundation. 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 our audits to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of SEG Foundation as of 31 December 2011 and 2010, 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.

Hawtan, Morris, Simpson & Smith, PLLC

6 August 2012

SEG FOUNDATION

Statements of Financial Position

31 December 2011 and 2010

		2011	2010
Assets			
Cash and cash equivalents	$	735,652	1,045,472
Accounts receivable		139,470	93,856
Promises to give		106,796	133,433
Interest receivable		22,860	35,047
Prepaid expenses		2,409	4,125
Total current assets		1,007,187	1,311,933
Temporarily restricted cash and cash equivalents		727,431	1,524,512
Temporarily restricted promises to give		5,645,886	4,558,018
Endowment cash and cash equivalents		1,902,808	604,359
Endowment promises to give		409,829	325,466
Endowment investments		9,541,731	9,908,661
Property and equipment at cost, less accumulated depreciation of $11,544 in 2011 and $9,969 in 2010		134,758	132,473
Total assets	$	19,369,630	18,365,422
Liabilities and Net Assets			
Liabilities:			
Accounts payable		210,114	119,439
Grants payable		1,155,459	531,382
Total current liabilities		1,365,573	650,821
Net assets:			
Unrestricted		(519,219)	264,204
Board designated – committed matching		2,033,587	2,033,587
Total unrestricted		1,514,368	2,297,791
Temporarily restricted		6,362,315	5,859,746
Temporarily restricted – earnings from endowment funds		159,832	222,784
Total temporary restricted		6,522,147	6,082,530
Permanently restricted		9,967,542	9,334,280
Total net assets		18,004,057	17,714,601
Total liabilities and net assets	$	19,369,630	18,365,422

See accompanying notes to financial statements.

SEG FOUNDATION

Statements of Activities

For the Years Ended 31 December 2011 and 2010

		2011	2010
Changes in unrestricted net assets:			
Revenues:			
Contributions	$	232,918	264,924
In-kind imputed contributions		508,540	436,337
Inventory sales		-	-
Interest and dividends		20,528	31,595
Net gain (loss) on investments		(429,133)	869,362
Total unrestricted revenue		332,853	1,602,218
Net assets released from restrictions		2,153,621	2,271,571
Total revenues		2,486,474	3,873,789
Expenses:			
Program expenses		2,127,001	2,212,224
Supporting expenses		857,246	791,548
Fundraising expenses		261,198	186,738
Total expenses		3,245,445	3,190,510
Net assets transferred		(24,452)	13,103
Increase (decrease) in unrestricted net assets		(783,423)	696,382
Changes in temporarily restricted net assets:			
Contributions		2,492,473	1,190,095
Interest and dividends		237,590	234,816
Net gain (loss) on investments		(161,577)	143,452
Net assets released from restriction		(2,153,621)	(2,271,571)
Net assets transferred		24,752	(137,311)
Increase (decrease) in temporarily restricted net assets		439,617	(840,519)
Changes in permanently restricted net assets:			
Contributions		633,562	533,468
Net assets transferred		(300)	124,208
Increase in permanently restricted net assets		633,262	657,676
Increase in net assets		289,456	513,539
Net assets at beginning of year		17,714,601	17,201,062
Net assets at end of year	$	18,004,057	17,714,601

See accompanying notes to financial statements.

SEG FOUNDATION

Statements of Cash Flows

For the Years Ended 31 December 2011 and 2010

	2011	2010
Cash flows from operating activities:		
Increase in net assets	$ 289,456	513,539
Adjustments to reconcile increase (decrease) in net assets to net cash provided by operating activities:		
Depreciation and amortization	1,575	325
Realized/unrealized (gain) loss on investments	590,710	(1,012,814)
Temporary restricted promises to give	(2,434,808)	(929,082)
Endowment promises to give	(172,939)	(50,861)
Bad debts	400	-
(Increase) decrease in:		
Accounts receivable	(45,614)	11,075
Promises to give	26,637	(36,403)
Interest receivable	12,187	(3,972)
Prepaid expenses	1,716	(724)
Temporarily restricted cash	797,081	(399,615)
Endowments cash	(1,298,449)	685,530
Increase (decrease) in:		
Accounts payable	90,675	22,103
Grants payable	624,077	132,545
Net cash used by operating activities	(1,517,296)	(1,068,354)
Cash flows from investing activities:		
Purchase of assets	(3,860)	(1,602)
Proceeds from investments	6,107,789	6,830,440
Purchases of investments	(6,331,568)	(8,009,752)
Net cash provided (used) by investing activities	(227,639)	(1,180,374)
Cash flows provided by financing activities:		
Endowment pledge receipts	88,175	190,550
Temporary restricted pledge receipts	1,346,940	2,169,217
Net cash provided by financing activities	1,435,115	2,359,767
Net increase (decrease) in cash and cash equivalents	(309,820)	111,039
Cash and cash equivalents, beginning of year	1,045,472	934,433
Cash and cash equivalents, end of year	$ 735,652	1,045,472

See accompanying notes to financial statements.

SEG FOUNDATION

Notes to the Financial Statements

For the Years Ended 31 December 2011 and 2010

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Nature of Operations

SEG Foundation (the "Foundation"), is a not-for-profit corporation affiliated with the Society of Exploration Geophysicists (the "Society"). 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 projects of special merit, summer field camps and the Geoscientists *Without* Borders program. Contributions are received primarily from members of the Society and corporations.

Net Assets

To ensure observance of limitations and restrictions placed on the use of resource available to the Foundation, the net assets of the Foundation are segregated according to any restrictions placed on the resources. The net assets of the Foundation are segregated as follows:

- Unrestricted Board Designated: This category reflects net assets that are generally available for authorized expenditures in furtherance of the goals and objectives of the Foundation and represent unrestricted contributions and cumulative earnings of funds other than those whose use has been specified by the donor.
- Temporarily Restricted: This category reflects contributions provided by donors for specified Foundation activities and unexpended earnings on permanently restricted assets.
- Permanently Restricted: This category reflects contributions provided by donors who have explicitly expressed that they wish only the income earned on their donations expended for Foundation activities while the corpus is to remain intact.

Activities

The Foundation's activities consist of the following:

- Professional Development Programs: Programs that support practicing geophysicists and to 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 six to seventeen years of age in the geosciences.
- Geoscientists *Without* Borders: Programs designed to assist not for profit organizations in humanitarian projects throughout the world.
- IQ Earth: A program to create a fundamental change in visualizing and interpreting subsurface structure, rock and fluid properties.

(continued)

SEG FOUNDATION

Notes to the Financial Statements

For the Years Ended 31 December 2011 and 2010

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Cash and Cash Equivalents

Cash and cash equivalents include cash on hand, money market funds and all highly liquid investments with a maturity when acquired of three months or less. The Foundation had cash and cash equivalents in excess of federally insured limits of $1,649,697 at 31 December 2011 and $1,480,147 at 31 December 2010. The recorded values of cash and cash equivalents approximate their fair value based on their short-term nature.

Investments

Investments consist of trading securities of fixed income investments, equity investments, mortgage-backed securities, futures, commodities and currencies are carried at fair value at 31 December 2011 and 2010. Trading securities consist of investments that are held for resale in anticipation of fluctuations in market prices. Fair values for trading securities are based on quoted market prices.

The Foundation maintains a pool of investment funds for the unrestricted, temporarily restricted and permanently restricted assets. Investment returns are allocated to net assets classifications based upon a percentage of the balance of net assets held in each classification. Returns on permanently restricted assets and allocated matching funds from unrestricted board designated net assets are allocated to temporarily restricted net assets and expended according to donor restrictions. Returns on temporarily restricted assets and unallocated matching funds of unrestricted board designated assets are allocated to unrestricted net assets.

Promises to Give

Promises to give are classified as unconditional and conditional. Unconditional promises to give consist of pledges that do not have donor stipulations or have donor stipulations in which the possibility that the stipulation will not be met is remote. Unconditional promises to give are recognized as revenues in the period pledged. Conditional promises to give consist of pledges with donor stipulations that depend on the occurrence of a specified future and uncertain event to bind the donor. Conditional promises to give are recognized when the stipulation is substantially met. An allowance for uncollectible promises to give is provided based on management's evaluation of potential uncollectible promises to give at year-end.

Contributions

Contribution revenue is recorded as unrestricted, temporarily restricted or permanently restricted net assets depending on the existence and nature of any donor restrictions.

(continued)

SEG FOUNDATION

Notes to the Financial Statements

For the Years Ended 31 December 2011 and 2010

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Income Taxes
The Foundation is exempt from federal income taxes under Section 501(c)(3) of the Internal Revenue Code. Contributions to the Foundation qualify as charitable deductions.

Endowment Funds
A majority of the Foundation's endowment net assets meet the definition of endowment funds under UPMIFA (Uniform Prudent Management of Institutional Funds Act). The Foundation accounts for its endowment funds as required by FASB ASC 958. The Foundation is registered as an exempt organization in the State of Oklahoma. The State of Oklahoma has enacted UPIMFA.

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.

Subsequent Events
The Foundation has evaluated subsequent events through 6 August 2012, the date the financial statements were issued, and all required disclosures have been made.

Reclassifications
The Foundation has reclassified amounts in 2010 financial statements to conform with the 2011 presentation.

Fair Value Measurements
The Financial Accounting Standards 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.

(continued)

SEG FOUNDATION

Notes to the Financial Statements

For the Years Ended 31 December 2011 and 2010

NOTE 2 – FAIR VALUE MEASUREMENTS

Assets measured at fair value on a recurring basis at December 31, 2011 and 2010, respectively, are as follows:

		2011	2010
Promises to give	$	106,796	133,433
Temporarily restricted promises to give	$	5,645,885	4,558,018
Endowment promises to give	$	409,829	325,466
Endowment investments	$	9,541,731	9,908,661

The related fair values of these assets are determined as follows:

		Quoted Prices In Active Markets (Level 1)	Other Observable (Level 2)	Unobservable Inputs (Level 3)
December 31, 2011 -				
Promises to give	$	-	-	106,796
Temporarily restricted promises to give		-	-	5,645,885
Endowment promises to give	$	-	-	409,829
Endowment investments	$	7,767,423	351,185	1,423,123
December 31, 2010 -				
Promises to give	$	-	-	133,433
Temporarily restricted promises to give		-	-	4,558,018
Endowment promises to give	$	-	-	325,466
Endowment investments	$	8,283,238	498,979	1,126,444

The December 31, 2011 Endowment investments assets measured at fair value on a recurring basis using significant unobservable inputs (Level 3) are other speculative investments in futures, commodities, and currencies managed by the Foundation's investment advisors.

(continued)

SEG FOUNDATION

Notes to the Financial Statements

For the Years Ended 31 December 2011 and 2010

NOTE 3 – ENDOWMENT INVESTMENTS

Endowment investments, trading securities that are at fair value, consist of the following at 31 December:

		2011	2010
Fixed income securities:			
U.S. Government notes	$	581,900	918,420
Corporate bonds		1,330,892	1,508,803
Asset backed securities		351,185	498,979
		2,263,977	2,926,202
Common stocks		4,946,074	5,400,298
Mutual funds		908,557	455,717
Other		1,423,123	1,126,444
Total endowment investments	$	9,541,731	9,908,661

NOTE 4 – PROMISES TO GIVE

Unconditional promises to give at 31 December follow:

		2011	2010
Contribution Pledges	$	6,157,370	5,085,270
Trustee Associates		49,487	9,250
		6,206,857	5,094,520
Less unamortized discount		44,347	77,603
Unconditional promises to give		6,162,510	5,016,917
Less endowment unconditional promises to give		409,829	325,466
Net unconditional promises to give	$	5,752,681	4,691,451

Unconditional promises to give due in less than one year are reflected at net realizable value. Unconditional promises to give due in more than one year are reflected at present value of estimated future cash flows using a discount rate of 0.82% for pledges originating in 2011, 0.93% for pledges originating in 2010 and 1.62% for pledges originating prior to 2009.

(continued)

SEG FOUNDATION

Notes to the Financial Statements

For the Years Ended 31 December 2011 and 2010

NOTE 4 – PROMISES TO GIVE (CONTINUED)

The recorded values approximate fair value. At 31 December the unconditional promises to give are due as follows:

		2011	2010
Less than one year	$	3,522,208	2,585,245
One to five years		2,639,450	2,431,672
More than five years		852	-
	$	6,162,510	5,016,917

The Foundation does not expect these promises to give to be uncollectible.

NOTE 5 - PROPERTY & EQUIPMENT

A summary of property & equipment at 31 December 2011 and 2010 follow:

		2011	2010
Furniture & Fixtures	$	3,736	1,062
Computer equipment		10,830	9,644
Exhibits		131,736	131,736
		146,302	142,442
Less accumulated depreciation		11,544	9,969
	$	134,758	132,473

NOTE 6 - NET ASSETS

Unrestricted:
Unrestricted net assets are comprised of funds for general operating expenses and amounts representing the difference between the original value of endowments and their current market value when market value is below original value:

		2011	2010
General operating	$	303,963	745,914
Endowed scholarships		(409,084)	(169,031)
Endowed general operating		(212,310)	(169,575)
Endowed field camps		(87,143)	(55,105)
Endowed professional development		(47,177)	(40,327)
Endowed Geoscientists *Without* Borders		(23,097)	-
Endowed student support		(18,900)	(11,202)
		(493,748)	300,674
Less: restricted matching pledge balance		25,471	36,470
	$	(519,219)	264,204

(continued)

SEG FOUNDATION

Notes to the Financial Statements

For the Years Ended 31 December 2011 and 2010

NOTE 6 – NET ASSETS (CONTINUED)

Unrestricted Board Designated:
The Foundation Board of Directors designated $2,033,587 of unrestricted funds to be used as matching funds to promote contributions to temporarily restricted and permanently restricted funds. All Foundation funds reserved for this program are committed as of 31 December 2011.

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

		2011	2010
Professional development	$	1,836,053	2,338,840
Student support		2,984,967	1,963,810
Youth outreach		9,832	20,262
Geoscientists *Without* Borders		669,838	851,503
IQ Earth		905,301	912,761
Other		116,156	(4,646)
	$	6,522,147	6,082,530

The temporarily restricted net assets are held in cash and as promises to give at 31 December 2011 and 2010.

Permanently Restricted:
Net assets consisting of endowments were permanently restricted for the following purposes at 31 December:

		2011	2010
Professional development	$	415,096	415,096
Student support		7,063,444	6,937,476
Youth outreach		219,315	217,815
Geoscientists *Without* Borders		752,014	255,914
General & Administrative		1,517,673	1,507,979
	$	9,967,542	9,334,280

The permanently restricted net assets are held in various cash, investments and as promises to give at 31 December 2011 and 2010.

(continued)

SEG FOUNDATION

Notes to the Financial Statements

For the Years Ended 31 December 2011 and 2010

NOTE 7 - 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. As required by generally accepted accounting principles, net assets associated with endowment funds, including funds designated by the Board of Directors to function as endowments, are classified and reported based on the existence or absence of donor-imposed restrictions.

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 the original value of gifts donated to the permanent endowment, the original value of subsequent gifts to the permanent endowment, and accumulations to the permanent endowment made in accordance with the direction of the applicable donor gift instrument at the time the accumulation is added to the fund.

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 expenditure by the Foundation in a manner consistent with the standard of prudence prescribed by UPMIFA. The Foundation considers the following factors in making a determination to appropriate or accumulate donor-restricted endowment funds: the duration and preservation of the various funds, the purposes of the donor-restricted endowment funds, general economic conditions, the possible effect of inflation and deflation, the expected total return from income and the appreciation of investments, other resources of the Foundation, and the Foundation's investment policies, in accordance with 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 well diversified asset mix, which includes equity and debt securities, that is intended to result in a consistent inflation-protected rate of return that has sufficient liquidity to make an annual distribution of 3 to 5 percent, while growing the funds if possible. Therefore, the Foundation expects its endowment assets, over time, to produce a real return, net of fees, of at least 4 to 6.25 percent per annum. Actual returns in any given year may vary from this amount. Investment risk is measured in terms of the total endowment fund; investment assets and allocation between asset classes and strategies are managed to not expose the fund to unacceptable levels of risk.

(continued)

SEG FOUNDATION

Notes to the Financial Statements

For the Years Ended 31 December 2011 and 2010

NOTE 7 - ENDOWMENT FUNDS (CONTINUED)

Spending Policy

The Foundation has a policy of appropriating for distribution each year 3 to 5 percent of its endowment fund's average fair value of the prior 12 quarters through the 3rd 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 percent 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 return.

Endowment net asset composition by type of fund as of 31 December 2011 is as follows:

	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
Donor-restricted endowment funds	$ -	159,830	9,967,442	10,127,272
Board designated endowment funds	1,997,217	-	-	1,997,217
Total funds	$ 1,997,217	159,830	9,967,442	12,124,489

Changes in endowment net assets as of 31 December 2011 are as follows:

	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
Endowment net assets, beginning of year	$ 1,987,117	222,784	9,334,280	11,544,181
Contributions	-	4,000	633,162	637,162
Investment income	-	162,650	-	162,650
Net depreciation	-	(161,578)	-	(161,578)
Amount appropriated for expenditure	-	(178,377)	-	(178,377)
Fund adjustments & transfers	10,100	110,351	-	120,451
Endowment net assets, end of year	$ 1,997,217	159,830	9,967,442	12,124,489

(continued)

SEG FOUNDATION

Notes to the Financial Statements

For the Years Ended 31 December 2011 and 2010

NOTE 7 - ENDOWMENT FUNDS (CONTINUED)

Endowment net asset composition by type of fund as of 31 December 2010 is as follows:

	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
Donor-restricted endowment funds	$ -	222,784	9,334,280	9,557,064
Board designated endowment funds	1,987,117	-	-	1,987,117
Total funds	$ 1,987,117	222,784	9,334,280	11,544,181

Changes in endowment net assets as of 31 December 2010 are as follows:

	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
Endowment net assets, beginning beginning of year	$ 1,977,117	199,762	8,676,603	10,853,482
Contributions	-	-	533,469	533,469
Investment income	-	234,816	-	234,816
Net depreciation	-	143,452	-	143,452
Amount appropriated for expenditure	-	(200,777)	-	(200,777)
Fund adjustments & transfers	10,000	(154,469)	124,208	(20,261)
Endowment net assets, end of year	$ 1,987,117	222,784	9,334,280	11,544,181

(continued)

SEG FOUNDATION

Notes to the Financial Statements

For the Years Ended 31 December 2011 and 2010

NOTE 8 - NET ASSET TRANSFERS

New donor agreements for contributions greater than $25,000 allow for a portion of the earnings of permanently restricted contributions to be used for investment portfolio management fees, expenses related to the restrictive purpose of the endowment, amounts held for future expenses and amounts to be transferred back into the endowment fund in permanently restricted net assets. Per formulas and percentages set forth by the agreement and the Board of Directors, no funds were transferred in 2011 and $121,808 in 2010 was transferred from the temporarily restricted net assets to permanently restricted net assets. Also, funds released from temporarily restricted net assets to unrestricted net assets for management fees were $43,349 in 2011 and $33,074 in 2010.

NOTE 9 - FUNCTIONAL CLASSIFICATION OF EXPENSES

For the year ended 31 December 2011:

	Grants & Reimbursement for Programs to SEG	Program Expenses	Sub-Total	Support Expenses	Fundraising Expenses	Total
SEG Online	$ 658,177	-	658,177	1,135	-	659,312
Student support	307,919	240,908	548,827	21,250	-	570,077
Field camps	-	110,636	110,636	17,150	-	127,786
Awards	-	713	713	1,921	-	2,634
Projects of Merit	-	17,052	17,052	-	-	17,052
Distinguished Programs	238,947	-	238,947	1,963	-	240,910
Scholarships	-	383,005	383,005	42,040	-	425,045
Geoscientists *Without* Borders	-	161,993	161,993	87,875	-	249,868
IQ Earth	-	7,651	7,651	-	-	7,651
Administrative fees	-	-	-	563,120	169,258	732,378
Facility rent	-	-	-	9,201	5,747	14,948
Professional fees	-	-	-	62,034	3,818	65,852
Travel & meetings	-	-	-	15,380	45,182	60,562
Other	-	-	-	34,177	37,193	71,370
	$ 1,205,043	921,958	2,127,001	857,246	261,198	3,245,445

(continued)

SEG FOUNDATION

Notes to the Financial Statements

For the Years Ended 31 December 2011 and 2010

NOTE 9 - FUNCTIONAL CLASSIFICATION OF EXPENSES (CONTINUED)

For the year ended 31 December 2010:

	Grants & Reimbursement for Programs to SEG	Program Expenses	Sub-Total	Support Expenses	Fundraising Expenses	Total
SEG Online	$ 508,263	-	508,263	1,525	-	509,788
Student support	310,221	289,672	599,893	14,265	-	614,158
Field camps	-	1,000	1,000	6,021	-	7,021
Awards	-	2,384	2,384	1,084	-	3,468
Projects of Merit	-	82,673	82,673	-	-	82,673
Distinguished Programs	309,440	-	309,440	2,639	-	312,079
Scholarships		400,502	400,502	54,338	-	454,840
Geoscientists *Without* Borders	-	231,818	231,818	93,674	-	325,492
IQ Earth	76,250	-	76,250	-	-	76,250
Administrative fees	-	-	-	503,791	124,987	628,778
Facility rent	-	-	-	19,995	4,508	24,503
Professional fees	-	-	-	38,093	300	38,393
Travel & meetings	-	-	-	19,809	35,837	55,646
Other	-	-	-	36,315	21,106	57,421
	$ 1,204,174	1,008,049	2,212,223	791,549	186,738	3,190,510

(continued)

SEG FOUNDATION

Notes to the Financial Statements

For the Years Ended 31 December 2011 and 2010

NOTE 10 - RELATED PARTY TRANSACTIONS

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 31 December, are as follows:

	2011	2010
Contributions to the Society	$1,205,043	1,186,190
Contributions from the Society	$ 4,500	27,600
Reimbursement to the Society for fundraising services	$ 178,190	96,369
Reimbursement to the Society for administrative expenses	$ 126,703	139,959

Included in accounts receivable at 31 December 2011 is $139,470 and at 31 December 2010 is $93,856 due from the Society. Included in accounts payable and grants payable at 31 December 2011 is $1,319,903 and at 31 December 2010 is $650,821 payable to the Society.

The Society contributed the following to the Foundation:

	2011	2010
Administrative expenses	$ 497,428	425,860
Rent	11,112	10,477
Total	$ 508,540	436,337

These amounts are reflected in the Foundation's financial statements as both revenue and expense, with the net financial impact of zero 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.