

# 2013 Annual Report



**CSEG**

Canadian Society of  
Exploration Geophysicists



# CSEG 2013 Council



L – R: Front row: Kurt Wikel, Rob Vestrum, Ron Larson, Kim Nevada, Jason Schweigert, Wade Brillon; L – R Back Row: Sheryl Meggeson, Meghan Brown, Rob Kendall, Tammy Wilmer, Larry Wellspring, Jim Racette. Not in photo: Shawn Maxwell

## CSEG 2013 Executive

Ron Larson, President

Rob Vestrum, Vice President

Shawn Maxwell, Director Educational Services

Kurt Wikel, Assistant Director Educational Services

Kim Nevada, Director Member Services

Tammy Wilmer, Assistant Director Member Services

Wade Brillon, Director Finance

Larry Wellspring Assistant Director Finance

Jason Schweigert, Director Communications

Meghan Brown, Assistant Director Communications

Rob Kendall, Past President

Jim Racette, Managing Director

Showing the World  
how to Understand  
the Earth.

# CSEG 2013 ANNUAL REPORT

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## President's Message

Thank you for the opportunity to serve the CSEG as your President. For initial context, I'll start by referring to the CSEG's mandate as found in our bylaws:

**CSEG Mandate:** *The Mandate of the Canadian Society of Exploration Geophysicists is to promote the science of geophysics, especially as it applies to exploration, and to promote fellowship and cooperation among those persons interested in geophysical prospecting.*

While it is a given that something could always be done better, it is arguable that the CSEG is living up to that mandate. We are certainly making every attempt, at the executive table, to ensure that we do. The incoming executive will do the same.

Your 2014 CSEG Executive Committee will be:

President:	Rob Vestrum
Past-President:	Ron Larson
Vice-President:	Rachel Newrick
Director of Finance:	Larry Wellspring
Asst. Director of Finance:	John Bertsh
Director of Education:	Kurt Wikel
Asst. Director of Education:	Paul Anderson
Director of Communication:	Meghan Brown
Asst. Director of Communication:	Keith Millis
Director of member Services:	Tammy Wilmer
Asst. Director of member Services:	Stephen Kotkas

The Society thanks you for your willingness to serve.

## Fellowship and Cooperation

**Social Committees:** The continued excellence of the historically labelled 'Social Committees' is impressive. Doodlebug, DoodleSpiel and the Ski Spree are the senior events, if you will, having continued without interruption for many years. The more junior members of the group including the T-Wave and WISE golf events, and the 10K Race in conjunction with the CSPG have enjoyed success as well. The T-Wave in 2013 was originally scheduled for 'Flood Week' and the committee reacted quickly to locate alternate date and venue to ensure the event was enjoyed by the registrants. We have continued with our annual meeting of Committee Chairs in the hope that we see common ground. The Executive wishes to express its thanks to all of the Committees for running high quality events that appeal to the geophysical community. Rob Kendall's report last year included the contention that CSEG's social events "are considered the best in the industry". It is a statement that bears repeating. Well done to all, and thank you.

**Intra-Society Agreements:** In 2012 the CSEG signed non-binding agreements with the SEG and EAGE that could be summarised as agreements to promote one another's activities in the spirit of 'geo-cooperation. Such things as attendance (as an organisation) at one another's conferences, exchanging articles for publications and promoting training opportunities are within the purview of these MOU agreements. In early 2014 we extended this to include an agreement with the Geophysical Society of Houston. While these efforts could be equally construed as being in the category of 'promoting the science of geophysics' the cooperative aspect of the agreements is important and they are included here.

## Promoting the Science of Geophysics

Various groups within the CSEG are active in promoting the science of geophysics. Perhaps most visible to the Calgary area members are the Technical Luncheons and the GeoConvention. Thanks are expressed to the Director(s) of Education and the Technical Luncheon committee for the success of the former. Kurt Wikel, Shawn Maxwell and Rob Kendall deserve mention for arranging the talk by Dr. Jaymie Mathew (photo) in December 2013: it was a bit outside our normal world, so to speak, but interesting and entertaining to be sure. In an effort to be 'Canadian' John Logel is endeavoring to have the Technical Luncheons 'webcast' to venues across the country.



Other groups that assist with the promotion of the science of geophysics include the people behind recurring events like the MUG (Microseismic Users group), and Lunchbox Geophysics. MUG's Technology days, a forum for microseismic service providers was, like the T-Wave, originally scheduled for 'Flood Week'. Similar urgent re-arrangements were made and a successful event ensued. Perhaps we should add a second G in CSEG that would stand for 'Get it done'. The now online only, resurrected (2010) and refereed Journal continues publication and its editors, Larry Lines and Satinder Chopra, deserve thanks.



In the context of promoting the science of geophysics, the RECORDER must be mentioned as a success story. John Fernando and his group turn out a high quality magazine ten times a year. They have worked through rebranding related formatting issues, CSEG Executive 'advice' on content and have delivered more or less on schedule. One of the aims of the 2014 executive is to help the RECORDER group function even more efficiently. It should be noted that online access to RECORDER issues is quite high and as a result CSEG is expending some effort to ensure that all issues of the RECORDER are properly archived in the newer online format. A discussion that has been occurring on and off at the CSEG Executive since about 2001 (my first time on the executive), revolves around the question of whether we should retain more or less completely open public access to past issues, or if we should tighten the access, perhaps to members only – period. Or, should we release them to the world in one of the 'pay for papers' services that exist. Feedback is welcome.

The CSEG Foundation's Outreach volunteers are working hard to promote geophysics as both an applied science and a career path in events across the country. They attend such things as Science Teacher Association meetings, High School career fairs, Teachers Conventions, university student conferences and so on. Impressive.

## GeoConvention

In 2013 the CSEG, along with our convention partners the CSPG and the CWLS signed what is almost certainly the most important financial document any of the three societies have ever signed. Together we formed the GeoConvention Partnership. Structured a bit like an accounting or legal 'firm', it puts the convention in a position where it can plan, brand and operate more effectively. It positions the convention for growth and allows it be more strategic. The convention is a significant fiscal contributor to all three societies. As such the executives of all three societies believe that structuring it to allow for growth and success, AND allowing it to deliver value to registrants into the future in the face of competition from commercial events is a very important part of strategic planning, and frankly, ongoing viability for our respective societies.

## Finances

Finances are dealt with elsewhere in the Annual Report. Suffice it to say here that the CSEG's finances are in reasonable shape. A modest operating profit was achieved in 2013 of about \$85,000. This amount was achieved after adding to the reserve fund amounts sufficient to cover anticipated GeoConvention start-up costs, and making provision for additional RECORDER archive efforts as mentioned earlier. Total equity is about \$2M.

## Past (In Memoriam)

Spurred largely by the tragic week that saw the deaths of Tom Podivinsky and Bruce Atkin, I have decided to include in this report and the proceedings of the AGM at the technical luncheon on March 31, 2014 a list of the members known to have died in the 2013 – 2013 fiscal year. This list will assuredly be inadvertently incomplete and apologies are here made for any omissions, however unintentional. We thank the following people for their contributions to our community. In remembrance (in no particular order):

- ▶ Sean Callaghan
- ▶ Tom Podivinsky
- ▶ Bruce Atkin
- ▶ Bob Parker
- ▶ Bill Kidby
- ▶ Allin Folinsbee
- ▶ Alan Richards
- ▶ Warner Loven
- ▶ Lloyd Hatelid
- ▶ Ken West
- ▶ Warren Workman

## Future

Rob Vestrum (2014 President) and Rachel Newrick (2014 VP and 2015 President) are well equipped to move the CSEG forward in good fashion. They'll need to be: my failings as your President include not pursuing the MOU's, especially the newest with the Geophysical Society of Houston with enough vigor, and failing to do enough to re-establish CSEG as a 'voice' within APEGA, and being largely non-present to our brothers and sisters in the CAGC. Our successes have been in establishing the VIG and establishing the GeoConvention partnership. I'll have to live with that balance.

Thank you.

## RON LARSON

CSEG PRESIDENT – 2013

## Education Services

The past year has been an exciting time serving on the CSEG executive as Education Director. We have seen an excellent series of presentations in our technical luncheons, lunchbox and MUG presentation series. Once again the Doodletrain was a fantastic education event. The 2013 SEG DISC in April featured David Johnston presenting "Making a Difference with 4D: Practical Applications of Time-Lapse Seismic Data". All these events involve a great deal of organization which is a tribute to the incredible number of volunteers involved.

During my tenure as Education Director, my travel commitments significantly ramped up and I am greatly indebted to Kurt Wikel's assistance over the last year. I am confident that with Kurt's oversight and the addition of Paul Anderson as assistant director, great things are to come over the next year.

Key to the successful execution of the technical luncheons is the hard work of the technical lunch committee, chaired by Mohammed Al-Ibrahim. Other members of the 2013 committee include Kurt Wikel, Mark Jeroncic, Marc Boulet, John Rennie, David Emery and Larry Mewhort. Starting in the fall, we also began remotely connecting locations in to the technical luncheon to broaden the audience to other CSEG members outside of Calgary. The effort was spearheaded by John Logel and began with dry runs to University of British Columbia, Memorial and University of Alberta. With the technology now properly sorted, we are ready to expand the audience to other universities across Canada.

### 2013 TECHNICAL LUNCHEONS

**Wednesday, January 23rd, 2013** – Don Lawton, *Post-earthquake Seismic Reflection Survey, Christchurch, New Zealand, with Some New Insights into Faults*, sponsored by Halliburton.

**Tuesday, February 19th, 2013** – Gerard T. Schuster, *Seismic Interferometry and Beyond – Harvesting Signal from Coherent Noise*, sponsored by Divestco.

**Tuesday, March 19th, 2013** – Olav Barkved, *Seismic Surveillance – Highlights from 10 years of Full Field Permanent Seismic Monitoring of the Valhall Field*, sponsored by APEGA.

**Thursday, April 25th, 2013** – Trevor Johnson, *Elucidating Paleodepositional Environments from 3D Seismic 'Solving for One Part of the Hydrocarbon Accumulation Puzzle'*, sponsored by Seisware.

**Wednesday, June 19th, 2013** – Scott MacKay, *The Interpreter's Guide to Depth Imaging*, sponsored by Canadian Discovery.

**Monday, September 9th, 2013** – Carl Regone, *Acquisition Modeling: Expect the Unexpected*, sponsored by APEGA.

**Monday, October 7th, 2013** – Nick Moldoveanu, *Evolution of Marine Acquisition Technology After Wide Azimuth*, sponsored by Arcis.

**Wednesday, October 30th, 2013** – Kurt J. Marfurt, *Seismic Clustering Uncloistered – Application to Resource Plays*, sponsored by Paradigm.

**Monday, December 16th, 2013** – Jaymie Matthews, *Asteroseismology: Stealing the Geoseismologists' Rule Book and Launching it into Space*, sponsored by EnCana

### MUG (MICROSEISMIC USER GROUP)

The second year of MUG lunchtime presentations saw another excellent series of presentations, including more out-of-town visitors. Shawn Maxwell is the MUG chair and is assisted by Paige Snelling. The talks were held in the Aquitaine Theater provided by Fugro-Kelman/CGG and subsequently by Katalyst.

The focus of the MUG presentations has been to target operating companies and visiting academics to discuss the practical application of microseismic monitoring. In order to provide a venue to microseismic vendors, a two day event called "MUG Technology Days" was held. Originally scheduled for June but unfortunately delayed by the flooding, the event was finally held in September at the University of Calgary downtown campus. Judy Leah helped coordinate the event, which was sponsored by Baker, Canadian Discovery, CGG, Divestco, ESG, Global, Ion, Microseismic, Nanometrics, Reservoir Imaging, Pinnacle, Schlumberger, Spectraseis, Transform and Trican. Presenters are listed below.

At the request of the CSEG Chief Geophysicist Forum, a technology forum on Induced Seismicity was held November 22, 2013 at the University of Calgary downtown campus. The meeting was held to address growing concerns of the members, who increasingly have to face induced seismicity issues particularly associated with hydraulic fracturing activities. A number of esteemed invited speakers (see below) gave a series of state-of-the-art technical presentations on various facets of injection induced seismicity and in particular related to hydraulic fracturing operations. Approximately 120 attendees participated in the forum; the majority were geoscientists although several engineers and managers were also present. A large number of oil and gas companies were represented, in addition to service providers, research organizations, regulators and geological surveys. Geographically most were from Western Canada and Calgary in particular, but several attendees came from other parts of Canada along with the US. The forum was organized by a committee comprised of the CGF, the CGF Microseismic Subcommittee and MUG. The forum was co-chaired by Chris Szelewski and Shawn



Maxwell along with the steering committee of Tom Podivinsky, Marian Hanna, Neda Boroumand, Bill Goodway, Jason Hendrick, Paige Snelling and Jim Racette. APEGA and the Department of Geoscience at the University of Calgary graciously sponsored the forum. A summary report was published in the January 2014 issue of the RECORDER.

## 2013 MUG PRESENTATIONS

**Thursday, January 17th, 2013** – Bob Whale and Jonathan Winsor, *Microseismic: Will You Acquire What You Need?*

**Wednesday, February 20th, 2013** – Mark Zoback, *The Importance of Slow Slip on Faults During Multi-Stage Hydraulic Fracturing*

**Monday, March 11th, 2013** – Jason Hendrick, *Tuning in to Lower Frequency Events – Monitoring Induced Seismicity from a Hydraulic Fracture Program*

**Wednesday, April 10th, 2013** – Art McGarr, *To What Extent do Earthquakes Induced by Fluid Injection at Depth Contribute to the Seismic Hazard?*

**Monday, June 3rd, 2013** – Jennifer Sawatzky and Arslan Akhmetov, *Passive Seismic Monitoring for Casing Integrity and Beyond*

**Tuesday, September 17th, 2013** – Paul Webster, *Distributed Acoustic Sensing for Micro-Seismic Detection and Interpretation*

**Tuesday, December 17th, 2013** – Ulrich Zimmer, *Microseismic Without Dots – A Probabilistic View of Microseismic Data*

## MUG TECHNOLOGY DAYS PRESENTATIONS, SEPTEMBER 9 & 10, 2013

David Eaton (University of Calgary)

David Dushman (TriCan)

Michael Doerksen (Reservoir Imaging)

Mike Seifert (Canadian Discovery)

Jeremy Dumoit (Baker)

Marc Prince (ESG)

Neil Spriggs (Nanometrics)

Brad Birkelo (Spectraseis)

George Fairs (Divestco)

Emmanuel Auger (CGG)

Natalia Verkhovetska (Pinnacle)

Jim Rutledge (Schlumberger)

Mike Thornton (Microseismic)

Alfred Lacazette (Global Geophysical)

## CSEG/CGF/MUG INDUCED SEISMICITY FORUM, NOVEMBER 22, 2013.

Todd Shipman (AER) Alberta perspective and responsibilities

Dan Walker (BCOGC) Regulatory perspective

Chris Szelewski & Ivan Wong (URS Corp) Industry perspective and protocols

David Eaton (UofC) Historical review of examples including Eagle and Rocky Mountain House

Pat McLellan (consultant) Fracturing/Injection Operations and Geomechanics

Honn Kao (GSC) NRCAN Monitoring

Carlos Salas (Geoscience BC) GBC-NRCAN-OGC Network

Art McGarr (USGS) Challenges identifying induced seismicity

Gail Atkinson (UWO) Seismic hazard including critical structures/dams

Bill Ellsworth (USGS) What do we need to monitor

Representatives of various operating companies present and discuss operational practices including assessment, monitoring and response. Panel consists of Kellen Foreman (Encana), Barbara Cox (Shell) and Jason Hendrick (Nexen).

Cross segment panelists discuss requirements and topics related to research, best practices and public outreach. Panel consists of David Eaton (University of Calgary), Dan Walker (BCOGC) and Bill Goodway (Apache).

## SHAWN MAXWELL

EDUCATION SERVICES DIRECTOR

## Managing Director

### The following are some highlights for 2013:

- ▶ The GeoConvention was deemed a huge success, both technically and financially for our membership. It was the second consecutive year the CSEG operate the convention.
- ▶ The DoodleTrain's experience another banner year, though down in registrants from 2012, with just over 400 participants. There were 22 courses provided and it still is considered a significant revenue stream for the CSEG.
- ▶ Though the RECORDER advertising was similar to the previous year (2012) there were cosmetic changes to the publication that brought the finances down to basically a breakeven point.
- ▶ Memberships rose about 3% over 2012
- ▶ The technical luncheons saw an average of 360 tickets sold per event. This is a slight drop from 2012 (4%). The Corporate Sponsor program continues to be a huge success as all 9 events were sponsored at \$1500.00 per luncheon. This helped the luncheons stay ahead of ever rising costs.
- ▶ The CSEG, CSPG and CWLS entered into a legal partnership regarding the operation of the annual convention. Starting in 2015 the GeoConvention Partnership will be the sole operator of convention. This will eliminate the operatorship from having to go back and forth between CSEG and CSPG and will provide the opportunity for growth both technically and financially while maintaining continuity.

### Looking ahead to 2014

- ▶ The third annual CSEG Symposium will be held in March. This has become an integral event with the CSEG as we not only honor individuals who have made an impact technically, business wise and in a volunteering role within the CSEG, but also an opportunity to engage in outstanding presentations in this day long event.
- ▶ The CSEG Foundation kicked off its second fundraising campaign in December after a very successful inaugural campaign in 2012.
- ▶ CSEG is predicting membership renewals might be a bit soft in comparison to 2013 numbers as there has been a number of changes in the industry i.e. layoffs.
- ▶ A major global workshop on International Land Frontiers will be held this the fall, in conjunction with the EAGE. More to come.

In closing I would again like to thank our executive for their support over the past year. Their commitment, along with the many volunteers serving on our committees, is the lifeblood of the CSEG and is unique among technical and professional societies in today's world. As our industry and the financial environment continue to change it is our commitment to the membership to provide the best service and information possible, while always seeking new initiatives to benefit our membership.

### JIM RACETTE

MANAGING DIRECTOR



## Financial

I am pleased to report the 2013 CSEG financial position continues to be strong given solid financial management and diligence as we worked through an uncertain and off year in our industry which will likely carry into 2014. Our second annual CSEG Symposium was a successful event that highlighted the technical contribution of our membership. Our financial strength was primarily driven by a successful Joint Convention with the CSPG and CWLS and we delivered a well attended DoodleTrain to our membership. The luncheons continue to be well attended. For the most part our expenses ran lower than budget, though costs related to continuing education along with the costs related to the RECORDER and digital media expenses ran higher than budgeted. The CSEG runs most of its programs on a breakeven basis although this can swing from a small loss to a small profit depending on how the attendance compares to our forecast. Our financial reserves have been preserved with the society having ample reserves to carry the society through years when the industry is struggling. Generating excess revenue for 2013 provided room for a contribution to the CSEG Foundation corpus again this year. Membership continued to grow and the slate of events continued to deliver good value to our members.

The Finance Director role is made simpler by our office staff, Jim and Sheryl, who look after all the day to day activities of the society. Larry Wellspring will be assuming the Director role and I am sure he will direct the finance stewardship effectively. We are well served by the many volunteers and committees who all work hard to deliver and improve the slate of services from the CSEG. Involvement in the CSEG is a very good way to network with your peers and meet new geoscientists involved in our industry. I hope that as participants in our industry you offer your support to the CSEG by volunteering or attending our events.

### **WADE BRILLON**

FINANCIAL DIRECTOR

## Communications

The Communications portfolio continued to evolve over the 2013 – 2014 year. It started out with the introduction of the CSEG's new website and rebranding at the 2013 AGM (a 2-year process on its own!). A large portion of 2013 was devoted to assisting the various CSEG committees in the implementation of the rebranding. It has been a challenge to coordinate this transition, and I believe it is almost complete. I would personally like to thank all the social committee's for their commitment which allowed this rebranding process to go as well as it did. In moving forward with the rebranding process, the updated RECORDER made its debut in September 2013. It took a few months to iron out all the details, but I believe the RECORDER's new look is now established.

The new CSEG RECORDER website was also introduced at the 2013 AGM ([www.csegrecorder.com](http://www.csegrecorder.com)). Since the launch of the website, our web developer (Jeremy Sherry) has been continually adding content to the site. Currently we have web content articles dating back to 2009. Thanks to our forward thinking executive, additional funds have been added to this project which should allow all CSEG RECORDER articles (back to 1986) to be on the website by the end of 2014!

The CSEG has now entered the realm of social media. With both a Linked In, and twitter account the CSEG is looking to become more involved in social media in an effort to promote the society. The Digital Media Committee (DMC), which was formerly the Website committee, has been placed in control of all CSEG social media activities. Social committees are able to use social media as they feel appropriate, but are requested to keep the DMC aware of their activities (see the CSEG Social Media Directive).

The CSEG Journal continues on its path of producing one peer reviewed journal per year. A peer reviewed journal is a significant amount of work, and is of huge value in promoting the CSEG on a global scale. To further promote the CSEG Journal internationally, a new website [www.csegjournal.com](http://www.csegjournal.com), will be launched shortly which will showcase all CSEG Journal articles ever published.

In closing, I am very thankful that I have been a part of the CSEG Executive for the last 2 years. It has been a personally rewarding experience. I would like to thank the RECORDER committee, the Journal committee, and the DMC for all their hard work over the last year. The CSEG would be nothing without our great volunteer base. I look forward to seeing what evolves next in the Communications portfolio. Good luck, Meghan Brown (Incoming Director of Communications).

### **JASON SCHWEIGERT**

COMMUNICATIONS DIRECTOR



The CSEG Foundation is the charitable operating arm of the CSEG. It is managed by a Board of Directors, is closely aligned with the CSEG, and has a very significant group of dedicated volunteers. Those volunteers, supported by your funding and that of the CSEG, assist a large group of young Canadians to become educated in geophysics; many of those young people will be the future of the CSEG.

Significant highlights are:

1. Our **fund raising campaign**: the generosity of a number of donors, including many **individual** CSEG members, has been inspiring; thank you! Your generosity helps the CSEG to help students – our future. We are proud to include your names on the Recognition List, visible on several sites and in the RECORDER. Total campaign: \$663,000 achieved; goal: \$3 million.
2. **Outreach/University Student Outreach** continues to show the CSEG flag and help students in universities and high schools, as well as the public at large gain information about geophysics and the CSEG. Many key and dedicated volunteers make this a vibrant group.
3. **Scholarships** were awarded to 20 students across Canada thanks to the generosity of many donors. New scholarships were awarded to university entrance students and to dependents of CSEG members.
4. The **Canadian Distinguished Lecture Tour**: Don Lawton (past) Bernd Milkereit (current). Don's tour hit 27 stops! Bernd's tour will include about 22 institutions, including a rare visit to the China University of Petroleum. By connecting with our Ambassadors and University Student Outreach Programs, we are hosting receptions at a number of lectures and providing information on CSEG membership to students and CSEG members across Canada.
5. **Travel Grants and Educational Subsidies** were awarded to university students from across Canada – 138 to be exact. Due to your generosity, more students are being supported in geoscience endeavours.

Each year we get a little better at what we do, through the organization and efforts of those volunteers and through funding – from you. Current terms of service are three year terms. The CSEG Executive has ultimate control of the CSEG Foundation through our articles of incorporation.

## CURRENT FOUNDATION MEMBERS

Chair:	Perry Kotkas
Past Chair:	Brian Russell (CGG)
Secretary:	Laurie Ross (Geo-X Exploration Services)
Treasurer:	Neil Rutherford* (Consultant) Annette Milbradt (Tourmaline Oil Corp.)
CSEG Executive Member:	Ron Larson (RPS)
Scholarship Chair:	Marc Boulet (Cenovus Energy)
Scholarship Sr. Trustee:	Brian Emmerson (Talisman Energy)
Campaign Co-chair:	John Boyd
Campaign Co-Chair:	Andreas Cordsen (WesternGeco)
Director/Finance:	Larry Herd (RPS)
Director:	Jennifer Leslie-Panek (Nexen Energy ULC)

## BOARD COMMITTEE MEMBERS

Lee Hunt (Mimir's Well Exploration Corp.)  
Stephen Kotkas (Sigma Explorations Inc.)  
Karen Chong (Statoil Canada Ltd.)  
Tiffany Piercey (Imperial Oil Canada)  
Kevin Bianchini (Shell Canada Limited)  
Dave Bonar (Encana Corp.)  
Sean Contenti (Imperial Oil Resources)  
Jessa-Lyn Lee\* (Apache Canada)  
Lindsay Miller (Progress Energy)  
*(\*retired from committee 2013)*

## FUNDRAISING CAMPAIGN

The campaign to raise funds for CSEG Foundation programs and endowment continued throughout the year. Donations and new pledges received during calendar year 2013 total approximately \$360,000 from new and repeat donors, bringing the campaign total to over \$663,000. We will contact more CSEG members for our campaign in 2014.

Interviews with ten potential corporate donors are completed and we expect to receive a report on this external review soon. This report will help us plan a corporate campaign. Our endowment at December 31, 2013 was \$1.3 million with the overall target for this campaign being \$3.0 million.



Our thanks go out to the numerous CSEG volunteers who have helped with the campaign and to all of the generous donors.

Campaign co-chairs: John Boyd & Andreas Cordsen. Past co-chair: Brian Russell.

## OUTREACH

The CSEG Foundation Outreach Committee is run by volunteers and funded extensively through the CSEG Foundation. We appreciate the support from the CSEG Executive and the Foundation over the past year.

Through 2013 the Outreach Committee continued its busy schedule, fulfilling our mandate of promoting the CSEG and the science of geophysics. Supporting the committee in its many initiatives is a very large group of volunteers. Thanks to those who generously gave their time and energy, making this another highly successful year for the Committee. Your time and efforts are much appreciated! Thank you, also, to the many organizations who allowed their staff to participate in our many programs and initiatives.

Schools and Public Outreach volunteers attended 26 career fairs and assorted exhibitions in 2013, talking to students and the public about geophysics. We took our booth to Vancouver, Kamloops, Richmond, Prince George, Kelowna, Saskatoon, Regina, Canmore, Edmonton, and Toronto as well as to local venues in the Calgary area. With the booth we present the science of geophysics using PowerPoint presentations, interactive seismic displays and other teaching aids. Volunteers also responded to requests from schools for in-school presentations. In October, CSEG Outreach hosted students from Centennial High School, Lord Shaughnessy High School, Ernest Manning and James Fowler at the Seismic in Motion for Students (SIMFS) event, where companies showcase their seismic acquisition technologies and procedures. Outreach volunteers visited the schools beforehand and informed students about careers in geophysics and prepared them for their day in the field. They also guided the students on-site through the various field stations, including the CSEG booth. At the booth, we gave participants an integrated overview of the various parts of the program. Thank you to 2013 SIMFS sponsors for their generous support. We received positive feedback from participants in all of our Schools and Public Outreach initiatives.

The University Student Outreach subcommittee activities included bringing the Outreach booth to four undergraduate conferences, attending two University career fairs, presenting Best Geophysical Paper awards at four undergraduate conferences, maintaining e-mail via our area reps and newsletter communications with students, connecting students with the Scholarship committee and

the Foundation for travel grants, organizing a student area at the convention, helping to deliver Geoskills 2013 for university students and junior geophysicists, providing networking opportunities, and growing GIFT (Geophysical Industry Field Trip) to a 3 day event in June for over 40 participants. The USO also cooperates with other organizations to administer events such as AAPG's Imperial Barrel Award, CSEG/EAGE's student chapter talks, and APEGA's Alberta Student Energy Conference. The Mentorship program was successfully launched in 2009 – 10, and has continued to grow significantly since its inception, greatly increasing its value to our university student members, and reaching over 50 mentor-mentee pairings. We are pleased to recognize and thank RPS for their generous sponsorship of 2013 student memberships, and welcome CGG as the 2014 sponsor. We greatly appreciate it!

The 2013 Challenge Bowl subcommittee USO team had eight teams representing different universities in the Canadian Finals across the country of competitors vying for an expense paid trip to compete in the Challenge Bowl finals at the 2013 SEG convention. An enthusiastic audience was privy to the action-packed geoscience competition which saw the University of Manitoba, taking the top score.

Ambassadors are CSEG representatives in cities across Canada and internationally. In 2013 and 2014 the program is planning to expand significantly and include meet-and-greet opportunities for CSEG members and university students throughout Canada.

Outreach members liaise with many other organizations to share outreach and education ideas and resources and to support their complementary geoscience initiatives. As our resources allow, we would like to expand our efforts in central and eastern Canada.

We're always looking for enthusiastic and energetic volunteers interested in helping with our activities. Contact us at outreach@cseg.ca for more information.

Stephen Kotkas and Karen Chong: CSEG Foundation Outreach Co-chairs (and thanks to Tiffany Piercey former co-chair).

## THE CANADIAN DISTINGUISHED LECTURE TOUR

Every year, the CSEG Foundation sponsors a national Canadian Distinguished Lecture tour by a distinguished member of the Canadian Society of Exploration Geophysicists (CSEG). The goal is to promote the science and application of geophysics to those working with, studying, and interested in the science of geophysics and highlights a topic of current interest. This tour (Don Lawton last year and Bernd Milkereit currently) is continually expanding and improving, with Don Lawton's tour reaching a prodigious 27 stops

CSEG FOUNDATION continued from Page 11

between September and April. The venues are typically universities and geoscience institutions, including Geological Survey of Canada offices, but also occasionally more public venues. Congratulations and thanks to Don Lawton, the 2012 – 2013 CDL, who has just concluded an incredibly well received Tour talking about Post-earthquake Seismic Reflection Survey, Christchurch, New Zealand and to Bernd Milkereit who is currently engaged in his tour entitled *Seismic Imaging in the Presence of Strong Contrasts – How forgetful are seismic waves?* Although the CDL Tour is primarily a Canadian Tour, it has recently been augmented to include a limited number of international visits which are supported by the CSEG rather than the CSEGF. This expanding program is very well received and enthusiastically supported by the venue hosts. Bernd Milkereit is even planning a stop at the China University of Petroleum, which will certainly be a memorable venture. The CDL tour is also incorporating post-talk networking events for local CSEG members, students, and faculty at some locations. These networking events are growing in sophistication, as are all aspects of the tour, and are used to further promote the CSEG and its programs across Canada. The CDL lecturer also publishes one or more tour diaries in the RECORDER, and typically also publishes an expanded technical article of the lecture in the RECORDER. Starting in 2011 – 2012, PDF files of the CDL lectures are being posted on the CSEG website. The CDL committee created a Guidebook in 2012 that defines many aspects of the CDL tour, as well as the responsibilities of the lecturer, chair, hosts, and committee. The guidebook has been modified and improved to include logistical data to make the Tour run more smoothly and with less organizational effort.

For details on the current CDL Tour, please visit:  
<http://cseg.ca/education/view/seismic-imaging-in-the-presence-of-strong-contrasts>.

Even as Bernd's tour is underway, the CDL Committee is working diligently to choose its next (2014/2015) Lecturer. The Committee works with input from many sources to choose a unique and different Lecturer each year. The goal is to always have a fantastic, truly distinguished lecturer who will deliver a talk of great educational content and interest to the CSEG's members across Canada.

## LEE HUNT

CDL COMMITTEE CHAIR 2013

## 2013 CDL COMMITTEE

Lee Hunt, Chair	Mimir's Well Exploration Corp.
Bernd Milkereit, Lecturer	University of Toronto
Don Lawton, Lecturer	University of Calgary
Gerhard Pratt	University of Western Ontario
Igor Morozov	University of Saskatchewan
Michael Enachescu	Memorial University
Ron Clowes	University of British Columbia
Brian Russell	Hampson-Russell/CGG
Richard Smith	Laurentian University
Satinder Chopra	Arcis Corporation

## CSEG FOUNDATION SCHOLARSHIP PROGRAM

2013 marked a year of continual improvement for the CSEG Foundation's scholarship program. The scholarship committee benefited tremendously from the Foundation's fundraising campaign, which raised 50% of the final \$34,500 budget. The scholarship committee's own fundraising initiative began late in the year, due to the June floods in Calgary, but we were rewarded with tremendous support from a number of companies, who graciously (and quickly) donated the remaining funds to provide a total of twenty scholarships this year. We would like to acknowledge the 24 donors, consisting of oil & gas operators, service companies, individuals, the Rob Shugg Trust Fund and the Alberta Community Spirit Grant, for their backing. This program could not exist without the annual generosity of the geophysical industry and the people who work in it. Thank you.

On the administrative side, the committee changed the application deadline in 2013, moving it from June to November. This was done to make the application process simpler and easier for students, ensuring that they could access required references and transcripts more easily while they are in school. The application was also migrated to an online format, a move welcomed by students. Those initiatives, combined with tremendous ongoing support from the University Student Outreach (USO) committee, resulted in a 32% increase in applications over last year.

The committee awarded scholarships in three categories. There were 16 university scholarships, valued at \$2000, given to graduate



and undergraduate students. For the second year, we awarded a \$1000 scholarship to a student enrolled in a technologist program. This was also the inaugural year that three \$500 scholarships were awarded to CSEG dependents and students entering their first year of university. The scholarship recipients represented ten different educational institutions from across Canada.

As the CSEG Foundation scholarship program enters its 45th year, the committee will focus on increasing awareness of industry sponsors and students alike across the country, through collaboration with the USO and the CSEG. The committee is honoured to continue the rich legacy of inspiring and rewarding the brightest new minds in geophysics.

## 2013 CSEG FOUNDATION SCHOLARSHIP COMMITTEE

Chairpersons: Sarah Cutten (Arc Resources)  
 Marc Boulet (Cenovus Energy)

Senior Trustee: Brian Emmerson (Talisman Energy)

Junior Trustee: Lindsay Miller (Progress Energy)

## 2014 CSEG FOUNDATION SCHOLARSHIP COMMITTEE

Chairman: Marc Boulet (Cenovus Energy)

Senior Trustee: Brian Emmerson (Talisman Energy)

Junior Trustee: Lindsay Miller (Progress Energy)

RECIPIENT	INSTITUTION	SCHOLARSHIP DONOR
Azadeh Ashoori	University of Ottawa	Sigma Explorations Ltd. / Apoterra Seismic Processing
Colin Brisco	Memorial University	Rob Shugg
Warren Cookson	University of Calgary	Athena Resources Ltd.
Sean Funk	Western	Canadian Natural Resources Ltd.
Tim Hayward	University of Manitoba	CGG
Caroline Karubin	Waterloo	Andreas Cordsen
Rosa La	University of Calgary	Geospace Technologies
Dave Melanson	Carleton University	Divestco
Michael Mitchell	UBC	Talisman Energy Inc.
Maxim Ralchenko	Carleton University	Hampson-Russell
Landon Safron	University of Alberta	Kendall Geophysics Ltd.
Baltej Sidhu	University of Calgary	Olympic Seismic
Adrian Smith	University of Calgary	Pulse Data Inc.
Chelsea Squires	Memorial University	SeisWare Inc.
Volodymyr Vragov	University of Alberta	Sam Gray / Kohlhammer Subsurface Geoscience Ltd.
Taras Zaporozan	University of Manitoba	Tesla Exploration
Daniel Carlos de Oliveira	SAIT	CSEG Community Grant
Nicole Evans	UBC	Perry & Karen Kotkas
Erin Geiger	UBC	Klukas Family
Robert Townsley	UBC	Perry & Karen Kotkas

CSEG FOUNDATION continued from Page 13

## CSEG FOUNDATION TRAVEL GRANT AND LEARNING SUBSIDY PROGRAM

Committee: Kevin Bianchini, Dave Bonar, Sean Contenti and Jessa Lee

The role of the Travel Grant and Learning Subsidy (TGLS) program is to provide student and professional CSEG members with financial support to develop awareness, knowledge and skills in Geoscience by supporting educational opportunities. In 2013, Andreas Cordsen supported the TGLS program through a dedicated sponsorship commitment to the CSEG Foundation. Thank you Andreas; our committee sincerely appreciates the generous support!

The TGLS committee strives to provide easily accessible funding to our applicants and to build and maintain relationships with our numerous recipients. In turn, we ask our funding recipients to provide written summaries of their educational experiences which are published in the CSEG RECORDER in order to share with the CSEG community.

In 2013, the CSEG Foundation (CSEGF) Travel Grant and Learning Subsidy program provided \$18,138 in travel funding to 138 recipients (all of whom are were either students or recent graduates) to travel to 10 separate events. We are happy to report that this exceeded our original 2013 budget of \$16,000. Relative to the 2012 total of \$8 255.00 for 52 recipients, our 2013 program of \$18 138.00 distributed to 138 recipients represented a 120% increase in funding, and a 165% increase in our funded student base.

See the following tables for 2013 funding statistics, by event and educational institution.

2013 CSEGF TGLS Funded by Event	Funded Attendees	Focus
SEG Annual Meeting	42	Geophysics
CSEG Symposium	8	Geophysics
GIFT	7	Geophysics
AGU Meeting	5	Geophysics
SIFT	1	Geophysics
WIUGC	25	Geosciences
AAPG Student Leadership Symposium	8	Geosciences
CSEG/CSPG/CWLS GeoConvention	5	Geosciences
Dalhousie Earth Sciences Advanced Field School	21	Geology
Willapa Bay/Columbia River Field Trip	16	Geology
<b>Total</b>	<b>138</b>	

2013 CSEGF TGLS Funding by Institution	Funded Attendees
University of Calgary	38
University of Alberta	35
Dalhousie University	23
University of Regina	15
University of Manitoba	9
University of Toronto	8
University of British Columbia	2
University of Western Ontario	2
Memorial University of Newfoundland	1
Mount Royal University	1
University of Ottawa	1
Queen's University	1
University of Saskatchewan	1
Simon Fraser University	1
<b>Total</b>	<b>138</b>

The TGLS committee is focused on continuous improvement to ensure that funding is impactful, easily accessible and our guidelines flexible enough to accommodate both individual and group applications for events in Canada, or around the world. To this end, we are very happy to report that our 2014 TGLS budget was approved as \$30,000 by the CSEGF.

2014 TGLS Committee goals are:

1. Encourage relationships with university student groups to facilitate annual application continuity for specific events (GeoConvention, GIFT, SEG Annual Convention, PDAC, field schools)
2. Develop and migrate to online CSEGF funding application
3. Develop and migrate to a CSEGF purpose expense reporting web form
4. Continue momentum from 2013 and prior

Student groups that communicate their intentions to send yearly delegations to events can help to improve the predictability of the TGLS yearly budget and consequently make CSEGF funding amounts to groups more predictable. The implementation of web based application and expense reporting will increase the efficiency, service and the ability of our committee volunteers to make the most impact with their time. We intend to seize the momentum from our past few years to make our 2014 program the most impactful the CSEG community has seen yet.

The CSEG Travel Grant and Learning Subsidy program continues to provide CSEG members the opportunity to develop, share and experience Geoscience in a variety of ways. We thank the CSEG Executive, the CSEG Foundation, as well as the CSEGF Outreach, CSEGF USO, and CSEG Symposium committees for promoting the program and providing support. We would also like to thank our numerous applicants for continuing to make this program a success.

### SUMMARY

As you have just read, the CSEG Foundation is a large, dynamic organization, driven by a large number of very dedicated volunteers and their group leaders. Your support and the support of the CSEG Executive have allowed, and will allow, the CSEG Foundation to continue its efforts. By reading this far, you have shown significant dedication yourself! Consider working with us as we support students and members across Canada, and cause the public to become more aware of the science of geophysics and the CSEG.

### PERRY KOTKAS

CHAIR OF CSEG FOUNDATION

## DoodleTrain 2013

A total of 24 courses were initially offered for the 2013 DoodleTrain week, one of these received insufficient attendance to run and one was cancelled by the instructor in the final week before the DoodleTrain. This latter cancellation affected 9 students who were either reimbursed or accepted alternate courses. The committee formally expressed the instructor's regrets to those affected. The committee will aim to ensure that there is no repeat of such an event. During the DoodleTrain week 392 students attended 22 courses. Only one advertised course could be categorized as a soft skills course, & this was also the course receiving insufficient number of registrants to run. The committee had observed early in the year that the soft skills courses did not seem to be taken up by the CSEG membership. It was thus decided to concentrate more on the hard skills courses in geoscience. Of the 23 courses finally offered 12 were repeated from 2012 and 11 were new for 2013.

The CSEG DoodleTrain committee is very grateful to the 12 companies that provided venues, the two Gold and five Silver sponsors and to APEGA for their Platinum sponsorship. We are also very grateful to the instructors for their commitment in giving back to the geophysical community and enabling us to continue to offer a great variety of courses to the CSEG membership during the DoodleTrain week.

For the first time the DoodleTrain committee was in charge of providing an educational opportunity in conjunction with the annual convention. Rather than running courses the decision was made to hold workshops on technical topics of current interest. Three such workshops were held, an all-day workshop on Reservoir

Characterization plus two half-day workshops, one on micro-seismic and the other on 5D interpolation for land seismic data. The format of these workshops was arranged such that short introductory talks set the scene for longer periods of discussion on a focused topic; something that is not generally possible during the convention itself. The consensus of the feedback was that participants would like to see similar workshops run again. As a result of this success the committee is organizing workshops again for this year's convention. As last year these workshops will be held on the Thursday and Friday of the week preceding the conference so as to avoid clashing with events from other societies that are traditionally held at the end of the convention week. There will be earlier advertising of the workshops this year plus the ability to register for them online through the CSEG website.

Bringing the Early Bird registration date forward in 2012 helped considerably in avoiding the last minute scramble of previous years so it has been decided to keep this earlier date. The committee decided to request course notes from instructors earlier to avoid a recurring & problematic situation with late arriving notes. A few more courses used books rather than course notes than in previous years but the feedback from the course attendees was sufficiently negative that it has been decided to make course notes compulsory in the future. Instructors may provide books in addition should they choose to but this cost will be borne by the instructors. It was also decided to increase the frequency of contact between committee members and instructors to ensure any potential issues are recognized in sufficient time to resolve them. Also along these lines a review was undertaken by Juan Joffre and David Manthei of the "Instructions for Instructors" and the new guidelines are now in place.

Maggi Jiao retired from the committee at the end of the year after dedicating many years of excellent support; the committee expressed their gratitude for her long standing service. Maggie introduced Lilin Liu, also of Shell as a new member of the committee; we wish Maggie every success in the future. Other members to join the committee during 2013 include David Manthei and Karl Rohraff.

It was decided to honour the pioneering work of Bill Nickerson in creating the DoodleTrain week. A "Bill Nickerson Education Award" will be made annually from 2014 to provide a student from an Alberta based University with a week of courses of their own choosing. The student thus awarded will be named at the CSEG Luncheon prior to the DoodleTrain, at the start of each course they attend and receive an engraved plaque. To commemorate this





initiative Bill Nickerson was presented with his very own DoodleTrain by Mike Hall during the October 30th Technical Luncheon. The Past Chairman will lead a small committee of volunteers from the main committee to run the award each year.

I would like to express my thanks and appreciation to the following members of the DoodleTrain committee without whose hard work and commitment the CSEG would not be able to continue providing this week of valuable training to its membership. The chairmanship of the committee will pass into the capable hands of Vicente Oropeza Baci for 2014.

Sheryl Meggeson	Sponsorship/Printing Administrative Support
Jim Racette	CSEG Managing Director
Vicente Oropeza Baci	Vice Chairman/Curriculum Committee/CSEG website content
Juan Joffre	Curriculum Committee/Workshop Committee/Instructor Liaison
John Fernando	Curriculum Committee (Chair)/ Workshop Committee
Danielle Robertson	Venues/ Curriculum Committee

Maggie Jao	Advertising/Printing
Darren Tallas	Instructor Liaison/ Volunteer coordinator
Patricia Gavotti	Volunteer coordinator
Davood Noroozi	Printing/Marketing
Akshay Gulati	Webinar
Jounada Oueity	Instructor Liaison
Karol Rohraff	Advertising
David Manthei	Instructor Liaison

It is through the work of volunteers putting a little back into their society that the CSEG is able to offer such services to its membership; I am honoured to have been amongst this group and will continue in the role of Past Chairman during 2014.

**MIKE HALL**

CHAIRMAN OF THE DOODLETRAIN COMMITTEE, 2013

## 2013 CSEG Symposium

The 2013 CSEG Symposium was successfully held on March 27, 2013 at the Telus Convention Centre. The event sold out, and a survey indicated that ~90% of attendees felt very positive about most or all aspects of the Symposium. The day's events started with registration, followed by a morning session of talks with coffee break, a lunch in the hall next door featuring the CSEG annual awards ceremony, an afternoon session of talks again with a coffee break, and ended with a mixer for attendees. Speakers, committee and sponsor reps followed that with an offsite dinner.

The honouree this year was Bill Goodway, with talks and speakers having some connection with Bill and his work. Besides being a very deserving choice due to his many technical and service-related contributions to the CSEG, his work has also had an impact on industry. Because Bill has focused on many areas, including aspects of acquisition, processing and interpretation, this made it easier to invite and secure excellent speakers with a broad range of expertise. The speakers were really excellent, and delivered on a variety of topics, as follows:

- ▶ Marco Perez (Apache Corporation): "Advancing Quantitative Interpretation"
- ▶ Norm Cooper (Mustagh Resources Ltd.): "Current Practises in Design of 3D Land Seismic Programs, or: '3D' stands for Design for Density and Diversity"
- ▶ David Monk (Apache Corporation): "Designing 3D Land Surveys Based on Imaging Requirements"
- ▶ Peter Cary (Arcis Seismic Solutions): "Questioning the Basics of Surface-Consistent Processing"
- ▶ Arthur B. Weglein (University of Houston): "Recognizing, defining and responding to pressing and prioritized challenges in exploration seismology "
- ▶ Rainer Tonn (Statoil ASA Norway): "Good Ways to Characterize Seismic Reservoirs"
- ▶ John Pendrel (Fugro-Jason): "Simultaneous AVO Inversion Techniques for Unconventional Plays"
- ▶ Ken Hedlin (Husky Energy): "AVO, Rock Physics, and LMR in an Offshore China Gas Field "
- ▶ Rob Stewart (University of Houston): "Hidden hazards: Using geophysics to reveal subsurface risk in Haiti and Rwanda "
- ▶ Lee Hunt (Fairborne Energy, Mimir's Well Exploration Corp): Tribute to CSEG Symposium Honouree – "Through a Glass Darkly"

The event was generously sponsored by several organizations, and they deserve a big thank you:

- ▶ APEGA – registration
- ▶ Apache Corp. and Sensor Geophysical – morning session

- ▶ Arcis Seismic Solutions – morning coffee break
- ▶ Cenovus and Seisware – afternoon session
- ▶ CGG – afternoon coffee break
- ▶ Canadian Discovery – Symposium mixer

The committee, made up of high calibre volunteers with proven track records, was outstanding:

- ▶ Oliver Kuhn (Apoterra) – Chair
- ▶ Satinder Chopra (Arcis) – Past Chair
- ▶ Laurie Weston Bellman (Canadian Discovery) – Speaker Liaison
- ▶ Marco Perez (Apache) – Speaker Liaison
- ▶ David D'Amico (Talisman) – Arrangements
- ▶ Laurie Ross (Geo-X) – Publicity
- ▶ George Fairs (Divestco) – Sponsorship
- ▶ Jim Racette – CSEG Office

Three volunteers also helped out and thank you to them: photographer Mohammed Al-Ibrahim (Gedco, now Geomodeling Technology), Usman Shahid (U of C, now Thrust Belt Imaging), Azat Kuliyevev (U of C). The CSEG office of course did a lot of the heavy lifting behind the scenes, especially in areas such as registration, and organising the venue details with Telus Convention Centre staff – thank you Jim and Sheryl. The CSEG Foundation offered travel / attendance subsidies to graduate students, and this resulted in 6 U of A and 6 U of C students attending. The intention is to give graduate students a better understanding of where the leading edge in industry is, so that they can perhaps tackle some of the challenges in their research efforts.

Besides indicating very high satisfaction levels with the event, the previously mentioned survey also generated many interesting suggestions for the incoming committee to consider. Lee Hunt and his committee, based on this attendee feedback, will be looking to include more up and coming (but still highest caliber) speakers, more case studies, and perhaps most importantly, cookies at the coffee breaks.

The primary objectives of the 2013 committee were to put on a top notch event, with high quality speakers presenting relevant topics, and to do this within budget. The financial objectives were achieved, with a modest surplus.

### OLIVER KUHN

2013 CSEG SYMPOSIUM CHAIR

## Digital Media

### COMMITTEE MEMBERS

Mohammed Al Ibrahim

Marc Boulet

Penny Colton

John Fernando

Jocelyn Frankow

Will McCarthy

After rolling out the new website in March the Website Committee needed a new challenge. Since the website committee was resurrected in 2011 we've found there's been an ever increasing desire, from members and other committees, to get the CSEG involved in social media in order to promote the benefits of membership, and better inform members of upcoming educational and social events. With this in mind the Website Committee has been renamed the Digital Media Committee (DMC).

### REBRANDING & WEBSITE OVERHAUL

The new CSEG brand hit a few snags here and there, for example colours needed to be adjusted to make powerpoint templates more readable, but overall it was launched successfully in March. Feedback from membership has been mostly positive.

### THE ONLINE RECORDER – CSEGRECORDER.COM

We released the Online RECORDER with two new ways to read the RECORDER, a pdf flipbook and a web article format. Traditional pdfs are still available for download as well.

A new tagging system for web articles is nearing completion that will allow us to better categorize articles as well as improve search functionality. It also allows for links to related articles to appear next to the one you're reading. Readership of the web based format is up and we seem to be reaching more of a worldwide audience.

Penny Colton has joined us as the new RECORDER committee liaison.

### SOCIAL MEDIA

After research and setup work by Assistant Communications Director Meghan Brown we have created a CSEG LinkedIn group moderated by the DMC. As members have been sharing articles and networking with each other the group has steadily grown. In the fall we also started a CSEG Twitter account that posts news and updates. Going forward the DMC will be the hub for any CSEG social media activity.

### DIGITAL MEDIA LIBRARY

The groundwork is being laid for a media library that will be easily shareable between committees and CSEG employees. Images will be categorized and stored here for use in CSEG publications, advertising, etc. Mo Al Ibrahim has been spearheading the search for and the categorization of useable high quality images.

As always we rely on members to provide us with feedback and always welcome new volunteers. We invite you visit [cseg.ca](http://cseg.ca) or search for us on LinkedIn or Twitter.

### WILL MCCARTHY

CHAIR

## RECORDER 2013

The most significant change for the RECORDER issues came in the new design of the cover page and the interior layout format of the various articles. A special "Thank You" to all those involved in the process of rebranding of the CSEG logo and the re-designing of the RECORDER and the CSEG website: Cheran Mangat, Jason Sweigert, Alexandra Harle Graphic Design, Will McCarthy and others in the executive, RECORDER committee and the website committee.

Next significant change came in the form of conducting short interviews with selected authors of the articles from the book: "52 Things You Should Know About Geophysics" by Matt Hall and Evan Bianco. Nearly all the article contributors to the book have gladly accepted the invitation to participate in the short interviews.

Needless to say, with the new approach to monthly interviews, the RECORDER readers are able to get a greater selection of interviews with Geophysicists who are able to share their vast knowledge base with the rest of the Geophysical community and the Geoscience community at large.

The following individuals were interviewed during 2013.



DAVE HALE



LARRY MATTHEWS



WEIMIN ZHANG



GERARD SCHUSTER



STEWART TRICKETT



LAWRENCE (LARRY) MAYO



DON LAWTON, ROB STEWART, GARY MARGRAVE



EVAN BIANCO, CARL REINE, TARAS GERYA



DAVID MOSHER



BRIAN RUSSELL, DAVID GRAY, JOSÉ M. CARCIONE



The 10 RECORDER issues of 2013 continued the approach of previous years in following a theme for each issue. 2013 incorporated thirteen focus articles and three articles, which were all technical articles. Satinder's suggestion to appoint a special coordinator for each issue is working well. It is very gratifying to see high quality focus articles being solicited by these special coordinators who are well aware of the latest research being done in the area of the selected topics. The benefactors of the above method of soliciting focus articles is much more efficient and is a key factor in being able to have them ready for publishing in a timely fashion.

The themes of the 10 issues were:

- ▶ Fracture Analysis – Bill Goodway – January
- ▶ Reservoir Characterization – Satinder Chopra – February
- ▶ Microseismic – Acquisition Design and Processing – March
- ▶ Unconventional Oil – Larry Lines – April
- ▶ Unconventional Gas – Manika Prasad – May
- ▶ Seismic Inversion / Time lapse / Rock Physics – Brian Russell – June
- ▶ Seismic Attributes – Satinder Chopra – September
- ▶ Microseismic – Bill Goodway – October
- ▶ AVO Inversion – Franck Delbecq – November
- ▶ Seismic Processing – Richard Bale – December

The CSEG RECORDER best paper awards for 2011 and 2012 were presented at the September



luncheon and a list of recipients and their award acceptance photos were published in the October 2013 RECORDER issue.

David Cho, Mohammed Al-Ibrahim, Meghan Brown, Mostafa Naghizadeh, David Bonar, Robert A. Holt and last, but certainly not least Satinder Chopra have rendered their time and efforts to the success of each of the RECORDER issues in 2012, which is gratefully acknowledged.

Mike Doyle (CAGC), Helen Isaac (Outreach), George Fairs (VIG), Oliver Kuhn (Science Break), Satinder Chopra (Interviews), Carmen Swalwell (Tracing Through the Industry), Kristy Manchul (Grapevine) have contributed their articles each month and their contribution completes the various aspects of the CSEG events and their efforts are very much appreciated.

## RECORDER COMMITTEE MEMBERS

Chief Editor        John Fernando  
Assistant Editors   Mostafa Naghizadeh  
                             Mohammed Al-Ibrahim  
                             David Bonar  
                             Rob Holt

The RECORDER Committee, aided each month in proof reading and layout by Penny Colton, guest editors and others, produced the 2013 issues in conjunction with our long-time print and layout provided by Bonnie and Lawrence Luft at The Printman. The RECORDER budget is designed to be revenue neutral, but in 2013 showed a modest surplus.

## JOHN FERNANDO

CHIEF EDITOR





## Canadian Journal of Exploration Geophysics

The Canadian Journal of Exploration Geophysics (CJEG), the flagship peer-reviewed journal of the CSEG, was revived in 2010 following an eleven year hiatus. Electronic issues of CJEG were published in June 2011, June 2012 and June 2013. The editorial staff of CJEG in 2013 included Larry Lines and Satinder Chopra as Co-Editors. The CJEG Associate

Editors are Sven Treitel, Patrick Daley and Kris Innanen.

As of February 2014, the revived journal has received 27 submitted papers. The statistics for these 27 submittals are as follows:

1. 19 papers have been published (6 in June 2011, 6 in June 2012, 7 in June 2013 issues).
2. 2 papers have been accepted for the June 2014 issue.
3. 5 papers are being reviewed or are under revision.
4. 1 paper has been rejected as being inappropriate for CJEG.

All the journal papers are peer-reviewed in a timely fashion, with a desired turnaround time of less than 3 months. Papers are generally reviewed by 2 – 3 reviewers with adequate technical expertise.

The PRINTMAN, Calgary provided composing/printing services for the CJEG, and has been found to be quite satisfactory in terms of quality and efficiency.

The criteria for submitted papers is outlined on the CSEG web site and are as follows:

1. The paper should be technically correct.
2. The paper should discuss a relevant technical topic in applied geophysics which is of interest to members of CSEG.
3. Papers should have correct English grammar and spelling.
4. Papers should be clearly written for a general exploration geophysics readership.
5. The text of papers should be in Word format. Illustrations should have high quality resolution in .tif or .jpeg format.

Papers may be submitted to the Co-Editors, Larry Lines at [lrines@ucalgary.ca](mailto:lrines@ucalgary.ca) or Satinder Chopra at [schopra@arcis.com](mailto:schopra@arcis.com). While the journal has published six papers per year, we are constantly receiving papers from noted international geophysicists. Our goal is to publish 1 – 2 issues of the journal every year. To achieve this objective, we are encouraging papers from exploration geophysicists in not only Canada, but around the world. At present, copies of CJEG are available on the web site to all CSEG members.

At a recent meeting of the CSEG Executive, it was decided that the CJEG issues would be open to everyone worldwide after being available to members-only for the three most recent issues. Also there are plans to create a separate web site for the CJEG. These two steps should make the journal more accessible worldwide and increase the public awareness of CSEG.

**LARRY LINES AND SATINDER CHOPRA**  
EDITORS OF CJEG

## Lunchbox Geophysics

Lunchbox Geophysics is an informal, free-of-charge technical lecture series that brings a variety of topical geophysical presentations to CSEG members.

The Lunchbox Geophysics committee welcomes all interested parties to submit their ideas for future talks.

For the 2013 season, five excellent talks were given:

- ▶ **January 2013** – David C. Henley, CREWES  
Interference and the art of static correction:  
Raypath interferometry
- ▶ **February 2013** – Jeff Grossman, Sensor Geophysical  
Simultaneous time-lapse processing for improved repeatability
- ▶ **March 2013** – Olga Rehkopf, Imperial Oil  
Characterization of Shale Gas Reservoirs Using Seismic and Well Data at Horn River, Canada
- ▶ **November 2013** – Mike Hall, CGG  
High Fidelity Vibroseis Acquisition on the Alaskan North Slope
- ▶ **December 2013** – Azer Mustaqeem, Petro-Explorers  
Practical Application of Artificial Neural Networks for Seismic Reservoir Characterization

There are many people who volunteered their time to make these talks possible: our speakers; CGG volunteers Pat McKenny, Larry Adorjan and Sid Liaqat who generously supplied the Aquitaine auditorium, the projector, and beverages; Marc Boulet and John Rennie who provided IT support and recorded the talks for the CSEG website. We would also like to thank Chevron for donating an auditorium and beverages for several talks.

[www.cseg.ca/technical/category/lunchbox](http://www.cseg.ca/technical/category/lunchbox)

**JASON MCCRANK**

**RICHARD GRAY**

COMMITTEE CO-CHAIRS

## Chief Geophysicists Forum

The Chief Geophysicists Forum continued to be active in 2013. In addition to the quarterly general forum meetings subcommittees were active on the following activities. Ongoing activity summaries can be found on the CSEG website. All CGF costs are born by sponsor companies. Thank you.

- ▶ Continued representation of CGF Reserves Sub-committee efforts to COGEH, SPEE, SEG and other interested groups.
- ▶ CGF Microseismic Sub-committee hosted a very well received symposium on Induced Seismicity, with a follow up survey planned
- ▶ CGF Microseismic Sub-committee plans to expand its deliverables guidelines to include near surface acquisition.
- ▶ For 2014 a sub-committee has been convened for the purpose of working with APEGA on issues such as incidental practice, the implications of 'geoscience' rather than geophysics and geology and so on.

The 2013 Report was delayed and the March 2014 meeting overshadowed by the sudden loss of Chair Tom Podivinsky.

FOR THE CGF

**RON LARSON, CSEG PRESIDENT**

## Junior Geophysicist Forum

The 11th Junior Geophysicist Forum was held on October 29, 2013 at Escoba Bistro and Wine Bar. All were treated to an insightful presentation by guest speaker Elaine Honsberger, Chief Geophysicist at Husky Energy correlating what we learn in University and how that applies to our professional careers. This event was very well attended with over 200 registrants, the attendance was similar to last year with the population distributed quite evenly between Senior Geophysicists, Junior Geophysicists and students.

The committee was comprised of the following:

Mark Lukwinski	Chair/Venue
Rob Vestrum	Co-chair
RJ Vestrum	Finance
Jessica Baldwin	Event Co-ordinator
Chris McGregor	Sponsorship
Victor Hoang	Student representative

We look forward to another great event in 2014.

**MARK LUKWINSKI**

CHAIR/VENUE

## 5th Annual CSEG T-Wave Golf Tournament

The 5th Annual CSEG T-Wave Golf Tournament was held on August 28th at River Spirit Golf Club due to us being flooded out June 24th at Inglewood. River Spirit went out of their way to accommodate us and the entire committee rallied to rework and pull the tournament off at a new location whilst working around their vacation schedules. We were very lucky that we were able to fill the tournament after moving the date. We did have people that had to back out due to prior commitments but we also had a waiting list and once we put the word out we again had a full slate of 144 golfers registered.

We also had to go back to our sponsors with the new date and we are very thankful to them as they stuck with us through moving the date and the location:

### ACE LEVEL

Nexen – tee gift  
SourceX Geophysical Corporation – lunch  
Synterra Technologies – dinner

### EAGLE LEVEL

#### Hole Sponsors

CGG  
Command Equipment/Lornel Seismic  
Project Management  
Divestco  
Earth Signal Processing  
Pulse Seismic  
RPS  
Sensor Geophysical Ltd.

#### Beverage Carts

GeoTir

#### Golf Carts

WesternGeco  
Driving Range  
Tesla Exploration  
Putting Contest  
Eagle Canada

#### Scoring System/Pictures

MicroSeismic

### BIRDIE LEVEL

Arcis Seismic Solutions, BJV, Edge Technologies, Geospace Technologies Canada, Great West Resources, Terra-Sine, ION Geoventures, Maxam North America, Print Three, Seisline, Sigma/Apoterra

### PAR LEVEL

HCL

This year the committee chose the “Light up the World” Foundation as the charity our efforts would go toward. The Silent Auction was taken out of the annual convention which in previous years helped to raise funds for this great charity. Pulse Seismic once again sold tickets on their hole which gave a team the ability to use the pro’s drive on a hole with the money going towards our choice of charity; they raised \$740! In addition, draw prize tickets were sold to help raise money and we were able to raise an additional \$1570 for a grand total of \$2310. As we had money left over we were able to top that amount up and we also donated to our charity from the previous year the Calgary Board of Education’s Fuel for School nutrition program which provides a nutritious breakfast for hungry CBE students. We donated a total of \$7,000.00 to two worthy charities!

This tournament wouldn’t be the success it is without the amazing people we have on the committee, so a big thank you to all the great committee members who make this tournament such a huge success year after year and who are always looking for ways to improve it.

Sponsorship – David Caldwell, Craig Van Dongen, and Sandy Lucas

Golf and prizes – Jim Hostetler, Rob Vestrum, Aaron Foyer, RJ Vestrum

Finance – Dick Willott

Registration – Jeff Gautreau

Bob Park graciously joined us a couple of weeks prior to the day of the tournament.

Although it is a fun tournament I did want to mention the winners:

Two teams tied at 58 for honorable mention:

Brendan Smith  
Danny Sutherland  
Jeremy Church  
Brad Gerl

David Caldwell  
Blaine Gervais  
Jordan Cicoria  
Brad Stone

Most honest team:

Adam Flynn  
Craig Melton  
Ashley Krakowka  
Jessica Baldwin

### JOCELYN FRANKOW

CHAIRMAN, CSEG T-WAVE TOURNEY



### Women in Seismic Golf Tournament 2013

2013 marked the 13th year of the tournament held at Fox Hollow Golf Course. We were two teams short of a sell-out of 144 golfers. The weather co-operated and we had a gorgeous September day that was in the mid 20's! We also had a full sponsor contingent at the tournament (all 18 holes) and even a few "19th hole" sponsors as well.

As this was our first year as part of the CSEG, we offered two prices to golfers. One price for members and one price for non-members (that included a CSEG membership). We brought in 50 new members to the CSEG from this year's tournament.

As always, we held a raffle of items during dinner and the proceeds went to the Alberta Cancer Foundation. We also sell Mulligans to raise funds as well. We chose this charity as we are able to direct the funds specifically towards Breast and Ovarian Cancer. We had a speaker at the event this year who was a Breast Cancer survivor and she spoke about the effect our donations have on finding a cure. This year also marked a milestone for us as we have donated over \$100,000 to date to the Alberta Cancer Foundation!

This event is a great opportunity for women in the industry to network and have a good time while supporting a very worthy cause. The event always runs smoothly because of the numerous committee members and I have no doubt the 2014 event will be the same.

#### **JOANNE POLOWAY**

2013 CHAIR

### CSEG Doodlebug

The 61st annual CSEG Doodlebug was held once again on August 22 – 24 in Kimberley B.C. at the Trickle Creek Golf Course. 165 golfers, guests and significant others enjoyed a weekend of good weather, golf and social events. Claiming this year's prize as Mr. Doodlebug was Daryl Robbins after being pushed into a playoff by Allan Starkoski. This year, the Doodlebug Committee focused on bringing back traditions. We were honoured to have Kevin Angus educate us on some of these traditions including the Ted Rozsa Award. The Ted Rozsa Award is given to those Doodlebug members who have attended the event for 25 years and it just so happened that Kevin Angus and Allan Starkoski were this year's recipients. The Committee would like to express its gratitude to Kevin for educating the newer generation on the meaning of this award, the man whom its named after and Ted's contributions to the Doodlebug, our society and to our community.

Celebrating a great weekend of golf and spouse events is always capped off with a Saturday evening theme dinner. This year, the Doodlebug theme was "Oktoberfest" and the Kimberley Alpine Resort convention centre was transformed into a Bavarian theme for the evening. There were Dirndls and Lederhosen aplenty enjoying authentic Bavarian music, food and drink.

Each year there is a charitable aspect to the Doodlebug. For 2013, the Doodlebug supported a local cause that as important to the town of Kimberley. The Committee chose to support a young teenage girl named Jenna Homeniuk as she recovers from an aggressive form of Leukemia and a recent bone marrow transplant. Incredibly, we raised \$17,814.38 for Jenna's trust fund. I had the privilege of meeting Jenna and her mother Paula at the Alberta Children's Hospital and presenting them with a cheque. Jenna and her mother were extremely grateful and wanted to pass on their appreciation for the generosity of everyone who attended the event. As you can imagine, meeting this young lady and seeing her bravery was a very moving and emotional experience. The people of Kimberley are grateful for the positive impact that the CSEG Doodlebug has had on their community by supporting Jenna and their local businesses.

Mark your calendars for the 2014 CSEG Doodlebug which will be held August 21st to 24th in Kimberley. Patrick Tutty will be the Chairman of the 2014 event and planning will soon begin for the 62nd annual CSEG Doodlebug.

#### **MARK WATSON**

2013 CSEG DOODLEBUG CHAIRMAN

## 2013 Doodlespiel

2013 marked the 41st Annual Doodlespiel, and the second year back in Banff continued to generate interest in the industry with 97 teams registering. The event had to be capped at 96 teams with a 64 team main draw and a 32 team hole plug event.

The following are the 2013 Doodlespiel Winners:

**A Event:**

Sterling Hansen, Matt Ng, Joel Kotkas, Daniel Perez, Igor Senek (spare)

**B Event:**

Andy Morris, Tim Boyke, Les Werle

**C Event:**

Jim Brack, Dale Johnson, David Cryer, Bill Campbell

**D Event:**

Armin Schaffer, Darin Brazel, Hillar Lilles, Curtis Chmilar, Jason Crawford

**Hole Plug**

Bill Mansell, Bill Greenan, Kena Hansen, Mark Harper, Dustin Borotisk

The Doodlespiel has grown over the years and the traditions of the event have evolved. Based on the success of last year's events,

the 2013 Doodlespiel continued with the new tradition of Human Curling competition and Draw to the Button events. Both events continue to generate excitement with a large number of participants. The addition of the best costume – team spirit award was well received and was appropriately awarded to Brad Ohler, Adam Ward, Cody Stewart and Bryan Withers for enduring the cold in their housecoats and cowboy boots all weekend!

As always, the turnout for this year's Calcutta was impressive. The door prizes that were handed out were well received. Congratulations to all of the winners. We hope that you enjoyed yourselves.

I would like to thank all of last year's participants and sponsors. Thanks also goes to the volunteers on the committee for all of their hard work that helps this great event run smoothly. The preparation for the 2014 42nd Annual Doodlespiel is already completed with the 2014 event only one week away as I craft this letter.

Please go to the Doodlespiel website to view pictures of last year's event. [www.doodlespiel.com](http://www.doodlespiel.com)

**ROGER EDGEcombe**

2013 CHAIRMAN

## 46th Annual Family Ski Spree

The Ski Spree was held the weekend of February 24th in beautiful Fairmont B.C. This sold-out event saw more than 350 participants enjoy family events and skiing at Fairmont Hot Springs Resort.

The awards dinner was filled with many happy faces as ski prizes were handed out to young and old alike and Zoe and Sheldon Ferguson received the coveted honour of being named Mr. and Mrs. Ski Spree for all the work they have done over the years.

Karen Webster, Ski Spree Chairman, is pleased to announce that over \$2600 was raised that night for the Alberta Children's Hospital. She would also like to thank all the sponsors for without them this event would not be the great success that it is.

The Ski Spree Committee hopes to see you at this fun family event next year

**CANADIAN SOCIETY OF EXPLORATION GEOPHYSICISTS**

**Financial Statements**

**Year Ended December 31, 2013**



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## INDEPENDENT AUDITOR'S REPORT

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To the Members of Canadian Society of Exploration Geophysicists

I have audited the accompanying financial statements of Canadian Society of Exploration Geophysicists, which comprise the statement of financial position as at December 31, 2013 and the statements of revenues and expenditures and cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information.

### Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian Accounting Standards for Not-For-Profit Organizations, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

### Auditor's Responsibility

My responsibility is to express an opinion on these financial statements based on my audit. I conducted my audit in accordance with Canadian generally accepted auditing standards. Those standards require that I comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my qualified audit opinion.

### Basis for Qualified Opinion

In common with many not-for-profit organizations, Canadian Society of Exploration Geophysicists derives revenue from memberships, registrations for luncheons and professional development courses and sponsorships, the completeness of which is not susceptible to satisfactory audit verification. Accordingly, verification of these revenues was limited to the amounts recorded in the records of Canadian Society of Exploration Geophysicists. Therefore, I was not able to determine whether any adjustments might be necessary to fundraising revenue, excess of revenues over expenses, and cash flows from operations for the year ended December 31, 2013, current assets and net assets as at January 1, 2013 and December 31, 2013

*(continues)*

Tel: (403) 250-2777 Fax: (403) 250-2774  
210, 2635 - 37th Avenue N.E., Calgary, Alberta T1Y 5Z6





Independent Auditor's Report to the Members of Canadian Society of Exploration Geophysicists  
(continued)

## Qualified Opinion

In my opinion, except for the possible effects of the matter described in the Basis for Qualified Opinion paragraph, the financial statements present fairly, in all material respects, the financial position of Canadian Society of Exploration Geophysicists as at December 31, 2013 and the results of its operations and its cash flows for the year then ended in accordance with Canadian Standards for Not-For-Profit Organizations.

Calgary, Alberta  
March 6, 2014

Murray Hunter ( Signed )  
CHARTERED ACCOUNTANT

**CANADIAN SOCIETY OF EXPLORATION GEOPHYSICISTS**  
**Statement of Financial Position**  
**December 31, 2013**

	2013	2012
<b>ASSETS</b>		
CURRENT		
Cash and cash equivalents	\$ 677,466	\$ 898,313
Accounts receivable	148,498	125,939
GST recoverable	71	-
Prepaid expenses	73,997	117,020
	900,032	1,141,272
FURNITURE AND EQUIPMENT <i>(Note 4)</i>	20,575	25,964
RESTRICTED FUNDS	931,632	875,000
	\$ 1,852,239	\$ 2,042,236
<b>LIABILITIES AND NET ASSETS</b>		
CURRENT		
Accounts payable	\$ 178,051	\$ 417,771
Deferred income	44,794	51,704
	222,845	469,475
NET ASSETS		
Capital assets	20,575	25,964
General fund	677,187	671,797
Restricted fund	931,632	875,000
	1,629,394	1,572,761
	\$ 1,852,239	\$ 2,042,236

**ON BEHALF OF THE BOARD**

\_\_\_\_\_ Owner

\_\_\_\_\_ Owner

See notes to financial statements

**CANADIAN SOCIETY OF EXPLORATION GEOPHYSICISTS**  
**Statement of Revenues and Expenditures**  
**Year Ended December 31, 2013**

	2013	2012
<b>REVENUES</b>		
Memberships - individual and corporate	\$ 116,400	\$ 115,950
Recorder	229,705	224,190
CSPG/CSEG Convention	435,126	458,398
Distinguished lecturers	10,454	19,933
Doodletrain	287,173	320,673
Interest and other	45,586	44,918
Luncheon fees	134,318	134,121
Continuing education	106,188	47,586
	<u>1,364,950</u>	<u>1,365,769</u>
<b>EXPENDITURES</b>		
Distinguished lecturer	-	15,000
Amortization	5,089	4,531
Recorder	230,791	203,478
Interest and bank charges	1,482	1,882
Continuing education	76,148	34,081
Distinguished lecturer-SEG	1,855	20,293
Administration	353,884	299,156
Digital media	85,999	33,647
Doodletrain	198,065	189,646
Outreach	50,054	79,570
Member services	59,464	37,288
Luncheons	130,831	128,000
Professional fees	39,014	18,372
Professional dues	642	440
	<u>1,233,318</u>	<u>1,065,384</u>
<b>EXCESS OF REVENUES OVER EXPENDITURES FROM OPERATIONS</b>	<b>131,632</b>	<b>300,385</b>
Donation to CSEG Foundation	<u>(75,000)</u>	<u>(580,000)</u>
<b>EXCESS (DEFICIENCY) OF REVENUES OVER EXPENDITURES</b>	<b>\$ 56,632</b>	<b>\$ (279,615)</b>

## CANADIAN SOCIETY OF EXPLORATION GEOPHYSICISTS

### Statement of Cash Flows

Year Ended December 31, 2013

	2013	2012
<b>OPERATING ACTIVITIES</b>		
Excess (deficiency) of revenues over expenditures	\$ 56,632	\$ (279,615)
Item not affecting cash:		
Amortization of property, plant and equipment	5,089	4,531
	<u>61,721</u>	<u>(275,084)</u>
Changes in non-cash working capital:		
Accounts receivable	(22,559)	78,949
Accounts payable	(239,720)	351,659
Deferred income	(6,910)	5,943
Prepaid expenses	43,023	(53,755)
GST payable (receivable)	(71)	-
	<u>(226,237)</u>	<u>382,796</u>
Cash flow from (used by) operating activities	<u>(164,516)</u>	<u>107,712</u>
<b>INVESTING ACTIVITY</b>		
Purchase of property, plant and equipment	<u>301</u>	<u>(4,097)</u>
<b>INCREASE (DECREASE) IN CASH FLOW</b>	<b>(164,215)</b>	<b>103,615</b>
Cash - beginning of year	<u>1,773,313</u>	<u>1,669,698</u>
<b>CASH - END OF YEAR</b>	<b>\$ 1,609,098</b>	<b>\$ 1,773,313</b>
<b>CASH CONSISTS OF:</b>		
Cash	\$ 677,466	\$ 898,313
Term deposits	931,632	875,000
	<u>\$ 1,609,098</u>	<u>\$ 1,773,313</u>



## CANADIAN SOCIETY OF EXPLORATION GEOPHYSICISTS

### Notes to Financial Statements

Year Ended December 31, 2013

#### 1. NATURE AND OBJECT OF THE SOCIETY

The Canadian Society of Exploration Geophysicists (the Society) was established as a Society under the Societies Act of Alberta on December 20, 1949 as a not-for-profit organization.

The object of the Society is to promote the science of geophysics, especially as it applies to exploration, and to promote fellowship and cooperation among the persons interested in geophysical problems.

#### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

##### Revenue recognition

The Society follows the deferral method of accounting for contributions. Restricted contributions are recognized as revenue of the appropriate fund in the year in which the related expenses are incurred. Unrestricted contributions are recognized as revenue of the appropriate fund when received or receivable if the amount can be reasonably estimated and collection is reasonably assured.

Project revenues and expenses are recognized in the Project Fund during the period when the revenue is received and expenses are incurred.

Convention revenues and expenses are recognized in the Convention Fund during the period when the convention is held.

##### Capital assets

Capital assets are recorded in the Operating Fund at cost. Amortization is provided on straight-line basis over three to eight years, being the estimated useful life of the assets.

Leasehold improvements are amortized on a straight-line basis over the term of the lease, which is five years.

##### Contributed services

The operations of Society are dependant on the services of many volunteers. Although these volunteered services form an integral part of the ongoing operations, the value of contributed services has not been recognized in these financial statements.

##### Social committees

Various social committees within the society have monies available to them in order to administer the specific activities for which the committees were established.

The financial activities of these committees have not been reported upon in these financial statements..

##### Income taxes

The Society is a not-for-profit organization and is exempt from income taxes pursuant to Section 149 of the Income Tax Act.

*(continues)*

## CANADIAN SOCIETY OF EXPLORATION GEOPHYSICISTS

### Notes to Financial Statements

Year Ended December 31, 2013

#### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES *(continued)*

##### Measurement uncertainty

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

#### 3. INTERNALLY RESTRICTED FUND BALANCES AND INTERFUND TRANSFERS

The Society's Executive Committee has internally restricted resources amounting to \$ 931,622 (2012 - \$ 875,000). These internally restricted amounts are not available for other purposes without approval of the Executive Committee. During the year the Society entered into a partnership with the Canadian Society of Petroleum Geologists and the Canadian Well Logging Society to manage and operate a Convention for the three organizations. In recognition of the cost associated with this venture, the Board's Executive Committee passed a motion at its January 28, 2014 meeting to move the balance of the 2013 surplus funds into an internally restricted convention fund to be used for this purpose. Accordingly, \$ the year end surplus of \$ 56,632 is included in the convention fund shown below as part of its restricted funds.

The internally restricted funds have been allocated as follows:

	<u>2013</u>	<u>2012</u>
Operating fund - reserve	\$ 800,000	\$ 800,000
Convention fund	131,632	75,000
	<u>\$ 931,632</u>	<u>\$ 875,000</u>

#### 4. FURNITURE AND EQUIPMENT

	Cost	Accumulated amortization	<u>2013 Net book value</u>	2012 Net book value
Furniture and fixtures	\$ 17,964	\$ (4,525)	\$ 13,439	\$ 16,280
Leasehold improvements	12,104	(4,968)	7,136	9,684
	<u>\$ 30,068</u>	<u>\$ (9,493)</u>	<u>\$ 20,575</u>	<u>\$ 25,964</u>

#### 5. FINANCIAL INSTRUMENTS

The Society's financial instruments that are included in the statement of financial position are comprised of cash and term deposits, accounts and advances receivable and accounts payable, all of which approximate fair value due to the immediate or short term maturity of these instruments. It is the opinion of management that the Society is not exposed to any material credit, interest rate or liquidity risk on any of these financial instruments.

## CANADIAN SOCIETY OF EXPLORATION GEOPHYSICISTS

### Notes to Financial Statements

Year Ended December 31, 2013

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6. COMMITMENTS

The Society is committed to a seven year lease commencing in 2011 that expires September 30, 2018. Annual base rental commitments are \$ 26,768. Current monthly payments are \$ 4,739.

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## Past Presidents

1950	J.O. Galloway	1972	J.K. Morrison	1994	G.G. Taylor
1951	C.M. Moore, Jr.	1973	W.N. Rabey	1995	B.T. Korchinski
1952	L.I. Brockway, N.J. Christie	1974	J.H. Harding	1996	D. Hampson
1953	W.R. Ogilvie	1975	J.R. Pullen	1997	R. Stewart
1954	R.J. Copeland	1976	W.D. Evans	1998	N. Shaw
1955	R.D. Holland	1977	R.J. McCaffrey	1999	D. Pruden
1956	R.B. Ross	1978	E.F. Mahaffy	2000	P. Kotkas
1957	G.J. Blundun	1979	L.R. Hatlelid	2001	R. Pelletier
1958	F.A. Hale	1980	P.D. O'Brien	2002	D. Uffen
1959	H.J. Kidder	1981	A.E. Wren	2003	W. Goodway
1960	M.B. Dobrin	1982	D.A. Carswell	2004	P. Cary
1961	P.I. Bediz	1983	V.A.A. Neilson	2005	J. Stenhouse
1962	P.J. Savage	1984	J.R. Hume	2006	Oliver Kuhn
1963	R.H. Carlyle	1985	L.C. Fichtner	2007	Doug Bogstie
1964	C.J. Chapman	1986	J.D. Boyd	2008	François Aubin
1965	R.A. Boulware	1987	R.L. Comer	2009	Jon Downton
1966	J. Hodgkinson	1988	R.M. Lundberg	2010	John Townsley
1967	E.A. Fulmer	1989	A.J. Ferworn	2011	Larry Herd
1968	G.E. Longphee	1990	N.E. Rutherford	2012	Rob Kendall
1969	W. Blair	1991	B.H. Russell	2013	Ron Larson
1970	L.R. Baxendale	1992	R.J. Brown		
1971	R.O. Lindseth	1993	W.E. Davitt		

## CSEG Medal

The CSEG Medal was introduced in 1988 and is the highest award that the Society bestows. "The CSEG Medal is given in recognition of the contribution to Exploration Geophysics by a member of the profession in Canada. It can be gained through a long-standing significant contribution to the application, teaching or business development of Exploration Geophysics. It can also be gained through a single achievement in any of these areas, which has been recognized over a period of years as a significant development. The award will be made to a member of the geophysical profession who is recognized for his integrity as well as his accomplishments."

- ▶ Ted Rozsa
- ▶ Roy Lindseth
- ▶ Greg Davidson (1990)
- ▶ Dave Robson (1991)
- ▶ Robert R. Stewart (1992)
- ▶ Hugh Stanfield
- ▶ Donald Chamberlain
- ▶ John Boyd (1994)
- ▶ Garry Kelman
- ▶ Brian Russell (1999)
- ▶ Don Lawton (2000)
- ▶ Dan Hampson (2004)
- ▶ Bill Goodway (2007)
- ▶ George Betram (2008)
- ▶ Warner Loven (2009)
- ▶ Mauricio Sacchi (2012)
- ▶ Tad Ulrych (2013)

## Honourary Membership Awards

Honourary Membership is normally given only to a few members who have gained recognition for distinguished contributions in the field of geophysics or in service to the CSEG, either nationally or internationally.

- ▶ George D. Garland
- ▶ Ernest R. Kanasewich
- ▶ Roy Hyndman (1996)
- ▶ John Bancroft (2005)
- ▶ J. Tuzo Wilson
- ▶ Robert Boulware
- ▶ Larry Lines (1998)
- ▶ Perry Kotkas (2006)
- ▶ Norman Christie
- ▶ A. Easton Wren (1987)
- ▶ Zoltan Hajnal (1999)
- ▶ Peter Cary (2008)
- ▶ Milton B. Dobrin
- ▶ Sudhir Jain
- ▶ Brian Russell (2000)
- ▶ Peter Duncan (2009)
- ▶ A.E. Pallister
- ▶ Charlotte Keen
- ▶ Robert Comer (2002)
- ▶ Gary Margrave (2011)
- ▶ Roy O. Lindseth
- ▶ Peter Gretener
- ▶ Robert Stewart (2003)
- ▶ Don Lawton (2013)
- ▶ David W. Strangway
- ▶ Gordon West
- ▶ John Boyd (2003)
- ▶ Don Gendzwill (2013)
- ▶ Peter J. Savage
- ▶ Ron Clowes (1995)
- ▶ Davey Einarsson (2004)
- ▶ R.H. Carylyle
- ▶ Douglas W. Oldenberg (1996)
- ▶ Mike Galbraith (2005)

## Meritorious Service Awards

The Meritorious Service Award is given to members of the CSEG who have made a prominent and/or lengthy contribution to the Society and/or the industry as a whole. Current practice is to present a maximum of two of these awards each year.

- ▶ Harry McGrew
- ▶ Bud St. Clair
- ▶ Arthur Baptie
- ▶ Doug Uffen (1999)
- ▶ Cecil A. Collins
- ▶ William D. Evans
- ▶ Bob Comer
- ▶ Penny Colton (2000)
- ▶ Milton B. Dobrin
- ▶ Earle F. Mahaffy
- ▶ Dan Hampson (1991)
- ▶ Norm Cooper (2000)
- ▶ Alexander H. McKee
- ▶ Jack E. Setters
- ▶ Nancy Shaw
- ▶ Barry Korchinski
- ▶ Peter J. Savage
- ▶ Peter Bediz (1983)
- ▶ Ralph Lundberg (1992)
- ▶ George Fairs (2001)
- ▶ Percy Smith
- ▶ William C. Stroup
- ▶ Murray Olson
- ▶ Perry Kotkas (2002)
- ▶ Roy O. Lindseth
- ▶ Ernie K. Shaw (1984)
- ▶ George Kostashuk
- ▶ Oliver Kuhn (2003)
- ▶ John Hodgkinson
- ▶ William Davitt (1984)
- ▶ Robert Grigg
- ▶ Satinder Chopra (2005)
- ▶ Jack W. Bowden
- ▶ Ray Prudholme
- ▶ Neil Rutherford
- ▶ Bill Nickerson (2005)
- ▶ Hal W. Godwin
- ▶ George Blundun
- ▶ Ken Duckworth (1994)
- ▶ Helen Isaac (2007)
- ▶ J. Kenneth Morrison
- ▶ Valerie A.A. Neilson
- ▶ Melvin E. Best (1995)
- ▶ Mauricio Sacchi (2007)
- ▶ Westley N. Rabey
- ▶ Duncan A. Carswell
- ▶ Brian Russell (1995)
- ▶ Doug Schmitt (2008)
- ▶ Easton Wren (1977)
- ▶ P. Dennis O'Brien
- ▶ Don C. Lawton (1996)
- ▶ Larry Mewhort (2008)
- ▶ Mary C. Colberg
- ▶ Judi McDonald (1987)
- ▶ James Brown (1997)
- ▶ Tooney Fink (2009)
- ▶ A. Vern Street
- ▶ Dale Kary
- ▶ John Pierce
- ▶ John Logel (2009)
- ▶ Alan J. Ferworn
- ▶ D.K. Bruce Fenwick
- ▶ Gregg Milne
- ▶ J.M. Annette Milbradt (2010)
- ▶ Jack R. Pullen
- ▶ Lloyd Hatlelid
- ▶ Ernest Kanasewich
- ▶ Laurie Ross (2010)
- ▶ Sudhir Jain
- ▶ Larry Fichtner
- ▶ Michael Enachescu (1998)
- ▶ Doug Bogstie (2011)
- ▶ Bill Blair
- ▶ Don Simpson
- ▶ Elaine Honsberger (1999)
- ▶ Lee Hunt (2012)
- ▶ Harold Acheson
- ▶ John Boyd (1988)
- ▶ Dave Siegfried (1999)
- ▶ Mike Doyle (2013)

## Technical Achievement

- ▶ Daniel Trad (2011)
- ▶ Shawn Maxwell (2013)

## Special Commendation

- ▶ Penny Colton (2011)
- ▶ Bill Goodway (2011)
- ▶ Larry Lines (2012)
- ▶ Tom Sneddon (2012)
- ▶ Rob Mcgrory (2013)
- ▶ Rick Green (2013)

## Symposium Honorees

- ▶ Brian Russell / Dan Hampson (2012)
- ▶ Bill Goodway (2013)



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