

# 2015 Annual Report



**CSEG**

Canadian Society of  
Exploration Geophysicists



# CSEG 2015 Council



*L – R Back Row: John Bertsch, Kevin Bianchini, Stephen Kotkas, Janine Ballingall, Marko Mah, Paul Anderson*

*L – R Front row: Marian Hanna, Rachel Newrick, Rob Vestrum,  
Not in photo: Ken Gray, Keith Millis, Jim Racette*

## CSEG 2015 Executive

**Rachel Newrick**, President

**Marian Hanna**, Vice President

**Paul Anderson**, Director Educational Services

**Ken Gray**, Assistant Director Educational Services

**Stephen Kotkas**, Director Member Services

**Kevin Bianchini**, Assistant Director Member Services

**John Bertsch**, Director Finance

**Janine Ballingall**, Assistant Director Finance

**Keith Millis**, Director Communications

**Marko Mah**, Assistant Director Communications

**Rob Vestrum**, Past President

**Jim Racette**, Managing Director

Showing the World  
how to Understand  
the Earth.

# CSEG 2015 ANNUAL REPORT

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## President

2015 has been a tough year. We all know that now, but as the CSEG Annual Reports are a historical record it is worth stating explicitly. Within the pages of this specific report you will see indications of the tough economic environment of 2015 over and over again: Marian Hanna, Vice President, and Jim Racette, Managing Director, discuss the effect of the down turn at length, John Bertsch and Janine Ballingall as Finance Directors focused the majority of their time on the Executive working to keep the budget in check and you will see that we deliberately ran a deficit budget in 2015 well within our mandate to spend down our significant savings in times of need, Keith Millis and Marko Mah worked tirelessly to reduce RECORDER expenses and made significant gains, the Education team, Paul Anderson and Ken Gray were highly aware of the downturn as technical luncheons, GeoConvention workshops and Symposium were all affected and expenses needed to be reduced along with income, and Stephen Kotkas and Kevin Bianchini, Member Services, dealt with sub-committees on a daily basis that were hit by decreased attendance and sponsorship. Larry Herd outlines the Foundation Reports and similarly discusses the economic situation and reduction in income that included the CSEG being unable to directly fund the Foundation in 2015. Jeff Deere discusses the newly formed CSEG-CSPG-CWLS partnership and outlines the successes and challenges of GeoConvention. CSEG staff, Jim Racette, Alyssa Middleton and Penny Colton, worked through the end of the year on reduced salary and hours, and the CSEG Foundation brought forward new initiatives such as Planned Giving as traditional funding decreased.

CSEG volunteers continued to give their best as we cut the budget to a minimum spend, removed committee lunches and cut back on the volunteer events as we focused on core programs.

As President, I spent time both working towards supporting members and looking outwards to other organisations such as the SEG, CSPG, CWLS, APEGA and CFES. So before summarising some key developments within the CSEG, I have included notes on these societies as well.

### SEG

In 2015, three CSEG representatives sat on the SEG Council [Rob Vestrum (represented by Paul Anderson), Rachel Newrick, Marian Hanna]. The SEG Council met in October 2015 at the Annual Convention and voted on changes to the SEG bylaws. The most significant for Canadians is the revision to District Representatives. District 5 (Canada) SEG members, not already represented by the CSEG or KEGS, were previously represented by a single representative. Now all members, including CSEG and KEGS members, will be represented by two representatives. Elections for a second representative will be held mid-2016.

### CSPG – CWLS

The CSEG and CWLS are our partners in GeoConvention and other industry events and to facilitate interaction between the three societies the Presidents and Vice-Presidents meet each month to discuss topical issues. It is through this interaction that Marian Hanna garnered consensus to move forward in approaching the provincial government with information on our three societies. We have also fostered relationships with the AAPG, SPE and CGEF.

### APEGA

As the legislative body governing engineering and earth science, APEGA has spent considerable effort working through a legislative review. Consultations were held in the Spring and Fall of 2015 and will continue into 2016. Legislative Champions were put in place to promote the Legislative Review – not to champion the changes but to champion the involvement of members in the process. Besides myself (P.Geoph, P.Geol), a number of CSEG members were involved as Legislative Champions (Ken Mitchell (P.Geoph.), Neda Bouroumand (Geoph.I.T), Rob Vestrum (P.Geo.) and Charles Welsh (P.Geoph.). They provided a valuable service to members, both informing the membership of the process and proposed changes as well as making the voices of geoscientists heard during the review sessions. Every geoscientist spoke clearly and loudly.

### CFES

The Canadian Federation of Earth Sciences ([www.cfes-fcst.ca](http://www.cfes-fcst.ca)) was formed as an umbrella organisation for earth science societies across Canada, and the CSEG is a member of this group.

Traditionally, the President of each member society sits on the CFES Council advising on the direction of the organisation. In 2014, to enhance continuity, I took on the role committing to three years as Vice President, President then Past President (2014-2017). In 2015, the CFES Council and Board discussed the need for additional industry participation and direction so the CSEG, CSPG and CWLS committed to approaching key members to sit on the CFES Board of Directors. In late 2015, Graziella Kirtland Grech was approved as CFES Director, Member Society Liaison.

### CSEG

Bylaw changes to Article X – Dues and Finance Section 1 – Dues and Gender Neutral Wording. The former removed the dues limit and the latter is self-explanatory. Given the current industry downturn, a decision was made not to raise the dues for the upcoming year, simply to remove the restriction from the bylaws.

Executive elections were streamlined with clear deadlines and information to members. Most notably was the call for member-led

nominations of which three were received. Members not elected to the executive were approached regarding similar opportunities elsewhere within the CSEG or CSEG Foundation so that their talent and enthusiasm could be captured.

In December, the Past Presidents Luncheon and Advisory Council Meeting were held in an RPS meeting room rather than the Palliser Hotel. In this economic climate, we felt that the simple lunch event provided an appropriate start to the afternoon that included CSEG updates from President, VP and Foundation Chair. Following the luncheon, the Presidents Advisory Council (PAC) comprising the last ten Past Presidents met to discuss specific concerns and their comments are being taken on board as we move forward.

In late 2015, the CSEG Executive along with Jim Racette, Managing Director, worked towards finding a new location for the CSEG Technical Luncheon. The Calgary Petroleum Club was selected for many reasons including a lower price point, more intimate venue and centrally located in the Calgary core including access via + 15. So again, the economic climate has fostered innovation and change – for the better.

Personally, I have been passionate about helping members help others and help themselves. As such, I feel that it is important to be reflective regarding our resilience during turbulent times, to consider our role and responsibilities regarding our careers and to know how to advocate for the industry, our profession, our companies, our colleagues and us. As always, I encourage you to take time to treat yourself well.

So again, it has been a tough year. Tough for the CSEG, tough for corporations, tough for members, tough for their families and tough for our industry. So, is it true that when the going gets tough, the tough get going? Incredibly, despite difficult personal and professional circumstances many of our members worked through and support each other either directly or through the society. They provided financial, emotional, and physical support through networking, mentoring, donations, volunteering, and being there for

a much-needed coffee break. Thank you to everyone who reached out to a fellow member or colleague.

Thank you to everyone within the society who contributed to the effort in 2015 – we look forward to better times but with the diligence of your Executive, staff and volunteers are prepared as the storm continues.

## 2015 EXECUTIVE

President	Rachel Newrick
Vice President	Marian Hanna
Director, Educational Services	Paul Anderson
Assistant Director, Educational Services	Ken Gray
Director, Member Services	Stephen Kotkas
Assistant Director, Member Services	Kevin Bianchini
Director, Finance	John Bertsch
Assistant Director, Finance	Janine Ballingall
Director, Communications	Keith Millis
Assistant Director, Communications	Marko Mah
Past President	Rob Vestrum

## 2015 Staff

Managing Director	Jim Racette
Office Manager	Sheryl Meggeson (on leave)
Office Assistant	Alyssa Middleton
RECORDER Chief Editor	Penny Colton

## RACHEL NEWRICK CSEG PRESIDENT – 2015



CSEG Technical Luncheon January 2016 at the Calgary Petroleum Club. Join us next time.

PHOTO BY RACHEL NEWRICK

## Vice President

Some say that seeds of uprooted chances are grains of goodbye. I rather believe that tough times don't last but innovative ideas do. And these are tough times but we have an opportunity now to become some of the most creative and innovative idea generators during this downturn more than any other time. Pundits have said this is the worst downturn in oil and gas industry, even worse than the early to mid – 1980's. A fight for market share is more responsible for this downturn as oversupply of product is available to harness more of that market share for several large country exporters. Perhaps Canada has lagged behind in policy and procedure to get product to market and instead relying on our neighbor south of the border who have now become Canada's strongest competitor. In spite of the latest pipeline decision from the US, the US is importing more Canadian crude than ever before but it is via rail which has yet to prove the safety record needed. Perhaps it is a decision based on a "not in my backyard" for pipelines masked by environmental concerns vs. using existing antiquated rail systems which are largely owned by some of the wealthiest US people protecting their investment.

However, is this a catastrophic time in industry or challenging? If you are personally feeling the pinch of being unemployed then perhaps it feels like it is catastrophic. But the term challenging represents an opportunity to do things differently, more creatively than ever before. Now is our time to burn that pain as if it is fuel for our challenging journey. The CSEG financial status has me greatly concerned and it may seem catastrophic but I think there is opportunity.

Oil and gas producers in Canada have rapidly reduced headcounts, cut budgets, postponed investment in projects, etc. In essence, trying to do more with less. However, experience, watchdogs and mentors have exited the building while those that remain struggle to deliver the efficiencies needed to weather this storm for a longer term of lower prices.

Investing in innovation and the scientists that bring forward that innovation is the key to managing the evolution needed in a low price environment. With vision and strategic planning most explorers, developers and producers will come out of this downturn stronger than ever.

The CSEG has a long history of delivering on the technical exchanges, technical training and networking that have put geophysics at the forefront of innovation. The CSEG is also equipped with some of the most passionate and motivated members stepping forward into that challenging future. For the CSEG to survive, that investment and sponsorship is necessary to continue to deliver the relevance needed for the members and corporate members.

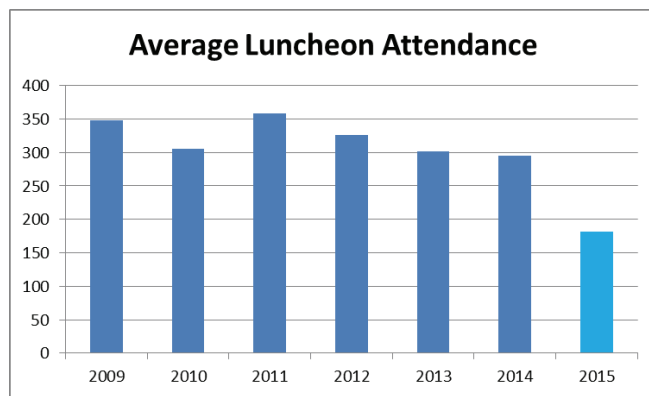
The CSEG has some of the most outstanding group of volunteers globally! The statistics show that 30% of our members volunteer in giving back to our industry community. That is more than any other professional society including some of the global societies. However, there has recently been some exchanges that indicate quite a few companies do not value that investment of personal volunteer time back to the CSEG. It is always a balance between work, personal life and community work but statistics also show that giving back creates a better person, a better employee and I will argue a better scientist. Volunteering creates a sense of self-worth and improved self-confidence; an improved network of people enhancing social and relationship skills; opportunities to exchange creative ideas; a sense of self-worth with improved mental and physical health. What employer doesn't want those benefits reflected in their employees?

My year as Vice President has been less about the social aspect of the role and I apologize for that shortfall. However, we have all been working on bringing the CSEG into the future by evolving our bylaws, making hard decisions on budgets and expenditures while maintaining technical professional relevance and networking for improved influence within industry. We have also been reaching out to our governments locally and federally to improve our influence. Next year may also be challenging for our Canadian market and therefore, for the CSEG, but I'm certain the law of causality will work to our benefit for our future through the efforts we are making today.

**MARIAN HANNA**  
CSEG VICE PRESIDENT – 2015

## Education Services

2015 was a challenging year throughout industry. Oil prices not only impacted peoples opportunities to take advantage of educational opportunities, but also cut into Corporate Training budgets. As a result, some of our ambitions for 2015 were curtailed for future years, including DoodleTrain East and the expansion of the technical luncheons to other locations across Canada via webcast. An additional result of this downturn is that attendance at our technical luncheons has dropped significantly, almost exactly in step with oil prices, something not observed in our recent past (see figure 1). I would like to take this time to remind you that the CSEG Technical Luncheons provide a networking opportunity like now other in industry, not only for the young members facing the uncertainty that comes with their first downturn, but also for mid-career professionals to maintain connections for employment opportunities, as well as to our more experienced members who may be close to or currently enjoying retirement who can help temper the pessimism we all feel by reminding us that “this too shall pass”. As always, we welcome feedback and ideas from members who have ideas on topic of interest for the Technical Luncheons, Lunchbox, MUG, etc.



**Figure 1** – Average attendance at monthly Technical Luncheons by year. Note significant decline in 2015 coincides with the current industry downturn

Despite the challenges of 2015, the various committees worked hard to put together programs through the year to contribute to its members, including Technical Luncheons, Lunchbox Geophysics, Microseismic User Group (MUG), Value of Integrated Geophysics (VIG), Symposium and Workshops at the 2015 GeoConvention. In order to address cost constraints resulting from the downturn in 2015, the Technical Luncheons will be moving to the Petroleum Club, beginning in January 2016. This will allow us to keep ticket prices low for our members while ensuring that we are fiscally responsible.

I would like to thank each member of the Educational Services subcommittees for their continued dedication to the CSEG and its members. Additionally, I would like to thank Ken Gray who will be stepping into the role of director of Educational Services in March

2016. With my move to Texas in June 2015, Ken has graciously stepped up and been of great assistance to me in ensuring our Educational Programs continue to run without my physical presence in Canada.

### 2015 Technical Luncheons

The technical luncheon committee consists of Ken Gray, Mohammed Al-Ilbrahim, Marc Boulet, Mark Jeroncic and Michel Nzikou. On behalf of the Executive and Members, I would like to thank them for their continued contributions to the CSEG, for what is still considered to be one of the best attended events of its type in the world. We would also like to thank our luncheon sponsors for their continued support and we look forward to their continued support in 2016.

**January 26th, 2015:** David Eaton (University of Calgary) – 2b or not 2b? Interpreting Magnitude Distributions from Microseismic Catalogs

**February 23rd, 2015:** Aaron Stanton (University of Alberta) – Signal Processing and Physics-Based Approaches to Seismic Data Regularization

**March 30th, 2015:** Peter Cary (Arcis, 2015 Canadian Distinguished Lecturer) – *Known Knowns, Known Unknowns and Unknown Unknowns in Land Exploration Seismology*

**April 27th, 2015:** Jean Virieux (Université Joseph Fourier) – *Hierarchical Seismic Imaging: A Multiscale Approach*

**June 22nd, 2015:** Mauricio D. Sacchi (University of Alberta) – *From Recommender Systems to 5D Seismic Data Reconstruction*

**September 14th, 2015:** Dimitri Bevc (Chevron, 2015 Fall SEG Distinguished Lecturer) – *Full-Waveform Inversion: Challenges, Opportunities and Impact*

**October 14th, 2015:** Dan Whitmore (PGS, SEG North American Honorary Lecturer) – *Concepts and Applications of Imaging with Multiples and Primaries*

**November 23rd, 2015:** Leon Thomson (DoodleTrain Keynote Speaker) – *Geophysics in a Time of Cheap Oil*

**December 14th, 2015:** Andrew C. Newson (Moose Oils 2014 Ltd.) – *Imaging the Overturned Limb of a Footwall Syncline and its Impact on Exploration in Fold and Thrust Belts*

### PAUL ANDERSON

DIRECTOR, EDUCATION SERVICES

## Communications

2015 was a year where fiscal scrutiny was paramount. Overcoming some of these challenges took sacrifice and the dedicated attention from many individuals on the communications team. We are keenly aware that the current environment may warrant further changes. In describing the initiatives we've implemented to provide a better return to our members, it's important we also reflect on our communication team's successes.

The RECORDER has undergone several cost cutting measures, including a reduced page count, lighter paper weight, streamlining the proofing, and renegotiated production and mail-house costs. These efforts have effectively cut RECORDER expenses by more than 50%, and all without degrading the quality, nor reducing the quantity of our publication. We are grateful for our production team's ability to positively respond to these initiatives.

Even with all of the fiscal refinements described above, we continue to be mindful of the need to further reduce our environmental impact and production costs. Accordingly, we have provided our members with the option to solely receive the RECORDER electronically. Upon membership renewal, there is an option to opt-out of receiving a paper edition of the RECORDER. The online edition of the RECORDER is identical to the print edition, and can be easily accessed on our website in either HTML, PDF, or Flash format. It provides instant access to a wealth of content.

Our publications have improvements on many fronts. The CSEG JOURNAL – Vol 40, No. 1 – has been made readily available to our members at CSEGJournal.com. I'd like to thank Larry Lines, Satinder Chopra, and the contributing authors for another successful volume. The RECORDER committee, chaired by Penny Colton, has ensured that publication has been consistently delivered to our members

at the beginning of the month, with engaging and refreshing new content. October's Conjugate Margins edition was particularly well received, not only for the technical content, but also for the distinctly Canadian flavour. We strive to highlight the achievements and tangible application of our profession across the country. As my East Coast friends and colleagues will remind me, "we are the Canadian Society, not the Calgary Society."

The Digital Media Committee (DMC), chaired by Jason Schweigert, has been providing insight and opportunities on how best to engage our membership digitally. Though, due to fiscal constraints, there have been some initiatives that were postponed, there are several that have been implemented. They include highlighting inspirational and ground breaking RECORDER articles on the website, advertising opportunities, synergies with online and publicly available source code, as well as the RECORDER survey that recently concluded. The intent of the survey was to identify our member's disposition toward a digital-only RECORDER, making the digital RECORDER freely available to the public, and their content preferences. Thanks to the large number of responses and well thought-out suggestions, we were able to better craft our approach in making our publications available.

As I wrote in my recent executive report, I've reflected on the aspirations I had when I first joined the executive. There have been many accomplishments, and while not all of them came to fruition, vision was met with pragmatism. I am happy to say that I've been part of an incredibly effective executive, and I'm honoured to have served the society alongside them.

**KEITH MILLIS**  
DIRECTOR, COMMUNICATIONS



GeoConvention 2015: CSEG Booth, Jim Racette and Alyssa Middleton



## Member Services

On behalf of Kevin Bianchini and myself we would like to thank all of the CSEG members and volunteers who all contribute to make the CSEG the dynamic society that it is today. Acknowledging our societies volunteers for their efforts is something that we feel is really important. Countless volunteer hours have been given to the variety of educational, social, technical and outreach events. It is the willingness and desire of our volunteers that drive the success of our events. The energy, effort and of all the amazing work that our membership has accomplished over this time makes our society a success.

In January we held a volunteer appreciation evening to highlight the efforts of the over 40 different committees. In addition, there are a number of initiatives in place to continue retain our current volunteers, to recruit new volunteers and to ensure that everyone feels valued for their contributions. The individual and committee "spotlight articles" highlighting the history, efforts and successes of some of our CSEG volunteer committees each month. There was increased visibility of the volunteer's efforts through committee recognition presentations at the technical luncheons. These efforts provide our membership with an awareness of the considerable amount of volunteer time and energy that has gone into making these events what they are today and how they have helped to shape our society as a whole.

### Social Committees

The Doodlespiel 43rd annual was yet again successful in Banff, Alberta. It is an incredible weekend of networking and curling. The 48th Ski Spree at the Fairmont Hot Springs yet again was a lovely family event that was filled with fun and comradery. The T-Wave returned to Inglewood Golf Club for another spectacular tournament in late June. The committee hosted a well-organized, fun-filled afternoon. The 63rd annual Doodlebug Golf tournament was held at the Trickle Creek Golf Course in Kimberley, British Columbia. The committee did an outstanding job delivering a weekend of competitive golf, networking and various social events. The Doodlebug chose to sponsor the charity called 'Heart Beats' assisting families with congenital heart defects. Women in Seismic (WiSe) celebrated its 15th year with a focus on fun and fellowship. WiSe has now donated over \$120,000.00 to the Alberta Cancer Foundation. The CSPG/CSEG/CAPL Road Race took place in September. This event was well run and well attended.

### Professional Resources

The Emerging Professional Program (EPP) had a full slate of events in 2015. The EPP led two very successful inter-society young professional networking events in May and December with over 240 people in attendance respectively. Further the EPP ran other professional development events including, employability skills, well-seismic correlation, software training, and micro seismic to name a few. The EPP and Mentorship Committees have opened up mentorship to include young professionals as well as students. The Junior Geophysicists Forum organization has been taken over by the EPP's umbrella.

The CSEG Ambassador program has also moved from under the direction of the Foundation to the CSEG Executive. The Committee continued to reach out to our members across Canada holding events in different geographic domains most recently being the completion.

Thank you to our volunteers who are remarkable reflection of how our CSEG members not only value giving back to their society but how the CSEG gives back to the community.

**STEPHEN KOTKAS AND KEVIN BIANCHINI**

DIRECTORS, MEMBER SERVICES

## Ambassador Program

The CSEG Ambassador Program is a national program under the CSEG Member Services arm. It aims to promote the CSEG and grow the geophysical community across the country through a variety of events, including but not limited to the Canadian Distinguished Lecture Tour. Ambassadors are CSEG representatives in cities across Canada who help organize and host receptions at lectures while providing information on CSEG membership to students and geoscience professionals. In 2015, the program was headed by Chair Aaron Foyer and Vice Chair Ryan Cox, with Ryan taking over as Chair for 2016.

Recent highlights of the program include the sponsoring of a Queen's University event where a mix of students and industry members gathered for a talk by Bruce McMonnies of Lamontagne Geophysics Ltd. In addition, the program has contributed to a CSEG Foundation scholarship awarded to Callum Walter of Queen's University, his studies focus on hard-rock geophysics. In 2016 the program will continue to plan events that coincide with the Distinguished Lecture Tour as well as various student conferences such as the AUGC, CUPC, AESRC, and the WIUGC.

**AARON FOYER, CHAIR**

**RYAN COX, VICE CHAIR**

## Finance

As Director of Finance for the Canadian Society of Exploration Geophysicists, it is incumbent upon me in this role to provide a written report summarizing the financial proceedings for the previous year 2015 to 2016, and a brief update on expectations or anticipation for the upcoming year of 2016 to 2017. As you will see from the attached statements, and should you have attended the CSEG annual luncheon, you would have read, or seen that as a society we had an extremely rough year financially, not unlike many others in the industry. Rather than comment on the obvious I would choose to comment on the fact that your entire CSEG board worked hard this year to lessen the totality of financial loss and additionally worked extremely hard with all members and committees to mitigate any further significant losses in 2016 to 2017.

These are difficult times, and for our Society our only or primary sources of income remain memberships, courses and symposiums, and the annual convention. There may be one or two other smaller income outlets, but those primaries are what carry or provide income revenue to the society year after year. With the tough times facing many of our members and their employers we have seen a significant decrease in revenue, and have projected even more loss of revenue going forward. Conversely it is only responsible to inform you the entire CSEG board and all committees have examined multiple avenues of reducing expenditures while maintaining a certain quality of service to our membership. I have personally

cautioned the board and committees as to the "hidden" extra burden unintentionally placed on our membership with continuation of previous levels of society activities, programs, symposiums and sponsorship requests.

If I were to close with a couple cognoscente comments, they would include and not be limited to requesting from the board and all committee members and involved associates, that we ask each other in these times if we can put something aside for a year, on hold for a year, or possibly push an event, talk, program or convention just a little further out until funding levels are again strong. I would not suggest dropping any one specific item, but just ask that going forward we look at the total cost of an event, a conference, a series of talks and really evaluate the necessity from a business standpoint and maybe hold the passion until revenue is again strong. From the membership I would have to ask that you continue to support the events, talks and conventions, as these are the life line of the CSEG and without continued support our society is in jeopardy. I have confidence in the board and our membership going forward, and optimism that as an entire identity we will weather this storm, but financial diligence is paramount.

**JOHN BERTSCH**  
DIRECTOR, FINANCE

## Managing Director

When I penned my 2014 annual report we were just beginning what the experts said could be a lengthy downturn. Unfortunately they were correct and it continues as I write 2015's report. To say it has been a difficult year financially is a true understatement. A number of our members were relieved of their employment status while a few more took this as an opportunity to leave the industry or completely retire. Bottom line, our industry has suffered immensely both financially and in lost jobs, and in turn the CSEG has also seen likely its toughest year financially. We have seen revenue drop 47% from 2014. The two major factors resulting in this decline were convention revenues which were 75% short of 2014 net proceeds and our Continuing Education week (DoodleTrain) which basically broke even in 2015 while in past years traditionally provided anywhere between 6 and 10% of our total revenue. Add reduced total members, decrease in Recorder advertising, and low Technical Luncheon attendance and it is clear to see why the society will post a significant deficit for 2015, while 2016 is targeted to be no less the same and perhaps worse. The good news is past CSEG Executives and administration identified the need to internally restrict a fair portion of our funds in surplus years and while it is not an infinite sum of money, it will hopefully offset the deficits for the next two to three years if required. In saying that, the current Executive has had to implement a number of reductions during the year to ensure our viability during that period of time. As many of you who operate a business in the industry can appreciate that is no easy task. Our funding is based 100% on discretionary funding from our individual and corporate members. When people stop enrolling in continuing education courses, buying luncheon tickets and registering for GeoConvention it becomes very difficult to make up that lost revenue. Though we have been actively trying to identify new potential sources of revenue it is not an easy endeavor. What a downturn forces a company or your society to do is evaluate what you have done in the past and begin looking at doing it differently. That means be more attentive to the bottom line even in stronger years to help mitigate the softer times.

Looking ahead in 2016 the Executive has no choice but to plan for the same or even worse results, hoping the economy and the fortunes of our corporate and individual members improve to a point where they again can participate fully in our core activities.

We will plan to continue offering a similar program as in the past however there will be a stronger contingency plan to act on if required. It may be the case where the traditional or core activities look different. Perhaps they do not happen as frequently as in the past. You do what needs to be done. I have been asked several times by members "What's the word on the street?" meaning, "When do you see this ending?" My response: if I knew that, I would be a very rich man. Unfortunately, we have been given only speculation and it is difficult to plan forward on that. However, as our President Rachel Newrick mentioned in an open letter to the membership in late 2015:

*"We, the Executive and Managing Director, believe that our current plan will minimize loss of services and help us provide continued value for your CSEG membership. All of our efforts are made possible by the incredible volunteer base that we have. We thank you for your active participation in the society."*

This is an ideal that is important to embrace and move forward on. We do not plan to fold the proverbial tent just yet but we need our memberships to continue helping. Continue to volunteer. Go to every second luncheon if you cannot afford to go to them all. Take a course to help you stay current. RETAIN YOUR MEMBERSHIP. It is one of the lowest fees in the industry and you get a lot in return. If you can continue to try and help your society your society will be there in the future to assist you.

As I complete my 16th year with the CSEG, 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. Let us keep working together to combat the latest hit to our industry and try to make a positive difference during a difficult time.

### JIM RACETTE

MANAGING DIRECTOR

## GeoConvention 2015

GeoConvention 2015 was held May 4-6, 2015 at the Telus Convention Centre in Calgary. Followed by CSEG workshops and the CSPG Core Conference on May 7-8. The theme of GeoConvention 2015 was “Geoscience: New Horizons” and the focus of the convention was described as:

*“The 2015 Convention will focus on “New Horizons” – specifically, the importance of new technologies to improve the cost effectiveness of our exploration and production activities; ideas and findings that are more important now than ever. In addition to the traditional technical program, economic and financial data will be explored as we all bring together industry and financial experts to predict how we will be effected by and how we can best navigate the unfavourable oil prices.”*

This was the first convention operated by the GeoConvention Partnership. This is a formal partnership between the Canadian Society of Exploration Geophysicists, the Canadian Society of Petroleum Geologists and the Canadian Well Logging Society. The partnership is guided by the GeoConvention Board that consists of representatives of the three societies and the partnership employs a full-time executive director, Dustin Menger. As in past years, volunteers are critical to a successful convention and Table 1 lists the convention committee chairs. Additionally, some 140 volunteers, both students and industry professionals, helped make the convention a success.

Committee Role	Name
General Co-Chairs	Dustin Menger, Jeff Deere, Art Irwin
Technical Co-Chairs	Uliana Romanova, David Cho, Heather Makowecki
Core Conference	Adam Pugh, Rachel Acker
Exhibit Chair	Vic Urban
Volunteer Chairs	Brett Nwokeforo, Mandy Thompson
Sponsorship Chair	Elwin Reichert
Finance Chair	Dave Clyde
Mobile App Chair	Nancy Laing
Social Media Chair	Cheryl Kuyten
Special Events	Laura Pecharsky
Judging Chair	Lynn Engel
Poster Chair	Amy Orr

Table 1. GeoConvention 2015 committee listing.

GeoConvention is an important revenue source for the parent societies. The three major sources of revenue for the convention are sponsorship, exhibits and delegate registration.

In 2015 we had many returning sponsors as well as a few new ones. The sponsors and their support levels are shown in Figure 1.



Figure 1. GeoConvention 2015 sponsors

# COMMITTEE REPORTS

Sponsorship allows us to offer a broad program of events to our delegates; from luncheons with guest speakers (Scott Tinker, Alex Epstein and Jay Ingram) to travel assistance for eight students. The ongoing support of these sponsors is certainly appreciated.

In 2015 we had a total 117 exhibitors on the Telus Convention Centre exhibit floor. For 2015 the convention saw 3466 unique registrants versus 4244 in 2014. In past years, registration on Monday morning resulted in large queues, these were alleviated this year with a new registration system and provider.

Despite the economic challenges that the industry faced in 2015, GeoConvention made a profit of \$217,949 and returned \$98,077 to the CSEG.

While there was a small decline in the number of delegates the same cannot be said for the technical program. In 2015 we had 275 oral presentations and 109 posters and increase of 6 and 5, respectively, from 2014. The convention had 49 sessions spread over the three days including a session hosted by the SPE. The location of the posters this year, just off the exhibit floor, generated good foot traffic and was deemed a success.

The final event associated with GeoConvention 2015 was the “Best of 2015 Luncheon” held at the Metropolitan Centre on September 30, 2015. At this event we thanked our 2015 sponsors and recognized the winners of awards for the best posters and oral presentations. Six of our award winners presented their work in six minute summary form. This was a well-received event and we hope it becomes an

annual event. In a break with past years, the awards from GeoConvention were awarded independent of discipline as we become more and more integrated; a complete list of award winners can be found in the September 2015 edition of The RECORDER or at [www.geoconvention.com/conference/2015-award-winners.html](http://www.geoconvention.com/conference/2015-award-winners.html)

To enhance networking amongst delegates the exhibit floor remained open until 6:00 pm on Monday and Tuesday. The networking events drew approximately 1000 visitors to the floor on Monday and 800 on Tuesday. Wednesday evening consisted of the Alumni Event and the CSEG Foundation Challenge Bowl. We had only two universities participate in the event and we will look for ways to make this event more inclusive.

To help advertise GeoConvention and keep delegates informed we have used Social Media and the Mobile App. GeoConvention has a LinkedIn and Twitter presence and will soon add Facebook. This was the second year that we created a Mobile App dedicated to GeoConvention enabling delegates to create a personalized schedule and locate exhibitors on the convention floor.

For 2016, GeoConvention leaves its traditional dates in May and it will be held March 7-11, 2016. With March 7-9 at the Telus Convention Centre and March 10-11 at Lake Louise.

**JEFF DEERE**  
GENERAL CO-CHAIR



CSEG Education Workshops were held on Thursday and Friday mornings during GeoConvention week.

## Chief Geophysicists Forum

### CGF MISSION:

*Address technical and non-technical issues that impact the practice of geophysics within the communities we work in.*

The CSEG Chief Geophysicists Forum (CGF), initiated in 1999, is a committee made up of chief geophysicists, senior geophysicists, consultants and managers who meet on a quarterly basis. During the meetings the group receives updates from its current subcommittees as well as from the CSEG, APEGA and CAPP. New issues related to our practice of geophysics are usually raised during the updates or afterwards during the discussion. The current membership stands at over 60 members. Past meeting minutes and the current roster can be found on the CSEG website.

This year a decision was made to move the quarterly meetings to a low cost venue and not provide breakfast to minimize costs. A number of companies stepped up to provide meeting places at no charge resulting in the decision to hold future CGF meetings at APEGA's large conference room, centrally located in the Scotia Centre. The CGF would like to thank Tom Sneddon of APEGA for providing a venue for our future meetings and all of the companies that sponsored our meetings in the past.

### APEGA Advisory Subcommittee (2014 – Present)

The APEGA Advisory Subcommittee was formed in 2014 to follow the progress of the APEGA Legislative Review and to update both the CGF and CSEG Executive on any changes that could impact the geophysical community and how we operate as professionals. As well as encouraging members and their co-workers to participate in the APEGA Legislative Review by either attending a session and/or filling out the survey, the subcommittee provided a summary of the results from the spring 2015 consultations and a brief overview of the topics currently being addressed during the fall 2015 consultations.

Members: Ken Mitchell (Chair), Fred Kierulf, Paul Anderson, Charles Welsh, Neda Boroumand, Tom Sneddon.

### Microseismic Subcommittee (2011 – June 2015)

The existing document "Guidelines for Standard Deliverables from Microseismic Monitoring of Hydraulic Fracturing" has been expanded to include surface microseismic and once it has been reviewed, the new combined guidelines will be placed on the CSEG website (<http://cseg.ca/members/chief-geophysicists-forum>). As the Microseismic Subcommittee's work is now completed they have decided to stand down at this time. Results from the "Public Perception on Induced Seismicity" survey that was carried out in 2014, were published in the May 2015 issue of the CSEG Recorder and presented by Neda Boroumand at the May 8th "Induced Seismicity: Micro to Macro CSEG Workshop" held at the GSC Calgary office.

Members: Chris Szewelski (Chair), Shawn Maxwell, Bill Goodway, Neda Boroumand, Marian Hanna, Jason Hendrick, Paige Mamer and

contributions from Eric von Lunen, Ron Larson, Florence Reynolds and Heath Pelletier.

### Reserves Subcommittee (2011 – Present)

CGF members participated in the SEG review of SPEE Monograph IV to bring awareness and promote the use of geophysics in reserves and resources evaluation. CSEG members can download a copy of the CGF Reserves Subcommittee document "Geophysical Applications – Using Geophysics for Hydrocarbon Reserves and Resources Classification and Assessment" at [http://cseg.ca/members/ chief-geophysicists-forum](http://cseg.ca/members/chief-geophysicists-forum).

Members: Marian Hanna (Chair), David Gray, Tooney Fink, David Mitchell, Barrie Jose, Dick Willot and contributions from Stephen Jensen, Eric von Lunen, Kevin Brown, John Etherington, Bill Goodway and Neil Orr

### CAPP Updates

High profile issues presented this year include:

- ▶ Change in Alberta to a single regulator (AER)
- ▶ AER Fox Creek directive and implications for completions involving hydraulic fracturing in the Duvernay
- ▶ Alberta Royalty Review
- ▶ Microseismic – Is it seismic data (proprietary) or well data (public)?

### APEGA Updates

- ▶ Reorganization of Geoscience department
- ▶ APEGA Legislative Review –member/stakeholder consultations held in spring and fall of 2015
- ▶ Profession Practice Standards being reviewed. Read Tom Sneddon's "Professional Practice Standards and Guidelines versus Technical Standards – What is a Professional to Think?" in the Summer/Autumn 2015 issue of Source for further information.
- ▶ Creation of Environment Committee to collaborate with Professional Standards Committee

Volunteers from the Chief Geophysicists Forum were highlighted in the "CSEG Volunteer Spotlight" column in the December 2015 issue of the Recorder.

Neil Orr will be the Chairman of the CGF in 2016 and James Lamb will serve as Secretary and then CGF Chair in 2017.

If you are interested in joining the CGF, have company approval and are a CSEG member, contact Neil Orr, CGF's current Chair, at Neil.Orr@CNRL.com.

### TOM BORTHWICK

2015 CGF CHAIR

## Value of Integrated Geophysics (VIG)

The VIG committee was created in the spring of 2013 we have continued to fulfill our mandate of promoting the value in utilizing geophysics and the application of various geophysical applications to members of the CSEG, CSPG, SPE as well as the engineering and finance communities. We continue to be involved in a number of activities consisting of presentations, courses and inter society outreach and other CSEG activities.

The 2015 season started with the January 2015 CSEG RECORDER that had Dave Gray, as an invited editor, did a special section on Heavy Oil, focusing on value.

During the first quarter Dave, Lee, George, the Pauls and other members of the VIG committee helped Amanda with "VIG thinking" on the 2015 Symposium. (The committee has an ongoing commitment to assist current Symposium Chair Laurie Ross with her plans for the 2016 Symposium). David Gray was the recipient as the honoured geophysicist at the 2015 CSEG Symposium which highlighted numerous Value of Integrated talks. Later on in March, Dave went on to present to the EAGE/CSEG/GAGGS at the U of C.

John was one of the Keynote speakers at the Alberta Student Energy Conference in March presenting to over 200 students and professionals.

During the second quarter Amanda was the guest editor for the March edition of the CSEG RECORDER VIG issue along with spill over papers in the April and June issues. The issues included well-written papers by Lee Hunt and Dave Gray. Lee also gave a VIG presentation to the Board of Directors and senior management of Pulse Seismic in May.

In late May, the VIG team got involved in the Reserves Estimation Unconventionals (REU) Summit where John Duhault chaired the Cross Departmental Integration Planning Session. He, along with Amanda Knowles, Paul Anderson and Mark Sweatman gave a fast paced presentation that engaged the delegates very effectively. The four were joined by Mike Hall to form a panel to discuss the Value of Geophysics creating plenty of discussion and feedback. We were all credited with providing the liveliest and most informative session of the forum.

Paul Hausmanis presented the Value of Integrated Geophysics to 60 students during the CSEG Foundation's Geophysical Industry Field Trip (GIFT) in June. The committee then worked on fine tuning the "slidedeck" for the VIG Doodletrain course.

Throughout the year George and Paul liaised with SPE Canada to get them interested in attending the CSEG Symposium and they worked with 2015 GeoConvention Committee to help create a special SPE section at this year's convention. Although the session was poorly attended the experience will help create better integration at future conventions. Paul continues to act as the SPE liaison for the VIG committee.

During the fourth quarter Lee presented to the EAGE/CSEG/GAGGS at the U of C and gave a "Value Orientated" paper to the

EAGE Student chapter at the U of A. John co-chaired the CSPG's Gussow Conference and presented the paper: "Mythbusting: Can Geophysics add Value in Resource Plays?" He went to present an extended version of this paper at the EAGE Student chapter at the U of A along with the timely "You and Your Future" paper reflecting the current market conditions for geoscientists in the oil and gas business.

The culmination for this year was Lee and John presenting the two day VIG course during the CSEG's DoodleTrain. Lee, "The professor", focused the first day with critical thinking and decision analysis processes with group discussions. John, "the Bard", presented case histories and other "Valued Added" stories, including Microseismic, during the second day. Although the course was well received, the numbers were about half as last year. The committee is working on improving the curriculum, title and description of the course for 2016.

### Outlook for 2016

The committee wishes to continue to grow their knowledge and influence others on the Value of Integrated Geophysics. To that end, we have some already scheduled and future planned activities for 2016.

Planned activities:

- ▶ CSEG February 22, 2016 Technical Luncheon, Lee Hunt: "Value thinking from the Classical to theHyper-modern"
- ▶ Improved interaction with SPE (Liaison, Paul Hausmanis): Dave, Lee, and John will be giving three separate presentations as part of the SPE's Breakfast Seminars in April 2016
- ▶ CSEG Symposium May 2016
- ▶ GIFT June 2106

### 2016 Future Vision and Activities

- ▶ Improved curriculum, title and description for the VIG Doodle-Train course for 2016.
- ▶ Interactive "Value" session with CSEG Past Presidents
- ▶ Reach out to other professional societies to allow committee member to get the VIG Message out.

This year's efforts could not have been possible without the help from the committee members and I appreciate all of their efforts:

Current members: George Fairs (Past Chair, SPE Liaison), Dave Gray (Secretary, RECORDER Special Editor), Lee Hunt, Paul Hausmanis (SPE Liaison), Mike Hall, Laurie Ross (2016 Symposium Chair), and Ken Gray (CSEG Exec).

Past members: Amanda Knowles (2015 Symposium Chair, RECORDER Special Editor), Paul Anderson (CSEG Exec), and Amy Fox.

### JOHN LJ DUHAULT

VIG CHAIR 2015



This year the Foundation, as did many organizations in the earth sciences field, experienced the effects of the market downswing. What was to be a break-even budget year is expected to wrap up with a deficit balance which will have the effect of reducing our overall asset account by roughly \$96,000. With our asset base being so strong, the Foundation Board of Directors specifically elected to continue funding the programs that the Foundation supports in spite of reduced income so that our services to the public and specifically our students were not adversely affected. The Board will continue to monitor our financial situation and make prudent budgeting and fund allocation decisions while ensuring the continuation of our core programs. This will likely mean continued deficit budgeting for 2016 and perhaps the following year until the industry recovers from the current market troubles.

## Who we are

The CSEG Foundation is a registered Canadian organization – the charitable operating arm of the Canadian Society of Exploration Geophysicists. It was initiated in 2003-04 as the brainchild of several CSEG Past Presidents and received charitable status in 2006. It is managed by an independent Board of Directors, is closely aligned with the CSEG and is ultimately controlled by the CSEG. The Mission of the CSEGF is: to encourage and support scientific, educational and charitable activities that benefit geophysicists through the solicitation of contributions aimed at promoting the development of geophysical knowledge, education and public awareness.

When the Foundation attends public events, career fairs, conferences for university students, high school science teachers and career counsellors, we strive to make the public more aware of geophysicists' contribution to the well-being of Canadian society. We convey to educators, students and the public our key role in not only the petroleum and mining industries but also in environmental engineering and the mapping of natural hazards. The scientists and support persons in the CSEG are ethical and conscientious stewards of the environment. They help to find and develop the resources essential to our daily lives.

The Foundation is a volunteer-run organization with only a small staffing overhead. Funding to support the Foundation's activities comes from generous donations from the public, members, corporate sponsors and the CSEG itself. Thanks to all who have contributed to this year's success through either your volunteer time or your financial support.

2015 Board of Directors: (names in bold are Directors; \*designates a CSEG past-President) Each Director's term is nominally three years and candidates may be nominated either by the membership or through a nominating committee.

Larry Herd\* (Chair), Perry Kotkas\* (Past Chair and Secretary), Mike Clement (Treasurer), Susan Thomson (Assistant Treasurer) Annette Milbradt (Finance), Marian Hanna (CSEG Rep.), Dennis Ellison (Outreach Chair), Andreas Cordsen and John Boyd\* (Fund Development Co-chairs), Brian Emmerson (Scholarships Chair), Sean Contenti (Travel Grants and Learning Subsidies Chair), Helen Isaac (Communications), Mauricio Sacchi (Director-at-Large), Don Lawton (CSEG Distinguished Lecturer Chair), Jim Racette (CSEG Managing Director), Alyssa Middleton (CSEG staff).

## This year's highlights

- ▶ Foundation assets grew in excess of \$2M thanks to the generous donations of our members and corporate supporters.
- ▶ For the 2015 budget year, the Foundation Board elected to reallocate \$12,000 of the annual operating funds to specifically support programs for unemployed members.
- ▶ Outreach/University Student Outreach (USO) continued to support students in universities and high schools, and to inform educators and the public at large about geophysics and the CSEG. Outreach is the Foundation's largest group and accounts for about half of our operating budget. Outreach sent representatives with informational displays and handouts to teachers' conferences, science and physics conferences, career counsellor's conferences, and career fairs.
- ▶ We continue to support post-secondary education and students. From 72 applications for university scholarships, the Foundation awarded 15 scholarships to students at eight universities across Canada. In addition, one scholarship was awarded to a student at a technical institute, and three scholarships were awarded to high school students entering university in the fall of 2015.
- ▶ The Foundation provided travel grants and learning subsidies to help Canadian undergraduate and post graduate students take courses and attend conferences, seminars and geoscience field trips. In 2015, \$11 000 in funding was provided to assist over 60 recipients in support of travel or registration in events during the 2015 calendar year.
- ▶ Our 2015/2016 Distinguished Lecturer is Dr. Mauricio Sacchi, who is giving his talk entitled "New and not-so-new applications of low-rank matrix and tensor completion to seismic data processing" to various different universities and institutions across Canada and into Alaska, wrapping up in April, 2016.
- ▶ By connecting with our Ambassadors and University Student Outreach Programs, we continued to host receptions at a number of lectures and providing information on CSEG membership to students and CSEG members across Canada.
- ▶ The Geophysical Industry Field Trip (GIFT) took over 40 students from eight different universities to various host companies, where



they learned more about operations, processing, interpretation and other elements of applied geophysics.

- ▶ The fifth Earth Science for Society (ESfs), partnered with APEGA, CSPG and CWLS, which has many CSEG members on the organizing committee, hosted over 650 members of the public and over 1,350 junior high school students from 11 schools.
- ▶ Seismic in Motion for Students, run jointly with the CAGC, took more than 200 high school students to the Waiparous area to spend a day seeing all of the aspects of seismic field operations, learn about job opportunities, and hear how we minimize environmental impact.

In the big picture, the CSEG Foundation's ongoing success is attributable to several things:

- ▶ A strong and varied-experience Board of Directors, a good set of Governance procedures and advice and input from experienced and engaged members.
- ▶ Outstanding volunteers, some who have contributed for many years and some who are brand new, creating a dynamic mixture of experience, enthusiasm, energy and new ideas.
- ▶ Excellent financial support from our donors, including a number of very significant individual donations (please see our Donor Recognition List in the April 2015 RECORDER).

## LARRY HERD

CSEG FOUNDATION CHAIR

## Finance

**MIKE CLEMENT, TREASURER AND DIRECTOR**

**SUSAN THOMSON, ASST. TREASURER AND DIRECTOR**

At the end of 2014, the Canadian Society of Exploration Geophysicists Foundation (CSEGF) approved a breakeven budget for 2015. It has been a difficult year for fund raising and sponsorship on all levels within the CSEG and the CSEGF due to the unprecedented downturn in oil and gas revenues of our corporate members and the effect that has had on our individual members. It was also recognized early in 2015 that the CSEG would not be able to provide the CSEGF with an expected \$88,000 in funding.

That being said, the CSEGF has managed to maintain their bottom line on their balance sheet from the end of 2014 to the end of Q3 2015 to a small loss of approximately 1 percent. This is due in part to the CSEGF investment with the Calgary Foundation being particularly robust. In 2015, the CSEGF board approved an additional investment of \$90,000.00 to the Calgary Foundation adding to the initial investment of \$500,000.00 made in 2013. As of September 30, 2015, that investment value is now \$731,697.41. In 2015, the Foundation has been able to maintain all of the programs that were funded in 2014.

Every month, the CSEG Foundation's finances are overseen by the CSEGF financial team and the CSEGF accountant and approved by the board. The financial policies and processes are well defined and strict protocols are followed. Our assets have been distributed over many GIC's to maintain insurability by the CDIC. The Investment Policy, originally approved by the Board in 2014, was updated in 2015. This policy has guided the Foundation's investment choices. It sets out financial objectives and guidelines for risk, targets, and investment mix that best protect the Foundation's funds.

Pending final audit, the Foundation's total assets at yearend are sitting at just over \$2,000,000. As of September 30, 2015, the CSEG Foundation has long term funds distributed over 11 GICs and a managed fund at the Calgary Foundation. Previous years' audited financial statements are available on the CSEG website: <http://cseg.ca/foundation/about-the-cseg-foundation>

At the time of this report, projections for the 2015 are: Total budgeted revenue of \$137,911.19, total budgeted expenses of \$224,462.57, total net unbudgeted revenue of (\$9,692.55), resulting in net revenue of (\$96,243.20).

The CSEG Foundation Board is in 2016 budget discussions in Q4 2015 and, when finalized, the budget will be forwarded for final approval by the CSEG Executive. Due to the current state of the economy, overall budget levels and programs funded may be reduced. The CSEG Foundation will continue to exercise fiscal prudence during this economic downturn.

I would like to acknowledge and thank Susan Thomson, the incoming Assistant Treasurer, for her invaluable contributions since coming on board in July, Annette Milbradt for her experience and wisdom with all things Foundation, Jim Racette and Alyssa Middleton for their help and support in the CSEG office, as well as Spryng Kubicek, our accountant at Associations Plus, and Murray Hunter, our auditor for their work and their guidance.

## Communications

**HELEN ISAAC, CHAIR AND DIRECTOR**

The Communications portfolio has the responsibility of coordinating CSEG website updates and connections between the Foundation and the general membership. The website updates keep the membership informed about activities such as scholarships, the mentorship program, GIFT, the travel grant and learning subsidy, and the CDL tour. The Foundation page on the website also includes information about the board of directors, all the activities we support, and annual reports and audited statements.

The Foundation communicates to the membership through personal letters and articles in the RECORDER. In 2015 the RECORDER published articles on student-oriented activities such as the Mentorship program, scholarships, and Outreach activities

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in schools, at career fairs and at the GeoConvention. We also published a major article about the Foundation and all its activities and fund-raising efforts. The article listed our donors and thanked them for their generosity. We also wrote about Fund Development and its initiatives.

All communications from the Foundation to its members are edited for content and appearance to give a consistent message. In particular, Communications works closely with Fund Development to create letters thanking donors or soliciting funds.

## Fund Development

**JOHN BOYD, CO-CHAIR AND DIRECTOR**

**ANDREAS CORDSEN, CO-CHAIR AND DIRECTOR**

In a difficult year for both corporations and individuals, new donations were understandably less than in previous years. We continued to receive support however, and on behalf of the Board of Directors and all of the students and CSEG members who benefited from Foundation programs, we thank all of you who have contributed to the Foundation.

The CSEG Foundation assets at the end of October were \$2,010,625 and the Endowment reached \$1,548,625. We received \$112,161 from previous pledges, new donations and sponsorship for programs. The CSEG has, in previous years, made significant donations to the Foundation but we knew that would not be possible in 2015. Fortunately, our strong financial position allowed us to maintain our programs, somewhat reduced and with expenses trimmed.

The Fund Development Committee met monthly and concentrated more on plans for the future than on fundraising for this year. We did solicit funds from Corporations to help finance some of our programs, but not for the endowment. We have trimmed expenses but have not made significant reductions in any of our programs, nor have we budgeted such reductions in 2016. The Directors believe that we need to maintain our programs during a downturn. We also believe that when we are ready to start soliciting donations, again we can remind potential donors that their previous donations allowed us to maintain our programs in difficult times.

We are continuing to develop a program to promote planned giving, encouraging gifts from the estates of our CSEG members. Derek Fraser, our fundraising advisor, has been very helpful with this effort. We will describe the benefits of planned giving on our website and we have set up a committee of senior CSEG members who are able to discuss it with their peers.

An effort to promote alumni support for scholarships and other university programs was launched at an alumni reception held before the CSEG-F Challenge Bowl at the May GeoConvention. The CSEG membership list does include most of our members' alma

mater and we will attempt to collect more data through our annual renewals to help us organize alumni groups.

Scholarships, Outreach and Travel Grants all require fundraising and now the directors responsible for these programs are part of the Fund Development Committee.

## Canadian Distinguished Lecturer

**DR. DON LAWTON, CHAIR**

**DR. MAURICIO SACCHI, 2015/2016 DISTINGUISHED LECTURER**

The Foundation operates the national CSEG Canadian Distinguished Lecture Tour, an annual event that started in 2005. Many post-secondary Geoscience departments across Canada host an industry or academic expert who delivers a presentation highlighting topics of current interest.

The 2015/2016 Distinguished Lecturer is Dr. Mauricio Sacchi, a well-known Edmonton-based academic in the world of seismic signal processing and imaging and recipient of the 2012 CSEG Medal, the highest award that the Canadian Society of Exploration Geophysicists bestows. Mauricio is presenting his talk "New and not-so-new applications of low-rank matrix and tensor completion to seismic data processing" to various different universities and institutions across Canada and into Alaska, wrapping up in April, 2016.

## Outreach

**DENNIS ELLISON, CHAIR AND DIRECTOR**

**DOUG UFFEN, VICE CHAIR**

The CSEG Foundation Outreach Committee matures and maintains relationships between the CSEG and its current members, prospective members, and university students. As per our mandate we focus heavily on developing awareness and education of the field of geophysics to these groups, as well as grade school students and the general public. Through 2014, the CSEG Executive and Foundation continued their solid financial and moral support, allowing our many volunteers to successfully complete another full year of productive activities.

The committee's core members for the 2015 year are Dennis Ellison, Doug Uffen, Karen Chong, Stephen Kotkas, Chris Bird, Frank Ryan, Ben Consolvo, Deepi Mand, Annette Milbradt, Jeff Calvert Alessandro Carducci.

Supporting the committee in its many initiatives is a very large group of volunteers. Thank you to those who generously gave their time and energy, making this another highly successful year for the Committee. Thanks are also due to the many companies and organizations who allowed their staff to participate in our many programs and initiatives.

Alessandro Carducci chaired Schools Outreach and Deepi Mand chaired Public Outreach. Our dedicated and enthusiastic volunteers attended over 20 career fairs and assorted exhibitions in 2015, talking to students and the public about geophysics. We took our booth all over Canada, including Vancouver, Kamloops, Kelowna, Winnipeg, Saskatoon, Regina, Canmore, Edmonton, and Toronto, as well as to many 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 numerous in-school presentations.

From March 15th to 17th 2015, over 2000 students, teachers, and general public attended the fifth annual highly successful Earth Science for Society (ESfS) exhibition. ESfS had a strong line-up of exhibitors and over 120 volunteers contributing 765 hours to the success of the event.

From September 29th to September 30th, 2015, CSEG-F Outreach hosted over 200 high school students and teachers from multiple CBE high schools at the Seismic in Motion for Students field trip, where companies showcase their seismic acquisition technologies and procedures. Outreach volunteers visited the schools beforehand and briefed students about careers in geophysics, and prepared them for their day in the field. They also guided the students on-site through various field stations, including the CSEG booth. At the booth, we provided participants with an integrated overview of the various parts of the program. We continue to receive positive feedback from participants and extend a big thank you to all the volunteers and sponsors for their generous time and financial contributions to these important and successful events.

The University Student Outreach (USO) committee was led by Chris Bird and Frank Ryan. This year it brought the Outreach booth to five undergraduate conferences, including the Canadian Geophysical Union's convention for the first time, attended multiple university career fairs and presented several Best Geophysical Paper awards. The USO maintained its ongoing communication with students through email and regular newsletters, connecting them with the Scholarship Committee and the Foundation for travel grants; organized a student area at GeoConvention; helped to deliver GeoSkills 2015 for university students and junior geophysicists; provided networking opportunities; and ran the annual summer student field trip (Geophysics Industry Field Trip, GIFT) for over 40 university students from universities across Canada.

The USO also maintained its cooperation with other organizations to help administer events such as the Calgary Talk Series, and CSEG/EAGE's student chapter talks. The Mentorship program chaired by Nathan Fester, is in its seventh year and continued its steady growth through 2015. Workshops for both mentees and mentors were also held. Not only has the program accumulated more than 60

protégé-mentor pairings between university students and seasoned professionals, but has also extended using various and innovative forms of mentorship in order to reach mentees across Canada.

We are pleased to recognize and thank Chevron for their generous sponsorship of 2015 student memberships, and we are searching for our 2016 sponsor. We greatly appreciate all past companies for this valuable contribution!

In order to further education, the newly created Educational Resources sub-committee has created a complete online source of educational materials, lesson plans, and experiments related to the field of geophysics and directly associated with the Alberta curriculum, for the use of teachers and students.

The 2015 Challenge Bowl subcommittee was led by Lewis Jones and supported by many volunteers, notably Stephen Kotkas, Chris Bird. The event's indefatigable host and moderator, Peter Duncan, once again navigated eight teams of competitors vying for an expense paid trip to compete in the Challenge Bowl finals at the 2015 SEG convention in New Orleans. Duncan's high energy style fed enthusiastic audience participation throughout the action-packed geoscience competition with competitors. Reid Campbell and Brandon Clayton of University of Manitoba won the Canadian Division and placed 4th in the finals in New Orleans.

CSEG Outreach members volunteered on the Honorary Address (HA) committee, chaired by Keith Millis. This year's event took place in November, with the theme "Planetary Geology: Exploring Mars". Mars Exploration Rover Project Scientist Matt Golombek of the California Institute of Technology Jet Propulsion Laboratory, and Don Hladiuk, Past President of the Royal Astronomical Society of Canada were the Keynote speakers for the event. Matt highlighted the importance or understanding earth's processes and how we can apply it to Mars and other planets to learn about their history and how geoscience is used to find rover landing sites. This event had taken place at the Arts Commons in the Jack Singer Concert Hall.

Outreach members work with many other organizations to share outreach and education ideas and resources and to support their complementary geoscience initiatives. This collaboration has facilitated our continued expansion into B.C. and central and eastern Canada in 2015.

Helen Isaac is the CSEG Foundation Communications Director who coordinates reports regarding Outreach activities. We encourage you to read our column in the Regular Features section of the RECORDER.

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

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## Scholarship

**BRIAN EMMERSON, CHAIR AND DIRECTOR**

**CRAIG MOSHER, SENIOR TRUSTEE**

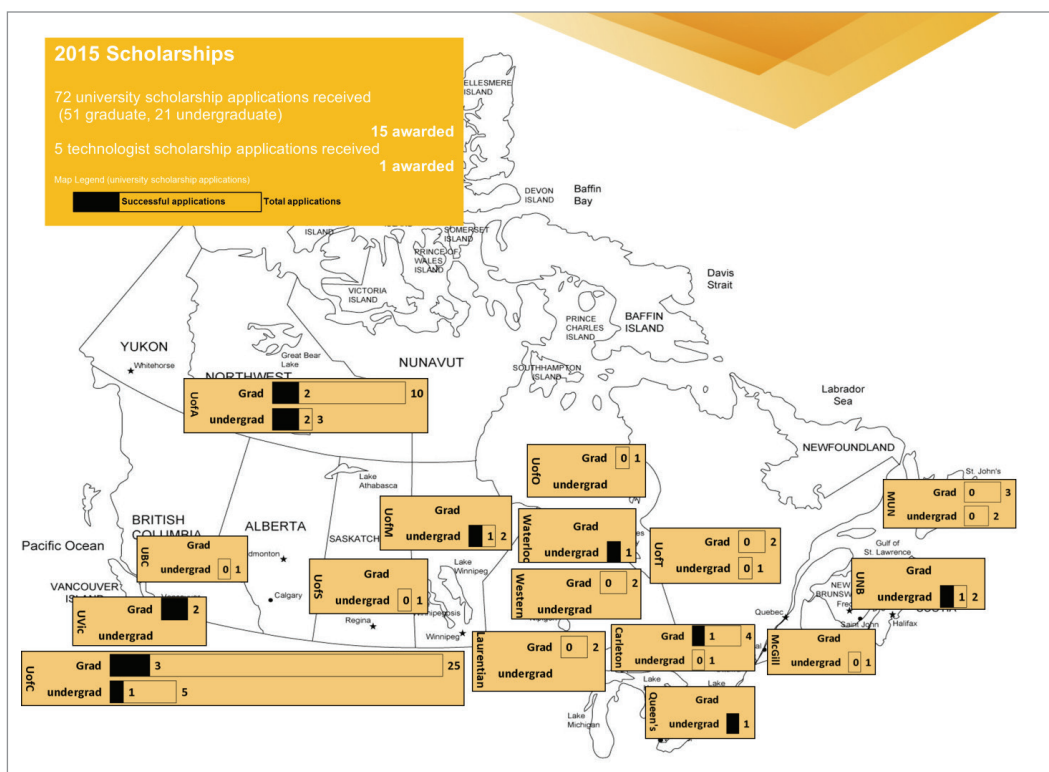
**STEVEN KIM, JUNIOR TRUSTEE**

2015 was another successful year in the 46-year history of the CSEG Foundation's scholarship program. In 2015, the scholarship committee was able to allocate \$32,500 to 19 post-secondary students across Canada. The committee would like to acknowledge the individuals, oil and gas operating companies, service companies, the Rob Shugg Memorial Fund, and the CSEG Foundation for their backing. Thank you all for your generosity, particularly in such tough times for the oil and gas industry; our program relies on your contributions and we and the recipients of funds are extremely grateful.

In 2015, we received a record number of 72 applicants for university geophysics scholarships (51 graduate, 21 undergraduate). The committee awarded 15 scholarships of \$2,000 in this category, to students at eight institutions across Canada. We also received five applications from students enrolled in a technologist program, and awarded one scholarship of \$1,000 in this category. In the summer of 2015, the committee also awarded three \$500 scholarships to high school students entering a science-based university program in the fall of the same year.

University student and technologist scholarship recipients in 2015 were:

RECIPIENT	INSTITUTION	SPONSOR
Jennifer Adam	U New Brunswick	Pulse Data Inc
Sean Bettac	U Alberta	Hampson-Russell
Wesley Campbell	U Waterloo	CSEG Foundation and John Townsley
Fernanda Carozzi	U Alberta	Andreas Cordsen
Craig Christensen	U Calgary	CNRL
Raul Cova	U Calgary	CSEG Foundation ( <i>awarded to a University of Calgary student, following the Geoconvention Alumni Draw</i> )
Jeremy Gosselin	U Victoria	Brian Emmerson and Talisman Energy (Part of the Repsol Group)
Nadine Igonin	U Calgary	Talisman Energy (Part of the Repsol Group)
Ayodeji Kuponiyi	U Victoria	Arcis Seismic Solutions
Junxiao Li	U Calgary	CGG
Christopher Nixon	U Alberta	Anonymous donor
Peter Oliver	Carleton U	Rob Shugg Memorial Fund



Sherry Rath	U Alberta	Athena Resources Ltd
Yana Tyomkin	U Manitoba	Marc Boulet and Cenovus Energy
Callum Walter	Queen's U	CSEG Foundation and the CSEG Ambassador Program
Nathan Rose	SAIT	CSEG Foundation

High school recipients of scholarships, entering into university science programs in the fall of 2015 were:

RECIPIENT	INSTITUTION	SPONSOR
Robyn Cameron	U Alberta	Perry & Karen Kotkas
Grace Knowles	St FX	Perry & Karen Kotkas
Lulu Lu	McMaster	Anonymous donor

## Travel Grants and Learning Subsidies

**SEAN CONTENTI**, CHAIR AND DIRECTOR

Committee: Sean Contenti, Daniel Loas, Kun Guo

The role of the Travel Grants and Learning Subsidy (TGLS) program is to provide student and professional CSEG members with financial support to develop awareness, knowledge, and skills in the geosciences by supporting educational and professional development opportunities for members. As in 2014, Andreas Cordsen has once again supported the TGLS program through a dedicated sponsorship commitment to the CSEG Foundation. Thank you Andreas; our committee sincerely appreciates the continued 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 light of the growth in demand for the CSEG Foundation (CSEGF) Travel Grant and Learning subsidy (TGLS) program through the 2012 (\$8 255), 2013 (\$18 138) and 2013 (\$22 616) funding years provided the

CSEGF with incentive to provide the TGLS program with a budget of \$30,000 for the 2015 funding year. This has allowed the TGLS program to provide, as of this report, over \$11,000 in funding for over 60 recipients to travel or participate in events during the 2015 calendar year. We are proud to have been able to assist members of the CSEG professional community in Calgary and area through sponsorship of the CSEG Emerging Professionals Program, as well as students from the following universities:

- ▶ University of British Columbia
- ▶ University of Alberta
- ▶ University of Calgary
- ▶ University of Manitoba

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. Towards this goal, the TGLS committee is pleased to report that a previous effort, developing an online application form, has been successful and is functioning to streamline the application process for applicants. The TGLS committee has requested a budget of \$20 000 for the 2016 calendar year, and will be undertaking efforts to increase our exposure with under- and un-employed CSEG members, with a focus towards providing funding for skills maintenance and ongoing professional development.

The 2016 TGLS committee would like to continue to encourage relationships with university student groups to facilitate annual application continuity for specific events (GeoConvention, GIFT, SEG Annual Meeting, geophysical field schools). Student groups that communicate their intention 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. As well, the 2016 committee would like to forge partnerships with new and existing educational or professional development initiatives (CSEG Emerging Professionals Program, others), to reduce or eliminate financial barriers and promote continuing geoscientific and geophysical education.

## DoodleTrain 2015

To honour our mandate to provide high quality education at affordable rates, the 2015 DoodleTrain Committee offered sixteen high calibre courses in four distinct categories: Topics for Technologists, Acquisition and Processing, Reservoir Geophysics and Interdisciplinary studies. Despite uncertainty and facing a steep challenge in this particularly difficult year, our volunteers focused on formulating clear plans making tough decisions early on to produce yet another successful training week that ran between the 2nd and 6th of November 2016. These included eleven returning and five new courses featuring extremely well received instructors such as Leon Thomsen, Steve Roche and Dr. Thomas Davis, William Abriel, Ruben Martinez and Gijs Vermeer. This powerful line-up attracted 240 students – low compared to previous years but significant under the circumstances and sufficient to meet our mission without a fiscal deficit.

This year, for the first time, the prestigious Bill Nickerson Award went nationwide to offer, on a competitive basis, free courses to a qualified student of Geophysics. The selected candidate was Tara Soporasan from the University of Manitoba. For the first time the DoodleTrain regularly updated the CGF seeking their support in our endeavours and, last but not least, elected Danielle Roberts to head its activities for the 2016 running of the DoodleTrain. This year, the DoodleTrain Committee provided logistic support to two GeoConvention workshops (Naturally Fractured Reservoirs and Induced Seismicity) but shed its organizational responsibilities to the CSEG Education Committee.

Acknowledging the difficult employment circumstances facing several of our colleagues and in particular recent graduates and students, the DoodleTrain Committee, along with financial assistance

from the CSEG Foundation launched an initiative to provide them access to all courses at an extraordinarily low \$50 per instruction day fee. Approximately 40 took advantage.

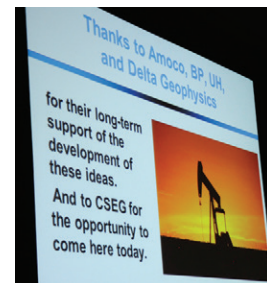
I wish to thank all the volunteers for their dedication in a difficult year full of uncertainty. Their focus on the mission was a determining factor in our success. Special thanks to Jim Racette and Alyssa Middleton for their invaluable support and Danielle Robertson for gracefully accepting to lead in 2016.

### DoodleTrain Committee Members 2015

- Akshay Gulati
- Danielle Robertson
- Darren Tallas
- Dunia Blanco Acuna
- Patricia E. Gavotti
- John Fernando
- Jounada Oueity
- Juan Joffre
- Karol Rohraff
- Lilin Liu
- Mike Hall
- Mohammed Al-Ibrahim
- Ryan Cox
- Vicente Oropeza Bacci

### JUAN JOFFRE

DOODLETRAIN CHAIR, 2015



Jon Downton, CSEG President 2009 introduces Speaker Leon Thomsen, (SEG President 2007), who arrived as Speaker for the CSEG Luncheon wearing his Texas Stetson hat, and thanked CSEG at the end of his talk.



Leon Thomsen receiving the CSEG "crystal DoodleTrain", as presented by L-R: Ken Gray (Assistant Director Education), Rachel Newrick (CSEG President), Speaker Leon Thomsen, Jon Downton.

## 2015 CSEG Symposium

The fourth annual CSEG Symposium was held on March 4th at the Telus Convention Center. This industry focused educational event honoured David Gray for his progressive vision and many contributions to the field of geophysics. The Symposium followed the theme of "Dynamic Value" as related to our ability as scientists to adapt to the changing landscape of our industry. Speakers were brought in to deliver talks on value oriented, innovative case studies which address the challenges of technical persons working as part of an integrated team in the oil and gas industry today. These challenges include the use of decision analysis and overall business acumen in leveraging geophysical knowledge to increase production and decrease costs.

The Symposium Committee was comprised of: **Amanda Knowles** (Chair), **Lee Hunt** (Past-Chair), **Mohammed Al-Ibrahim** (Photographer/Advertising), **George Fairs** (Sponsorship), **Scott Reynolds** (Speakers), **Alishah Nayani** (Speakers), and **Laurie Ross** (Arrangements). These committee members went above and beyond to create an enjoyable, educational event, which brought timeless value to the 2015 Symposium.

The day was focused on the dynamic value geophysicists bring to responsible and economic oil and gas exploration and development. One of the concepts that is clear in our profession is that we get to higher levels of thinking and success by standing on the shoulders of giants. David Gray is one of these giants. David is amongst the best, brightest, and most accomplished of our country's geophysicists and he is responsible for pushing modern, relevant, and valuable advances in AVO and geomechanics for unconventional and conventional plays. One of my goals as Symposium Chair was to get to know David and to read all of the published works that David has contributed to over the years. It was an educational, enlightening and humbling experience to immerse myself in his mind. As a committee we knew that the simple act of honouring David would be educational in itself. David is a visionary, ahead of his time, and he adapts to the changing demands of the industry like the smooth response of a race car turning the tight corners of a track. Fittingly, the gift that was presented to David at the Symposium was a model of a Shelby Cobra 427, which was chosen to compliment his dynamic personality and drive.

The Iron Throne was used as a prop during one of our discussion periods. During the Symposium David agreed to sacrifice himself in honour of education and once again be exposed to scrutiny by sitting on the Iron Throne to be asked questions.

The speakers for the 2015 Symposium were a creative, dynamic crew. Similar to last year, we desired a line-up of speakers that would be provide variation in subject matter and in familiarity to the audience. Some of the speakers were well known geophysicists, some were engineers and some had never spoken at a venue like the Symposium before. We even exploited our Honouree by asking him to do a keynote speech. As much as possible, we wanted the speakers to thematically tie their variations in subject matter with the underlying

concept of value. They all did a fabulous job! The speakers and their talk titles are below:

1. *Mano a mano with VVAZ and shear wave splitting: tales from the trenches in fracture analysis of a 3C-3D land data set*, **Mike Perz**, B.Sc., P.Geoph, Arcis Seismic Solutions
2. *How to Determine Stress in the Earth from a Borehole: Using Imaging Methods with Some Examples*, **Douglas R. Schmitt**, Ph.D., University of Alberta
3. *Heavy Oil Reservoir Characterization Case Study: PP-PS Joint Inversion in Jackfish*, **Alanna Caldwell**, B.Sc., P.Geoph, Devon Energy
4. *Low Frequency Models for AVO Inversions – Strategies for Success*, **John Pendrel**, Ph.D., CGG Geosoftware
5. *How seismic attributes and visualization techniques can assist in reservoir characterization of an EOR project – A Husky case study*, **Christian Abaco**, B.Sc. (Hons.), M.Sc., Husky Energy
6. *Geomechanical Prediction of Hydraulic Fracture Geometry from Reservoir*, **Shawn Maxwell**, Ph.D., IMaGE
7. *Geophysical Methods for Mapping a Shallow Unconsolidated Gas Sand*, **Rebecca Daniels**, M.Sc., P.Geoph, Talisman Energy Inc
8. *Assessment of Unconventional Reservoirs Based on Geophysical Methods*, **Eric von Lunen**, M.Sc., Nexen CNOOC LTD
9. *The Rock Physics Bridge Connecting Seismic Data and Heavy Oil Reservoir Simulation*, **Laurence R. Lines**, Ph.D., University of Calgary
10. *VOI Assessment for a 4D Seismic Program in an Athabasca Oil Sands Play*, **Kent Burkholder**, B.Sc., P.Eng., Decision Frameworks
11. *Never look at seismic the same way*, **Dragana Todorovic-Marinic**, M.Sc., Nexen CNOOC LTD

Question boxes were placed strategically around the hall so that questions and comments could be collected throughout the day. Our goal was to answer those questions during the discussion periods; however there were so many offerings that we didn't have time to get to them all. This is great news of course! We value discussion at the Symposium event as it stimulates our minds to put things together, pull things apart or steer our thoughts in completely different directions.

Next year's Symposium is already in the works. Laurie Ross is the incoming chair of the new committee. She has crafted a survey of the participants in this year's event and she will use that and other information to fine tune her committee's mandate.

The 2015 Symposium was generously sponsored by Absolute Imaging, APEGA, Arcis Seismic Solutions, Canadian Discovery Ltd., Cenovus Energy, CGG, Seisware, Nexen and Jupiter Resources. We thank them all for their support.

### AMANDA KNOWLES

2015 CSEG SYMPOSIUM CHAIR

## Lunchbox Geophysics

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

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

The Lunchbox Geophysics committee welcomes all interested parties to submit their ideas for future talks. Our contact information can be found on the web page: [www.cseg.ca/events/lunchbox.cfm](http://www.cseg.ca/events/lunchbox.cfm).

For the 2015 season, two talks were given:

- ▶ **January 2015** – Robin Owens, Talisman Energy  
*Jambi Merang Carbonate Gas Reservoir, onshore Sumatra: Using 3D Seismic Attributes to guide Porosity Modelling*
- ▶ **February 2015** – Dr. Kristopher Innanen, University of Calgary  
*Predicting Internal Multiples: Basic Ideas and Parameter Choices*
- ▶ **March 2015** – Laurie Weston Bellman, Canadian Discovery Ltd.  
*The Surprising Influence of Multi-Component Data*
- ▶ **April 2015** – Andrew C Newson, Moose Oils 2014 Ltd  
*Imaging the Overturned Limb of a Footwall Syncline and its Impact on Exploration in Fold and Thrust Belts*
- ▶ **September 2015** – Carter Edie, Divestco  
*Hiding in Plain Sight: Improving seismic resolution through diffraction imaging*
- ▶ **October 2015** – Liansheng Liu, PanImaging Canada, SK  
*The Total Solution to Near Surface Problem in Complex Exploration Areas*

In addition to the speakers we would like to thank Marc Boulet, Mark Jeroncic 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 the talks.

### JASON MCCRANK AND RICHARD GRAY

COMMITTEE CO-CHAIRS

## Microseismic User Group

The Microseismic User Group (MUG) is an open forum that provides an educational series of talks to create an environment where people can share microseismic experience. It was originally organized by Shawn Maxwell and Paige Mamer in 2012 and a new member of the committee, Hoda Rashedi, joined in 2015. In 2015 with increased concern around the issue of Induced Seismicity, the focus of the MUG presentation topics continued to evolve and expand to align with the topics of interest to the CSEG community. A total of eight talks were hosted on various topics, but mostly focused on Induced Seismicity and Geomechanics.

During the spring talks were held in an auditorium offered through the venue sponsor CGG. In the fall, the MUG moved to a new venue generously donated by IHS. Attendance numbers varied with each presentation with some of the presentations filling the venue past capacity. In 2016, the MUG committee will focus on addressing the venue capacity issue.

### 2015 MUG Presentations

1. **January 29th, 2015** – Gail Atkinson, *Estimating Hazards from Induced Seismicity*
2. **February 25th, 2015** – Mirko van der Baan, Drew Chorney, Vincent Roche, *Geomechanical modeling of Induced Seismicity*
3. **March 24th, 2015** – Andy Gamp, *Improving Hypocenter Depth Accuracy at Graham BC – A passive seismic monitoring case study*
4. **April 28th, 2015** – Todd Shipman, *Seismic monitoring in Alberta and Subsurface Order #2 (Monitoring and Reporting of Seismicity in the Vicinity of Hydraulic Fracturing Operations in the Duvernay Zone, Fox Creek, Alberta)*
5. **June 23rd, 2015** – Dave Eaton & Enrico Caffagni, *Enhanced Downhole Processing Using Matched Filtering Analysis*
6. **October 8th, 2015** – Neda Boroumand, *Why is microseismic monitoring important?*
7. **November 9th, 2015** – Paul Young, *Laboratory Earthquakes*
8. **December 2nd, 2015** – Matt Ng, *Use of Microseismic Data to Assess and Manage Montney Well Completions*

### HODA RASHEDI



## RECORDER 2015

The RECORDER continues to be the flagship magazine of the CSEG, publishing technical articles of current or human interest articles, and society news, as well as advertisements from our industry.

The 10 RECORDER issues published in 2015 used a Focus Theme schedule plan initiated by Past Chief Editor Satinder Chopra and continued by Chief Editors John Fernando and Penny Colton. The Committee selected 10 focus topics and appointed a Special Coordinator for soliciting articles for the assigned theme. Both the coordinators as well as the RECORDER Technical Editors did a marvelous job, which helped bring out each issue in a timely fashion.

### TECHNICAL ARTICLES

The 2015 RECORDER issues published forty-three articles in Focus Themes and five articles of a general nature.

#### The FOCUS THEMES and Coordinators / Technical Editors:

Issue Month and Focus Theme	Special Coordinator / Technical Editor
January: Oil Sands	David Gray
February: Electromagnetic Methods	Martyn Unsworth / Mostafa Naghizadeh
March: Value of Integrated Geophysics (VIG)	Amanda Knowles / Rob Holt
April: Land Seismic	Rob Vestrum* / Mostafa Naghizadeh
April: VIG (continued from March)	Amanda Knowles
May: Rock Physics	Doug Schmitt* / Neda Boroumand
June: Unconventional Resources	Marco Perez* / Matteo Niccoli
September: Overseas Research	Rob Holt* / Fereidoon Vasheghani
October: Conjugate Margins	Deric Cameron, Ian Atkinson* / Rob Holt
November: Programming in Geoscience	Matteo Niccoli* / Fereidoon Vasheghani
December: Land Seismic in Complex Basins	Rob Kendall* / Mostafa Naghizadeh

### GENERAL ARTICLES

Five General articles were submitted by authors to the Editor and accepted for publication. The General articles were:

**January and February** by Selim Simon Shaker – *A new approach to Pore Pressure Predictions, and A new perspective on shallow water flow (SWF) prediction...*

**May** by Neda Boroumand (CGF) – *Survey Responses on Public Perception of Induced Seismicity*

**June** by Jean M. Legault – *Airborne Electromagnetic Systems – State of the Art*

**October** by Ryan Shultz and Virginia Stern (AGS) – *The Regional Alberta Observatory for Earthquake Studies Network (RAVEN)*

The **Interviews** are popular with the CSEG readership and provide ready access to an invited selection of geophysicists who share insights on their knowledge and experience base with the rest of the geoscience community. The interviews are coordinated by Satinder Chopra in one of two formats. The short-format interviews are Q & A with selected authors from the book: *52 Things You Should Know About Geophysics* by Matt Hall and Evan Bianco. The traditional long-format interviews are with selected members of the CSEG. The following individuals were interviewed during 2015:

**January** – Doris Ross

**February** – Kris Inannen, plus: Mike Batzle (reprint of March 2006 Interview with Mike)

**March** – Bert Brill, Maiti Erwin, and Chris Jackson (from the “52 Things”)

**June** – Andreas Cordsen, Mirko van der Baan

**September** – Marian Hanna, Deric Kleibacker, Alex Cullum, and Linn Margareth Johansen (from “52 Things”)

**October** – David Dolberg

**November** – Marilyn Mawdsley

**December** – Marie Hong

The RECORDER is also the primary “record” of the activities and accomplishments of CSEG Committees, Volunteers, and the Foundation. The following Reports about CSEG Events and Activities were published in 2015.

**January:** Career Fairs, Atlantic University Conference

**February:** ESfS, Student Mentorship

**March:** 2014 CSPG Honorary Address, CSEG Foundation Outreach Committees, the Western Inter-University Geosciences Conference 2015 (at the University of Manitoba), and the November 2014 CSEG Fall Mentorship Workshop

**April:** CSEG 2014 CSEG Scholarship Recipients, CSEG Foundation Outreach – Mentor Workshop, Ambassador Program, Emerging Professional Program Kickoff

**May:** CSEG Executive Elections – Director Responsibilities, Life after CSEG Elections, GeoSkills

**June:** CSEG-Foundation: USO at GeoConvention 2015, CSEG Challenge Bowl, also Mentorship, Roadrace and Fun Run

**September:** T-Wave Golf, Roadrace and Fun Run, Mentorship events

**October:** RECORDER Committee Press Tour, Lunchbox Geophysics, U Calgary Earth Rings, June Lunch Photos (2015-16 CDL), ESfS, CSEG-F, October Lunchbox (Liu), 2015 Symposium

**November:** CSPG Honorary Address (Mars), CSEG Foundation – Scholarship Draw at Alumni focused GeoConvention gathering

**December:** CSEG Foundation Outreach – Seismic in Motion, EPP, ESfS, CSEG DoodleTrain Luncheon, 2015 CSEG Workshops at GeoConvention 2015

RECORDER 2015 continued from Page 25

## VOLUNTEER SPOTLIGHT COLUMN

President Rachel Newrick continued the 2014 monthly initiative spotlight on volunteers who have been working on different committees. The following committee volunteers were featured in the issues:

Issue	Committee	Volunteers
January	Technical Luncheons	Kurt Wikel, Mark Jeronic, Mohammed Al-Ibrahim
February	Symposium	Alishah Nayani, Amanda Knowles, and Scott Reynolds
March	CSEG Past Presidents	Peter Savage (1962), Roy Lindseth (1971), Easton Wren (1981), John Boyd (1986), Nancy Shaw (1998), Perry Kotkas (2000)
April	RECORDER Technical Editors	Rob Holt, Mostafa Naghizadeh, Fereidoon Vashighani, Matteo Niccoli
May	Past Executives	Dave Nordin, Jason Noble, Jason Schweigert
June	Digital Media	Marc Boulet, Will McCarthy, Johnathan Schneider
September	RECORDER Columnists	Carmen Swalwell, Kristy Manchul, Mike Doyle, Oliver Kuhn
October	Emerging Professionals (EPP)	Jeff Calvert, Chau Huynh, and Brian Schulte
November	Value of Integrated Geophysics	George Fairs, John Duhault, Lee Hunt, and David Gray
December	Chief Geophysicists Forum	Tom Borthwick, Neil Orr, Marian Hanna, Chris Szelewski

## COMMITTEE HIGHLIGHT COLUMN

The Member Services Directors undertook to provide historical overview information about an individual Committee each month. These began as "Reports" and starting in fall 2015, their report was listed in the RECORDER Index as a Column called "Committee Highlights". Those 2015 Committee Highlights /Reports are listed below by month and Committee.

January: CSEG Doodle Spiel

February: CSEG Distinguished Lecture (CDL) Tour, Ski Spree Committee

March: CSPG Honorary Address

April: CSEG Foundation Committee – History: A View from high Altitude – plus Fundraising,

May: CSEG Challenge Bowl Committee

June: Volunteer with CSEG (Member Services – Volunteer Appreciation)

November: Member Services – Volunteer with CSEG, Calgary Geoscience Data Managers Network

December: CSEG Technical Luncheon Committee (as a Column),  
CSEG Foundation Canadian Distinguished Lecture Tour (CDL) Report

## REGULAR COLUMNS

CAGC Column: Mike Doyle

Grapevine: Kristy Manchul

Science Break: Oliver Kuhn wrote nine articles on the following topics (month indicated in brackets): Prions (1), Aerial Archeology (2), Sociopathy (3), Practical Applications of Science (4), Coral (5), The U-Curve (6), Fear of Music (10), Math and Science Jokes (11) and DSLR Cameras (12).

Tracing the Industry: Carmen Swalwell

## IN MEMORIAMS

Three In Memoriams or Remembering type tributes were published in 2015: One in February for Mike Batzle, one in September for Tad Ulrych (recipient of 2013 CSEG Medal), and one in October for George Hobson.

## 2014 CSEG BEST RECORDER PAPER AWARDS

(PRESENTED IN APRIL 2015 NOT REPORTED IN 2014 AR)

The awards for the best papers published in the 2014 RECORDER were adjudged by the Committee and were presented at the April 2015 Technical Luncheon and reported in the June 2015 RECORDER.

## 2014 BEST RECORDER PAPER AWARD

Terence Krishnasamy (CGG), Luis D'Afonseca, Patrice Guillaume, Ole J. Birkeland (CGG), Tânia M.G. Santiago, Claudio Guerra and Rosenberg Lima (Petrobras), *Multicomponent PSDM Velocity Model Building using OBC Data from the Albacora Field*, CSEG RECORDER, December 2014

## 2014 BEST RECORDER PAPER: HONORABLE MENTIONS

Andrew Iverson (Apache Canada) *The impact of interbed multiples on the inversion and interpretation of pre-stack data*, CSEG RECORDER, January 2014

Michael (J-M) Kendall, J.P. Verdon and A.F. Baird (University of Bristol, UK) *Evaluating fracture-induced anisotropy using borehole microseismic data*, CSEG RECORDER, February 2014

## RECORDER COMMITTEE MEMBERS 2015

The continuing committee members from 2014 were: Chief Editor Penny Colton and Technical Editors Rob Holt, Mostafa Naghizadeh, Matteo Niccoli and Fereidoon Vasheghani. Three new Technical Editors joined in 2015: Neda Boroumand, Steve Jensen, and Nicole Willson. Mike Doyle (CAGC), Oliver Kuhn (Science Break), Carmen Swalwell (Tracing the Industry), and Kristy Manchul (Grapevine) continued their reliable reporting of ongoing news, science, people and industry connections in their Regular Columns. Longtime RECORDER volunteers Mo Al-Ibrahim and David Bonar took up very active volunteer commitments on other CSEG Committees. Past

Chief Editor Satinder Chopra continued his valuable role as advisor and participant on the Committee.

John Fernando received a commemorative plaque at the April 2015 Luncheon for his contribution as RECORDER Chief Editor for 2011 – September 2014.

## THANKS TO ALL THE CONTRIBUTORS TO THE SUCCESS OF THE RECORDER

The final creation and distribution of each issue of the RECORDER relies on the Committee members along with the invited Special Coordinators, suggestions by Members and Volunteers, and our Advertisers. The RECORDER also relies on the CSEG Office through Jim Racette (CSEG Managing Director) and Alyssa Middleton (CSEG Support Services Coordinator – advertising – and tabulation of the New Member Reports). They make everything happen by dealing with general inquiries, advertisers, meetings, and volunteers. The production, printing and distribution of the RECORDER is provided by Bonnie and Lawrence Luft, from The PRINTMAN. We also thank them for hosting a Committee tour of the press plant in August 2015; it was exciting to see the RECORDER coming off press. Jeremy Sherry of Enter the Mind Media converts the RECORDER issues into the ONLINE versions. *Note that while CSEG members by default receive printed copies, they also have access to all the RECORDER editions that are posted on the website, while Non-members get access to the "Online" RECORDER archives after three months.*

The dedication, creativity, innovation, and commitment by all of the Committee Members, Focus Coordinators, Authors and Advertisers, to the quality of the CSEG RECORDER in 2015 are very much appreciated.

## PENNY COLTON

CHIEF EDITOR, CSEG RECORDER



CSEG Commemorative plaque of appreciation, presented to John Fernando for his service to CSEG as RECORDER Chief Editor, September 2011 – June 2014



RECORDER Plant Tour, August 2015 (L-R): Keith Millis, Bonnie Luft, Steve Jensen, Rachel Newrick, Penny Colton, Alyssa Middleton, Mostafa Nagizadeh, Neda Boroumand, Nicole Willson, Kristy Manchul

## 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 every year since this revival - in June 2011, June 2012, June 2013, June 2014 and June 2015 (printed in August 2015). The editorial staff of CJEG in 2015 included Larry Lines and Satinder Chopra as Co-Editors. The CJEG

Associate Editors are Sven Treitel, Patrick Daley and Kris Innanen.

As of February 2016, the revived journal has received 37 submitted papers. The statistics for these 32 submittals are as follows:

1. 31 papers have been published (6 in June 2011, 6 in June 2012, 7 in June 2013, 6 in June 2014 issues, 6 in June 2015).
2. 1 papers has been accepted for the June 2016 issue.
3. 3 papers have been reviewed and are under revision.
4. 2 papers have 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 who have technical expertise.

The PRINTMAN, Calgary provided composing/printing services for the CJEG, and has been found to be excellent 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 page 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

## Digital Media (DMC)

The digital media committee (DMC) had a relatively quiet year. In the past, the committee has been focused on larger projects (website creation, recorder website archiving, etc.). With the downturn in the economy, the DMC has not been able to continue or start new projects due to budgetary constraints. We continue to find our way through the social media world to determine how the CSEG fits into it in a meaningful way for our members. The DMC is currently working on ways to increase visits to our website without incurring any additional costs.

**JASON SCHWEIGERT**  
CHAIR

## Emerging Professionals Program (EPP)

This year, we kicked off the Emerging Professionals Program (EPP) with an array of successful events that were aimed at providing support for any CSEG member, but targeting young professionals with 1 to 5 years of work experience in the industry. As per our mandate we strive to not compete, but to collaborate with other existing CSEG committees and also our sister societies. In this challenging economic environment, there are a significant number of individuals who are either unemployed, underemployed or are just struggling in their career. We provide opportunities in the form of soft or technical skills workshops, because we recognize that the future of the industry lies within young professionals; to invest in them today, will allow our Geoscience community to flourish in the future.

This year's committee was comprised of:

<b>Co-Chairs</b>	Daniel Loas, Stephen Kotkas
<b>Vice Chair</b>	Jeff Calvert
<b>Senior Advisor</b>	Brian Schulte
<b>Committee</b>	Hassan Odhwani, Karl Mome, Chau Huynh, Elizabeth Ramsey, Sean Lovric
<b>JGF Vice Chair</b>	RJ Vestrum
<b>JGF Venue/Event Coordinator</b>	Jennifer Welsh
<b>JGF Student Representative</b>	Ian McFarland

The events for 2015 were highly regarded by our attendees and wouldn't have been possible without the volunteering efforts of the EPP committee and the industry at large. We would like to thank all those who participated, especially the companies that provided excellent workshops and venues and the CSEG Foundation for being an overall sponsor. Below is a list of the 2015 events:

1. *Employability Workshop*, Design Group Staffing Inc.
2. *Well Synthetic Tie Workshop*, CGG Hampson Russell
3. *Effective Networking and the Benefits of LinkedIn*, Cenera
4. *Migration Basics*, Divestco Processing
5. *Hands-on Introduction to GeoGraphix*, LMKR
6. *Technical Integration in a large, E, D & P Oil and Gas Company: Multiple Perspectives*, Imperial Oil
7. *Junior Geophysicist Forum*, The Emerging Professionals Program
8. *Young Professionals Holiday Social*, AAPG, SPE & CSEG

This year the Junior Geophysicist Forum was united under the EPP and was held on Monday, November 16 at the Nexen Amphitheatre. There was a great turnout with 130 students, Junior Geophysicists and Senior Geophysicists. The evening started with a mixer, followed by a presentation from Brian Schulte, who shared his own industry story in hopes to inspire. Thank you to our sponsors; Cenovus, Repsol, Shell, Husky, RPS, Nexen, CSEG and the CSEGF.

The EPP continues to grow and we look forward to another busy year with the opportunity to host events alongside our sister committees. It is important for us to involve other groups to ensure that we take an integrated approach to technical knowledge sharing and also inter-disciplinary networking. There will once again be a combination of both soft and hard skills workshops throughout the calendar year. This following year Stephen Kotkas will step down as Co-Chair and Daniel Loas will take the role as Chair.

**JEFFREY CALVERT**  
VICE CHAIR



Karl Mome for EPP and JGF at the 2015 DoodleTrain Keynote Luncheon

## 2015 Doodlespiel

The 43rd annual 2015 Doodlespiel (held January 23 – 25) has now come and gone and this year we had 86 teams with over 400 participants. The host town of Banff and the Banff Curling Club again created an amazing venue for the Doodlespiel that was enjoyed by all.

The **A Event** final had the Hansen rink against the Gill rink and it was an exciting back and forth game as the lead changed hands several times. In the end the Hansen rink consisting of Sterling Hansen, Matt Ng, Joel Jotkas, Igor Senek, and Daniel Perez won the A event. This win is the second Doodlespiel championship for the Hansen rink.

Other event winners include:

**B Event** = Sandy Jenkins, Scott Law, Jeff Deere, Andrew Boland

**C Event** = Warren Murray, John Ropchan, Brian Irwin, Christian Eastham, Cathy Parr  
**D Event** = Victoria Joliffe, Scott Sverdahl, Grant Williams, Chris Baldwin  
**Holeplug** = Shawn Traxler, Geoff Castle, Victoria Yung, Meaghan Wright

Team Spirit best costume awards go to:

1st Place = Mario Kart – Team Jeronic

As Chairman of the 2015 Doodlespiel, I would like to take the opportunity to thank all of the sponsors of the 2015 Doodlespiel. Without the continued support of the industry, this great event would not be

able to continue. Sponsorship and overwhelming participation of our industry continue to make this the largest curling bonspiel in Western Canada. As outgoing Chairman I am confident that next year's Doodlespiel committee will no doubt deliver another excellent event. The committee wishes everyone a safe, healthy and prosperous 2015 and look forward to seeing everyone in Banff for 2016.

### DOODLESPIEL COMMITTEE MEMBERS 2015

<b>Past Chair</b>	Trent Olson
<b>Chairman</b>	Matt Ng
<b>Vice Chairman</b>	Chris McGregor
<b>Finance</b>	Daniel Perez
<b>Registration</b>	Andreas Georgousis
<b>Sponsorship – Lead</b>	Nathan Baker
<b>Sponsorship</b>	Bryce Davis, Chad Wildman
<b>Special Arrangements</b>	Karen Chong, Luc Gravel

### TRENT OLSON

CHAIRMAN - 2015 DOODLESPIEL

## Women in Seismic Golf Tournament (WiSe) 2015

2015 was the third year of the tournament with the CSEG and the event was scheduled on Thursday September 10th. The theme this year was 'Superheroes, Fighting Against Cancer for 15 years' and it came down to audience participation to determine a winning team for the 2nd annual Spirit Award. This year was our 15th annual which is a significant accomplishment and I would like to take this opportunity to say thank you to the current and past committee members for their dedication to the event over the years.

Due to the economy, we saw a decrease in hole sponsors along with participants. Unfortunately, we had to say good-bye to some annual hole sponsors due to their cost constraints but on the positive side we were able to obtain new hole sponsors who are committed to the event going forward which is great to see. Looking into 2016, we the committee may need to readjust the event and/or pricing to account for the expected continued downturn.

As a not-for-profit event, the money we raise at the tournament goes to the Alberta Cancer foundation (earmarked for breast and ovarian

cancer). Between the event and the generous donation from Fox Hollow Golf Course, we donated just under \$13,000 to ACF. This money was raised through hole sponsorship, selling raffle tickets and mulligans. Over the past few years, it has become tradition to host a guest speaker at the event. This individual shares their personal experience, with the audience, about going through cancer treatment and is an inspiring reminder of the purpose of our donations and the strides being made towards treatment and prevention. Although, the round of golf is long, both the sponsors and participants appreciate and enjoy the ability to network on the course in this non-competitive one day event.

Lastly, I would like to personally thank Joanne Poloway (past chair) for all her hard work over the years as she has helped shape this event into what it is today.

### TRISH MULDER

2015 CHAIR

## 48th Annual Family Ski Spree

The 48th Annual CSEG Family Ski Spree was held from February 20 – 22, 2015 at the beautiful Fairmont Hot Springs Resort in Fairmont, B.C. Seventy-seven CSEG members brought their families to B.C. for this weekend that saw a total of 271 participants. It was a weekend of fun for everyone of all ages and skiing skill levels. You definitely didn't need to ski in order to participate. The format for the weekend is a long standing tradition that focuses on all the children while still keeping the adults entertained.

Friday evening began with the family registration and then the games began. The Toddler Room, ages 0-4, was filled with safe and age-appropriate toys. The Ski Spree Committee also provided some babysitters for this room to help the parents in all this excitement. Each toddler also received a gift. The Horizon North Camps Mini Mixer, ages 5-11, is where all the action was. There were multiple crafts for everyone, some needing adult supervision and some not. Tons of volunteers helped out in this room as every child built something to take home with them. Pizza, snacks and drinks were readily available. As in the Toddler Room, every child received an age-appropriate gift. Everyone then helps in the massive clean-up as we set up for a Night at the Movies. Everyone knows how hard it is to keep the teenagers occupied, but the volunteers in the Teen Room, ages 12-18, seemed to have the formula for success. The night was centred around a difficult scavenger hunt that scattered the teens to all corners of the hotel to learn about the history of the Columbia Valley. Other competitions centred on fitness, gaming and mental agility. The teens were grouped into teams with the winners receiving cash or gift cards. Again, tons of pizza, snacks and drinks for all. And let's not forget about the adults. The Cook Leach Surveys Mogul Mixer was a chance to meet up with old friends and make new ones as the adults gathered for an Italian buffet. This was followed by the Divestco Ski Spree Grande Prix, racing Hot Wheels cars on a 10m track. Entertainment for the adults then continued upstairs in the Bear's Paw as the Ski Spree Committee provided a DJ for the evening.

Saturday was focused on the Fairmont Hot Springs Resort Ski Area, about a 5-minute drive from the hotel. For the younger generation, the LXL Consulting Ltd. Snow Snake Hunt and the Earth Signal Processing Ltd. Obstacle Race occupied the beginner hill. Children of all abilities navigated the minimal difficulty obstacle course and searched for snakes in the snow to receive small prizes. For everyone else, they were encouraged to participate in the Seitel Canada Ltd. Snowboard Races and/or the Katalyst Data Management Downhill Races. Kids raced side-by-side against their parents, siblings or friends. The race commentary done by Peter provided great entertainment to everyone as it could be heard all over the Main Hill. Seisline Resource Services Lunch was provided on the hill for everyone. Arcis Seismic Solutions ran the Cocoa on the Mountain

at the top of the ski lift and new this year was a Alltrek Drilling Snow Toffee tent on the Lodge patio. There was just enough time after all the events on the hill for the vast majority of the participants to take a quick dip in the giant hot tub before heading for dinner. Saturday dinner saw all the families seated together as the Ski Spree Committee recognized the Sponsors for the weekend and handed out all the awards from the day, and there were a lot of awards and participation medals. Randy Yee and Michella Pritchard had the best times in the Ski Race and Jack Collins and Chloe Collins had the best times in the Snowboard Race. Unfortunately, we had to listen to all of them boast of this for the whole year. A charity raffle is held each year and this year the proceeds in the amount of \$2380 went to 'Inn from the Cold'. Mr. & Mrs. Ski Spree is an award that recognizes volunteer commitment, years of participation and a visible positive attitude towards this event was given this year to Kirsten and Dale Johnson. For the adults, the night did not end after dinner. Synterra Technologies Ltd. Late Night occurred in the Bear's Paw with renowned one-man band Dallas Wolbaun providing all the entertainment.

In this difficult environment the 2015 CSEG Family Ski Spree was extremely grateful for all the sponsors that donated what they could for this fantastic event. All it takes is to have seen all the kids faces either in the Crafts Room on Friday night or coming off the hill on Saturday to know that it was worth it. On behalf of the organizing committee we hope that everyone had a wonderful and fun-filled weekend and we look forward to seeing everyone again in 2016.

### SKI SPREE COMMITTEE MEMBERS 2015

<b>Chairman 2016</b>	Andrew Lane
<b>Past Chairman 2015</b>	Adam Sly
<b>Past Chairman</b>	Roger Bilger
<b>Finance</b>	Kelly Zamiski
<b>Registration</b>	Alex Gauthier
<b>Sponsorship</b>	Michella Pritchard, Mark Nergaard, Andy Dyke
<b>Entertainment</b>	Geoff Castle, Estelle Rebel, Mathieu Arbour
<b>Races</b>	John Bertsch, Kristof DeMeersman, Jason Crawford
<b>Volunteers</b>	Dennis Daly, Kevin Mullie, Ana Abad, Alice Chapman, Kathleen Dorey, Jeff Collins, Josef Heim, Irene Lane, Karen Webster, Brock Hassell, Chris Heaver, Dawn Zamiski

### ROGER BILGER

CSEG FAMILY SKI SPREE CHAIRMAN 2015

## CSEG Doodlebug

The 63rd annual Doodlebug returned to Kimberley B.C. in 2015 with the tournament played at Trickle Creek Golf Course for the fifth consecutive year. We enjoyed warm sunny seasonal weather for the majority of the tournament with only a few brief with pockets of rain on Friday. This year saw a range of golfers from novice to experienced low handicaps able to enjoy the tournament as golfers are put into groups of players with similar skill-sets to ensure that everyone can have the chance to compete for a coveted ceramic flight trophy regardless of golfing ability. This year the Doodlebug saw a first time champion take home the Mr. Doodlebug trophy – Mr. Ed Slobodian.

Not surprisingly, due to the economic conditions currently affecting us all, participation in the tournament fell. The committee worked very hard, with smaller numbers of participants and budget to produce a Doodlebug of similar calibre to previous years. Some participants were even overheard to say, “I enjoyed a smaller, more intimate Doodlebug. I had the opportunity to talk with everyone attending”.

The Doodlebug has continued its evolution towards becoming more inclusive and more affordable to the participants. Sponsors were offered “all in” pricing this year, allowing them to not worry about additional expenses at or after the event.

Trickle Creek is a wonderful venue to host the Doodlebug. Golfer friendly due to reasonable length and beautiful layout, it provides the Doodlebug with a great balance of amenities with levels of affordability not seen at other previous venues. The committee has continued to find ways to address costs and provide good value for our registrants and our generous sponsors.

As in past years, the Doodlebug continues to include a significant charity focus to the weekend’s events. This year the Chairman chose to support an excellent grass-roots charity in Calgary called Heart Beats. This 100% volunteer run charity helps families facing situations of adversity when a child is diagnosed with Congenital Heart Disease. They provide emotional and financial support to not only the children affected but also support to the parents and family. The

generous contributions from both the participants and sponsors at the 2015 Doodlebug helped to raise in excess of \$12,000 for this worthy charity.

This event is one of the premiere golf tournaments in the oil and gas industry and featured a fun weekend of socializing for both CSEG members and their guests. From the formal dinner on Friday, to the theme dinner on Saturday night, to the charity chipping and long drive contests, this is an event that should be on every CSEG member’s golf or social calendar.

We look forward to seeing everyone at the 2016 CSEG Doodlebug back at Trickle Creek, August 25th – August 27th. This year’s committee will be Chaired by Brian McCue and it will surely be a wonderful 64th Annual Tournament.

### DOODLEBUG COMMITTEE 2015

<b>Chairman</b>	Brendan Smith
<b>Past Chairman</b>	Patrick Tutty
<b>Vice Chairman</b>	Brian McCue
<b>Secretary/Treasurer</b>	Shaun Ali
<b>Housing/Registration</b>	Alexandre Gauthier, Robyn Benner
<b>Sponsorship</b>	Brian Ingenthron, Steve Denne,
<b>Golf Committee</b>	David Wardlaw, Billy Mooney, Ed Slobodian
<b>Entertainment</b>	Joe Bonaventura, Alex Daum, Geoff Castle
<b>Guest Events</b>	Regan Kennedy, Jane Ling
<b>Printing and Graphics</b>	Ross Turner
<b>Community Liaison</b>	Zoe Ferguson

### BRENDAN SMITH

2015 CSEG DOODLEBUG CHAIRMAN



## 7th Annual CSEG T-Wave Golf Tournament

The 7th Annual CSEG T-Wave Golf Tournament took place on June 22nd, 2015. It was a challenging year but our amazing sponsorship committee was able to go above and beyond and raise sponsorship dollars in order for us to provide the same great event everyone has become accustomed to. Monthly, we faced new challenges but we continued to evaluate and respond. At one point (with the large number of layoffs) we were wondering if we were going to have enough players to make the tournament successful. We offered a student rate as well as a 'career transition' rate which put us at 136 players turning out for the tournament. That is just two teams short of being full!

A gigantic 'Thank You' to our sponsors who helped make this event successful.

### OUR SPONSORS THIS YEAR:

#### ACE LEVEL

Tesla Exploration – lunch  
LXL Consulting – Bag Drop and Bag Tags  
Synterra Technologies – Wine and Dinner

#### EAGLE LEVEL

##### Hole Sponsors

CGG  
Geo-X  
Divestco  
Earth Signal Processing  
Dyno Nobel  
Signature Seismic Processing

##### Golf Carts – TBI

Driving Range – Tundra Oil & Gas Partnership

#### BIRDIE LEVEL

All-Trek Drilling  
BJV  
Edge Technologies  
Geospace Technologies Canada  
HIS  
Maxam North America  
Pipestone/United Datawys  
Speth Drilling  
RPS

We decided to forgo selecting a charity this year as we felt as an industry we are a charity and as such we chose to have a 50/50 draw and give out all the funds to two recipients. Adam Flynn and Shaun Ali were the lucky winners.

A big thank you to all the great committee members who made this tournament such a success. As always, we learned some things and probably more so because of the challenges due to the downturn.

*"We don't grow when things are easy, we grow when we face challenges."*

#### T-WAVE COMMITTEE

**Sponsorship** – Rob Curts, Sandy Lucas and Flo Reynolds

**Golf** – Jim Hostetler

**Prizes** – Aaron Foyer and Elwyn Galloway

**Finance/Registration** – Dick Willott

**Communication and Signage** – Patty Evans

**Slideshow** – Flo Reynolds and Elwyn Galloway  
(pictures will be available on the website soon)

**Chair** – Jocelyn Frankow

Rob Curts will be taking over as Chair and as a committee it has been decided to move the event to Valley Ridge next year. I wish him the best and I know he will be a great Chairman as this event goes forward in these difficult times. I will be moving to Registration and Flo Reynolds will be taking over Finance as Dick Willott attempts to "really" retire and spend time with his grand kids. We started this Golf Tournament in 2009 with 120 players and it has been full with a waiting list for the past 5 years. This year in a severe downturn we were able to get 136 people out for the day thus I would personally like to give a Gargantuan Shout Out and thank you to all the players and sponsors for supporting this event the past seven years.

#### JOCELYN FRANKOW

CHAIR, CSEG T-WAVE TOURNEY

## 27th Annual CSPG/CSEG/CAPL 10K & 5K Road Race & Fun Run

This year mother nature was on our side and the weather was perfect for running (no snow on the ground, no broken branches or power outages). An enthusiastic group of 77 runners finished the race out of the 102 who were registered to run.

The south side of the river from Crowchild to Edworthy was completed a few months ago, so we were able to go back to our old route, all along the south side of the river, now paved all of the way. Our race volunteers, decked out in bright orange safety vests, aided the runners in negotiating the route. Once again distances were marked uniquely in geologic time to assist, or perhaps confuse, the participants. Like every year it's great to see a mix of competitive and first time runners. This year timing was done by Zone4 using ankle/wrist bracelets. The start line was moved to the previous years finish line to enable a chip start instead of a gun start. As a result, the times will be more accurate, as a start time and a finish time is used for each racer. The bracelets are also used in triathlons so they are waterproof, which turned out to be a good thing as one person took a shower with their bracelet on still. To see individual times, please go to <http://new.zone4.ca/results> and click on the CSPG/CSEG 10K/5K Road Race & Fun Run – Overall and Age Groups links.

We returned to the Calgary Curling Club for the post race awards party, where the mix of racers and volunteers enjoyed plenty of cold beverages and a pasta dinner. The evening was topped off with door prizes, awards and of course our now infamous sock-toss. Through great sponsorship and strong participation, we are once again able to contribute to our designated charity the YMCA strong kids foundation!

A special part of the evening was a brief memorial to Mike Cardell. Mike was on the race committee for 6 years and was the Race Director for 4 years. Mike's life ended far too soon as he died at the young age of 63 years old, from Pancreatic Cancer. We had a moment of silence followed by a Cheers for Mike and the opportunity to write something on a poster with several pictures of Mike on it that we presented to Marnie Cardell.

I would like to thank all the volunteers and sponsors who helped make this event a success! We have acknowledged our sponsors on a separate page. Thank you also to all the runners. It was a pleasure cheering you in at the finish line.

Finally, a huge thank you to our group on the committee that made this all work: Jocelyn Frankow, Tina Donkers, Shirley Fleming, Chris Savels, Tim Burk, Baltej Sidhu, Shawna Christensen and Kristy Casebeer at the CSPG office. As well, thanks to Nick Wiggins and the staff at the Eau Claire YMCA for their continued hospitality.

Here's a summary of the CSPG, CSEG and CAPL winners:

### OVERALL TOP MALE 10 K RESULTS

Place	Gun Time	Race #	Name	Member
1	37:04	208	Dylan Childs	CSPG
2	39:12	214	Noel Devere-Bennet	CSPG
3	39:31	213	Robert Dawson	CSPG
4	40:45	202	Dave Bracey	CAPL
5	41:10	216	Alex Duhault	None

### OVERALL TOP FEMALE 10 K RESULTS

Place	Gun Time	Race #	Name	Member
1	43:25	244	Holly Ratzlaff	CSPG
2	49:58	201	Shannon Bjarnason	CSEG
3	51:44	215	Sara Dobek	CSEG
4	51:45	236	Ashley Mantha	CSEG
5	53:40	218	Christina Ewert	CAPL

### OVERALL MALE 5K RESULTS

Place	Gun Time	Race #	Name	Member
1	21:52	335	Scott Courchesne	CSEG
2	23:57	317	Davin Hertz	CSEG
3	24:54	337	Zac Colbran	CSPG
4	25:22	319	Kam Vincent	None
5	25:39	333	Armin Schafer	CSEG

### OVERALL FEMALE 5K RESULTS

Place	Gun Time	Race #	Name	Member
1	25:57	336	Carly Frank	CSPG
2	26:16	308	Monica Devereux	None
3	27:27	311	Jocelyn Frankow	CSEG
4	28:26	304	Shawna Christensen	CSPG
5	32:53	322	Chole Mann	None

For more information on category winners, run times and placement, please see <http://new.zone4.ca/results>

We look forward to seeing you next year for the 28th annual; race date will be Wed, September 21, 2016. Thank you.

**ARMIN SCHAFER**  
RACE DIRECTOR

# COMMITTEE VOLUNTEERS

*We thank all volunteers – those listed and those we may have inadvertently missed.*

Aaron Foyer	Chad Wildman	Flo Reynolds	Judith Chan	Meriem Dennis	Rob Holt
Adam Sly	Charles Boyer	Francois Aubin	Julianne Fic	Michael Corr	Rob Kendall
Adrian Smith	Charles Welsh	Frank Ryan	Kaissa Blessy	Michael Hartley	Rob McGrory
Akshay Gulati	Charlotte Adams	Fred Kierulf	Karem Mohamed	Michael Le	Rob Vestrum
Alan Hannah	Chau Huynh	Geoff Castle	Karen Anderson	Michael Llewellyn	Robyn Benner
Alanna Felske	Chelsey Hay	George Fairs	Karen Chong	Michael Rayson	Roger Bilger
Alasdair Fergusson	Chris Bird	George Pinckney	Karen Webster	Michel Nzikou	Ron Larson
Alessandro Carducci	Chris Chalcraft	Gerry Langille	Karl Mome	Michella Pritchard	Rose-Mary Pfeiffer
Alex Daum	Chris Heaver	Glen Stewart	Karol Rohraff	Michelle Montano	Ross Turner
Alex Gauthier	Chris Manion	Glenn Malcolm	Kate Smileyv	Mike Clement	Ryan Borman
Alex Shrake	Chris McGregor	Godfrey Nowlan	Kathleen Dorey	Mike Doyle	Ryan Cox
Alexandre Gauthier	Chris Savels	Graziella Kirtland	Kathleen Nester	Mike Hall	Ryan Derish
Alice Chapman	Chris Szewelski	Grech	Keith Millis	Mike Ostrzenski	Ryan Link
Aline Anderson	Claire Johnson	Greg Deutscher	Kelley Dahlby	Mikhail Yakunin	Ryan McKay
Alishah Nayani	Claus Sitzler	Gus Teske	Kelly Nelson	Mohamd Sltan	Salma Khatun
Aliya Kairzhanova	Corina Irvine	Hassan Odhwani	Kelly Zamiski	Mohammed	Sandy Lucas
Aliyyah Mohamed	Craig Mosher	Heather Mannas	Kelsey Shorten	Al-Ibraheem	Sarah Mah
Alyssa Spencer	Dan Curilla	Heather Noah	Kelsey Tillapaugh	Morgan Brooks	Satinder Chopra
Amanda Knowles	Dan Loas	Helen Isaac	Ken Gray	Mostafa Naghizadeh	Scott Reynolds
Amanda Mansell	Daniel Perez	Hoda Rashedi	Ken Mitchell	Muhammed Butt	Sean Contenti
Amy Iverson	Daniel Wennerstrom	Ian McFarland	Kevin Bianchini	Murray Ellis	Sean Lovric
Ana Abad	Danielle Robertson	Ian Scott Tourney	Kevin Mullie	Nancy Laing	Shahin Jabbari
Andrea Christians	Darren Tallas	Irene Lane	Khevy Gormley	Nancy Shaw	Shahin Moradi
Andreas Cordsen	Dave Artuz	James Lambe	Kim Thielen	Nanna Eliuk	Shaun Ali
Andreas Georgousis	Dave Law	James Whiteley	Kristof DeMeersman	Nar Raewal	Shawn Maxwell
Andrew Holder	Dave Nordin	Jane Ling	Kristy Manchul	Nathan Baker	Shawna McKay
Andrew Lane	David Bonar	Jared Shivak	Krystal Sekora	Nathan Fester	Sheldon Barron
Andrew Mills	David Dougherty	Jarom LaPierre	Kun Guo	Navjot Aneja	Shi Hua (Wendy) Zhao
Andrew Nicol	David Germscheid	Jason Crawford	Kurt Mulhall	Neal Barretto	Shminder Singh
Andy Dyke	David Gray	Jason Harper	Kyle Buss	Neda Boroumand	Sitamai Winnie Ajiduah
Angela Spencer	David Mitchell	Jason Hendrick	Kyle Powers	Neil Orr	Sobhi Alhashwa
Annette Milbradt	David Simpson	Jason Huang	Larry Adorjan	Neil Rutherford	Stephanie Robillard
Anthony Molinar	David Wardlaw	Jason McCrank	Larry Herd	Nguyen Mahn Thang	Stephen Kotkas
Armin Schafer	Dawn Zamiski	Jason Schweigert	Laura Osorio	Nicole Willson	Steve Denne
Baltej Sidhu	Deborah Borthwick	Jay Williams	Laurie Ross	Nikala Jonsson	Steve Hill
Barrie Jose	Deepi Mand	Jean Dougherty	Leah Wilson	Oliver Kuhn	Steve Jensen
Becky Ferguson	Denise Freeland	Jeff Crowhurst	Lee Hunt	Paige Mamer	Steve Smith
Ben McKenzie	Denise Yee	Jeff Collins	Liliana Zuleta	Patricia E. Gavotti	Steven Kim
Bev Bridger	Dennis Daly	Jeff Deere	Lilin Liu	Patrick Tutty	Steven Milbradt
Bill Goodway	Dennis Ellison	Jeff Gautreau	Linden Achen	Patty Evans	Susan Armitage
Billy Mooney	Dick Willot	Jeff Packard	Lindsay Rowell	Paul Thacker	Susan Thomson
Biya Ishola	Domenic Raimondi	Jeffrey Calvert	Lindsey Abbott	Paul Anderson	Susie Ehrhardt
Bob Stuart	Donald Tough	Jennifer Welsh	Lisa Fuenzalida	Paul Hausmanis	Tal Hogbin
Bobby Gunning	Doug Bogstie	Jianyi Dong	Lona Leavitt	Penny Colton	Teddi Herring
Bona Wu	Doug Brost	Jim Hostetler	Luc Gravel	Perry Kotkas	Thomas Wagner
Brad Spence	Doug Clark	Jim Stenhouse	Lynn Engel	Peter Milbradt	Tianci Cui
Brant Skibsted	Doug Colvin	Jingping Ma	Marc Boulet	Peter Mitchell	Tiffany Yaxley
Brendan Smith	Doug Hackbarth	Joanne Poloway	Marc Nolte	Petra Buziak	Tim Burk
Brendan Snow	Dunia Blanco Acuna	Jocelyn Frankow	Marian Hanna	Rachel Newrick	Tim Sandberg
Brian Emmerson	Dustin Borotsik	Joe Bonaventura	Marie Hong	Rafael Asuaje	Tom Borthwick
Brian Ingenthron	Dustin Curtis	Joe Minten	Marissa Whittaker	Raluca Olaru	Tom Sneddon
Brian McCue	Ed Slobodian	John Bertsch	Mark Ciccione	Ranald Gault	Tooney Fink
Brian Russell	Elizabeth Ramsey	John Boyd	Mark Jeronic	Raul Cova	Trent Olson
Brian Schulte	Ellie Owens	John Fernando	Mark Lane	Rebecca Haspel	Trish Mulder
Brock Hassell	Elwyn Galloway	John McDonald	Mark Nergaard	Regan Kennedy	Usman Shahid
Brodie Sutherland	Emily Johns	John Townsley	Marko Mah	Renu Sahota	Vic Urban
Bryce Davis	Eric Motil	Jon Downton	Mathieu Arbour	Richard Gray	Vicente Oropeza Bacci
Calista Yim	Eric Rops	Jonathan Schneider	Matt Ng	Richard Willot	Victor Hoang
Camien Swalwell	Erik Keyser	Jordan Domin	Matteo Niccoli	Rick Green	Vipul Shrivastava
Candice Charman-Shea	Esteban Pineda	Jordan Vandean	Mauricio Sacchi	Rick McCulloch	Volodymyr Vragov
Carly Hornstra	Estelle Rebel	Josef Heim	Max Eidsvik	Rigel Bilger	Yinyin Wu
Carolina Mirabella	Fereidoon Vasheghani	Jounada Oueity	Meaghan Wright	Rik Gray	Yuyao Chen
Caroline Mongrain	Fernando Cerda	Juan Joffre	Meghan Brown	RJ Vestrum	Zack Anderson
Cassie Vocke	Festus Uwuilekhue	Judi MacDonald	Melissa Sawyer	Rob Curts	Zoe Ferguson

**CANADIAN SOCIETY OF EXPLORATION GEOPHYSICISTS**

**Financial Statements**

**Year Ended December 31, 2015**



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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, 2015 and the statements of revenues and expenditures and changes in net assets 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 audit opinion.

### Opinion

In my opinion, the financial statements present fairly, in all material respects, the financial position of Canadian Society of Exploration Geophysicists as at December 31, 2015 and the results of its operations and its cash flows for the year then ended in accordance with Canadian accounting standards for not-for-profit organizations.

Calgary, Alberta  
February 25, 2016

CHARTERED ACCOUNTANT

**CANADIAN SOCIETY OF EXPLORATION GEOPHYSICISTS**  
**Statement of Financial Position**  
**December 31, 2015**

	2015	2014
<b>ASSETS</b>		
<b>CURRENT</b>		
Cash	\$ 47,215	\$ 136,061
Temporary investments and accrued interest	-	623,042
Accounts receivable	42,209	84,285
Convention development fund	42,109	90,000
Goods and services tax recoverable	3,167	4,810
Prepaid expenses	11,263	15,991
	<b>145,963</b>	954,189
FURNITURE AND EQUIPMENT <i>(Note 5)</i>	15,582	21,320
RESTRICTED FUNDS	1,431,633	931,632
	<b>\$ 1,593,178</b>	<b>\$ 1,907,141</b>
<b>LIABILITIES AND NET ASSETS</b>		
<b>CURRENT LIABILITIES</b>		
Accounts payable	\$ 30,599	\$ 60,929
Deferred income	35,966	32,371
	<b>66,565</b>	93,300
<b>NET ASSETS</b>		
Capital assets	15,582	21,320
General fund	79,398	860,889
Restricted funds	1,431,633	931,632
	<b>1,526,613</b>	1,813,841
	<b>\$ 1,593,178</b>	<b>\$ 1,907,141</b>

**ON BEHALF OF THE BOARD**

\_\_\_\_\_  
*Director*

\_\_\_\_\_  
*Director*

See notes to financial statements

**CANADIAN SOCIETY OF EXPLORATION GEOPHYSICISTS**  
**Statement of Revenues and Expenditures and Changes in Net Assets**  
**For the Year Ended December 31, 2015**

	2015	2014
<b>REVENUES</b>		
Geo convention	\$ 103,999	\$ 430,000
Continuing education	61,422	105,358
Doodletrain	158,016	261,640
Interest and other	40,739	33,128
Luncheon fees	85,646	122,156
Memberships	108,182	113,915
Recorder	190,764	228,445
	<u>748,768</u>	<u>1,294,642</u>
<b>EXPENDITURES</b>		
Administration	352,701	401,300
Amortization	5,738	6,548
Recorder	255,532	237,646
Interest and bank charges	1,042	1,394
Continuing education	41,223	59,008
Outreach	1,463	-
Doodletrain	148,745	193,797
Digital media	34,474	37,432
Member services	45,442	36,544
Luncheons	100,281	127,499
Professional outreach	1,464	9,027
	<u>988,105</u>	<u>1,110,195</u>
<b>EXCESS (DEFICIENCY) OF REVENUES OVER EXPENSES FROM OPERATIONS</b>	<b>(239,337)</b>	<b>184,447</b>
Write-down of convention development fund	<u>(47,891)</u>	<u>-</u>
<b>NET EXCESS (DEFICIENCY) OF REVENUES OVER EXPENSES</b>	<b>(287,228)</b>	<b>184,447</b>
NET ASSETS - BEGINNING OF YEAR	<u>1,813,841</u>	<u>1,629,394</u>
<b>NET ASSETS - END OF YEAR</b>	<b>\$ 1,526,613</b>	<b>\$ 1,813,841</b>

See notes to financial statements

**CANADIAN SOCIETY OF EXPLORATION GEOPHYSICISTS**  
**Statement of Cash Flows**  
**Year Ended December 31, 2015**

	2015	2014
<b>OPERATING ACTIVITIES</b>		
Excess (deficiency) of revenues over expenses	\$ (287,228)	\$ 184,447
Amortization of furniture and equipment	5,738	6,548
Write-down of convention development fund	47,891	-
	<u>(233,599)</u>	190,995
Changes in non-cash working capital	<u>(478,288)</u>	(202,219)
Cash flow from operating activities	<u>(711,887)</u>	(11,224)
<b>INVESTING ACTIVITY</b>		
Purchase of furniture and equipment	-	(7,293)
Cash flow from (used by) investing activity	<u>-</u>	(7,293)
<b>FINANCING ACTIVITY</b>		
Transfer of general funds to restricted funds	<u>500,000</u>	-
Cash flow from financing activity	<u>500,000</u>	-
<b>DECREASE IN CASH FLOW</b>	<b>(211,887)</b>	<b>(18,517)</b>
Cash - beginning of year	<u>1,690,735</u>	1,709,252
<b>CASH - END OF YEAR</b>	<b><u>1,478,848</u></b>	<b>1,690,735</b>
<b>CASH CONSISTS OF:</b>		
Cash	\$ 47,215	\$ 136,061
Temporary investments	-	623,042
Restricted assets	<u>1,431,633</u>	<u>931,632</u>
	<b><u>\$ 1,478,848</u></b>	<b><u>\$ 1,690,735</u></b>

See notes to financial statements



## CANADIAN SOCIETY OF EXPLORATION GEOPHYSICISTS

### Notes to Financial Statements

Year Ended December 31, 2015

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1. BASIS OF PRESENTATION

The financial statements were prepared in accordance with Canadian accounting standards for not-for-profit organizations (GAAP).

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2. 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.

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3. 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.

*(continues)*

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**CANADIAN SOCIETY OF EXPLORATION GEOPHYSICISTS**  
**Notes to Financial Statements**  
**Year Ended December 31, 2015**

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES *(continued)*

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.

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.

4. INTERNALLY RESTRICTED FUND BALANCES AND INTERFUND TRANSFERS

The Society's Executive Committee has internally restricted resources amounting to \$ 1,431,632 (2014 - \$ 931,632). These internally restricted amounts are not available for other purposes without approval of the Executive Committee. During the year the Board of Directors passed a resolution to transfer \$ 500,000 from its general fund to its internally restricted fund. The internally restricted fund provide for sustainable administration, recorder and membership costs.

The internally restricted funds have been allocated as follows:

	2015	2014
Operating fund - reserve	\$ 1,300,000	\$ 800,000
Convention fund	131,632	131,632
	\$ 1,431,632	\$ 931,632

## CANADIAN SOCIETY OF EXPLORATION GEOPHYSICISTS

### Notes to Financial Statements

Year Ended December 31, 2015

#### 5. FURNITURE AND EQUIPMENT

	Cost	Accumulated amortization	2015 Net book value	2014 Net book value
Furniture and fixtures	\$ 25,257	\$ 11,989	\$ 13,268	\$ 16,585
Leasehold improvements	12,104	9,790	2,314	4,735
	<b>\$ 37,361</b>	<b>\$ 21,779</b>	<b>\$ 15,582</b>	<b>\$ 21,320</b>

#### 6. 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.

#### 7. 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 \$ 5,075.

## Past Presidents

1950	John O. Galloway	1972	J. Ken Morrison	1994	Gary G. Tarylor
1951	Charlie M. Moore, Jr.	1973	Wes N. Rabey	1995	Barry T. Korchinski
1952	L. I. Brockway / Norman J. Christie	1974	John H. Harding	1996	Dan Hampson
1953	Bill (W.R.) Ogilvie	1975	Jack R. Pullen	1997	Robert R. Stewart
1954	R.J. Copeland	1976	William D. Evans	1998	Nancy Shaw
1955	R.D. Holland	1977	R. J. McCaffrey	1999	Doug Pruden
1956	R.B. Ross	1978	Earle F. Mahaffy	2000	Perry Kotkas
1957	George J. Blundun	1979	Lloyd R. Hatlelid	2001	Randy Pelletier
1958	Francis A. Hale	1980	P.D. (Denny) O'Brien	2002	Doug Uffen
1959	H.J. Kidder	1981	A. Easton Wren	2003	W. (Bill) Goodway
1960	Milton Dobrin	1982	Duncan A. Carswell	2004	Peter Cary
1961	Peter I.(Ibrahim) Bediz	1983	Valerie A. A. Nielson	2005	James Stenhouse
1962	Peter J. Savage	1984	Jim R. Hume	2006	Oliver Kuhn
1963	Robert Harold Carlyle	1985	Larry C. Fichtner	2007	Doug Bogstie
1964	Carl J. Chapman	1986	John D. Boyd	2008	Francois Aubin
1965	Robert A. Boulware	1987	Robert L. Comer	2009	Jon Downton
1966	John Hodgkinson	1988	Ralph M. Lundberg	2010	John Townsley
1967	Earl A. Fulmer	1989	Allan J. Ferworn	2011	Larry Herd
1968	George E. Longphee	1990	Neil E. Rutherford	2012	Rob Kendall
1969	W. (Bill) Blair	1991	Brian H. Russell	2013	Ron Larson
1970	John L. R. Baxendale	1992	Robert James (Jim) Brown	2014	Robert Vestrum
1971	Roy O. Lindseth	1993	W. (Bill) E. Davit	2015	Rachel Newrick

## 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)
- ▶ Andreas Cordsen (2014)

## 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)
- ▶ Satinder Chopra (2014)
- ▶ 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
- ▶ William D. Evans
- ▶ Dan Hampson (1991)
- ▶ Barry Korchinski
- ▶ Cecil A. Collins
- ▶ Earle F. Mahaffy
- ▶ Nancy Shaw
- ▶ George Fairs (2001)
- ▶ Milton B. Dobrin
- ▶ Jack E. Setters
- ▶ Ralph Lundberg (1992)
- ▶ Perry Kotkas (2002)
- ▶ Alexander H. McKee
- ▶ Peter Bediz (1983)
- ▶ Murray Olson
- ▶ Oliver Kuhn (2003)
- ▶ Peter J. Savage
- ▶ William C. Stroup
- ▶ George Kostashuk
- ▶ Satinder Chopra (2005)
- ▶ Percy Smith
- ▶ Ernie K. Shaw (1984)
- ▶ Robert Grigg
- ▶ Bill Nickerson (2005)
- ▶ Roy O. Lindseth
- ▶ William Davitt (1984)
- ▶ Neil Rutherford
- ▶ Helen Isaac (2007)
- ▶ John Hodgkinson
- ▶ Ray Prudholme
- ▶ Ken Duckworth (1994)
- ▶ Mauricio Sacchi (2007)
- ▶ Jack W. Bowden
- ▶ George Blundun
- ▶ Melvin E. Best (1995)
- ▶ Doug Schmitt (2008)
- ▶ Hal W. Godwin
- ▶ Valerie A.A. Neilson
- ▶ Brian Russell (1995)
- ▶ Larry Mewhort (2008)
- ▶ J. Kenneth Morrison
- ▶ Duncan A. Carswell
- ▶ Don C. Lawton (1996)
- ▶ Tooney Fink (2009)
- ▶ Westley N. Rabey
- ▶ P. Dennis O'Brien
- ▶ James Brown (1997)
- ▶ John Logel (2009)
- ▶ Easton Wren (1977)
- ▶ Judi McDonald (1987)
- ▶ John Pierce
- ▶ J.M. Annette Milbradt (2010)
- ▶ Mary C. Colberg
- ▶ Dale Kary
- ▶ Gregg Milne
- ▶ Laurie Ross (2010)
- ▶ A. Vern Street
- ▶ D.K. Bruce Fenwick
- ▶ Ernest Kanasewich
- ▶ Doug Bogstie (2011)
- ▶ Alan J. Ferworn
- ▶ Lloyd Hatlelid
- ▶ Michael Enachescu (1998)
- ▶ Lee Hunt (2012)
- ▶ Jack R. Pullen
- ▶ Larry Fichtner
- ▶ Elaine Honsberger (1999)
- ▶ Mike Doyle (2013)
- ▶ Sudhir Jain
- ▶ Don Simpson
- ▶ Dave Siegfried (1999)
- ▶ Jocelyn Frankow (2014)
- ▶ Bill Blair
- ▶ John Boyd (1988)
- ▶ Doug Uffen (1999)
- ▶ Joanne Poloway (2014)
- ▶ Harold Acheson
- ▶ Arthur Baptie
- ▶ Penny Colton (2000)
- ▶ Bud St. Clair
- ▶ Bob Comer
- ▶ Norm Cooper (2000)

## Technical Achievement

- ▶ Daniel Trad (2011)
- ▶ Shawn Maxwell (2013)
- ▶ Douglas Schmitt (2014)

## Special Commendation

- ▶ Penny Colton (2011)
- ▶ Rob McGrory (2013)
- ▶ Bill Goodway (2011)
- ▶ Rick Green (2013)
- ▶ Larry Lines (2012)
- ▶ Paul MacKay (2014)
- ▶ Tom Sneddon (2012)

## Symposium Honorees

- ▶ Brian Russell / Dan Hampson (2012)
- ▶ Bill Goodway (2013)
- ▶ John Boyd (2014)
- ▶ David Gray (2015)

2015 CORPORATE MEMBERS

