

# 2016 Annual Report



**CSEG**

Canadian Society of  
Exploration Geophysicists

# CSEG 2016-17 Board of Directors

**Marian Hanna**, President

**John Duhault**, Vice President

**Ken Gray**, Director Educational Services

**Graziella Kirtland Grech**, Assistant Director Educational Services

**Kevin Bianchini**, Director Member Services

**Karen Chong**, Assistant Director Member Services

**Janine Ballingall**, Director Finance

**Neda Boroumand**, Assistant Director Finance

**Marko Mah**, Director Communications

**Carmen Swalwell/Elizabeth Atkinson**, Assistant Director Communications

**Rachel Newrick**, Past President

**Jim Racette**, Managing Director

**Showing the World**  
how to Understand  
**the Earth.**

# CSEG 2016 ANNUAL REPORT

## Directors' Reports

President .....	4
Vice President.....	5
Past President.....	6
Educational Services .....	8
Communications .....	9
Member Services .....	10
Finance .....	11
Managing Director.....	12

## Committee Reports

Chief Geophysicists Forum .....	12
GeoConvention 2016 .....	14
CSEG Foundation.....	16
Value of Integrated Geophysics (VIG).....	22
DoodleTrain 2016 .....	23
2016 CSEG Symposium.....	24
Microseismic User Group (MUG).....	25
Lunchbox Geophysics .....	25
RECORDER 2016 .....	26
Canadian Journal of Exploration Geophysics .....	27
Digital Media (DMG) .....	27
Emerging Professionals Program (EPP).....	28
2016 Doodlespiel .....	31
Women in Seismic Golf Tournament .....	31
49th Annual Family Ski Spree .....	32
Doodlebug .....	33
8th Annual T-Wave Golf Tournament.....	34
28th Annual CSPG/CSEG/CAPL 10K & 5K Fun Run .....	35

## Financial Reports

Auditor's Report .....	37
Financial Statements .....	38

## CSEG Achievements

Past Presidents .....	44
CSEG Medal .....	44
Honourary Membership Awards.....	45
Meritorious Service Awards .....	45
Technical Achievement .....	45
Special Commendation.....	45
Symposium Honoree.....	45

Corporate Members .....	46
-------------------------	----



## President

The CSEG has continued to work hard, work together and plan big as we move toward the 75th Anniversary in 2025. Over the past year the CSEG Strategy survey and Strategy Plan have been accomplished. The Strategy Plan continues to be a focus at the monthly Executive meetings especially around the discussion of budget and financial health. The four main Strategy plan objectives are:

1. Financial Health
2. Member Value
3. Promotion of the Profession
4. Position of the CSEG as a professional society

You may have noticed that the Survey results and the Plan are on the CSEG website home page for your convenience. The CSEG Strategy should continue to evolve and be of utmost importance to the Society.

Part of the Strategy survey and Plan was the increase of membership dues on a sliding scale based on income and the honor system. Dues haven't changed over the past 16 years and albeit a tough decision, the need was clear. The CSEG is also capturing demographic information in the membership renewal process to be used as a guide for the CSEG programs and budget for the composition of the membership. The demographics will be anonymously kept and not linked to any particular member. However, the data is critical for planning purposes and budget allocation. If the CSEG doesn't understand its membership composition then how can we adapt for its evolution?

The New Initiatives committee was set up in 2016 and is led by CSEG VP, John Duhault, in alignment with the CSEG Strategy objectives. John has been working with the committee and the Haskayne School of Business on some very creative marketing and revenue generation ideas. Stay tuned to that space from John Duhault.

Board of Directors best practices have been adopted by the CSEG Executives to facilitate better on information exchanges, focus on strategic discussion and Bylaw updates. We've eliminated the AGM requirement for Bylaw change adoptions and now have a process where members can vote online for any future adaptations. The CSEG Board also created the CSEG Governance document which serves as a guide for the Board and the members.

Advocacy, government engagement and education has been a personal focus of mine in 2015 and 2016 for the CSEG and its members. I've personally reached out to the Federal Minister of Natural Resources, Jim Carr, and our Alberta ministers, Federal Ministers and MP's. We even had Mayor Nenshi speak at our AGM in March. The City of Calgary, the Alberta and Federal Ministers along with Minister Jim Carr now know what the CSEG is and the amazing value its volunteers accomplish.

The joint societies of the CSEG, CSPG, CWLS, CSUR and the SPE planned and implemented an Energy Employment Crisis round-table with other leaders from the community here in Calgary which led to further discussions with several Alberta Members of Parliament and beyond. Those advocacy efforts continue to help those

unemployed, underemployed and in transition but the reality is we all have to work to help ourselves. Postings on the CSEG LinkedIn and Twitter accounts have increased for information sharing on these accomplishments and opportunities to have your voice heard on many topics ranging from the Trans-Mountain Expansion project, Climate Change, the NEB modernization, APEGA Legislative Review and other topics such as gender disparity in unemployment rates in the scientific realm. Join the CSEG social media outlets if you haven't already, stay connected and have your voices heard.

More advocacy was displayed by the CSEG Executive representation and it's District Representatives at the SEG Council meeting that occurred during the SEG Annual meeting in Dallas, TX. I'm proud to say that the innovation and strategic planning of the CSEG has been noticed by the SEG. There may be more opportunity to influence in that space as well.

Awareness about Women in STEM in our industry has also been topics of discussion with GeoWomen, AWSN, the University of Calgary, Mount Royal University, our politicians, etc. with actions occurring to continue the focus on diversity in our industry and STEM.

Unemployment has affected a lot of us personally and consequently, the CSEG. Change is uncomfortable and I've felt this as well. It has been a tough time and challenges continue for the industry, the Society and all of us. The CSEG has also had tough financial decisions that needed to be made, cuts that needed to occur and new financial models that needed to be adopted. The CSEG staff has had to take some cuts too along the way. We still have some adaptations that should occur and hopefully those resistant to change will see the need for the future of the CSEG's survival and thriving future. We can always improve on how we problem solve for the benefit of the CSEG.

We still face many challenges ahead as a Society. The CSEG encourages all geoscientists to keep their membership current, stay connected and get involved through volunteering to continue to build a constructive network. If you are unemployed, take advantage of the CSEG unemployed rate! You never know where networking within the CSEG will lead to for your future. The CSEG still has the best member volunteers by far and the Society needs that level of passion.

The CSEG has to accept what is in front of it that is beyond its control and move forward on what is in the realm of control. This is why the Board has worked so hard for the CSEG on what we can do to positively influence what is in our control. There is a saying that suggests "Be ready to change or be ready to be irrelevant". Our Society is too important and too relevant in industry to not work on its future, together.

I'm certain the law of causality will work to the benefit of the CSEG's future through the efforts we are making today. Survive and thrive!

**MARIAN C. HANNA, ICD.D, P. GEOPH**  
CSEG PRESIDENT – 2016

## Vice President

As Vice President of the CSEG my main duties were focused on helping to reduce expenses, improve revenue sources, identify new potential sources, promote the business value of geophysics as a risk reduction / economics improvement tool for the oil and gas industry, support Marian Hanna in her initiatives to improve the governance and strategic planning of the CSEG Board.

### VIG Committee:

I chaired the VIG, (Value of Integrated Geophysics), committee and presented several papers at technical society meetings.

The first VIG presentation in 2016 was part of an SPE breakfast series that Lee Hunt, David Gray and myself taught for over 2 hours each on three separate mornings. Twenty to thirty attendees were in each class, small but attentive.

Other presentations were given to APEGA and CWLS in Q4 2016. Another 80-people heard the VIG word.

Some very good questions at the APEGA talk.

I presented the Value of Applied Geophysics as a one day short course at the CSEG Doodletrain in November 2016.

I passed over the Chairmanship of the VIG Committee to Paul Hausmanis in Q4 in order to focus on other CSEG executive duties.

**VIG Committee current members:** Paul Hausmanis (Chair, SPE Liaison), Ruth Peach, Dave Gray (Secretary, RECORDER Special Edition Editor), Mike Hall, Laurie Ross, Ken Gray (CSEG Exec), Matt Ng, Louis Chabot, Craig Christiansen

**Retired in 2016 members:** John Duhault (Past Chair), Lee Hunt, and Jessica Galbraith

### NIC Committee:

My other largest time commitment for the CSEG was the creation of the New Initiatives Committee (NIC). It involved gathering several people from throughout our society to help come up with some new ways to get revenue into the CSEG. The committee met several times from June to September. The team created a plan to help set the stage for a Haskayne School of Business MBA Marketing student study to be started in January 2017.

The committee came up with a list of questions that was inserted into a short survey.

The committee also came up with a list of people in Service Companies, and Operating Companies. These people were identified as "Ambassadors" or "Decision Makers" within a specific target company. The Ambassador was to promote the CSEG and the survey to the Decision Maker.

The Decision Maker was asked if they would be willing to be interviewed by the students in Q1 2017.

In the end over 100 people were sent the survey, 45 replied and 32 decision makers agreed to be interviewed.

The Value Proposition was made to the students by myself and Jessica McPherson on January 16th.

The reports from the students will be presented in April 2017 and the recommendations for potential new revenue sources will be implemented in Q4 2017 and budget year 2018.

Keith Millis has taken on the role of Champion of the MBA project for the NIC committee.

**NIC Committee Members:** George Fairs, Nancy Laing, Shannon Bjarnason, Victor Irwin, Keith Millis, Jessica McPherson, Karen Chong, Kevin Bianchini, Jim Racette, Alyssa Middleton, Neda Boroumand

### Other CSEG Activities:

I attended several CSEG luncheons and MC'd when Marian Hanna was not available.

I represented the CSEG, along with Marian and Rachel at the SEG annual meeting in Dallas in 2016.

Throughout the year, I attended the all four of the CGF (Chief Geophysicist's Forum) Meetings and sometimes presented with Neil Orr on the Value proposition of Geophysics to other audiences.

I also maintained the communication between the GeoConvention board and the CSEG Board as well as attended the GeoConvention strategy session in Q4 2016.

My goals for 2017 are as follows:

1. To continue to be fiscally responsible by heading towards a minimal-to-no deficit budget
2. Promote the business value of geophysics
3. Support our CSEG social programs as opportunities for networking and fellowship
4. Continue the CSEG Strategies as initiated by Marian Hanna and the CSEG Board in 2016

### JOHN L. J. DUHAULT

CSEG VICE PRESIDENT – 2016

## Past President

During 2016, as Part President, there are a few key areas for which I have been responsible: APEGA Legislative Review, Canadian Federation of Earth Sciences, CSEG Awards, Past Presidents Luncheon & President's Advisory Council.

### APEGA

As the legislative body governing engineering and earth science, APEGA has spent considerable effort working through a legislative review. Consultations were first held in the Spring and Fall of 2015 and continued 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 continued to provide 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 in 2015, and, given that the proposed changes have significant impact on many of our members, continued to do so in 2016.

### 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, and is presently an active participant on the CFES Board.

CFES led groups facilitate regional, national, and international geoscience initiatives that are proposed by its 13 member societies. CFES benefits member societies and aligns with the objectives of its members societies by:

- ▶ Helping ensure that Canadians are knowledgeable about Earth Science and its societal impact
  - Canadian Geoscience Education Network
  - Science Media Centre of Canada
  - Four Billion Years and Counting
- ▶ Supporting informed discussion of Earth Science in Canada through meetings and conferences
  - CFES annual meeting
  - Resourcing Future Generations 2018
  - GeoCanada 2020
- ▶ Providing Earth Science input to government decision-making
  - PAGSE (The Partnership Group for Science and Engineering)
- ▶ Helping coordinate national and international Earth Science initiatives in Canada
  - Geoparks
  - CanGeoRef
- ▶ Representing the Canadian earth science community internationally
  - CFES is the Canadian representative to IUGS (International Union of Geological Sciences)

### CSEG Past Presidents

The CSEG Past Presidents meet annually providing an avenue for the current President and Vice President to become acquainted with those who have previously held the role. As economic conditions, society challenges and ideas fluctuate, it is useful to discuss past challenges and successes so that the current Executive can move forward with additional information in hand. Given the economic challenges of 2016, the Past Presidents luncheon was held at a venue facilitated by Crescent Point at very low cost to the CSEG for which we are thankful.



We are grateful to all of the Past Presidents whom made the effort to attend the event, and engaged with the current Executive.

## CSEG President's Advisory Council (PAC)

The ten most recent Past Presidents of the CSEG informally comprise the President's Advisory Council (PAC) chaired by the current Past President. They are called upon when needed by the President, or Executive, to generally comment upon direction or advise on specific concerns. We thank those Presidents who attended the various PAC meetings and provided timely advice.

## CSEG Awards

The CSEG Awards Committee (Rachel Newrick, Rob Vestrum and Ron Larson) worked to solicit many worthy candidates for CSEG Awards in 2016 and additionally brought forward a new category to recognise outstanding volunteers. The following candidates were unanimously approved by the CSEG Executive and will be presented with the awards at the 2017 CSEG Symposium.

**CSEG Medal:** Larry Lines

**Meritorious Service:** Stephen Kotkas

**Meritorious Service:** Trent Olsen

**Honorary Membership:** Laurie Weston Bellman

**Technical Achievement:** Stewart Trickett

**Special Commendation:** Sigma Exploration

## Outstanding Volunteer Award

This 2016 Outstanding Volunteer Awards will allow the CSEG to recognise those members who dedicate time, energy or effort to the CSEG but have not yet met the 'prominent' or 'lengthy' requirements for Meritorious Service Award, Honorary Membership or Special Commendation. There are many members in this category including early career professionals and members who contribute behind the scenes. A call for nominations started December 15th, 2016 after approval by the CSEG Executive and will close January 31st, 2017. We do not envisage any limit to the number of recipients nor the amount of times a volunteer is able to receive this award. Members who were recognised in this category are:

CSEG Medal

Nominee: Larry Lines

Honorary Membership

Nominee: Laurie Bellman

Meritorious Service

Nominee: Stephen Kotkas

Meritorious Service

Nominee: Trent Olsen

Technical Achievement

Nominee: Stewart Trickett

Special Commendation

Nominee: Sigma Exploration

Outstanding Volunteer Award

Nominee: xxx

## RACHEL NEWRICK

CSEG PAST PRESIDENT – 2016

## Education Services

2016. "What a year" as the realization that oil prices were not going to rebound to their previous highs anytime soon, and that industry – and personal – budgets would have to adapt to the new reality of a world with plenty of hydrocarbons. Your society responded by significantly reducing the cost of the Technical Luncheon series, with a new, attractive venue at the Petroleum Club's Devonian Room. Educational outreach expansion plans have been shelved, at least temporarily. A significant effort was made to provide a program of educational talks and programs that highlight both the 'value of geophysics' and doing 'more with less'. I hope you agree, and encourage you to take advantage of, attend and participate in the many educational programs of the CSEG.

This directorship is truly a team effort, and I am grateful for the time I spent as assistant to the 2015 Director, Paul Anderson. Paul was recruited and relocated to Texas in late 2015, but here in Calgary you would hardly know this, as he seamlessly continued his role and duties to the CSEG via Skype, Dropbox, email and phone. He was and still is 'always available' for guidance and help.

The move to the Petroleum Club was timely and just one of the cost-saving ideas from our incoming President, Marian Hanna. She also arranged a particularly memorable luncheon visit at the new venue by his Worship Naheed Nenshi, who gave a much-appreciated and uplifting vision of the future of our city. He later tweeted about his lunch-time visit with the 'CSPG'. Clearly, we have more work to do to communicate 'who we are'.

A personal highlight of the year was having the privilege of presenting the 2015 CSEG Best Technical Luncheon and Best RECORDER Paper award to three outstanding geoscientists. Aaron Stanton delivered a wonderfully concise, clear description of "Signal processing and physics-based approaches to seismic data regularization" to an engaged luncheon audience. Similarly, my Osum colleagues Tammy Willmer and Garrett Quinn were recognized for their beautifully illustrated paper "Characterization of the Albian Lower Grand Rapids Formation, Cold Lake, Alberta".

Graziella Grech is the incoming assistant director and the two of us have worked the past year as a 'tag team'; I am grateful for her camaraderie, support and guidance. Aaron volunteered to help us plan our upcoming luncheon series, and the three of us met regularly until we had the entire 2017 year all set. We are also thankful to our fellow directors and members who offered suggestions and ideas, particularly Marian Hanna, Neda Boroumand and Penny Colton.

In addition, there are several individual committees putting together unique educational programs throughout the year, including Lunchbox Geophysics, the Microseismic User Group (MUG), the Value of Integrated Geophysics (VIG), Symposium and DoodleTrain.

Please check out their current schedules on the website, then support and participate.

The technical luncheon committee of Mohammed Al-Ibrahim, Marc Boulet and Karl Mome organized the actual agenda and luncheon audio-visuals throughout the year. On behalf of all of us who could easily think 'it just happens', I would like to thank them for 'making it happen'.

Most importantly, on behalf of the directors and membership of the CSEG, I wish to thank our luncheon sponsors for your financial support both this year and into the future. Thank you.

**January 25, 2016:** Steven Lynch (The Visual Wavefield Project) – *Working Visually with the Wavefield*

**February 22, 2016:** Lee Hunt (CSEG Value in Integrated Geophysics founder; Jupiter Resources Inc.) – *Value Thinking from the Classical to the Hyper-Modern*

**March 30, 2016:** Easton Wren (CSEG past-president; educator) – *The Oil Price and Seismic Exploration: A Roller Coaster Ride*

**April 25, 2016:** Joe Dellinger (SEG Distinguished Lecturer; BP) – *Forensic data processing – Revealing your data's hidden stories*

**May 16, 2016:** Claudio Virues (Nexen Energy ULC) – *The New in Microseismic-based Prediction of Ultimate Stage by Stage SRV Through Engineering*

**June 20, 2016:** Simon O'Brien (Shell Canada) – *Quest Carbon Capture Project*

**September 19, 2016:** Ann O'Byrne (Cenovus Energy) – *Improving seismic data while decreasing costs*

**October 31, 2016:** Jennifer L. Miskimins (Colorado School of Mines) – *Integrating Data – How Geophysicists and Engineers Can Work Together to Improve Hydraulic Fracturing*

**November 21, 2016:** Mauricio D. Sacchi (University of Calgary) – *New and not-so-new applications of low-rank matrix and tensor completion to seismic data processing*

### KEN GRAY

DIRECTOR, EDUCATIONAL SERVICES



## Communications

2016 was a year of continued financial austerity. This entailed further painful financial decisions being made and the resulting discomfort. These decisions were made with the best of intentions to ensure the longevity of the CSEG while trying to preserve those aspects of our society that we treasure.

The RECORDER Committee as chaired by Nicole Willson ensures the regular publication of the CSEG RECORDER which is the principal medium for communication with our members and that it meets the technical and journalistic standards expected by the CSEG membership. There has been a continuation of the cost reductions started in 2015 with the elimination of the paid Chief Editor position and a reduction in the number of publications from 10 per year to 7 per year. The CSEG RECORDER has also been quite fortunate in being able to obtain not one but two volunteer Chief Editors in a very short period of time - Rob Holt who had to resign as a consequence of obtaining employment in Houston and Nicole Willson who has stepped up to replace Rob Holt. While there has always been an expectation that the RECORDER would follow in the footsteps of other publications and go fully digital eventually, due to the current financial situation this transition to fully digital has been greatly accelerated. So in 2017 the print edition of RECORDER will be discontinued. When financial conditions improve the return of the print edition will be evaluated. Thanks to the hard work of the Recorder Committee a plan has been put into place to transition to a completely paperless RECORDER in 2017. I would like to thank the previous and current Chief Editors – Penny Colton, Rob Holt and Nicole Willson as well as the rest of the RECORDER committee for all their hard work in keeping the RECORDER going during this period of rapid change and difficult challenges.

The Canadian Journal of Exploration Geophysics (CJEG) with Larry Lines and Satinder Chopra as co-editors is the peer-reviewed journal of the CSEG that encompasses all aspects of research, exploration and education in applied geophysics. By good fortune and the perseverance the co-editors and associate editors it has endured through difficult economic circumstances over the years but currently receives no direct budgetary allocation. However, a shorter version of the CJEG was published through donations via the CSEG Foundation. The current Vol 41, No.1 edition of the CJEG can be found on-line at [csegjournal.com](http://csegjournal.com) in the Members only section.

While the Digital Media Committee (DMC) as chaired by Jason Schweigert has discontinued or postponed earlier initiatives due to budgetary constraints, it has been continuing to look at ways to adapt social media to better serve the CSEG membership. This includes but is not limited to looking at ways to increase visitors to the CSEG website and exploring different ways of digital revenue generation.

The CSEG does more than just promote the science of geophysics. It promotes fellowship, community and cooperation among our membership. It is my hope all these aspects of the CSEG are not forgotten and are preserved in the future. I would like to thank the Communications team for their continued support of the CSEG, all their creative solutions, hard work and patience during all the changes that have occurred during 2016.

**MARKO MAH**  
DIRECTOR, COMMUNICATIONS

## Member Services

If you've volunteered for the CSEG in the past, flipped through the RECORDER and/or attended a social, educational or technical event I suspect that you might feel a sense of community or perhaps it's just the sum of positive experiences that has motivated you to continue to be a member of our society. As a corporate sponsor, you likely feel that there is a value there beyond the recognition of your brand or the advertisement of your services. As a private donor, I imagine there is more motivation to support the CSEG and its charitable foundation than simply a tax write-off.

So what is it that has and will continue to define the success of our society? It is all those things and more. In the past two years I have had privilege of seeing what that "more" is. Put simply, it is the ability of us all to adapt and innovate...and all that adapting and innovating requires extra effort from our staff, our volunteers and from our sponsors as well. So as a reminder to us all, when you're attending your next CSEG event, or reading your next RECORDER article, if you have the opportunity, thank those people. They deserve it!

In that spirit, on behalf of Karen Chong and the rest of the CSEG Executive, I would like to extend a big thank you to all of the CSEG members, volunteers and sponsors for their contribution to the continued success of our society.

One of the roles of Member Services is to recognize the efforts of our volunteers across the CSEG and CSEGF through our Annual Volunteer Appreciation Party. The appreciation party took place in March 2016 and over 130 of our 2015 volunteers were able to attend. A special thank you to the CSEG Foundation for its co-sponsorship this important celebration.

Our Social Committees succeeded carrying on their traditional events through an admirable display of hard work, adaptability and the generosity of their many sponsors.

The 44th annual Doodlespiel was held late January in scenic Banff, AB. The bonspiel is one of largest in western Canada and is a weekend full of networking and curling. The committee responded to economic challenges and the event was a success once again. Thank you to the Doodlespiel committee and Larry Herd's matching donation to make a total donation of \$2600 to the CSEG Foundation.

The 49th Annual CSEG Family Ski Spree was held in February, 2016 at the beautiful Fairmont Hot Springs Resort in Fairmont, B.C. The family event held strong from its 2015 attendance with over 260 participants making the trip for a weekend full of fun and competition. The Ski Spree committee rose over \$2500 for The Inn from the Cold, a charity that supports homeless children and their families.

The 8th annual T-Wave successfully hosted 140 participants at Valley Ridge Golf Course on June 27th. The committee worked hard to adapt to economic challenges and were able to include members in a career transition and students with competitive rates. Thank you to the T-Wave committee for its generous donation of over \$800 to the CSEG Foundation.

The 64th CSEG Doodlebug was held in August, 2016 at the Trickle Creek Golf Course and the Trickle Creek Lodge in scenic Kimberley, BC. The weather held and the committee did an outstanding job delivering a weekend of competitive golf, networking and a costumed themed event. The Doodlebug committee raised \$7500 from a variety of fundraising for the Providence Children's Centers, a charity that works with children with special needs in a therapeutic preschool environment.

The 16th annual Women in Seismic (WiSE) golf tournament occurred on Sept 8th, at the Fox Hollow Golf Course. The WiSE committee scaled the event back to 9 holes this year and were very successful with event attendance, sponsorship and feedback. WiSE raised \$8100 this year for the Alberta Cancer Foundation, bringing their cumulative donations to over \$125,000.

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) continued promoting the development of young professional's networks, knowledge and skills through several events over the course of 2016.

The 2016 EPP events included:

- ▶ Two very successful inter-society young professional networking events in May and December.
- ▶ Two well attended technical workshops; a VSP workshop in May and an Introduction to Seismic Inversion workshop hosted in September.
- ▶ Volunteering at the Calgary Drop In Center with the help of the Calgary EAGE Student Chapter Calgary began in August.
- ▶ The Junior Geophysics Forum merged with the CSEGF Mentorship program's kickoff event in early October. The event included a panel discussion and hosted a diverse mix of attendees from student to executives.
- ▶ Fall Speaker Series with the AAPG talk in late November with a focus on value of networking, volunteering and resilience.

The CSEG Ambassador program had no activity in 2016 but stay tuned for 2017.

Please see the individual Social Committee and EPP reports in the following sections for more details.

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.

## KEVIN BIANCHINI AND KAREN CHONG

DIRECTORS, MEMBER SERVICES

## Finance

The CSEG has weathered a wide variety of economic conditions throughout its history and while we have been required to sharpen our pencils and make some difficult decisions over the past year, the Society remains in a reasonable financial position. Vulnerability still exists, however, with careful financial management we anticipate that the Society will remain an important part of the geophysical community for years to come.

Due to an economic downturn in Alberta that began in 2014, paired with GeoConvention 2016 facing direct competition from the American Association of Petroleum Geologists (AAPG) conference – hosted in Calgary in 2016, the CSEG Executive could anticipate well in advance that 2016 would face a deficit year. Despite diligent efforts to achieve a balanced budget, 2016 forecasted a \$341,275 deficit. The Executive, in cooperation with the Society's many volunteers and staff, proceeded through the year making every effort to reduce expenses and increase revenues. Every cost to the Society was analyzed carefully and some very difficult decisions were made. Significant cost saving measures were applied to the administration and RECORDER portfolios, the financial performance of non-core programs were evaluated, and efforts were invested in revenue generating programs to stimulate additional income. The result of these efforts was a year-end deficit of \$271,053, which reflects an improvement from budget by \$70,222 or 21 per cent. This should reinforce that your Executive had exercised and will continue to exercise fiscal diligence at every opportunity.

Despite improving upon our deficit budget in 2016, the reality is that 2015 was also a deficit year, as is the forecast for 2017. Recognizing that this trend is clearly unsustainable, the Executive held a strategy session in May of 2016. Armed with valuable member feedback, a variety of topics were addressed including financial health, member value, promotion of profession, and the position of the Society. Some immediate action items regarding financial health were taken including: 1) assembling a "New Initiatives Committee" designed to help generate revenue and seek new sponsorships, 2) identifying additional cost saving measures, particularly in the administration portfolio, and 3) raising membership fees, which had not been done since 2001. These and other strategic efforts continue to be measured for success and (re)evaluated at every Executive meeting through the year.

The CSEG's yearly historic financial performance is shown below in Figure 1. The deficit budget that the CSEG experienced in 2015 and 2016, and will experience in 2017 is primarily due to the impact of reduced oil prices in the energy industry. This has affected the CSEG's normal revenue stream because overall sponsorship, advertisement, and membership declined significantly. GeoConvention, which historically represents the CSEG's greatest source of revenue has also been subject to the effects of this economic downturn, contributing largely to the deficit outcomes beginning in 2015.

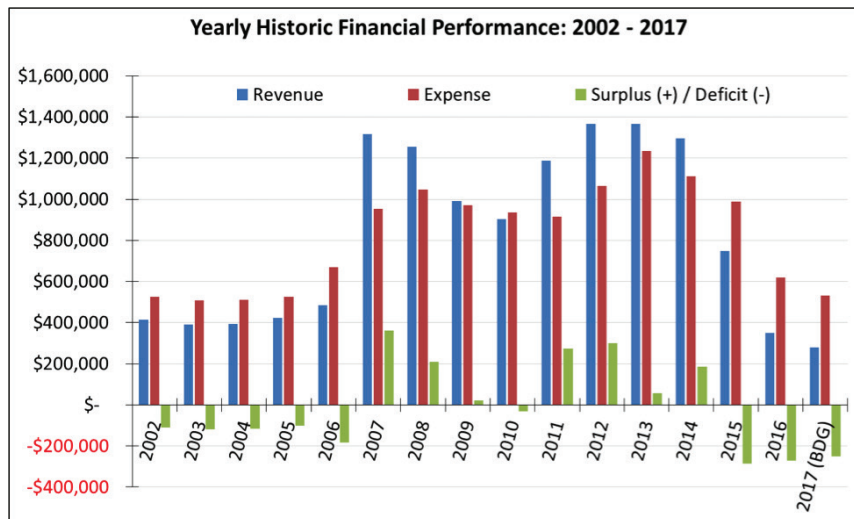
On a positive note, the net financial results of the 2016 operating budget resulted in an improvement over 2015, and the budget for 2017 reflects an improvement over 2016. Throughout 2017, the CSEG Executive will remain committed to exercising diligent fiscal responsibility and ensure the forecasted improvements are realized and continue beyond 2017. This approach will support the CSEG's efforts to see the Society thrive into 2025, where we will celebrate our 75th anniversary.

**JANINE BALLINGALL**

DIRECTOR, FINANCE

**NEDA BOROUMAND**

ASSISTANT DIRECTOR, FINANCE



**Figure 1:** CSEG's yearly historic financial performance showing revenue, expense and surplus/deficit from 2002 to 2016. Includes the 2017 budget (BDG) for reference.

## Managing Director

Going back to my report for 2015 we were well into the downturn and the affects it was having on the CSEG. Well 2016 was just as tough, perhaps worse. Several more of our members were relieved of their employment status, while more took this as an opportunity to leave the industry or completely retire. Companies and individuals who once supported the society just did not have the discretionary funds to direct our way; be it convention, continuing education (Doodletrain, Symposium, membership renewals, and sponsorship). In turn those are the very activities that we rely on for revenue to operate. I totally understand why they couldn't support us, but reality is that is what happened. Since 2014 the society has seen one million dollars in gross revenue come off the operating budget. Though we have made significant cuts within administration, programs and publications it has been virtually impossible to balance revenues with expenditures. The reserves that I was able to convince executives to begin putting away starting back early in my tenure (almost 17 years) has been our saving grace. However, even with our financial cutbacks those reserves are by no means infinite. If the current trends continue the society will eventually use up its war chest. Based on the deficits of the past two years, with the possibility of no significant additions of revenue or expenditures, 2020 could be the year of reckoning. The executive and administration are beginning to put in place plans to begin transitioning in a different direction if this situation actually occurs. Unfortunately the industry, of which the CSEG is very much a part of, is also transitioning itself to operate within the "new normal". Even though the tail end of 2016 has seen some hope, most industry pundits say it will take some time for cash to flow again and feel it will not be at the same pace. Basically when a downturn hits, a society like ours is the first place where funds are stopped being directed to and the last to return (if they do) when things begin to turn around.

Looking ahead in 2017 the Executive has no choice but to plan again 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 it will look different. The digital world that a number of entities already thrive in will be implemented even more within the society. Digital RECORDER, digital notes for Doodletrain, webinars and on and on. It may be the case where the traditional or core activities look different. Perhaps they do not happen as frequently as in the past. Certainly there is some optimism when it comes

to GeoConvention and hopefully we can see a bit of a rebound where the society can see some important funds come back to the operation.

Personally this has been an extremely trying time on a number of fronts. The CSEG is my lively hood, my workplace. I am very cognizant on the fact as an employee of the CSEG I am dealing with members to whom we work for who are currently out of work. At times it makes for an awkward and uncomfortable situation. It happens in all facets of the work world but it does not make it easier. We are all working to ensure the CSEG is here for its 75th Anniversary in 2025, but the next 2-3 years will be vital. We have some wonderful volunteers on the executive and committees who are totally committed to change and to move forward. The past is for history books. Nice to reminisce but that's about it. The future is real and something that can be navigated and directed through change. Some changes will be difficult and possibly not as successful as others. However we are at a point where there is not as much time to test the water temperature with our big toes, but instead to do the "polar bear" swim and go all in.

Finally as I complete my 17th year with the CSEG, I must recognize some key individuals for their support over the past year. Marian Hanna and John Duhault have been a huge support for me and together we are persevering through all of this change. As well our financial directors Janine Ballingall and Neda Boroumand have worked extremely hard in keeping us all in tow financially. On the Foundation side Larry Herd, Perry Kotkas and Annette Milbradt are as dedicated volunteers that you will find anywhere and the CSEG and Foundation are fortunate they work on our side. All are very committed, and along with the many volunteers serving on our committees, is the lifeblood of the CSEG. Our volunteer base is unique among technical and professional societies in today's world. As well my co-worker Alyssa Middleton has been strength of support for me and works extremely hard for both the CSEG and Foundation. She is a very committed and dedicated employee who is willing to tackle anything. As our industry and the financial environment continue to change it is our commitment to the membership to provide the best service and information possible, while always seeking new initiatives to benefit our membership.

**JIM RACETTE**  
MANAGING DIRECTOR



## Chief Geophysicists Forum

The CSEG Chief Geophysicists Forum gathered on March 17, June 2, September 8 and December 1, 2016 for the quarterly morning 1.5 hour meetings at the APEGA office.

It was another successful year ending with over 60 members. The latest membership list and minutes are published on the CSEG website at <http://cseg.ca/members/chief-geophysicists-forum> and continues to grow with representatives (max. one per company) from various sized companies, University, consultants and retired Geophysicists.

The Forum made significant strides in promoting the value of Geophysics based on discussions, actions and publications. The CGF focus and theme for 2016 was discussion on the practical, business and scientific benefits of using geophysical analysis directed to the decision makers in our organizations and in the industry in general. Each agenda had industry updates, technical issues, operations concerns, CSEG matters and APEGA reports. The most notable accomplishments this year are as follows:

1. **Ideas check list:** Based on discussions at each meeting, an Ideas/Points to Consider list was refined to help members approach decision makers on Geophysical budget and manpower in the various ways Geophysics can add value in their business decisions.
2. **Value added role of Geophysics:** A paper was written and published in various Technical and industry publications to educate people on the current ways Geophysics can be properly used in collaboration with other Professions to create better technical and business decisions. This paper is also a resource for CGF members to pass on to others for reference in promoting our Profession.
3. **Efficiency/communication on Geophysical issues:** At each meeting the discussion and knowledge from various sized producing companies, service companies, geophysical

organizations and consultants were shared. This helped us all understand the state of the geophysical industry and suggestions resulted in on how we can do our jobs better. With the decline in Geophysical budgets and employed numbers, our group took on our responsibility to ensure we all understand then communicate key messages and best practices in our profession.

4. **Associated committees:** Regular reports on key highlights from APEGA, CSEG, Training events, CAPP Geophysical and Industry concerns were presented and discussed.
5. **Minutes:** The meeting minutes (except confidential discussion points) are posted in the members' only part of the website and date back to Sept. 2013.

The CGF next year will focus on a series of presentations outlining examples of where geophysics has been successful with discussions following as a way to continue to equip members with ways to advocate for our profession.

To join the CGF, the potential member has to be a CSEG member, have a passion for Geophysics, have manager approval to attend quarterly meetings and if representing a company with more than one geophysicist that the company have a corporate CSEG membership.

The 2017 Chairman of the CGF is James Lamb (Sigma).

**NEIL ORR**  
2016 CGF CHAIR

## GeoConvention 2016

GeoConvention 2016 was held March 7-11, 2016 at the Telus Convention Centre in Calgary. The theme of GeoConvention 2016 was “Optimizing Resources” and the focus of the convention was described as:

*“GeoConvention 2016: Optimizing Resources, will showcase the necessary sharpening of tools, techniques and images required to find and produce oil and gas efficiently. Against a backdrop of changing macro and micro conditions, the industry must adapt by focusing attention on the most significant facets of an operation, refining workflows, and sustaining effective practices.”*

More than ever before, GeoConvention 2016 integrates soft skills, recruiting and personal development insights and meaningful networking with peers and colleagues as we all come together to learn, grow and develop and overcome the business environment we are in.

In its second year of existence, 2016 was a difficult year for GeoConvention Partnership. In addition to oil prices that reached lows not before seen in the 21st century, AAPG was in Calgary in June necessitating the move of GeoConvention 2016 to March. From a financial perspective, the main objective of GeoConvention 2016 was to reduce our cost structure as much as possible while returning as much as possible to our delegates, sponsors, exhibitors and sponsor societies.

### VOLUNTEERS

As in past years, volunteers are critical to a successful convention and Table 1 lists the convention committee chairs. Additionally, some 90 volunteers, both students and industry professionals, helped make the convention a success.

Committee	Name
General Co-Chair	Heather Makowecki
General Co-Chair	Jeff Deere
General Co-Chair	Gary Bugden
Technical Co-Chair	Nanna Eliuk
Technical Co-Chair	Duncan Findley
Technical Co-Chair	Mohamed Helmy
Exhibit Chair	Vic Urban
Volunteer Chair	Mandy Thompson
Sponsorship Chair	Nicole Sendziak
Finance Chair	Spryng Kubicek
Mobile App Chair	Susie Ehrhardt
Social Media Chair	Susie Ehrhardt
Special Events	Deepi Mand
Judging Chair	Lynn Engel
Poster Chair	Lisa Cartier
Workshops and Courses	Abby Woods
Alumni/Students	Jason Moore

Table 1. GeoConvention 2016 committee listing.

### TECHNICAL

GeoConvention 2016 hosted a total of 239 talks across 47 sessions over the three days with including 3 panel discussions and an additional 78 total posters. Under the guidance of the GeoConvention Board, the technical committee sought to diversify the 2016 content by sourcing the following groups to participate in the technical program: Society of Petroleum Engineers, Canadian Society for Gas Migration, NES Global Talent, and Citi Group.

### SPONSORSHIP

In 2016 we had many returning sponsors as well as a few new ones. The sponsors and their support levels are shown in Figure 1. Sponsorship allows us to offer a diverse technical program while also supporting our luncheons and networking opportunities. The ongoing support of these sponsors is certainly appreciated and critical to the ongoing success of GeoConvention.



Figure 1. GeoConvention 2016 sponsors

## EXHIBITS

2016 struggled with Exhibit floor sales in large part due to AAPG being in Calgary in June and the poor economic conditions in the industry. Despite the 2016 cost of space holding steady at a 50% discount to similar shows, the uptake on floor space was down nearly 50% year over year. In the end, The Exhibit Hall C and D was utilized to house the 58 exhibitors. Despite the smaller floor, the exhibitors that were able to join us indicated GeoConvention 2016 was one of the best shows they had participated in with the following quotes coming from a few of our key supporters:

*"geoLOGIC systems has been a proud supporter of the GeoConvention for over 10 years and we continue to see it's benefits pay dividends within industry. Each year geoLOGIC maintains its' investment in this joint effort we see increased sales opportunities, training interactions and interest in our software solutions."*

LAUREN PARKER, GEOLOGIC SYSTEMS



*"The GeoConvention Partnership recognizes the industry's challenges and creates a right-size solution allowing Seitel to maximize every corporate dollar we put into our participation. Our ability to meaningfully interact with operators across all of Canada's basins is exceptionally well served through the exposure we attain when participating in GeoConvention."*

ERIC RUYGROK, SEITEL CANADA



*"GeoConvention has given us a great opportunity to showcase Paradigm software and services to new and existing clients. This has been of value to both Paradigm, and our clients who wish to be aware of our latest technologies."*

MATT WILLIAMS, PARADIGM



## ATTENDANCE

The 2016 GeoConvention saw further economic decline in the oil and gas sector that saw oil prices plunge from 2014 highs of \$110 per barrel down to price points in the \$40 range in 2015 and into the sub-\$30 range in the days leading up to the convention. This price decline resulted in continued industry layoffs and had a large impact on the GeoConvention attendance numbers. Overall, GeoConvention saw 2402 unique registration entries, down from 3466 in 2015. The bright side was that the Exhibit hall registrations were up year over year by 38% to 1291 leading to good exhibit floor traffic and networking opportunities for our delegates. In large part, this was due to the initiative GeoConvention took in 2016 to send out personalized invitations to our participating companies to send out to their clients.

## NETWORKING

Networking continues to be an integral part of the convention – allowing people to reconnect and build new relationships. The networking nights again proved to be the single-biggest draw to the exhibition floor. The Monday attracted an estimated 590 visitors and the Tuesday another 475. Wednesday evening consisted of the Alumni Event and the CSEG Foundation Challenge Bowl which attracted about 100 students and industry professionals.

The final event associated with GeoConvention 2016 was the "Best of 2016 Networking Night" held at the Nexen Theater on October 27, 2016. This was the second annual "Best of" event where we had the opportunity to thank our 2016 sponsors and recognized the winners of awards for the best posters and oral presentations. Five of our award winners presented their work in 6 minute, 40 second fast-paced summary format. A complete list of award winners can be found in the September 2016 edition of The RECORDER or at [www.geoconvention.com/conference/2016-award-winners.html](http://www.geoconvention.com/conference/2016-award-winners.html)

For 2017, GeoConvention will be back in May – May 15th-19th – at the Telus Convention Centre and it will boast the largest technical program in recent memory with 60 technical sessions planned in total. To keep up to date on GeoConvention visit [www.geoconvention.com](http://www.geoconvention.com) and follow @geoconvention on Twitter.

JEFF DEERE, GEOCONVENTION CO-CHAIR

DUSTIN MENGER, GEOCONVENTION MANAGER



Is that a glimmer of positivity I see on the horizon? Perhaps we're finally on the way out of our doldrums. This year the Foundation, as did many organizations in the Earth Sciences field, experienced the effects of the continued market downswing. Last year, the Foundation board approved a deficit budget year which would have the effect of reducing our overall asset account by roughly \$96,000. Due to the diligent efforts of our committees and volunteers, we expect the actual deficit to be less than \$50,000; an amount that is more than offset by interest and capital growth gains in the CSEG endowment investments.

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 2017 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 CSEG 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.

**2016 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), **Annette Milbradt** (Secretary), **Mike Clement** (Treasurer), **Susan Thomson** (Assistant Treasurer) (Finance), **Marian Hanna\*** (CSEG President and Representative to the Foundation), **Perry Kotkas\*** (Past Chair and Special Projects Fund Chair), **Doug Uffen\*** (Outreach Chair), **Doris Ross** (Fund Development Chair), **Neil Orr** (Fund Development Vice-Chair), **Craig Mosher** (Scholarships Chair), **Kun Guo** (Travel Grants and Learning Subsidies Chair), **Helen Isaac** (Communications Chair), **Neil Rutherford\*** (Governance Chair), **Brodie Sutherland** (Earth Science for Society Chair), **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 \$2.1M thanks to the generous donations of our members and corporate supporters and the income generated from our investments.
- ▶ For the 2017 budget year, the Foundation Board elected to **allocate \$18,000** of the annual operating funds to specifically support programs for unemployed members under the **Special Projects Fund** committee chaired by Perry Kotkas.
- ▶ The sixth **Earth Science for Society (ESfS)** in March hosted over 750 members of the public, 300 Girl Guides and 1,500 junior high school students from more than 11 schools. In 2016, the CSEG Foundation "adopted" ESfS and became the long-term Parent Organization for the event. Brodie Sutherland chairs the ESfS committee and is looking forward to the next event on March 19-21, 2017.
- ▶ **Outreach/University Student Outreach (USO)/Public Outreach** continued to support students in universities and high schools, and to inform educators and the public at large about geophysics and the CSEG while maintaining a close eye on expenses. Doug Uffen chairs Outreach, the Foundation's largest committee, accounting for about half of our operating budget outside ESfS. Outreach sent representatives with informational displays and handouts to teachers' conferences, science and physics conferences, career counsellor's conferences, and career fairs. This year, Outreach plans to initiate a stronger national online presence by utilizing videos and webinars.
- ▶ We continue to support post-secondary education and students through our **Scholarship committee's** efforts chaired by Craig Mosher. From 42 applications for university scholarships, the Foundation awarded 12 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 2016.



- ▶ The Foundation provided **travel grants and learning subsidies** (Kun Guo, Chair) to help Canadian undergraduate and post graduate students take courses and attend conferences, seminars and geoscience field trips. In 2016, \$8000 in funding was provided to assist over 25 recipients in support of travel or registration in events during the 2016 calendar year.
- ▶ Our 2016/2017 **Distinguished Lecturer** is Laurie Weston Bellman, who is giving her talk entitled “Data Interpretation and Integration from a Seismic Perspective – The Excitement of Innovation” to various different universities and institutions across Canada and into Alaska, wrapping up in April, 2017.
- ▶ The **Geophysical Industry Field Trip (GIFT)** took over 40 students from eight different universities to various host companies, where they learned about operations, processing, interpretation and other elements of applied geophysics.
- ▶ **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 the aspects of seismic field operations, learn about job opportunities, and hear how we minimize environmental impact.
- ▶ Our **Fund Development Committee**, chaired by Doris Ross, has been working diligently to finalize the details of our new **Planned Giving campaign – “Preserving the Future of Geophysics in Canada”**, which is set to launch in January, 2017.

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

- ▶ A **strong Board of Directors** with various levels of experience, 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.

## LARRY HERD

CSEG FOUNDATION CHAIR

## Finance

**MIKE CLEMENT, TREASURER AND DIRECTOR**

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

Not unexpectedly, this past year has again been a challenging one for the CSEG Foundation in terms of fund raising and sponsorship for our programs and therefore the CSEG Foundation Board was cautious and judicious when planning the budget for the 2016 fiscal year. The Board and the committees worked hard to strike a balance

between the continuance of funding long-term charitable programs and showing restraint and fiscal management while capitalizing these same programs. In late 2015, the Board approved a deficit 2016 budget of approximately \$96,000.00.

The CSEG had been a major contributor to the Foundation from inception through to 2014. With their contributions and the generous support of the CSEG members, both corporate and individual, the CSEG Foundation was able to grow its endowment each year since inception in 2007. This was accomplished while increasing the number of programs and the charitable scope of the Foundation. With initial donations from the CSEG and members, the endowment started with assets of \$457,000.00 in the commencement year. That endowment has grown through funding and interest to greater than \$1.5M. This value is not yet sufficient to sustain the current annual program expenditures without further fund development, but it is a phenomenal start over only a few years.

As with all profit and not-for-profit charitable organizations in Alberta over the 2015 and 2016 recessionary years, the CSEG and the CSEG Foundation have witnessed a sharp drop in revenues available to fund their operations. Subsequently, the CSEG has temporarily discontinued the flow of capital to the Foundation endowment. In fact, the CSEG Foundation has allowed, within their budget, for the support of the CSEG office operations that directly accommodate the day-to-day interests of the CSEG Foundation, a legitimate and reasonable request given the current climate.

I am pleased to report that even though the CSEG Foundation revenues have dropped significantly for reasons just stated, the 2016 year end projections are showing an approximate deficit of only \$50,000.00; an amount that is more than offset by interest gains in the CSEGF endowment investments. At the time of this report the Foundation is likely to have year-end assets of about \$2.092M. In 2014 and 2015, the audited reports show total equity of \$2.160M and \$2.030M, respectively.

Of particular note this year was the Canada Revenue Agency’s audit of the CSEGF financial record for the period of January 1, 2013 to December 31, 2014. This was this Foundation’s first audit since the outset and it went extremely well. Only two areas of non-compliance were identified and each was easy to resolve. In fact, one had already been identified and the Foundation had been waiting for feedback from the CRA for recommendations.

This year it is paramount for the financial committee to recognize the hard work of all the Foundation subcommittees to maintain the CSEGF programs which are so important to the Geoscience community while finding ways to curb spending without curtailing the integrity of the programs. The CSEG Foundation finances are managed by a team of hard working individuals and I personally want to thank Susan Thomson, Spryng Kubicek, Murray Hunter, Adrian Smith, Doug Uffen, Jim Racette, and Alyssa Middleton for

Continued on Page 18

CSEG FOUNDATION continued from Page 17

their invaluable efforts and professionalism in maintaining the CSEGF financial record. Special thanks also to Annette Milbradt, whom, although she has stepped away from the day-to-day operations of the finance committee, still disburses invaluable knowledge to the aforementioned team when needed.

I welcome anyone who would like to view the previous years' audited financial statements of the CSEG Foundation to visit the website: <http://cseg.ca/foundation/about-the-cseg-foundation>

## Fund Development

**DORIS ROSS, CHAIR**

**NEIL ORR, VICE CHAIR**

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.

## Special Projects Fund

**PERRY KOTKAS, CHAIR**

The Special Projects Fund (SPF) was created in April of 2016 in order to "support members of the geoscience community during the current economic downturn on projects outside the annual budget of the CSEGF". Special consideration is given to under-employed and unemployed CSEG members.

**2016 SPF Committee:** Chair: Perry Kotkas, members: Susan Thompson, Dan Loas

**2017 SPF Committee:** Chair: Perry Kotkas, members: Susan Thompson, Doris Ross

### 2016 Projects:

1. Financial support for those attending the Geoconvention
2. Financial support for those attending the CSEG Symposium
3. Financial Support for those attending the CSEG Doodletrain.
4. Financial support for certain activities of the CSEG "EPP" (Emerging Professionals Program), although at year-end, the EPP has managed to run their activities without assistance from the SPF.

**2016 Budget:** \$18,000.00

**2017 Budget:** will be similar.

**Accessing support from the CSEGF Special Projects Fund:** Please contact the CSEG office for more information and to be routed to the appropriate Foundation Committee member. Make sure you allow enough time for your project to be reviewed and approved by the CSEGF Board (one meeting, monthly), and for enough time to properly advertise the project for which support is requested.

## Outreach

**DOUG UFFEN, CHAIR AND DIRECTOR**

Frugality was the theme of the year for the Outreach and USO Committees. Operating with a \$90,000 expenditure budget, the Outreach and USO team of volunteers managed to execute their collective programs at a significant cost savings. As this is being written in mid-December, budget projections anticipate that the committees will be able to execute their programs this year for a savings of approximately \$18,000. Kudos go out to the organizing committee and all the volunteers for executing this program so cost effectively. The committee's focus was to mitigate airplane travel along with hotel and meal expenditures as much as was reasonably possible, using local volunteers where we can. The Outreach and

USO committees do have offsetting revenues and much appreciation goes out to all our sponsors of our various events. In 2017, our expenditure budget has been set at \$70,000 for a net cost to the Foundation for the Outreach and USO programs of just under \$29,000. Our plans next year will focus upon more cost effective ways for delivery of our efforts in the long-term. An online web-based Outreach program is being developed so that we can reach out to schools and the public that reside outside major urban centres in Canada by using You-tube like video material. The program will showcase all aspects of geophysics and potential career paths, not just those that lead into the oil patch. For USO, we hope to have more senior level matriculated material that may make use of webinars as well as videos. This online initiative is in concert with the longstanding desire for the CSEG to expand our reach nationally across the country. This online program, once it is ready for roll-out, will help the CSEG Foundation and the society to be less Calgary-centric and oil patch-centric. It will also be less expensive to operate and maintain in the future. Personal interaction with the public and students will always be a foundation of our program but awareness can be heightened appreciably across the country with a stronger online presence.

As part of Public Outreach, chaired by Deepi Mand in the first half of the year and Sam Quiroga in the second half, the CSEG Foundation attended several career fairs across Western Canada, including Edmonton, Calgary and Vancouver, and including U of C and U of A. With our booth we were able to reach out to hundreds of students and present to them the science of geophysics using Power-Point presentations and interactive seismic displays. We received numerous requests from teachers to provide in-school presentations. In March of 2016, eleven (11) schools attended, bringing approximately 1500 students, the seventh highly successful Earth Science for Society (ESfS) exhibition. Hundreds of members of the public also attended the exhibition. On the Sunday, 300 children, from non-school groups like the Girl Guides, received guided tours of the event. It was a very well received event with lots of booth traffic and one event that is sure to be successful in 2017.

Our Schools Outreach program this year, chaired by Alessandro Carducci, included the Calgary City Teachers Convention (CTTC), the Alberta Teacher's Association (ATA Conference in Banff), and the Seismic in Motion Field School in addition to several school presentations. The Seismic in Motion field experience proves year after year to be a great event. We provided school buses for 150 students so that they could experience a unique "hands-on" education about the practical field aspects of our industry.

Our University Student Outreach (USO) program, chaired initially by Frank Ryan and most recently by Laura Osorio, includes events such as the Challenge Bowl, Mentorship for student and young professionals, and the geophysical field school, GIFT. Several student conferences are also supported by this program. This year the

Mentorship program was united with the Junior Geophysicists Forum (JGF) for an opening night event to kick-off the 2016/2017 mentorship program. By all accounts, this approach met with huge success.

Last but not least, thanks goes out to Dennis Ellison, who is our current past chairman of Outreach and USO, for his organizational skills and financial governance during his presidential term. Taking control of our financial reporting was a key step in being able ultimately to save the money we did this year. Our finances are currently being managed by the very capable Adrian Smith, who has recently moved to Newfoundland but continues to be our finance person.

The Outreach and USO committees are approaching 2017 with a new sense of optimism, with the excitement and desire to move online with our material and message.

## Earth Science for Society (ESfS)

**BRODIE SUTHERLAND, CHAIR**

**GLENN MALCOLM, VICE CHAIR**



**March 19-21, 2017 – <http://esfscanada.com/>**

In 2016, the CSEG Foundation agreed to become the long-term Parent Organization of Earth Science for Society (ESfS), an annual exhibition that demonstrates how the earth sciences play a critical role in our society. The exhibition is organized by a committee of over 30 volunteers who work throughout the year to ensure a successful event. From March 13th to 15th, 2016, the ESfS exhibition hosted close to 2,500 attendees. The enthusiastic visitors included 1484 students, 766 members of the public, and 300 Girl Guides. Twenty-four exhibitors provided stimulating interactive displays and our 27 generous sponsors provided \$81,000 in financial support. The exhibition relies upon the support of over 100 enthusiastic volunteers covering 200 shifts and accounting for over 700 volunteer hours. The ESfS event is a revenue neutral event for the CSEG Foundation, relying on funds that the ESfS volunteers raise themselves.

In 2017, the 7th annual ESfS exhibition will be held March 19th to 21st. Planning is well underway with 1074 students and 354 youth group participants already signed-up.

CSEG FOUNDATION continued from Page 19

## Scholarship

**CRAIG MOSHER**, CHAIR AND DIRECTOR

**STEVEN KIM**, SENIOR TRUSTEE

**IAN WATSON**, JUNIOR TRUSTEE

2016 was another successful year in the 47-year history of the CSEG Foundation's scholarship program.

In 2016, the scholarship committee was able to allocate \$23,000 to 12 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, the CSEG Doodlespiel and T-Wave, 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 2016, we received a record number of 42 applicants for university geophysics scholarships (32 graduate, 10 undergraduate). The committee awarded 11 scholarships of \$2,000 in this category to students at eight institutions across Canada. We also awarded one scholarship of \$1,000 in the technologist category. In the summer of 2016, 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 2016 were:

RECIPIENT	INSTITUTION	SPONSOR
Adriana Gordon	U Calgary	Arcis
Chris Williams	Memorial	Imperial & Ian Watson
Deep Inamdar	McMaster	Repsol Oil & Gas Canada
Sarah McPeak	Carleton	Rob Shugg Memorial Fund
Shahpoor Moradi	U Calgary	CGG
Taylor Finks	SAIT	SeisWare
Yichuan Wang	U Saskatchewan	Hampson-Russell
Jacqueline Huggins	Laurentian	CSEG T-Wave & CSEGF
Mauricio Reyes Canales	U Alberta	Apache
Max Salman	Waterloo	"In the Rings" Doodlespiel Scholarship
Meghan Sharp	UBC	Athena Resources
Melanie Postman	Western	Pulse Seismic

High school recipients of scholarships, entering into university science programs in the fall of 2016 were:

RECIPIENT	INSTITUTION	SPONSOR
Ashley Hards	UBC	Matt Klukas and Family
Bryan Willis	U Toronto	Perry & Karen Kotkas
Ginelle Mah	U Calgary	Perry & Karen Kotkas

## Travel Grants and Learning Subsidies

**KUN GUO**, CHAIR AND DIRECTOR

**Committee:** Kun Guo, Daniel Loas

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 geoscience. In 2016, Andreas Cordsen has once again supported the TGLS program through a 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 to share with the CSEG community.

In 2016, the CSEG Foundation Travel Grant and Learning Subsidy committee was granted a budget of \$10 000 despite the economic downturn. This has allowed the TGLS program to approve, as of this report, over \$8 000 in funding for over 25 applicants to travel or participate in events during the 2016 calendar year. We are proud to have been able to assist members of the CSEG professionals as well as students from the following universities:

University of Alberta  
 University of British Columbia  
 University of Calgary  
 Dalhousie University  
 Université Laval  
 University of Saskatchewan  
 University of Toronto

The TGLS committee is focused on continuous improvement to ensure that funding is effective and easily accessible, and that our guidelines are flexible in accommodating the needs of both individual and group applicants for events in Canada and around the world. The TGLS committee is pleased to report that the development of an online application form to streamline the application process for applicants, has been successful. The TGLS committee has requested a budget of \$10,000 for the 2017 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 2017 TGLS Committee would like to continue developing the relationship with university student groups and facilitating their applications for annual events (GeoConvention, GIFT, SEG Annual Meeting, geophysical field schools). Then the TGLS yearly budget can be drafted based on the number of delegates that student groups are planning to send, and the CSEGF can provide more realistic budget funding to these groups. The 2017 committee would



also like to reinforce partnerships with existing and new educational or professional development initiatives (CSEG Emerging Professionals Program, others), to overcome financial barriers and promote continuing geoscientific and geophysical education.

The CSEG Travel Grant and Learning Subsidy program continues to provide CSEG members with opportunities to learn about, develop and share geoscience in a variety of ways. We would like to extend our sincere gratitude, on behalf of our committee volunteers and all of our funding recipients, to the CSEG Executive, the CSEG Foundation, as well as the CSEGF Outreach, CSEGF USO, and CSEG Symposium committees for promoting the program and providing support. We would also like to thank our numerous applicants for continuing to make this program a success.

## Communications

### HELEN ISAAC, CHAIR AND DIRECTOR

The Communication Committee has the responsibility of coordinating CSEG website updates and communications 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, annual reports and audited statements, Governance and By-laws. Webpage updates are sent to the digital media committee for forwarding to the website manager and the Foundation repays the CSEG for website maintenance.

In 2016 we added a new webpage on Planned Giving and Memorial Funds. The Planned Giving website became active in December, and gives details about the many ways a person can contribute now or leave a legacy to the Foundation. The Memorial Fund section has information about the funds and bios and photos of the five individual honorees.

All the photographs in our collection were uploaded to Google drive, which can be accessed by anyone through the CSEG webpage: Students > K-12 & Teachers > Educator Resources.

A major avenue for the Foundation to communicate to the membership is through the Recorder. In 2016 the Recorder published articles on activities which receive funding from the Foundation, such as Earth Science for Society, Seismic in Motion for Students, the Mentorship program, scholarships, and GIFT. We also published the annual article thanking our donors for their generosity.

All communications from the Foundation to its members are edited for grammar, syntax, content and appearance to give a consistent message. In 2016, Communications worked closely with the Fund Development Committee. We finalized the Planned Giving brochure and website content. We also edited letters thanking donors or

soliciting funds for potential new donors. We assisted by editing the CSEG Sponsorship brochure and the TGLS funding document.

## Canadian Distinguished Lecturer

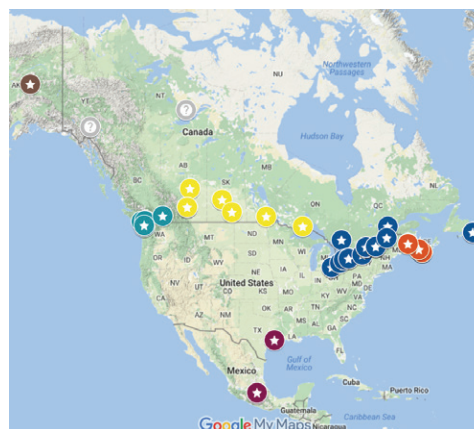
### DR. DON LAWTON, CHAIR

### LAURIE WESTON BELLMAN, 2016/2017 DISTINGUISHED LECTURER

The Foundation operates the national CSEG Canadian Distinguished Lecture Tour, which is 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 2016/2017 Distinguished Lecturer is Laurie Weston Bellman, a well-known Calgary-based geophysicist. Laurie's career as a geophysicist in the oil and gas business has spanned almost 30 years so far. During that time, she has seen the science (and the business) from many different perspectives. She has been part of the evolution of exploration objectives and analysis techniques, both as an interested observer and an active contributor. Originally a Physics/Astronomy graduate from the University of Victoria in B.C., Laurie has enjoyed a variety of career challenges in Canada and internationally. Laurie is presenting her talk *"Data Interpretation and Integration from a Seismic Perspective – The Excitement of Innovation"* to various different universities and institutions across Canada and, depending on available budget, the USA and into Alaska, wrapping up in April, 2017.

To date, she has given her presentation at 15 different venues and a further 12 are scheduled for January and February. She has now either visited or arranged a visit to every institution that had expressed interest except Alaska. Without exception, she has been welcomed warmly and treated respectfully. Her hosts have all contacted her a few days in advance to confirm her arrangements, provide maps and directions and invited her to various social events ranging from coffee to dinner, meetings with grad students and faculty, and tours of labs and facilities.



## Value of Integrated Geophysics (VIG)

### 2016 ACTIVITIES

The VIG committee was created in the spring of 2013 and we have continued to fulfill our mandate of promoting the value of geophysics and its countless applications to the CSEG, CSPG, APEGA, SPE and the finance community. We continue to be involved in a number of activities consisting of presentations, courses, inter-society outreach and other CSEG activities. In all, we gave, or coordinated, close to a dozen presentations and one course.

The 2016 season started with the February CSEG Luncheon VIG talk presented by Lee Hunt titled, "Value Thinking from the Classical to the Hyper-Modern".

With the mission of developing strong, inter-society connections of geoscientists and engineers to improve economic success in the oil industry, members of the VIG Committee presented at the SPE Technical Breakfast series in April 2016 at the Calgary Petroleum Club. The 3-part series was presented by Lee Hunt, David Gray and John Duhault. Titles of each talk were "A Critical Point", "Demystifying Geophysics" and "Applied Geophysics for Engineers Using Case Histories", respectively. A more complete description was captured as an article in the September 2016 Recorder.

The VIG Committee has an ongoing commitment to assist the 2016 Symposium Chair (Laurie Ross) by providing speakers to present. This year we continued with our theme of inter-society connections with Adam Yousefzadeh for Dr. Roberto Aguilera, a Distinguished Lecturer from the SPE who provided a paper titled, "Use of Petroleum Engineering Concepts for Estimation of Pore Stimulated Reservoir Volume and Prediction of Well Performance". We remained firm on value oriented talks with Lee Hunt who gave a presentation titled, "Addressing the Business Problem Involving Interfering Thin Sands with Timeslices and the Correlation Helix".

Continuing with more inter-society opportunities was the May CSEG Luncheon talk presented by Claudio Virues from the SPE titled, "The New in Microseismic Based Prediction of Ultimate Stage by Stage SRV through Engineering".

Also in May, coordinated by Ruth Peach, members of the committee met with Tom Sneddon, Director of Geoscience at APEGA, to brainstorm ideas about presentation and publication opportunities, web promotion, VIG champions, decision makers, and the possibility of presenting at annual APEGA Summits.

At GeoConvention in May, David Gray gave a talk titled "Fractured Fairy Tales", which dealt with how geoscientists should use their expertise to inform the public about things they care about, such as global warming/climate change and hydraulic fracturing.

The June 2016 VIG focus was provided by Paul Hausmanis who presented Lee Hunt's talk titled "The Value of Integrated Geophysics" to university students during the CSEG Foundation's Geophysical Industry Field Trip (GIFT).

In September 2016 John Duhault presented at the APEGA Luncheon with a VIG talk titled, "Geophysics: Maximizing Corporate Profits During Low Commodity Prices". The topic focused on how geophysics can be properly accounted for in planning capital expenditures to maximize asset value in today's low commodity prices.

In October 2016 John Duhault announced that as of January, he would step down as Chair of the VIG, because of his future responsibilities as President of the CSEG in 2017. That same month John attended the SEG Convention with Marian Hanna as the CSEG Executive Representatives and to promote VIG.

In November 2016, John Duhault presented the updated one-day VIG course during the CSEG's Doodletrain. The first half of the day included critical thinking and decision analysis processes followed in the afternoon by "valued added" case histories including a micro-seismic component presented by Matt Ng. Although the course was well received, the numbers were quite low due to the poor climate of the industry. John also presented at the CWLS Technical Luncheon a variation of the same talk that he did for APEGA.

### Outlook for 2017

The committee plans to continue promoting opportunities that demonstrate the value of geophysics. To that end, we have some scheduled and future planned activities for 2017.

### PLANNED ACTIVITIES:

- ▶ September 2017 RECORDER – VIG Special Edition, Louis Chabot as Coordinator—
- ▶ Continued interaction with SPE (Liaison: Paul Hausmanis)
- ▶ David Gray has been invited to participate in "The Modern Geoscientist" panel at the 2017 GeoConvention.
- ▶ GIFT Summer 2017, presented by Paul Hausmanis

### 2017 FUTURE VISION AND ACTIVITIES

- ▶ Update VIG webpage to include a "VIG Library" (listing of articles) and create a VIG brochure to help geophysicists promote the value of geophysics to non-geophysicists within their companies
- ▶ Improved curriculum, title and description for the VIG Doodle-Train course for 2017
- ▶ Outreach VIG message to other professional societies
- ▶ Brainstorm ways to deliver our message to the "C-Suite".

This year's efforts could not have been possible without the help from the committee members; their hard work and effort are always appreciated.

**Current members:** Paul Hausmanis (Chair, SPE Liaison), Ruth Peach, Dave Gray (Secretary, Recorder Special Edition Editor), Mike Hall, Laurie Ross, Ken Gray (CSEG Exec), Matt Ng, Louis Chabot, Patrick Tutty, Craig Christensen

**Past members:** John Duhault, Lee Hunt, Jessica Galbraith, George Fairs

### PAUL HAUSMANIS

VIG CHAIR 2016

## DoodleTrain 2016

In this difficult year for the industry the DoodleTrain week succeeded in attracting 181 registrants to 12 high quality courses. Eight courses were repeated from last year, one course was brought back from previous years and there were three new courses. Of the three new courses two were by local instructors, Laurie Weston Bellman and Marco Perez and one from an international instructor, Alan Atkinson, each of these was very well received. Courses were run in 4 different categories; Acquisition & Processing (2), Reservoir Geophysics (5), Interdisciplinary (4) and Topics for Technologists (1). The prime mandate for the DoodleTrain week is provide world class training to the membership of the CSEG and this was again achieved this year. Given the prevailing economic conditions incentives were offered to encourage enrollment. One free course was offered for every four equivalent registrations, for six registrations in the same course 2 free equivalent registrations were offered and for every \$1,000 spent on DoodleTrain sponsorship 1 free course was offered. The CSEG Foundation was approached and offered to help fund the attendance of un/underemployed geophysicists and also to subsidize the expenses for the winner of the Bill Nickerson Education Award. The DoodleTrain Committee wanted to offer some assistance to those geophysicists no longer in full time employment due to the downturn. In this vein, and with the assistance from the CSEG Foundation, reduced rates were offered to underemployed CSEG members at a rate of \$100 per course day, which included a ticket for the Technical Luncheon.



Masoud Aali: 2016 Bill Nickerson Education Award Recipient

The CSEG Foundation assistance for the Bill Nickerson Education award was also very important as this is now open to higher education establishments offering geophysics courses across Canada and the winner was a PhD student, Masoud Aali, from Dalhousie University in Halifax, Nova Scotia. During the year presentations were again made to the Chief Geophysicists Forum to keep them informed on progress and to share with them the nature of the courses being offered.



Luncheon Speaker:  
Dr. Jennifer L. Miskimins

The Technical Luncheon by Jennifer Miskimins entitled *“How Geophysicists and Engineers Can Work Together to Improve Hydraulic Fracturing”* was very well received and demonstrated ways by which the geophysical community can add value to the business of unconventional resource development.

Thanks to various measures taken to constrain costs the DoodleTrain week succeeded in exceeding breakeven, which is an outstanding achievement. I would like to thank the diligent work of Danielle Robertson who chaired the committee during the time most of these measures were put in place. I would also like to thank the CSEG staff, Jim Racette and Alyssa Middleton, plus each and every member of the main committee and the various sub committees for their hard work and dedication to continue providing training to the CSEG membership and making the 2016 DoodleTrain a great success – well done everyone.

**MIKE HALL**  
DOODLETRAIN CHAIR, 2016

## 2016 CSEG Symposium

The fifth annual CSEG Symposium was held on April 28th, 2016. The Symposium was initiated to honour Canadian geophysicists who have distinguished themselves through their outstanding contributions to our industry. In 2016 the CSEG Symposium posthumously honoured Bill Nickerson, a highly-respected, motivated CSEG member who volunteered determinedly so that the CSEG could offer its members quality continuing education programs. Bill's broad, vast and practical understanding of the oil and gas industry coupled with his rich experiences teaching and studying at university were at the root of his passion. Bill had a vision to organize quality training for Canadian geophysicists and he was the guiding force behind the successful creation of the CSEG DoodleTrain. The Symposium wanted to honour Bill as a way of recognizing the strong link behind education and technical excellence in the creation of value oriented geophysical solutions.

The theme for the 2016 CSEG Symposium was Integrity, Knowledge and Wisdom; three words which exemplified the gifted person Bill was. The Symposium celebrated Bill's career and his contribution to the CSEG with a day of education; taking an honest look at modern geophysics through case studies.

Supporting me on the committee were Amanda Hall (CNRL), Amanda Mansell (Divestco), Caylin Dobbie (Divestco), Mark Jeroncic (CNRL), Scott Reynolds (Bonavista Energy), Alishah Nayani and Mike Perz (Arcis). The Symposium Committee works year round starting immediately following the current year's symposium in order to find the best of speakers and to make the event a success.

The 2016 CSEG Symposium featured the following invited speakers, who were chosen by the Symposium Committee from a collection of talk proposals submitted by open invitation. All talks contained new, unpublished material of a value oriented, case study nature.

***'Use of petroleum engineering concepts for estimation of pore stimulated reservoir volume (pore SRV) and prediction of well performance'***

Adam Yousefzadeh for Roberto Aguilera, Ph.D., P.Eng.  
University of Calgary

***'Stress Estimator or Rubbish Farmer?'***

Bahaa Beshry, Lee Hunt, Eric Street, Richard Harris, and Cole Webster  
Jupiter Resources Inc.

***'Value Added Seismic Interpretation in Southeast Asia'***

Kathleen Dorey  
Petrel Robertson Consulting Ltd.

***'Pre-stack depth imaging to remove the effects of lateral velocity heterogeneity on time imaging that masquerade as azimuthal anisotropy: Midale EOR Case Study'***

Bill Goodway, Greg Purdue, Marco Perez  
Apache Canada

***'Addressing a Business Problem Involving Interfering Thin Sands with Timeslices and the Correlation Helix'***

Lee Hunt, Bahaa Beshry, Eric Street, and Cole Webster  
Jupiter Resources

***'Worlds in Collision": prestack migration, prestack elastic inversion, full waveform inversion, and ortho-rhombic anisotropy'***

Heloise Bloxsom Lynn  
Lynn Inc.

***'Luncheon Speaker – Knowledge and Wisdom – Industry Training in a Tough Economic Climate'***

Rachel Newrick  
Racian Venture

***'Reservoir Modelling of the Kurdamir-Topkhana Field, Kurdistan'***

Robin Owens  
Repsol

***'Tribute to Bill Nickerson'***

John Parkin  
Cenovus Energy

Feedback from previous years showed that attendees valued the discussion periods after the talks so an effort was made to expand the discussion time. Even with additional time we had more questions than time which was a good problem to have. There was lots of lively discussion which continued into the coffee breaks and at the mixer following the talks.

We would especially like to thank our 2016 sponsors; Repsol, Jupiter Resources, George Fairs of Divestco, GeoVectra Ltd., Arcis Seismic Solutions, the CSEG Foundation and Geo-X. Without their support we would not have been able to offer a superior day of education for a reasonable cost. We also thank all the attendees for supporting the Symposium. We realize that educational funds are dwindling and we are honoured that you direct your resources towards the Symposium.

Mark Jeroncic has graciously taken on the chair position for 2017 and Mohammed Al-Ibrahim for 2018. The venue will be moving to the Calgary Petroleum Club for 2017 in an effort to reduce costs and keep the Symposium as an affordable day of exceptional talks. Thank you for your continued support.

**LAURIE ROSS**

2016 CSEG SYMPOSIUM CHAIR

## Microseismic User Group

In an open and casual environment, the Microseismic User Group (MUG) provides a series of lunch hour talks that touch on all things micro (and macro) seismic. From oil and gas operators to industry regulators, service providers to university professors, the MUG provides a forum for discussion of microseismic challenges from all sides of the oil and gas industry. Originally developed by Shawn Maxwell and Paige Mamer in 2012, the MUG committee has grown to include Hoda Rashedi in 2015 and Johnny Wentzel in 2016.

The MUG had another amazing year of fantastic qualified speakers in 2016. With a focus on regulatory seismic monitoring in both Alberta and British Columbia, the MUG welcomed speakers from the Alberta Energy Regulator (AER) and the British Columbia Oil and Gas Commission (BCOGC), as well as academics, industry profes-

sionals, and service providers. In addition to the talks on induced seismicity, the MUG also featured presentations which explored some of the many uses of microseismic data, as well as the up and coming technologies in microseismic hardware and processing.



Hoda Rashedi (Left), Laurie Bellman (second from right), and Johnny Wentzel (right) welcome Dr. Mark Zoback to the MUG stage

The MUG committee would like to thank Canadian Discovery for graciously providing the venue to accommodate for the increased MUG talk attendance. The committee would also like to thank IHS for providing the venue for the first two MUG talks in 2016, until a larger venue could be found.

### 2016 MUG Presentations:

1. **January 18, 2016** – George Eynon, *The Regulatory Options for Managing the Induced Seismicity Issue*
2. **February 24, 2016** – John Duhault, *An analytical approach to hydraulic fracturing and induced seismicity monitoring*
3. **June 23, 2016** – Ryan Schultz, *Linking Fossil Reefs with Earthquakes: Geologic insight to where induced seismicity occurs in Alberta*
4. **September 28, 2016** – Dario Baturan, *Made to Measure: On the Performance and Limitations of the Seismic Instrumentation*
5. **October 28, 2016** – Stuart Venables, *Induced Seismicity in BC: Regulatory Update*
6. **November 28, 2016** – Dr. Ted Urbancic, *Assessing Microseismicity Derived Fracture Distributions Utilizing Scanlines and Topological Approaches for Reservoir Model Development*
7. **December 13, 2016** – Dr. Mark Zoback, *Can we predict and manage the risk of injection-induced seismicity?*

**JOHNNY WENTZEL**

## 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 2016 season, five talks were given:

### November

*Formulating a Seismic Value Proposition for Oil Sands SAGD: A review of the continually evolving understanding and acceptance of the return on investment of seismic information*  
Vince P. Rodych, P.Eng.

### October

*Optimal Station Placement during Seismic Acquisition: an examination of cost-effective methods for trace infilling around surface exclusions*  
Andrea Crook, P.Geoph

### June

*Impact Craters in Seismic Data: Past Discoveries and New Techniques*  
Amanda Obodovsky

### May

*Density Estimation from Pre-stack Seismic Inversion – An Interpreter's Perspective*  
Fred M. Peterson

### April

*Making Shear-Wave Statics Actual Statics: a Ray Path-Consistent Approach*  
Raul Cova

In addition to the speakers we would like to thank Lynn Engel who has been instrumental in finding speakers willing to share their work. We would also like to thank Chevron for donating an auditorium for the talks.

**JASON MCCRANK AND RICHARD GRAY**

COMMITTEE CO-CHAIRS



## RECORDER 2016

The RECORDER continues to be the flagship magazine of the CSEG, publishing technical articles, current or human interest articles, society news, and advertisements from our industry. The RECORDER is also the primary record of the activities and accomplishments of CSEG members, committees, and volunteers.

The RECORDER Committee implemented two cost-saving measures, decrease the RECORDER publication schedule from once a month to every six weeks at the request of the Executive Committee, and mail the RECORDER without envelopes (addressee inkjet labelling directly on magazine). The revised schedule began in September, resulting in 9 published editions in 2016. The RECORDER Committee also began planning the implementation of another cost-saving request at the request of the Executive Committee, the transition from a print and digital RECORDER to digital-only. The plan includes two print editions, mid-January and mid-April (GeoConvention edition).

These implementations, and all RECORDER editions, were only possible with the help of the RECORDER Committee members, our contributors, authors, Bonnie and Lawrence Luft (The Printman), the Digital Media Committee, Jim Racette, and Alyssa Middleton. You have our sincerest thanks!

### RECORDER COMMITTEE MEMBERS 2016

Past and current Chief Editors: Penny Colton, Rob Holt, Nicole Willson, Satinder Chopra (as advisor)

Past and current Technical Editors: Neda Boroumand, Steve Jensen, Elias Carciente, Elwyn Galloway, Ruth Peach, Fereidoon Vasheghani, Omid Aghaei, Mostafa Naghizadeh, Matteo Niccoli

### REGULAR COLUMNISTS

**CAGC Column:** Mike Doyle

**Grapevine:** Kristy Manchul

**Science Break:** Oliver Kuhn

**Tracing the Industry:** Carmen Swalwell

**Letters to the Editor:** from various members

### SPECIAL COLUMN CONTRIBUTORS

**Volunteer Spotlight:** Past President Rachel Newrick

**Committee Highlight:** Stephen Kotkas and Kevin Bianchini

### TECHNICAL ARTICLES

The 2016 RECORDER issues published thirty-six articles in Focus themes and eight general articles.

**The Focus themes and Coordinators / Technical Editors:**

**January:** Innovation 2015 (GeoConvention 2015)

Rob McGrory\* / Stephen Jensen

**February:** Convention Issue (TBA)

Marco Perez\* / Neda Bouroumand

**March:** GeoConvention Preview

Rob Holt\* / Stephen Jensen

**April:** Engineering Geophysics

Mostafa Naghizadeh\* / Fereidoon Vasheghani

**May:** Asteroids & Mars

Alan R. Hildebrand\* / Keith Millis

**June:** DAS/Borehole Geophysics

Paul Webster\* / Fereidoon Vasheghani

**September:** Innovation in Land Seismic

Alan Châtenay/Paul Thacker\* / Neda Bouroumand

**Mid-October:** U of C Research Topics

Kris Innanen\* / Elwyn Galloway

**December:** Microseismic Users Group (MUG)

Paige Mamer\* / Fereidoon Vasheghani

### INTERVIEWS

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 and the traditional long-format interviews are with selected members of the CSEG.

The following individuals were interviewed during 2016:

**January** – Dimitri Bevc

**March** – Arthur McDonald

**April** – Dr. A. Easton Wren

**May** – Matt Golombek

**June** – Peter Tertzakian

**September** – Presidents of Professional Societies Part 1

**Mid-October** – Presidents of Professional Societies Part 2

### IN MEMORIAM

Two remembering-type tributes were published in 2016: One in June for Tom Podvinsky (in a Letter to the Editor) and one in October for Aaron Dobrich (General Article).

### CSEG AWARDS: BEST RECORDER PAPER

The 2015 CSEG Awards for 'Best Technical Luncheon Presentation' and 'Best RECORDER Paper' were presented by Ken Gray, CSEG Director of Education, on May 5, 2016, at the CSEG Symposium Luncheon, which was held in Calgary. They were announced in RECORDER September 2016.

#### 2015 CSEG BEST TECHNICAL LUNCHEON PRESENTATION:

Aaron Stanton (University of Alberta) "*Signal Processing and Physics-based Approaches to Seismic Data Regularization*", February 23, 2015

#### 2015 CSEG BEST RECORDER PAPER:

Tammy Willmer and Garrett Quinn (Osum Oil Sands Corp) "*Characterization of the Albian Lower Grand Rapids Formation Cold Lake, Alberta*", January 2015

### NICOLE WILLSON, P.GEO.

CHIEF EDITOR

## Canadian Journal of Exploration Geophysics



The Canadian Journal of Exploration Geophysics (CJEG), the flagship peer-reviewed journal of the CSEG, was revived in 2010 following an eleven year hiatus. Electronic issues of CJEG were published every year since this revival - in June 2011, June 2012, June 2013, June 2014 and June 2015 (printed in August 2015), and June 2016. 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 42 submitted papers. The statistics for these 41 submittals are as follows:

1. 33 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 in June, 2016).
2. 1 paper has been accepted for the June 2017 issue.
3. 4 papers have been reviewed and are under revision.
4. 2 papers has been rejected as being inappropriate for CJEG
5. 1 paper was withdrawn.

The 2016 year was a very challenging one for the CSEG and consequently the CJEG. For the 2016 year, the CJEG budget was set to zero due to the current CSEG budget issues. The funding for publishing a shortened journal publication with only 2 papers was made possible by donations to the SEG Foundation by Brian Russell, Marko Mah and

Larry Lines. The decision was made to publish an abbreviated issue of CJEG rather than have the journal go into dormancy.

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 not only in Canada, but around the world. At present, copies of CJEG are available on the web site to all CSEG members.

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

## Digital Media (DMC)

The digital media committee (DMC) has had another 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. We are also working on educating all committees on the workflow for getting their information on to our website. The DMC continues to work on ways to increase visits to our website without incurring any additional costs, as well as helping to generate revenue on the CSEG RECORDER website by adding Google.

**MARIAN HANNA**

## Emerging Professionals Program (EPP)

### 1. Program Overview

The CSEG Emerging Professionals Program is a national program sponsored by the CSEG Foundation and the Canadian Society of Exploration Geophysicists (CSEG) and will be administered under CSEG Member Services. It aims to promote the CSEG and assist the younger geophysical community across the country through a variety of events and support.

The target audience is primarily the CSEG emerging professional membership and also includes professionals, local geoscientists and potential CSEG members.

An **emerging professional** is defined as a person who has graduated from a post-secondary institution and is either currently employed, looking for employment or has an interest in geophysics and/or geosciences but has not yet reached APEGA professional status.

### EMERGING PROFESSIONALS PROGRAM, CSEG AND CSEG FOUNDATION MISSION STATEMENTS

**Emerging Professionals Program Mission Statement:** To encourage and promote the development of young professionals' knowledge, skills and attributes within the CSEG through a variety of educational, networking, and employability skills in hopes of helping develop tomorrow's geoscientists today.

**CSEG Mission Statement:** To increase awareness of and fund activities towards education in the science of geophysics and earth science through the operation of a number of very worthwhile activities in the field of geophysics.

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

**CSEG Foundation Mission Statement:** Our mission 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. Based in Calgary, we are a Canadian foundation with initiatives all across Canada.

### EPP OBJECTIVES AND GOALS

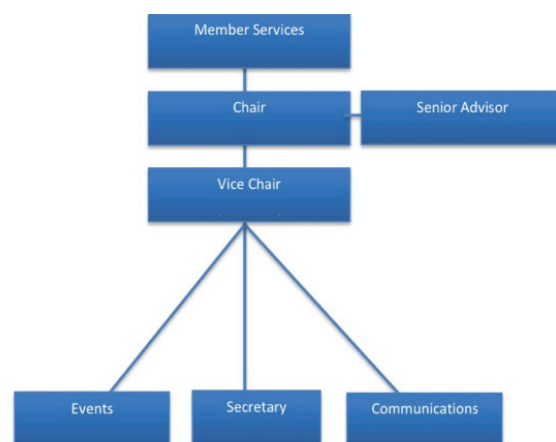
1. Gain exposure for the CSEG with (and for) emerging professionals, the CSEG membership across Canada and the general geoscience population
2. To provide educational support to members
3. To collaborate with other societies, namely SEG, CSPG, AAPG, SPE, KEGS, CAPL, and the CWLS as appropriate
4. To support existing CSEG committees
5. To act as the Canadian operational arm of the SEG EPIC program

6. To ensure volunteers act in a responsible, ethical and financially prudent manner
7. To foster and embody the values of the CSEG, including teamwork
8. To create a sense of support and community amongst young professional's within the CSEG where members can learn from each other's experiences, share industry knowledge and insight
9. To have fun
10. To advertise & promote the CSEG and enhance our national status and representation by a variety of appropriate means
11. The Emerging Professionals Program will run from September 1st to August 31st annually

### EPP COMMITTEE MEMBERS

Jeff Calvert	Karl Mome
Hassan Odhwani	Chau Huynh
Stephen Kotkas	Chris Bird
Brian Schulte	Khevyn Gormley
Elizabeth Ramsey	Alex Shrake
Kyle Dreher	

1. Emerging Professionals Program Chair: Detailed in Section 3
2. Emerging Professionals Program Senior Advisor
3. Emerging Professionals Program Vice-Chair
4. Emerging Professional Committee members at large
5. CSEG Office staff



### CSEG EPP BUDGET

#### Considerations

- ▶ Current estimated cost is \$4000\*
- ▶ Budget is for multiple events throughout the year which will highlight and focus on:

- technical (KSAs\*\*)
- soft skills (KSAs)
- employability (KSAs)
- networking (KSAs)

\* Funds will be solicited to industry as needed

\*\* Knowledge, Skills, and Attributes

## 2. EPP Committee Chair

Current: Jeff Calvert, Incoming: Hassan Odhwani

### EPP Committee Chair Primary Responsibilities

- ▶ To chair EPP committee
  - Organize and document meetings
  - Recruit committee members as needed
  - Track budget allocation and needs
- ▶ Liaise with other societies as listed above in Program Objectives
  - Be primary liaison with related CSEG committees specifically DoodleTrain, JGF, scholarship committees and others as appropriate
  - Establishment of a process to organize & operate partnered events with other societies and CSEG committees
- ▶ Be primary contact and resource for Emerging Professionals Program
  - Maintain up-to-date master list of contact info of committee members, sister societies and other CSEG committees
  - Compile and maintain Emerging Professionals Program Guidebook
  - Clarify roles and responsibilities for all parties
  - Track potential complementary OR conflicting events such as the CDL, CSEGF Outreach events, SEG tours and other societies young professional events
- ▶ Coordinate Emerging Professionals Program promotional materials and advertising
  - Assist the CSEG office with the Emerging Professionals Program poster / brochure, CSEG website, CSEG e-newsletter and other forms of promotion as needed
- ▶ Reports to CSEG Executive via Member Services

### EPP Committee Vice-Chair Primary Responsibilities

Current: Hassan Odhwani, Incoming: TBD

- ▶ Act as and complete tasks of chair in absence and support as needed
- ▶ Advertise the Emerging Professionals Program to the general CSEG population via luncheons, The RECORDER and other means
- ▶ Act as a Communications Director for all external information

## 3. Emerging Professionals Program Committee

Emerging Professionals Program Committee Primary Responsibilities

- ▶ Ensure alignment and communication between all CSEG committee and programs
- ▶ Assist and accept responsibility as designated by Emerging Professionals Program Chair
- ▶ Provide support and guidance to events and activities
- ▶ Ensure all meetings are recorded and archived for future reference and meeting minutes

## 4. Emerging Professionals Program Senior Advisor

Current: Brian Schulte, Stephen Kotkas

### EPP Senior Advisor Primary Responsibilities

- ▶ Provide information, present alternatives, encourage responsibility, support creativity, and challenge members of the Emerging Professionals Programs (EPP)
- ▶ Being involved in planning projects, events, or programs for the Emerging Professionals Program
- ▶ To be available to attend the regular meetings and events

## 5. 2016 Activities

### VSP Workshop:

May 3rd, CGG Training Room. Participating societies: AAPG. The event was a success in which about 46 people took part. The lecture session was approximately an hour long and 15 to 20 minutes for Q&A.

### Intersociety Social:

May 19th, Local 522. Participating societies: SPE, CSEG, CWLS, CADE, AAPG in partnership with CAPP, CAODC, and Canada Action. All in all, the event was a big success and drew a crowd of ~350 or more. We stopped checking people in at a certain point, but we definitely had the bar full to (and at times likely a bit over) capacity! Feedback from all the presenting organizations (CAPP, CAODC, and Canada Action) was been positive. They were very happy to have the chance to speak in front of such a large and diverse young professional audience. There was definitely some areas for improvement – potentially a larger space, better AV towards the back of the room, etc.. Considering we were trying to capture the attention of such a large group in a bar setting for the presentation portion, I don't think it could have gone much better.

The goal was to have engagement from all societies, especially considering it was free to participate and was obviously of significant value given the interest it drew from our members.

Continued on Page 30

Emerging Professionals Program (EPP) Continued from Page 29

## CGG GEOSOFTWARE WORKSHOP – AN INTRODUCTION TO SEISMIC INVERSION

In 2015, the CSEG EPP paired with CGG GeoSoftware to host an interactive workshop on Seismic Well Ties. Taught by Graham Carter, this event was very successful. This year we continued to work with CGG GeoSoftware and Graham Carter to host an interactive session on Seismic Inversions. The inversion of seismic data is a practical process that results in the recreation of the geology. This process continues to be an important aspect in reservoir characterization.

The workshop this year took place on September 15th, 2016 from 9:00am to 12:00pm at the CGG Office. The half-day session guided young professionals, step by step, through the basic workflow for post-stack seismic inversions that included practice exercises. The importance of 'the model' and how the inversion results are quality controlled using well logs was also highlighted. The session was well designed for those with no practical experience of running inversions, but planned to be involved in reservoir geophysics in the future. Once again the session was filled to capacity and the CSEG EPP hopes to continue to work with CGG GeoSoftware in the upcoming year.

## VOLUNTEERING AT THE CALGARY DROP INN CENTER

The EPP initiated a bi-monthly volunteering event at the Calgary Drop in Center with assistance from the University of Calgary EAGE Student Chapter. We had 10 participants serving dinner to the less fortunate on August 17th and 23 participants on October 20th. The goal of this event is to promote a supportive environment within the CSEG and within our community. Participant's network, share experiences and advice while gaining first hand experience of the daily challenges the less fortunate face, and helping to improve their situations. We plan to continue these volunteering events on a bi-monthly basis into 2017 and beyond.

## JUNIOR GEOPHYSICISTS FORUM

This year the Junior Geophysicists Forum (JGF) merged with the CSEGF Mentorship Kickoff event on October 4th at Cenovus' Odd Fellows Hall. The theme of the event was the Modern Geophysicist featuring a panel of geophysicist from a broad range of experience levels. Brian Rex (Vice President of Geoscience at Tundra) and Emily Duncan (Senior Geophysicist at Suncor) spoke from the perspective of the 15+ year geophysicists. Matt Ng (Geophysicist at Painted Pony) represented the intermediates and Jeff Calvert (Geophysicist-in-Training at Repsol) was the voice for new grad millennials. Topics included the Modern Geophysicists toolbox, Big Data, creative communication, work life balance and the quarter life crisis. We had 111 attendees, consisting of 25% new graduates, 19% undergraduate students, 12% graduate students, 8% 5-10year experience geophysicists, 23% senior geophysicists and 13% others. The JGF subcommittee consisted of Karl Mome (Chair), Elizabeth Ramsey (Vice Chair), Stephen Kotkas and Chau Huynh. The Mentorship subcommittee consisted of Nathan Fester (Chair), Paul Hausmansis

(Past Chair), Usman Shahid, Alex Shrake and Jordan Vandean. Sponsorship was obtained from Cenovus (venue), Brian Russell (\$1000.00), Husky (\$500.00), Qeye (\$500.00), Pulse Seismic (\$500.00), Ikon (\$500.00), Shell (\$500.00), Trish Mulder (\$250.00) and Petrel-Robertson (\$25.00).

## FALL SPEAKER SERIES WITH AAPG

Matt Lennon and Wayne Dwyer provide perspective and insight on careers and industry. It is a talk focused on the integration of the value of networking, volunteering, stories of perseverance. The event included lunch and a capacity of 80 people. November 25th, in the Husky Conference Centre.

## HOLIDAY NETWORKING

Held jointing with the SPE, AAPG and YPE this is our 3rd annual inter-society networking event. Proceeds of this event go to the Calgary Food bank. Usually 200+ people are in attendance. Participants participate in networking activities, bowling, and industry discussion. Note; this event will take place on December 15th, 2015

## 8. 2017 Activities

### TENTATIVE EVENT CALENDAR

#### January:

- ▶ EPP Newsletter

#### February:

- ▶ Volunteering at the Drop-In Centre
- ▶ Workshop hosted by Schlumberger

#### March:

- ▶ Session by Signature Seismic

#### April:

- ▶ Speaker Effect Workshop by Julie Truong

#### May:

- ▶ Thirsty Thursday Inter Society Social

#### June:

- ▶ Workshop hosted by CGG GeoSoftware

We continue to plan for the months of July to December. Currently Paradigm, OpenGeoSolutions and Ikon Geosciences have also offered their services. In addition to this, Chris Bird will be holding boot camps through the months of May to September. These classes will serve as an opportunity to network while exercising. Alex Shrake will organize a geoscience community clean up event.

## JEFFREY CALVERT

VICE CHAIR



## 2016 Doodlespiel

The 44rd annual 2016 Doodlespiel (held January 22 – 24) has now come and gone and this year we had 64 teams with over 300 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 was an exciting game between Team Nordin and Team Rasmusson. In the end the Nordin rink consisting of Dave Nordin, Al Bunn, Ken Mitchell and Kevin Brooks won the A event. Other event winners include:

**B Event** = Clare Bowie, Dennis Mesinger, Peter Ciavarella, Greg Davidson

**C Event** = Sterling Hansen, Matt Ng, Igor Senek, Blayne Wagemakers, Daniel Perez

**D Event** = Brian Lau, Warren Kozak, Barry Ryan, Meremy Anderson

Team Spirit best costume awards go to:

**1st Place** = Miss Interpreted – Team Manchul

**2nd Place** = Star Wars – Team Waggott.

We also had a team exemplify the spirit of curling and were awarded the Sportsmanship Award:

Team Bown = Todd Bown, David Bonar, Vicente Oropeza, Carson Laing, Grey Riddle

As Chairman of the 2016 Doodlespiel, I would like to take the opportunity to thank all of the sponsors and participants of this year's event. Without the continued support of the industry, this great event would not be able to continue. A highlight of this year's Doodlespiel were the charity draw prizes which raised over \$3000 for a Doodlespiel named scholarship for the CSEG Foundation, which was also generously matched by one of our respected Doodlespielers, Larry Herd.

The committee wishes everyone a safe, healthy and prosperous 2016 and look forward to seeing everyone in Banff for 2017.

### DOODLESPIEL COMMITTEE MEMBERS 2016

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

#### MAT NG

CHAIRMAN – 2016 DOODLESPIEL

## Women in Seismic Golf Tournament (WiSe) 2016

2016 was the fourth year of the tournament with the CSEG and the event was scheduled on Thursday September 8th. The event theme was 'Think Pink' and the Pink Ninja's took the win for the illustrious Spirit Award. This year the committee decided to reduce the tournament to only 9 holes due to the turnout in 2015 and therefore took the normally full day event to just an afternoon. The feedback received from the participants regarding this change was very positive and the committee will probably retain the event at 9 holes for the foreseeable future. It also allowed us to reduce the tournament fees which the committee believes was beneficial to the participants given that a high percentage of them are now unemployed or underemployed.

By downsizing the tournament, we saw all 9 hole-sponsor opportunities filled, participant level was almost at maximum capacity and we experienced a higher number of male golfers than we have seen in years. Unfortunately due to extreme weather conditions we had to cut the event short. However, that didn't seem to dampen the spirits of the attendees.

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). In this financially challenging year, we were happily able to raise \$8,100 between the event and the generous donation from Fox Hollow Golf Course. 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 about their illness and their cancer treatment process. It is an inspiring reminder of the purpose of our donations and the strides being made towards treatment and prevention. Unfortunately, our ACF guest speaker was not able to attend at the last minute due to health issues. In 2017, we may look at trying to ascertain someone within our oil & gas industry to offer a more 'closer to home' perspective.

Lastly, I would like to personally thank the committee for their dedication to this event. Every year the committee makes this event a success. The tournament could not be done without them.

#### TRISH MULDER

2016 EVENT CHAIR

## 49th Annual Family Ski Spree

The 49th Annual CSEG Family Ski Spree was held from February 19 – 21, 2016 at the beautiful Fairmont Hot Springs Resort in Fairmont, B.C. Sixty-seven CSEG members brought their families to B.C. for this weekend that saw a total of 267 participants. Almost the same numbers as 2015 which we consider to be a huge success. 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 SISMA Drilling Mini Mixer, ages 5-11, was where all the action was. There were multiple crafts for everyone, some needing adult supervision and some not. Pizza, snacks and drinks were readily available throughout the evening. 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. 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. This year, we hid the snow snakes so well that even the adults couldn't find them.

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. Lunch was provided courtesy of the Ski Spree Sponsors. Arcis Seismic Solutions ran the Cocoa on the Mountain at the top of the ski lift and returning this year was the Alltrek Drilling Snowbank Taffy 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 Isabelle St-Onge had the best times in the Ski Race and Kevin Mullie and Riley Castle had the best times in the Snowboard Race. A charity raffle is held each year and this year the proceeds in the amount of \$2591 went to 'Inn from the Cold'. Mr. & Mrs. Ski Spree is an award that recognizes years of participation and a visible positive attitude towards this event and it was given this year to Heather and Milt Tetzlaff. 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 Wolbaum 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 2017 at our 50th Celebration.

### ANDREW LANE

CSEG FAMILY SKI SPREE CHAIRMAN 2016

## CSEG Doodlebug

The 64th Doodlebug was hosted in Kimberley for the 7th consecutive year over 3 days from August 25 to 27th. This Doodlebug looked very similar to the 63rd with 49 golfers registered for the event.

Play over 3 days, was under ideal weather conditions with the Trickle Creek Golf Course in ideal tournament conditions. Abundant wildlife is always the norm at Trickle Creek, with a momma bear and 2 cubs seen on the course during play. However the bear wanted nothing to do with the Doodlebugs and quickly retreated into the forest when encountering golfers.

The golfers were divided in to 6 flights, with the winners being:

- ▶ Flight #1: Ed Slobodian (76) – Mr. Doodlebug
- ▶ Flight #2: Dave Nordine (86) – Supervisor
- ▶ Flight #3: Mantu Sihota (84) – Processor
- ▶ Flight #4: Drew Lane (83) – Interpreter & Low Net (61)
- ▶ Flight #5: Tim Harris (92) – Rodman
- ▶ Flight #6: Dereck Boeckx (102) – Jug Hound
- ▶ Chuckwagon Winners: Brendan Smith, Thomas Schmidt, Alex Gauthier, Victoria Yung

Ed Slobodian has repeated as Mr. Doodlebug and has indicated that the Doodlebug has entered the “Era of Ed” as he foresees winning the Doodlebug flight into the foreseeable future.

The themed costume party was, “Saturday Night Live” with all attendees arriving in costumes from Chippendales, to Spartans, to Bumble Bees. There was even a Buckwheat sighting!

Wildlife was not only seen on the golf course, the evening functions and on into the Chairman’s Suite provided ample opportunities to renew friendship and camaraderie that is the hallmark of the Doodlebug Tournament.

The Chairman’s Charity this year was, Providence Children’s Centers, providencechildren.com, a charity that works with children with special needs in a therapeutic preschool environment. A charity donation of \$7500 was generated by contribution, silent auction and raffle, charity long drive and chip off and Chuckwagon charity contributions.

On behalf of the 2015 Doodlebug committee a very special thank you to all of the generous sponsors who supported the Doodlebug and allow its long lasting traditions, particularly in this economic downturn. The continued support of these sponsors has allowed the Doodlebug to continue to be one of the premier social events on the CSEG Calendar.

To all the Doodlebugs that participated, thank you for making the 64th Doodlebug a huge success.

Dave Wardlaw will be taking over as the 65th Doodlebug Chairman, and has selected Banff as the venue to be hosted September 8th to 10th, 2017. Look for information updates on the Doodlebug website [www.doodlebuggolf.ca](http://www.doodlebuggolf.ca).

All and all, another very successful Doodlebug... now onto the 65th!

### DOODLEBUG COMMITTEE 2016

Chairman	Brian McCue
Past Chairman	Brendan Smith
Vice Chairman	David Wardlaw
Secretary/Treasurer	Shaun Ali
Housing/Registration	Alexandre Gauthier, Glenn Larson
Sponsorship	Steve Denne, Pascal St. Onge
Golf Committee	Billy Mooney, Ed Slobodian
Entertainment	Alex Daum, Geoff Castle, Rob Willson
Guest Events	Lisa Pap, Cindy McCue
Printing and Graphics	Brian Ingenthron

### BRIAN MCCUE

2016 CSEG DOODLEBUG CHAIRMAN

## 8th Annual CSEG T-Wave Golf Tournament

The 8th Annual CSEG T-Wave Golf Tournament took place on June 27th, 2016 at Valley Ridge Golf Club. After a tough 2015 we didn't anticipate things getting worse, but it was another challenging year for our industry with even less money to go around. However, our amazing sponsorship committee was able to raise the necessary sponsorship dollars that ensured continued success for the event, and switching venues also helped with the economics. We offered a student rate / 'career transition' rate which helped us achieve our goal of 140 players turning out for the tournament.

A gigantic 'Thank You' to our Sponsors who helped make this event successful in 2016:

### ACE LEVEL

LXL Consulting – Bag Drop and Golf Balls  
Synterra Technologies – Wine and Dinner  
Eagle Level  
Earth Signal Processing  
Dyno Nobel

### BIRDIE LEVEL

TerraView Surveys  
Geospace Technologies Canada  
Exploration Plastics  
Maxam Seismic Explosives  
Seitel  
Mel's Seismic  
Eagle Canada  
Seisware  
Sisma Drilling  
Terra-Sine Resources  
Cossack Land  
Outsource Seismic Consultants  
Seisline Resource Services

### 19TH HOLE LEVEL

Divestco  
RPS Energy  
Painted Pony Petroleum  
NCP Consulting Services  
Katalyst Data Management

The Charity of choice in 2016 was the CSEG Foundation. With the downturn and hard times felt by all in this industry we believed that giving back through the charitable arm of the CSEG was the right choice so that some of our members can receive the benefits they provide.

A heartfelt thank you goes out to the great committee members who made this tournament such a success. The T-Wave wouldn't exist without the dedication of its volunteer committee members! Thanks to Nicki from NCP Consulting for providing the photography at this year's event.

**Sponsorship** – Sandy Lucas, Wade Whitlow, Jocelyn Frankow

**Golf** – Jim Hostetler

**Prizes** – Elwyn Galloway and Andrew Nicol

**Finance** – Flo Reynolds

**Registration** – Jocelyn Frankow and Flo Reynolds

**Communication and Signage** – Patty Evans

**Chair** – Rob Curts

Thank you all so much for supporting this fun local event! Our sponsors and participants are simply the best! See you on Monday, June 26th, 2017 at Valley Ridge Golf Club for the 9th Annual CSEG T-Wave Golf Tournament.

### ROB CURTS

CHAIR, CSEG T-WAVE TOURNEY

## 28th Annual CSPG/CSEG/CAPL 10K & 5K Road Race & Fun Run

**SEPTEMBER 21, 2016**

It was a beautiful fall day for the run this year, with 60 runners finishing the race.

We were on the side of the river from Crowchild to Edworthy again. 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.

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, and awards. There was a noticeable lack of CAPL members this year; I hope they return next year. Through great sponsorship and strong participation, we are once again able to contribute to our designated charity the YMCA strong kids foundation!

I would like to thank all the volunteers and sponsors who helped make this event a success! 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, 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 overall 10K and 5K winners:

### OVERALL TOP MALE 10 K RESULTS

Place	Chip Time	Bib #	Name	Member
1	34:25	375	Mike Kondro	None
2	40:43	355	Darren Lazaruk	CSPG
3	41:17	351	Darren Hinks	CSEG
4	41:29	368	Alex Saldana	CSPG
5	42:36	350	Ian Grant	CSPG

### OVERALL TOP FEMALE 10 K RESULTS

Place	Chip Time	Bib #	Name	Member
1	42:29	365	Holly Ratzlaff	CSPG
2	47:16	376	Joanne Schmidt	None
3	48:19	353	Jessica Krawetz	CSPG
4	48:59	341	Shannon Bjarnason	CSEG
5	49:30	349	Julianne Fic	CSPG

### OVERALL MALE 5K RESULTS

Place	Chip Time	Bib #	Name	Member
1	18:17	269	Frank Delbecq	CSEG
2	19:11	266	Scott Courchesne	CSEG
3	19:19	280	Sean Murray	Student
4	19:37	270	Cameron Demmans	CSPG
5	20:34	278	Jordan Mannas	None

### OVERALL FEMALE 5K RESULTS

Place	Chip Time	Bib #	Name	Member
1	23:03	287	Heather Archibald	None
2	23:58	288	Christine Magyar	None
3	26:48	271	Tina Donkers	CSPG
4	27:04	272	Jocelyn Frankow	CSEG
5	27:09	285	Kathy Waters	CSEG

To see the full results, please go to <http://new.zone4.ca/results>, search CSPG and click on the 2016 CSPG/CSEG 10K/5K Road Race & Fun Run – Membership, Age Group and Overall links.

We look forward to seeing you next year for the 29th annual; race date will be Wed, September 20, 2017. Thank you.

**ARMIN SCHAFFER**

RACE DIRECTOR



**CANADIAN SOCIETY OF EXPLORATION GEOPHYSICISTS**

**Financial Statements**

**Year Ended December 31, 2016**



---

## INDEPENDENT AUDITOR'S REPORT

---

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, 2016 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 qualified audit opinion.

### Basis for Qualified Opinion

In common with many charitable organizations, the Society derives revenue from member contributions and activities, the completeness of which is not susceptible of satisfactory audit verification. Accordingly, my verification of these revenues was limited to the amounts recorded in the records of the Society and I was not able to determine whether any adjustments might be necessary to contributions, excess of revenues over expenses, current assets and net assets.

### Qualified Opinion

In my opinion, except for the effect of adjustments, if any, which I might have determined to be necessary had I been able to satisfy myself concerning the completeness of the contributions referred to in the preceding paragraph, the financial statements present fairly, in all material respects, the financial position of Canadian Society of Exploration Geophysicists as at December 31, 2016 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 23, 2017

CHARTERED ACCOUNTANT

**CANADIAN SOCIETY OF EXPLORATION GEOPHYSICISTS**  
**Statement of Financial Position**  
**December 31, 2016**

	2016	2015
<b>ASSETS</b>		
<b>CURRENT</b>		
Cash	\$ 170,100	\$ 47,215
Accounts receivable	22,599	42,209
Convention development fund	32,759	42,109
Goods and services tax recoverable	-	3,167
Prepaid expenses	7,472	11,263
	232,930	145,963
FURNITURE AND EQUIPMENT <i>(Note 5)</i>	10,614	15,582
RESTRICTED FUNDS	1,071,632	1,431,632
	\$ 1,315,176	\$ 1,593,177
<b>LIABILITIES AND NET ASSETS</b>		
<b>CURRENT LIABILITIES</b>		
Accounts payable and accrued expenses	\$ 21,411	\$ 30,598
Deferred income	38,206	35,966
	59,617	66,564
<b>NET ASSETS</b>		
Capital assets	10,614	15,582
General fund	173,313	79,399
Restricted funds	1,071,632	1,431,632
	1,255,559	1,526,613
	\$ 1,315,176	\$ 1,593,177

**ON BEHALF OF THE BOARD**

\_\_\_\_\_ Director  
 \_\_\_\_\_ Director

See notes to financial statements

3



**CANADIAN SOCIETY OF EXPLORATION GEOPHYSICISTS**  
**Statement of Revenues and Expenditures and Changes in Net Assets**  
**Year Ended December 31, 2016**

	2016	2015
<b>REVENUES</b>		
Geo convention	\$ -	\$ 103,999
Continuing education	21,657	61,422
Doodletrain	119,886	158,016
Interest and other	20,830	40,739
Luncheon fees	45,225	85,646
Memberships	84,793	108,182
Recorder	56,990	190,764
	<u>349,381</u>	<u>748,768</u>
<b>EXPENDITURES</b>		
Administration	263,592	346,165
Amortization	4,697	5,738
Recorder	130,874	255,532
Interest and bank charges	865	1,042
Continuing education	19,248	41,223
Outreach	560	1,463
Doodletrain	102,060	148,745
Digital media	16,323	34,474
Member services	24,171	45,442
Luncheons	41,695	100,281
Professional fees	7,000	8,000
	<u>611,085</u>	<u>988,105</u>
<b>DEFICIENCY OF REVENUES OVER EXPENDITURES FROM OPERATIONS</b>	(261,704)	(239,337)
Write-down of convention development fund	(9,350)	(47,891)
<b>NET DEFICIENCY OF REVENUES OVER EXPENDITURES</b>	(271,054)	(287,228)
NET ASSETS - BEGINNING OF YEAR	<u>1,526,613</u>	<u>1,813,841</u>
<b>NET ASSETS - END OF YEAR</b>	<u>\$ 1,255,559</u>	<u>\$ 1,526,613</u>

See notes to financial statements

4

**CANADIAN SOCIETY OF EXPLORATION GEOPHYSICISTS**  
**Statement of Cash Flows**  
**Year Ended December 31, 2016**

	2016	2015
<b>OPERATING ACTIVITIES</b>		
Deficiency of revenues over expenditures	\$ (271,054)	\$ (287,228)
Items not affecting cash:		
Amortization of furniture and equipment	4,967	5,738
Write-down of convention development fund	9,350	47,891
	<u>(256,737)</u>	<u>(233,599)</u>
Changes in non-cash working capital	379,622	(478,289)
Cash flow from operating activities	<u>122,885</u>	<u>(711,888)</u>
<b>FINANCING ACTIVITY</b>		
Transfer of general funds to restricted funds	<u>(360,000)</u>	500,000
Cash flow from (used by) financing activity	<u>(360,000)</u>	500,000
<b>DECREASE IN CASH FLOW</b>	<b>(237,115)</b>	<b>(211,888)</b>
Cash - beginning of year	<u>1,478,847</u>	1,690,735
<b>CASH - END OF YEAR</b>	<b><u>1,241,732</u></b>	<b>1,478,847</b>
<b>CASH CONSISTS OF:</b>		
Cash	\$ 170,100	\$ 47,215
Restricted assets	<u>1,071,632</u>	<u>1,431,632</u>
	<b><u>\$ 1,241,732</u></b>	<b><u>\$ 1,478,847</u></b>

See notes to financial statements

5



**CANADIAN SOCIETY OF EXPLORATION GEOPHYSICISTS**  
**Notes to Financial Statements**  
**Year Ended December 31, 2016**

---

1. BASIS OF PRESENTATION

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

---

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.

---

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)*

---

**CANADIAN SOCIETY OF EXPLORATION GEOPHYSICISTS**  
**Notes to Financial Statements**  
**Year Ended December 31, 2016**

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 internally restricted funds have been allocated as follows:

	2016	2015
Operating fund - reserve	\$ 940,000	\$ 1,300,000
Convention fund	131,632	131,632
	\$ 1,071,632	\$ 1,431,632

The Society's Executive Committee has internally restricted funds amounting to \$ 1,071,632 ( 2015- \$ 1,431,632 ). These 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 \$ 360,000 from this restricted fund to its operation fund. The internally restricted fund provides for sustainable administration, recorder and membership costs.

5. FURNITURE AND EQUIPMENT

	Cost	Accumulated amortization	2016 Net book value	2015 Net book value
Furniture and fixtures	\$ 25,257	\$ 14,643	\$ 10,614	\$ 13,268
Leasehold improvements	12,104	12,104	-	2,314
	\$ 37,361	\$ 26,747	\$ 10,614	\$ 15,582

## CANADIAN SOCIETY OF EXPLORATION GEOPHYSICISTS

### Notes to Financial Statements

Year Ended December 31, 2016

---

#### 6. FINANCIAL INSTRUMENTS

The Society's financial instruments that are included in the statement of financial position are comprised of cash , accounts receivable., accounts payable and deferred revenue, all of which approximate fair value due to the immediate or short term maturity of these instruments. In addition, included in restricted assets are \$ 800,600 of guaranteed investment certificates with maturities ranging from July 2017 to July 2020 bearing interest at rates between 1.2% to 2.1% . The Society has some exposure to changes in interest rates on these investments over this period. It is the opinion of management that the Society is not exposed to any material credit ,or liquidity risk on any of the other 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 \$ 5,034.

---

## Past Presidents

1950	John O. Galloway	1973	Wes N. Rabey	1996	Dan Hampson
1951	Charlie M. Moore, Jr.	1974	John H. Harding	1997	Robert R. Stewart
1952	L. I. Brockway / Norman J. Christie	1975	Jack R. Pullen	1998	Nancy Shaw
1953	Bill (W.R.) Ogilvie	1976	William D. Evans	1999	Doug Pruden
1954	R.J. Copeland	1977	R. J. McCaffrey	2000	Perry Kotkas
1955	R.D. Holland	1978	Earle F. Mahaffy	2001	Randy Pelletier
1956	R.B. Ross	1979	Lloyd R. Hatlelid	2002	Doug Uffen
1957	George J. Blundun	1980	P.D. (Denny) O'Brien	2003	W. (Bill) Goodway
1958	Francis A. Hale	1981	A. Easton Wren	2004	Peter Cary
1959	H.J. Kidder	1982	Duncan A. Carswell	2005	James Stenhouse
1960	Milton Dobrin	1983	Valerie A. A. Nielson	2006	Oliver Kuhn
1961	Peter I.(Ibrahim) Bediz	1984	Jim R. Hume	2007	Doug Bogstie
1962	Peter J. Savage	1985	Larry C. Fichtner	2008	Francois Aubin
1963	Robert Harold Carlyle	1986	John D. Boyd	2009	Jon Downton
1964	Carl J. Chapman	1987	Robert L. Comer	2010	John Townsley
1965	Robert A. Boulware	1988	Ralph M. Lundberg	2011	Larry Herd
1966	John Hodgkinson	1989	Allan J. Ferworn	2012	Rob Kendall
1967	Earl A. Fulmer	1990	Neil E. Rutherford	2013	Ron Larson
1968	George E. Longphee	1991	Brian H. Russell	2014	Robert Vestrum
1969	W. (Bill) Blair	1992	Robert James (Jim) Brown	2015	Rachel Newrick
1970	John L. R. Baxendale	1993	W. (Bill) E. Davit	2016	Marian Hanna
1971	Roy O. Lindseth	1994	Gary G. Tarylor		
1972	J. Ken Morrison	1995	Barry T. Korchinski		

## 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)
- ▶ John Pierce (2015)
- ▶ Larry Lines (2016)

## 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
- ▶ J. Tuzo Wilson
- ▶ Norman Christie
- ▶ Milton B. Dobrin
- ▶ A.E. Pallister
- ▶ Roy O. Lindseth
- ▶ David W. Strangway
- ▶ Peter J. Savage
- ▶ R.H. Carylyle
- ▶ Ernest R. Kanasewich
- ▶ Robert Boulware
- ▶ A. Easton Wren (1987)
- ▶ Sudhir Jain
- ▶ Charlotte Keen
- ▶ Peter Gretener
- ▶ Gordon West
- ▶ Ron Clowes (1995)
- ▶ Douglas W. Oldenberg (1996)
- ▶ Roy Hyndman (1996)
- ▶ Larry Lines (1998)
- ▶ Zoltan Hajnal (1999)
- ▶ Brian Russell (2000)
- ▶ Robert Comer (2002)
- ▶ Robert Stewart (2003)
- ▶ John Boyd (2003)
- ▶ Davey Einarsson (2004)
- ▶ Mike Galbraith (2005)
- ▶ John Bancroft (2005)
- ▶ Perry Kotkas (2006)
- ▶ Peter Cary (2008)
- ▶ Peter Duncan (2009)
- ▶ Gary Margrave (2011)
- ▶ Don Lawton (2013)
- ▶ Don Gendzwill (2013)
- ▶ Satinder Chopra (2014)
- ▶ Penny Colton (2015)
- ▶ Dan Hampson (2015)
- ▶ Laurie Weston Bellman (2016)

## 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
- ▶ Cecil A. Collins
- ▶ Milton B. Dobrin
- ▶ Alexander H. McKee
- ▶ Peter J. Savage
- ▶ Percy Smith
- ▶ Roy O. Lindseth
- ▶ John Hodgkinson
- ▶ Jack W. Bowden
- ▶ Hal W. Godwin
- ▶ J. Kenneth Morrison
- ▶ Westley N. Rabey
- ▶ Easton Wren (1977)
- ▶ Mary C. Colberg
- ▶ A. Vern Street
- ▶ Alan J. Ferworn
- ▶ Jack R. Pullen
- ▶ Sudhir Jain
- ▶ Bill Blair
- ▶ Harold Acheson
- ▶ Bud St. Clair
- ▶ William D. Evans
- ▶ Earle F. Mahaffy
- ▶ Jack E. Setters
- ▶ Peter Bediz (1983)
- ▶ William C. Stroup
- ▶ Ernie K. Shaw (1984)
- ▶ William Davitt (1984)
- ▶ Ray Prudholme
- ▶ George Blundun
- ▶ Valerie A.A. Neilson
- ▶ Duncan A. Carswell
- ▶ P. Dennis O'Brien
- ▶ Judi McDonald (1987)
- ▶ Dale Kary
- ▶ D.K. Bruce Fenwick
- ▶ Lloyd Hatlelid
- ▶ Larry Fichtner
- ▶ Don Simpson
- ▶ John Boyd (1988)
- ▶ Arthur Baptie
- ▶ Bob Comer
- ▶ Dan Hampson (1991)
- ▶ Nancy Shaw
- ▶ Ralph Lundberg (1992)
- ▶ Murray Olson
- ▶ George Kostashuk
- ▶ Robert Grigg
- ▶ Neil Rutherford
- ▶ Ken Duckworth (1994)
- ▶ Melvin E. Best (1995)
- ▶ Brian Russell (1995)
- ▶ Don C. Lawton (1996)
- ▶ James Brown (1997)
- ▶ John Pierce
- ▶ Gregg Milne
- ▶ Ernest Kanasewich
- ▶ Michael Enachescu (1998)
- ▶ Elaine Honsberger (1999)
- ▶ Dave Siegfried (1999)
- ▶ Doug Uffen (1999)
- ▶ Penny Colton (2000)
- ▶ Norm Cooper (2000)
- ▶ Barry Korchinski
- ▶ George Fairs (2001)
- ▶ Perry Kotkas (2002)
- ▶ Oliver Kuhn (2003)
- ▶ Satinder Chopra (2005)
- ▶ Bill Nickerson (2005)
- ▶ Helen Isaac (2007)
- ▶ Mauricio Sacchi (2007)
- ▶ Doug Schmitt (2008)
- ▶ Larry Mewhort (2008)
- ▶ Tooney Fink (2009)
- ▶ John Logel (2009)
- ▶ J.M. Annette Milbradt (2010)
- ▶ Laurie Ross (2010)
- ▶ Doug Bogstie (2011)
- ▶ Lee Hunt (2012)
- ▶ Mike Doyle (2013)
- ▶ Jocelyn Frankow (2014)
- ▶ Joanne Poloway (2014)
- ▶ Mo Al-Ibrahim (2015)
- ▶ Nana Eliuk (2015)
- ▶ Larry Herd (2015)
- ▶ Stephen Kotkas (2016)
- ▶ Trent Olsen (2016)

## Technical Achievement

- ▶ Daniel Trad (2011)
- ▶ Shawn Maxwell (2013)
- ▶ Douglas Schmitt (2014)
- ▶ Richard Bale (2015)
- ▶ Stewart Trickett (2016)

## Special Commendation

- ▶ Penny Colton (2010)
- ▶ Bill Goodway (2010)
- ▶ Larry Lines (2011)
- ▶ Tom Sneddon (2011)
- ▶ Rob McGrory (2012)
- ▶ Rick Green (2013)
- ▶ Paul MacKay (2014)
- ▶ Kurt Wikel (2015)
- ▶ Steve Lynch (2015)
- ▶ Sigma Exploration (2016)

## Symposium Honorees

- ▶ Brian Russell / Dan Hampson (2012)
- ▶ Bill Goodway (2013)
- ▶ John Boyd (2014)
- ▶ David Gray (2015)
- ▶ Bill Nickerson (2016)

