

## **CSEG Committee Report – 2019**

### **Value of Integrated Geophysics (VIG) Committee**

The CSEG's VIG Committee was created in 2013 in response to a perceived need to build stronger levels of understanding among geoscientists, engineers, executives and the oil and gas finance community, about the value of using geoscience to increase economic success and safety. Our main approach has been to get out and talk to engineers through SPE and APEGA talks, and to educate CSEG members through VIG-related CSEG talks, RECORDER articles, Doodletrain courses, etc. We have shared the idea with the SEG, who has created a Business of Applied Geophysics (BAG) session at its annual convention.

#### **A. Accomplishments in 2019 (chronological):**

**1. APEGA Evening Seminar (January 9, 2019):**

David Gray delivered "*Demystifying Geophysics for Engineers*". Attended by 36 APEGA members. Pragmatic discussion of how geophysics can help companies optimize well/pad placement and understand more about reservoirs and their surrounding pressure regimes. <https://csegrecorder.com/reports/view/value-of-integrated-geophysics-demystifying-geophysics-for-engineers>

**2. Distinguished Lecture Tour (Fall 2018 to Spring 2019):**

David Gray delivered the VIG concept to geoscience students and their professors at universities across Canada. Learned that Google is recruiting from the Colorado School of Mines, banks are recruiting geophysicists for their inversion skills, and that students at INRS (l'Institut National de la Recherche Scientifique, a Quebec geological survey mining research school) are being hired before they graduate.

**3. VIG-themed Doodletrain Course (Oct 2019):**

John Duhault (Past VIG Chair) presented "*How Engineers Mitigate Risk and Increase Profitability Using Integrated Geophysical Applications: A Course for Geoscientists and Engineers*".

**4. CSPG Structural Division Talk (November 6, 2019):**

David Gray presented "*Can Seismic Inversion Be Used for Geomechanics? A Casing Deformation Example*".

The remainder of 2019 was devoted to organizing and preparing new talks for 2020, as listed below.

**5. CSEG Luncheon Talk (Feb 26, 2020):**

Dennis Ellison presented "*Seismic and Surface Deformation: Insights from Qualitative Comparisons over a SAGD Reservoir in Alberta*". <https://cseg.ca/technical/view/tl-seismic-and-surface-deformation-insights-from-qualitative-comparisons>.

## 6. SPE Geomechanics Breakfast Series at the Petroleum Club (February, 2020):

David Gray joined the SPE's Geomechanics Special Interest Group and presented the second talk in the breakfast series. The talks were well attended.

### a) *Naturally Fractured Reservoirs and their Link to Tight and Shale Reservoirs*

Speaker: **Roberto Aguilera**, Professor of Petroleum Engineering, University of Calgary  
<https://specalgary.com/initiative/5dfbbd461af0bdb7c7196e3>

### b) *Using Seismic Azimuthal Anisotropy to Find Fractures*

Speaker: **David Gray (VIG)**, Principal Geophysicist, Ikon Science, Canada  
<https://specalgary.com/initiative/5dfbbe61af0bdb7c7196e5>

### c) *A Convenient Technology to Calculate Geomechanical Properties from Drilling Data*

Speaker: **Mazeda Tahmeen**, PhD, PEng, Technical Product Manager, Rocsol Technologies Inc. <https://specalgary.com/initiative/5dfbe06f1af0bdb7c7196ee>

## 7. 2020 CSEG Symposium – Fall 2020

David Gray: *"The Hunt for Value in Geophysics: Finding Value in the Montney through Seismic Geomechanics"* <https://cseg.ca/symposium/docs/abstracts/2020-CSEG-Symposium-Gray.pdf>

We also provided feedback and suggestions regarding the CSEG's *Bacon and Eggheads* project, being organized by Earth Science for Society, of which Mike Hall and Dennis Ellison are members.

## B. Costs for 2019:

VIG had no expenses in 2019, confirmed by Jim Racette.

## C. Future work:

VIG has new talks in mind, including a potential APEGA evening seminar, luncheon talk, Doodletrain course (David Gray - Inversion Bootcamp; suggestion to teach a Project Management for Geophysicists course), SPE talk (David Timko – *Geophysics for Reserves Information*). Social events have been shut down due to COVID-19, but VIG will see about scheduling talks for the fall. We would also like to update the VIG Reading List.

**D. Current members (as of March 2020):** Louis Chabot, Dennis Ellison, David Gray, Mike Hall, Ruth Peach, and David Timko. Ruth Peach prepared this report.

END