

CSEG VIG Reading List (Version 1.0, June 2018)

The Canadian Society of Exploration Geophysicists's (CSEG) **VIG Reading List** is a list of papers chosen by the CSEG's Value of Integrated Geophysics Committee (VIG). The papers may be useful to help geophysicists discuss, with non-geophysicists, the value of geophysics. There are two sorted versions of the list: 1) the top version is sorted by Value Proposition, and 2) the bottom version is sorted by Author. The list may be modified from time to time, at our discretion, and the intent is to keep it small and easy to navigate. Please send your feedback to vig@cseg.com.

Disclaimer: Material listed in the VIG Reading List includes views and opinions of the respective authors, and does not necessarily represent the views and opinions of the Canadian Society of Exploration Geophysicists nor its affiliates. The CSEG and its affiliates do not endorse, warrant, nor guarantee the accuracy of the information provided.

Sorted on Value
Proposition

Author	Title	Source	Link	Value Proposition
Aylor Jr., William K.	The Role of 3D Seismic in a World-class Turnaround	SEG Technical Program Expanded Abstracts 1997: pp. 725-729.	https://library.seg.org/doi/abs/10.1190/1.1886113	3D seismic, reserves, finding costs, risk management
Head, Kim J.	How Could You Possibly Predict the Value of 3-D Seismic Before You Shoot It?	SPE Annual Technical Conference and Exhibition, 3-6 October, Houston Texas, 1999, SPE 56446-MS.	https://doi.org/10.2118/56446-MS	3D Seismic, Seismic Acquisition
Rigzone Staff	New Oil & Gas Deal "Good News" for Future Engineers	Rigzone, Thursday, November 16, 2017.	https://www.rigzone.com/news/new_oil_gas_uk_deal_good_news_for_future_engineers-16-nov-2017-152483-article/?utm_campaign=DAILY_2017_11_17&utm_source=GLOBAL_ENG&utm_medium=EM_NW_F4	Communication among disciplines
Hunt, Lee	Estimating the Value of Geophysics: Decision Analysis	CSEG Recorder, May 2013, Vol. 38, No. 5, pp. 40-47.	https://csegrecorder.com/articles/view/estimating-the-value-of-geophysics-decision-analysis	Decision analysis, resource play
Hunt, Lee	The Importance of Making Conclusions, and Frameworks in Reasoning	CSEG Recorder, September 2013, Vol. 38, No. 7, pp. 60-64.	https://csegrecorder.com/columns/view/value-of-integrated-geophysics-201309	Decision analysis
Coopersmith, E.M., and Cunningham, P.C.	A Practical Approach to Evaluating the Value of Information and Real Option Decisions in the Upstream Petroleum Industry	SPE-77582-MS SPE Annual Technical Conference and Exhibition, 29 September-2 October, San Antonio, Texas, 2002. OnePetro.	https://doi.org/10.2118/77582-MS	Decision Trees, Value of Information (VOI)

Aylor Jr., William K.	Measuring the Impact of 3D Seismic on Business Performance	SPE Journal of Petroleum Technology, Vol. 51, Issue 6, June 1999, SPE-56851-JPT.	https://doi.org/10.2118/56851-JPT	Economics
Gray, David	Quantify the Economic Value of Geophysical Information	CSEG Recorder, March 2011, Vol. 36, No. 3, pp. 29-32.	https://csegrecorder.com/articles/view/quantify-the-economic-value-of-geophysical-information	Economics
Rodych, Vince	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	CSEG Lunchbox Geophysics Talk, November 22, 2016.	https://cseg.ca/technical/view/formulating-a-seismic-value-proposition-for-oil-sands-sagd-a-review	Economics
Society of Exploration Geophysicists	Competency Management at SEG	Society of Exploration Geophysicists Website.	https://seg.org/Competency-Management	Educational
Jacobs, Trent	Frac Hits Reveal Well Spacing May Be Too Tight, Completion Volumes Too Large	SPE Journal of Petroleum Technology, 01 November 2017.	https://www.spe.org/en/jpt/jpt-article-detail/?art=3510	Fracking, production
Jennifer L. Miskimins	Hydraulic Fracturing Data Integration - What Should I Be Asking My Engineer and What Are They Trying to Tell Me?	CSEG Recorder, September 2017, Vol. 42, No. 5, pp. 32-35.	https://csegrecorder.com/articles/view/hydraulic-fracturing-data-integration-what-should-i-be-asking-my-engineer	Fracking, production, communication
Hunt, Lee; and Hard, Glen	Exploration Applications of the Multipole Acoustic Log: A Case Study	CSEG Recorder, January 1999, Vol. 24, No. 1.	https://csegrecorder.com/articles/view/exploration-applications-of-the-multipole-acoustic-log-a-case-study	Full waveform acoustic log, AVO
Wikel, Kurtis	The Future of Geomechanics and What It Means for Geophysics	CSEG Recorder, October 2013, Vol. 38, No 8, pp. 60-62.	https://csegrecorder.com/assets/digital/2013-10/files/assets/basic-html/index.html#62	Geomechanics
Posamentier, Henry	Reducing Reservoir Risk Using 3D-Seismic Based Stratigraphic and Geomorphologic Analyses	CSEG Recorder, April 2006, Vol. 31, No. 4, pp. 5-9.	https://csegrecorder.com/articles/view/reducing-reservoir-risk-using-3d-seismic-based-stratigraphic-and-geomorphol	Geomorphology, risk
Funk, Craig; Appleyard, Janelle; Braun, Jennifer, Derkach, Jodi	How Geoscientists are Making Potash Mines Safer	CSEG Recorder, June 2017, Vol. 42, No. 4, pp. 12-17.	https://csegrecorder.com/articles/view/how-geoscientists-are-making-potash-mines-safer	Ground Penetrating Radar
Eaton, David W.; van der Baan, Mirko; and Allan Ingelson	Terminology for Fluid-injection Induced Seismicity in Oil and Gas Operations	CSEG Recorder, April 2016, Vol. 41, No. 4, p. 30-34.	https://csegrecorder.com/articles/view/terminology-for-fluid-injection-induced-seismicity-in-oil-and-gas-operation	Induced seismicity
Boroumand, Neda; and Maghsoudi, Samira	A Cheat Sheet on Induced Seismicity.	CSEG Recorder, April 2016, Vol. 41, No. 4, pp. 30-34.	https://csegrecorder.com/articles/view/a-cheat-sheet-on-induced-seismicity	Induced seismicity

Duhault, John L.J.	Cardium Microseismic West Central Alberta: A Case History	CSEG Recorder, October 2012, Vol. 37, No. 8, pp. 48-57.	https://csegrecorder.com/articles/view/cardium-microseismic-west-central-alberta-a-case-history	Microseismic
Chorney, Drew; Smith, Mike; and Maxwell, Shawn	Microseismic Geomechanics Interpretation of a Montney Hydraulic Fracture	CSEG Recorder, Mar 2016, Vol. 41, No. 3, pp. 16-19.	https://csegrecorder.com/articles/view/microseismic-geomechanics-interpretation-of-a-montney-hydraulic-fracture	Microseismic, fracking
McClymont, Alastair; Bauman, Paul; Johnson, Eric; and Pankratow, Laurie	Geophysical Applications to Construction Engineering Projects	CSEG Recorder, April 2016, Vol. 41, No. 4, pp. 16-21.	https://csegrecorder.com/articles/view/geophysical-applications-to-construction-engineering-projects	Near-surface geophysics
CSEG Chief Geophysicists Forum	The Value Added Role of Geophysics in the Canadian Oil and Gas Industry	Daily Oil Bulletin, July 19, 2016 and CSEG Website (CGF)	http://www.dailyoilbulletin.com/article/2016/7/19/value-adding-role-geophysics-oil-industry/	Overview
Fairs, George	Overview of VIG columns in Recorder: May 2013 - March 2014	CSEG Recorder, March 2015, Vol. 40, No. 3, pp. 22-26.	https://csegrecorder.com/articles/view/overview-of-vig-columns-in-recorder-may-2013-march-2014	Overview
Stewart, Robert R.; Brown, R. James, and Lawton, Don C.	Effective Geophysical Writing and Presentation	CSEG Recorder, December 1995, Vol. 20, No. 10	https://csegrecorder.com/articles/view/effective-geophysical-writing-and-presentation	Presenting, writing
CSEG Chief Geophysicists Forum (Hanna, Marian C.; Gray, David; Fink, Anthony; Mitchell, David; Jose, Barrie; Willott, Richard)	CGF Reserves Document on Geophysical Applications - Using Geophysics for Reserves and Resources Classification and Assessment	CSEG Website (CGF)	https://cseg.ca/members/chief-geophysicists-forum	Reserves, resource calculation
Daniels, Rebecca; Schulte, Brian	Geophysical Methods for Mapping a Shallow Unconsolidated Gas Sand	CSEG Recorder, April 2015, Vol. 40, No. 4, pp. 46-52.	https://csegrecorder.com/articles/view/geophysical-methods-for-mapping-a-shallow-unconsolidated-gas-sand	Reservoir characterization
SPE International - PetroWiki	Seismic Attributes for Reservoir Studies	SPE International - PetroWiki	http://petrowiki.org/Seismic_attributes_for_reservoir_studies	Seismic attributes
Hart, Bruce S.; Sagan, Justine A.; and Ogiesoba, Osareni C.	Lessons Learned from 3-D Seismic Attribute Studies of Hydrothermal Dolomite Reservoirs	CSEG Recorder, May 2009, Vol. 34, No. 5, pp. 18-24.	https://csegrecorder.com/articles/view/lessons-learned-from-3d-seismic-attribute-studies-of-hydrothermal-dolomite	Seismic attributes, hydrothermal dolomite reservoirs

Rudolph, Kurt W. and Goulding, Frank J.	Benchmarking Exploration Predictions and Performance Using 20+ Yr of Drilling Results: One Company's Experience	AAPG Bulletin (2017), Vol. 101, No. 2, pp. 161-176.	https://pubs.geoscienceworld.org/aapgbull/article-abstract/101/2/161/295143/benchmarking-exploration-predictions-and?redirectedFrom=fulltext	Testing geoscience interpretations and technologies
Gray, David	Value of Integrated Geophysics: An Unconventional View of Geophysics	CSEG Recorder, November 2013, Vol. 38, No. 9, pp. 50-54.	https://csegrecorder.com/columns/view/value-of-integrated-geophysics-201311	Unconventionals
Beran, Laurens; Zelt, Barry; Billings, Stephen	Detecting and Classifying UXO	Journal of Conventional Weapons Destruction. Formerly, the Journal of ERW and Mine Action: Vol. 17, Iss. 1, Article 15, 2013.	http://commons.lib.jmu.edu/cisr-journal/vol17/iss1/15/	Unexploded ordnance detection and classification
Bentley, Laurence R.; Langston, Gregory; McClymont, Alastair	Effective Use of Geophysics in Hydrologic Investigations	GeoHydro 2011, Quebec City, 28-31 August, 2011.	No link.	Water investigations

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Jacobs, Trent	Frac Hits Reveal Well Spacing May Be Too Tight, Completion Volumes Too Large	SPE Journal of Petroleum Technology, 01 November 2017.	https://www.spe.org/en/jpt/jpt-article-detail/?art=3510	Fracking, production
Jennifer L. Miskimins	Hydraulic Fracturing Data Integration - What Should I Be Asking My Engineer and What Are They Trying to Tell Me?	CSEG Recorder, September 2017, Vol. 42, No. 5, pp. 32-35.	https://csegrecorder.com/articles/view/hydraulic-fracturing-data-integration-what-should-i-be-asking-my-engineer	Fracking, production, communication
McClymont, Alastair; Bauman, Paul; Johnson, Eric; and Pankratow, Laurie	Geophysical Applications to Construction Engineering Projects	CSEG Recorder, April 2016, Vol. 41, No. 4, pp. 16-21.	https://csegrecorder.com/articles/view/geophysical-applications-to-construction-engineering-projects	Near-surface geophysics
Posamentier, Henry	Reducing Reservoir Risk Using 3D-Seismic Based Stratigraphic and Geomorphologic Analyses	CSEG Recorder, April 2006, Vol. 31, No. 4, pp. 5-9.	https://csegrecorder.com/articles/view/reducing-reservoir-risk-using-3d-seismic-based-stratigraphic-and-geomorphol	Geomorphology, risk
Rigzone Staff	New Oil & Gas Deal "Good News" for Future Engineers	Rigzone, Thursday, November 16, 2017.	https://www.rigzone.com/news/new_oil_gas_uk_deal_good_news_for_future_engineers-16-nov-2017-152483-article/?utm_campaign=DAILY_2017_11_17&utm_source=GLOBAL_ENG&utm_medium=EM_NW_F4	Communication among disciplines
Rodych, Vince	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	CSEG Lunchbox Geophysics Talk, November 22, 2016.	https://cseg.ca/technical/view/formulating-a-seismic-value-proposition-for-oil-sands-sagd-a-review	Economics

Rudolph, Kurt W. and Goulding, Frank J.	Benchmarking Exploration Predictions and Performance Using 20+ Yr of Drilling Results: One Company's Experience	AAPG Bulletin (2017), Vol. 101, No. 2, pp. 161-176.	https://pubs.geoscienceworld.org/aapgbull/article-abstract/101/2/161/295143/benchmarking-exploration-predictions-and?redirectedFrom=fulltext	Testing geoscience interpretations and technologies
Society of Exploration Geophysicists	Competency Management at SEG	Society of Exploration Geophysicists Website.	https://seg.org/Competency-Management	Educational
SPE International - PetroWiki	Seismic Attributes for Reservoir Studies	SPE International - PetroWiki	http://petrowiki.org/Seismic_attributes_for_reservoir_studies	Seismic attributes
Stewart, Robert R.; Brown, R. James, and Lawton, Don C.	Effective Geophysical Writing and Presentation	CSEG Recorder, December 1995, Vol. 20, No. 10	https://csegrecorder.com/articles/view/effective-geophysical-writing-and-presentation	Presenting, writing
Wikel, Kurtis	The Future of Geomechanics and What It Means for Geophysics	CSEG Recorder, October 2013, Vol. 38, No 8, pp. 60-62.	https://csegrecorder.com/assets/digital/2013-10/files/assets/basic-html/index.html#62	Geomechanics