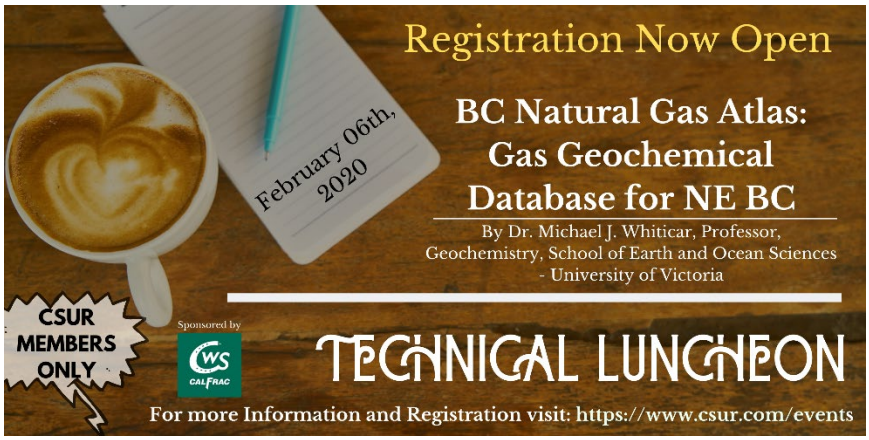


CSUR's Technical Luncheon Series – February 2020

In 2016, Geoscience BC and the University of Victoria jointly launched the British Columbia Natural Gas Atlas (BC-NGA) project. As highlighted by Dr. Michael J. Whiticar (UVic) at the February session of CSUR's Technical Luncheon Series, the primary objective of this ongoing project is to utilize existing natural gas & stable isotope data to create regional geochemical fingerprints for NE BC.

During the presentation, Dr. Whiticar methodically went through the oil & gas industry's presence in BC and then explained his vision & the subsequent evolution of the database to where it is now. His intention is to make the database accessible, searchable & interpretive with customizable reports and maps.

With the Montney from NE BC already contributing about 30% of Canada's total gas production, this database and the information within could lead to additional prospects for the various stakeholders or simply provide more definitive answers regarding the source of the gas.

According to Dr. Whiticar, this type of geochemical work, which is really like forensics for the oil & gas industry, is also highlighting anomalies that are potentially seeds for additional research work.

BC Natural Gas Atlas: Gas Geochemical Database for NE BC

With the recognition of the ongoing natural gas activity in NE BC, Geoscience BC and the University of Victoria (UVic) launched in 2016 the multi-year British Columbia Natural Gas Atlas (BC-NGA) project. The primary objective is to systematically catalogue the molecular and stable isotope compositions of natural gases produced in NE BC to establish gas geochemical fingerprints within a regional BC geological framework. The BC-NGA includes a comprehensive, open source natural gas database with the available gas geochemical data for NE BC (> 40,000 data entries) along with searchable datasets and maps (www.bcnga.ca).

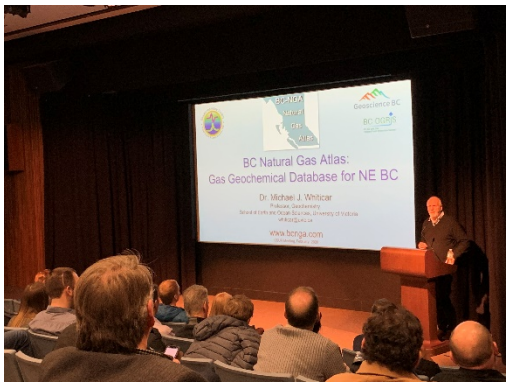
By providing an integrated compilation with extensive QA/QC of all available natural gas data in NE BC, the BC-NGA improves the overall understanding of the distribution and types of natural gas that occur in NE BC. For example, to identify specific geochemical characteristics that delineate regions that are more or less productive, or produce wet vs. dry gas. The database can also serve other stakeholders.

The BC-NGA database relies on the input from the BC Oil and Gas Commission datasets, but also from others and from analyses performed at UVic on new gas samples during the project. In 2020, the BC-NGA is developing on-line, specialty gas geochemical tools, e.g., interpretative plots, to enhance the utility of the database.

This CSUR presentation describes the BC-NGA database structure and gives examples of its use.

PRESENTER: Dr. Michael J. Whiticar, Professor, Geochemistry, School of Earth and Ocean Sciences - University of Victoria

Dr. Whiticar, Professor in the School of Earth and Ocean Sciences (SEOS) at University of Victoria, and CEO of Geochemical Analytic Services Corp., is an organic geochemist specializing in stable light isotopes and natural gases. Following a B.Sc. in geology (UBC, 1974) and Ph.D. in marine geochemistry (CAU, Kiel, 1978), Dr. Whiticar worked as a research geochemist with Petro-Canada, Calgary, then at the Federal Institute of Geosciences and Natural Resources (BGR) in Hannover, Germany and as the Nordic Professor in Petroleum Geology, Copenhagen. He is a founding member of SEOS (1990) with over 120 scientific publications and awards (e.g., GAC Distinguished Fellow, Hutchison Medalist, Fellow Can. Inst. Chemistry, Fellow Inst. for Adv. Study, Germany). His current research (GHGMap) focuses on remote sensing of climate-relevant gases on land and waters using optical micro-sensors on Autonomous Underwater and Unmanned Aerial Vehicles.



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