



## **Stratigraphic interpretation of the Clearwater Formation of the Mannville Group at Cold Lake, AB.**

**Speakers:** Bogdan L. Varban, Robert W. Wellner, Xavier Roca-Argemi, Jason A. Flaum, Esther K. Stewart, Michael D. Blum

**Date:** Wednesday, March 2, 2022 | 8:00am – 9:00am (MST)  
Virtual Event

### **Abstract:**

Integration of the recently acquired high-resolution 3D seismic volumes with well log and core data from Imperial Oil Cold Lake Production Project resulted in a new sequence stratigraphic framework of the Clearwater Formation.

We interpreted the seismic data and subdivided the Clearwater formation into several genetic sedimentary bodies bounded by erosional surfaces and further defined their lithofacies assemblage and reservoir properties in core. The analysis of core and well log data within the seismically defined stratigraphic framework suggest that a fluvio-deltaic depositional system best explains the lithofacies distribution, internal stratigraphic architecture and the map patterns and morphologies observed across the Cold Lake Production Project area.

The new stratigraphic framework of the Clearwater formation has resulted from integrating all available data in the field: 3D seismic, well logs and core, production data and it is also grounded in stratigraphic concepts derived from modern Quaternary and experimental studies. This current framework is simplified compared to its predecessor and therefore it provides more flexibility in interpreting the reservoir at the production pad level, allowing for more accurate production allocation and improved lithological prediction away from the borehole.

### **Biography:**

Bogdan L. Varban - Bogdan received a degree in geological engineering from the University of Bucharest in Romania and a PhD in stratigraphy and basin analysis from Western University in Canada. After a short assignment as a postdoctoral researcher with Western he joined the oil and gas industry in Calgary where he spent his career working in various technical geoscience roles for two companies operating multiple heavy oil assets within the Mannville Group and across a wide spectrum of technologies such as mining, CSS, SAGD and CHOPS. In his current role with Imperial Oil he works as a stratigrapher and (occasionally) a modeler in the Kearl Geoscience Group.