



## The Athabasca in situ oil sands: History, Geoscience, Development, Production and Technology

### Instructors:

Stan Stancliffe

Gordon Stabb, Durando Resources Corp.

### Post-Meeting Course– 1 Day: Thursday May 14, 2020

#### Course Outline:

The course will start with a review of the discovery and initial trials to extract the bitumen from the oil sands. The sedimentology, depositional environments, stratigraphy and geochemistry of the deposits will be outlined with an emphasis on what is unique in the basin. Discuss issues with top gas, bottom water, cap rock integrity, disposal zones, and isolated infrastructures. Overview of how in situ pads are drilled and developed along with the technologies used and government regulations. Present some of the mistakes made over the past 40 years, including blow outs, well failures, sterilised resource and near misses. Discuss potential future extraction technologies which are in development with their upsides and challenges.

#### Course Objectives:

- Present a concise geological overview of the in situ siliciclastic bitumen deposits in the Athabasca area
- Discuss the development technologies used
- Highlight some of the challenges and issues with the current reservoir and technology development
- Outline future technologies which can significantly enhance production efficiency
- Course participants will be able review company reports and government filings
- Highlight the interactions between geoscience, petroleum engineering, geography, local anthropology, and regulations in the current developments

#### Who Should Attend:

Attendees who are new to the exploration and development of in situ oilsands. This could include members of the CSPG, APEGA, CHOA, SPE, GAC, MAC, IAH along with new geoscientists, managers, and technicians.

*Meeting registration is **NOT** required to sign-up for this course*

#### Registration Rates: (rates do not include GST)

- Early-bird CSPG member rate: \$575
- Early-bird non-member rate: \$775

#### Early Bird Ends: **April 23, 2020**

- CSPG Member rate: \$775
- Non-member rate: \$975

#### Registration Close: **May 7, 2020**

CPD: 7.5

**Registration includes:** Coffee breaks, lunch and printed course manual.

**Time:** 8:30am-4:00pm

**Location:** CSPG Classroom, 540-5 avenue, Suite 150, Calgary



## About the Instructors



**Stan Stancliffe's** academic career includes creating and presenting courses at diverse institutions including the University of Toronto, Burgess Shale Foundation, Saskatchewan Indian Federated College and Mount Royal University. He obtained his PhD in palynology at the University of Saskatchewan. Stan then migrated west to join the Research Center of Imperial Oil. During the next 20 years, he drilled over 1,000 bitumen wells at Cold Lake and in the Athabasca at Aspen and Clearwater, along with handling land sales and competitor analysis. He also championed new technologies, published 18 refereed papers, lead field trips and presented numerous technical talks both internally and externally. At Suncor, he continued research programs development along with drilling specialist wells at Firebag and MacKay. Since 2017 he has founded a geological research, education and development consulting firm (GeoR.E.D.) working with diverse companies such as Enersoft, G.S.C., Petromentors and SAIT.

Stan is a member of the CSPG, AAPG and SPE and is a practising member of APEGA. The chance to present a course on the oil sands development from the perspective of someone who participated in its major expansion is going to be fun!



**Gordon Stabb** is a Petroleum Geologist with a 39-year professional background in Western Canadian oil and gas exploration, development, and production. His expertise includes stratigraphic analysis in siliciclastics, carbonates and business development in oil sands, conventional oil, EOR, and gas with integrated interpretation of geologic, geophysical and engineering information into prospect recommendations. Noted for generating solutions and discoveries that develop profitable projects through coordination with interdisciplinary and operational teams.

He has provided geologic insight to oilsands discovery and development including; the first Alberta SAGD pilot at Surmont, the North American Oil Sands SAGD project at Leismer (Statoil, now Athabasca), the Pengrowth Lindbergh SAGD commercial project, and the Wildwood SAGD project west of Surmont. Gordon has appeared as an expert geologic witness in multiple AER oil sand regulatory hearings. He contributed his SAGD geologic expertise to Suncor's Oilsands Subsurface Engineering and Geoscience research team and co-authored Suncor Patent CA2863396, Mine Insitu Gravity Drainage (MIGD) issued May 26, 2015. Also built stratigraphic delineated top gas pool maps for PTTEP Canada (Thailand NOC), at the Mariana SAGD project, Thornbury.

Gordon holds a Bachelor of Science degree in Geology from the University of Toronto (1981), and is a practicing member of APEGA. He is Technical Editor of the Journal of the Canadian Heavy Oil Association (CHOA), is a past Technical Director and Board Member of the CHOA and is the past Financial Director and Board Member of the CSPG and recipient of the 2016 Hunter Award.