

## **The Enigma of Point Bars Deposited in the Fluvial-Tidal Transition – What New Research Directions Does the Oil Industry Require to Better Understand the Athabasca Oil Sands**

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### **Abstract**

The Cretaceous Athabasca oil sands in western Canada are the second largest hydrocarbon resource on earth. Most of that resource is located in the deposits of the McMurray Formation, in multi-story, tidally influenced, meandering river point bars having highly variable lithology and morphology. This talk presents a series of vignettes illustrating the various depositional styles of point bars found in the Athabasca oil sands. Data sets include high-resolution seismic slices and cross-sections, detailed core measurements, and wire line and image logs. Sedimentological, ichnological associations and palynological recovery indicates that deposition occurred in a zone of tidal-fluvial transition; tidal indicators are rare to common.