Geological Review and Bitumen Resource Appraisal of the Grosmont Formation within the Athabasca Oil Sands Area

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The Energy Resource Conservation Board (ERCB) regulates oil and gas activity in Alberta. Its mission is to ensure that the discovery, development and delivery of Alberta's energy resources take place in a manner that is fair, responsible and in the public interest. Over the last six years, the ERCB has updated the bitumen resource assessment for the Wabiskaw-McMurray, Bluesky-Gething and Clearwater Deposits in the Athabasca, Peace River and Cold Lake Oil Sands Areas respectively. Recently the ERCB has completed an assessment of the Athabasca Grosmont Oil Sands Deposit for its bitumen potential.

The late Devonian aged Grosmont Formation is a shallow marine to peritidal platform carbonate with four distinct units: the Grosmont A, B, C & D. These reservoir units are highly varied some being highly karsted, brecciated and/or dolomitized. Due to the complex lithology and the diverse suite of porosity types special petrophysical evaluation techniques were used in the ERCB's recent assessment.

The Grosmont Oil Sands Deposit is a huge untapped bitumen resource. The ERCB's previous resource estimate in 1990 estimated an initial bitumen in place volume for the Grosmont Deposit (including all the sub units) of 50,500 106 m3 of initial bitumen in place. The new assessment was conducted using higher saturation and porosity cutoffs and found a somewhat larger extent to the Grosmont deposit than previously determined. Recent land sales, drilling activities and applications to the ERCB have publicized the oil industry's re-kindled interest in this elusive carbonate giant. However, development of the Grosmont bitumen is in its infancy with many technical issues still needing to be addressed.

The poster shows the results of the recent review, including cross-sections, isopach maps, and volumetrics.