

An Evaluation of Unconventional Oil Resources in the Bakken Formation in Saskatchewan and North Dakota.

¹ David W. Hume, PGeol.² Graham R. Davies, PhD, PGeol.

¹ Kaush Rakhit, MSc. PGeol. ³E. Ross Crain, PEng.

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ABSTRACT

We have applied a volumetric method to calculate the unconventional oil in place in the Bakken Formation in Saskatchewan and North Dakota. This method began with a detailed stratigraphic model to identify the distribution and the depositional controls on the various Bakken Reservoirs. A basin wide hydrogeological model was created to identify source rock thickness and distribution, areas of oil migration and oil migration pathways, as well as the distribution of regional aquifers and areas of isolated pressure systems. A petrophysical model was developed that identified the porosity, fluid saturations and net reservoir thickness within the Bakken reservoirs. These components were then mapped and integrated to define Bakken play types in specific geographic areas.

The sum of the volumetric calculations for all the unconventional play types in Saskatchewan and North Dakota provides an accurate estimate of the original oil in place for the Bakken play in this sector of the Williston Basin.

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- 2 Graham Davies Geological Consultants Ltd**
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s of assessing risk.