

## **Rocking the Viking: Reservoir Quality and Net Pay Determination in the Bioturbated (Shaley Sand) Viking Formation of Western Canada**

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### **Abstract**

The Lower Cretaceous Viking Formation of Western Canada has been producing oil and gas conventionally for over 60 years. The finer grained, bioturbated and lower permeability oil-bearing sand and finely interlaminated shale deposits of the transitional to offshore geological setting hold vast quantities of unexploited oil. The question is how much?

The Viking oil resource play extends from the Redwater area of Central Alberta through Provost and across the border into West Central Saskatchewan (figure 1). Vertical oil producers have been drilled in areas along this trend but have typically been low rate wells requiring fracture stimulations to be marginally economic. Initial rates average less than 40 bopd. Drainage areas are not extensive and recovery factors are only 5-7%. The remaining oil-in-place in the undrained portions of the reservoir represents a very large and worthwhile target to pursue with today's advanced drilling, completion and production practices.