

West Sask: Viking

Summary

The Viking Resource Oil Play of eastern Alberta and western Saskatchewan covers an area of 37,500 square miles. The original oil-in-place (OOIP) estimates vary, but range from 2 billion barrels to 6 billion barrels depending on the source. The commonly accepted amount is 5 billion barrels. Canadian Discovery infers a remaining resource potential of 1.4 billion barrels for the greater Dodsland area and 0.5 billion barrels for the Redwater region. Structure is locally important; however, oil is generally stratigraphically trapped. Viking deposition and structure was influenced by reactivated basement structures and preexisting Mississippian and Cantuar/Mannville topography. Viking sand deposition is postulated to have originated from shelf sand deposition in a shallow sea resulting in bioturbated shelf sand ridges. Tidal effects are not noted in the Viking in this region (if originally present they have been obliterated by subsequent bioturbation). Dodsland Viking is interpreted (Pozzobon and Walker) to have been deposited as a reworked sand plume carried offshore from a deltaic environment into 25m to 60m of water. Up to five coarsening-upward cycles with minor encased erosional surfaces are mapped. The lower sands are generally oil productive and the upper sands may be gas productive.

Play Synopsis

Fluid Oil, 43 API
 Pay Thickness Up to 5m
 Rf(Primary) 9.6%
 Fm. Temp. 30°C
 Active operators Teine, Whitecap, NAL, Raging River
 Completions Multi-stage Hydraulic Fracturing
 Depth 500m
 Lithology Sand/Clastic
 Average Porosity 26%
 Water Saturation 42%
 Type Well EUR 35 Mbbls (Tier 9)
 Type Well IP90 50 bbls/d

Capital Costs

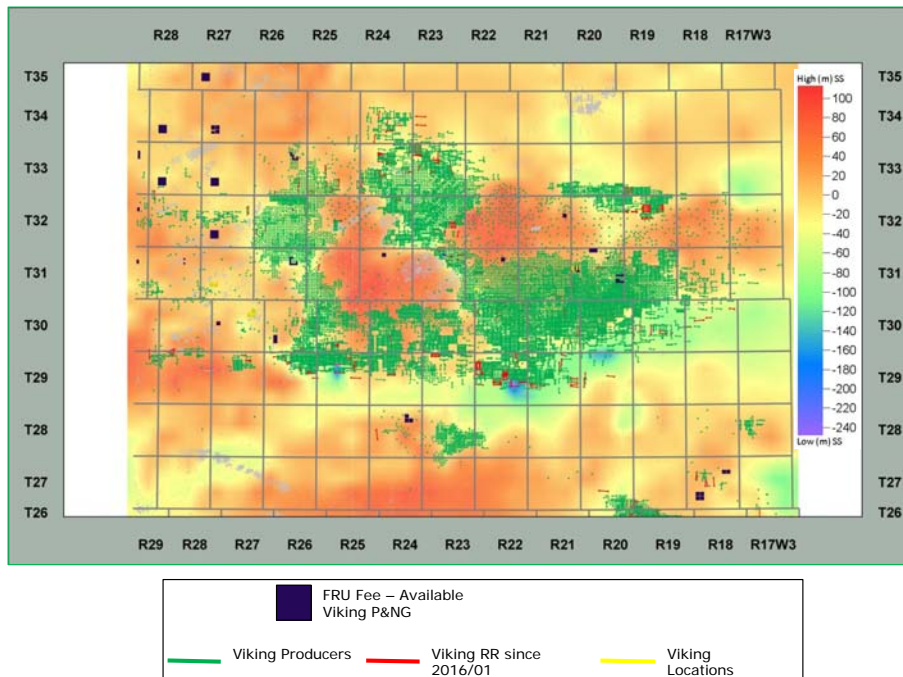
DCE&T: \$650M

With 20% Lessor Royalty

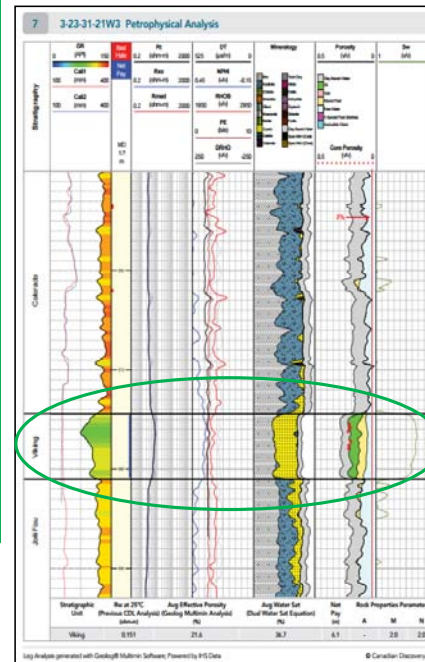
IRR BT: 80%
 Payout: 1.2 years
 F&D: \$22.48/boe
 Netback (IP 90): \$44.70/boe
 Recycle Ratio: 2.00

***Based on 0.5 mile HZ**

Viking 3rd Order Residual Structure Map



Offset Well Log



Type Curve Analysis

