

A New Approach to Exploration: Utilizing Gravity Gradiometry for Onshore Reef Oil Targets in Nova Scotia

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Summary

Forent is actively pursuing an onshore exploration program on the Alton concession in central Nova Scotia. The exploration program is targeting the Carboniferous aged reefs of the Gays River formation which are anticipated to be oil prone in this area. During the summer of 2010, an 890 km² gravity gradiometry survey was acquired over the Shubinacadie sub-basin in an attempt to resolve subsurface reefal structures. Interpretation of the gravity gradiometry data in conjunction with available seismic, magnetic, well and surface geology datasets has identified over sixteen new anomalies which will be delineated further with a 2D seismic program to be acquired summer 2011. The anomalies demonstrate similar geometries to modern reefs and exhibit areal extents comparable to Gays River reefs already mapped at outcrop and near surface on the Alton concession. Correct positioning of the 2D seismic lines would not have been possible without the gravity gradiometry survey which illustrates how this application of technology was used in a cost effective manner to solve a common frontier exploration problem.