

Evaluation Petroleum Resource Potential in the Liard Fold and Thrust Belt, Northern Cordillera and District of Mackenzie

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ABSTRACT

The rocks that provide the spectacular scenery in Nahanni Park Reserve are also the primary reservoirs for petroleum in the Liard Fold and Thrust Belt structural gas play. Recent exploration activity and changes in development strategies have renewed interest in this play. It has a significant economic potential that represents between $181 \times 10^9 \text{m}^3$ (6413 BCF) and $113 \times 10^9 \text{m}^3$ (3988 BCF) of initial gas in place probably in 15 to 128 accumulations, including the seven existing discovered fields with a reserve estimated to be between 59,480-65,130 $\times 10^6 \text{m}^3$ (2105-2305 BCF), primarily in Devonian Manetoe and Carboniferous Mattson reservoirs. This resource represents between 10.5% and 6.5% of the national gas reserve. Historically this play has one of the best exploratory well success and reserves addition rates in Cordilleran Foreland Belt. Recent developments in the Liard Field have shown that early exploration tests may not be diagnostic and that the Mattson Anticline and the Etanda Dome may still contain potential for commercial production.