

CANADIAN GEOSCIENCE SUCCESS STORIES

MANITOBA

Stratigraphy and petroleum geology of the Devonian Three Forks Formation, southwestern Manitoba

HEADLINE:

The Manitoba Geological Survey's research has spurred new oil exploration targets, increasing provincial revenue in royalty and taxes, land sales, and job creation.

DESCRIPTION OF SUCCESS:

- Manitoba Geological Survey's research has assisted energy companies in accelerating their understanding of the Devonian Three Forks Formation's potential, which directly resulted in luring more energy companies to explore for oil in this formation, outside the current known oil field target.
- MGS publications, posters and oral presentations on the topic directly resulted in an increase in oil exploration in areas previously unexplored. This is seen in land sale results and an increase in exploratory drilling licenses issued in areas that had seen very little exploration activity in the past.
- The publication of oil shows identified by the MGS north of the traditional exploration areas between late November 2007 to May 2008 resulted in land sale postings in August 2008, which is the first land sale posting opportunity immediately after the presentation given in May 2008, outside the traditional exploration areas and into the areas promoted by the MGS's findings.
- Revenue from land sales has increase significantly with the development and exploration of this oil play.
- Oil production in Manitoba has more than doubled since 2003, with the first discovery of this oil play.
- A better stratigraphic understanding of this package of clastic rocks has resulted in updating the stratigraphic nomenclature to better reflect modern understanding.

OVERVIEW:

- The objective of this project is to provide a regional overview of the stratigraphy, petroleum geology, and hydrocarbon potential of the Devonian Three Forks Formation in southwest Manitoba.
- The project involves a detailed analysis of the formation's stratigraphic variations and hydrocarbon reserves/potential through (1) core logging, (2) geophysical well log analysis, (3) structure and isopach mapping of the individual stratigraphic units, (4) core analysis evaluation, (5) detailed hydrocarbon assessment including potential reserves and reservoir characteristics.
- This project has been ongoing since 2006; a comprehensive geoscientific report detailing the results and findings is now in preparation.

TESTIMONIAL:

“Fort Calgary is engaged in exploration and development of Bakken - Three Forks prospects in southwest Manitoba. I found your (MGS's) research work to be most useful in this endeavor. I am interested in commissioning some additional core and detail mapping work on specific areas that we have identified as holding good potential for light oil.”

- Reid Brodylo, President, Fort Calgary Resources Ltd., via e-mail.

PREPARED BY: Michelle P.B. Nicolas, P. Geo., Petroleum and Phanerozoic Geologist, 204-945-6571

DATE: March 3, 2011