

# Map Compilation Series of Saskatchewan's Ultimate Potential for Natural Gas - Energy Market Assessment

Melinda Yurkowski  
Saskatchewan Ministry of Energy and Resources, Regina, SK  
Melinda.Yurkowski@gov.sk.ca

Arden Marsh, Rick McLean and Steve Rymes  
Saskatchewan Ministry of Energy and Resources, Regina, SK

and

Peter Budgell, Mike Johnson and Jim Davidson  
National Energy Board, Calgary, AB

## Abstract

In November 2008, the National Energy Board together with Saskatchewan's Ministry of Energy and Resources (ER) released a joint Energy Market Assessment, entitled *Saskatchewan's Ultimate Potential for Conventional Natural Gas*. The report revealed Saskatchewan's ultimate potential of marketable conventional natural gas resources to be 297.4 billion cubic metres or 10.6 trillion cubic feet. This represents a 42 per cent increase from the last study done by the National Energy Board in 1998. Approximately half of that volume has already been produced; the remaining volume is 150.6 billion cubic metres or 5.3 trillion cubic feet.

As part of this study, ER has undertaken the development of a map compilation series that broadly outlines the geology of the individual plays identified in this report. The compilation series includes maps for each formation that show the areal distribution of the play areas. The information in the map series is designed to give users a better understanding of the geology behind the distribution of natural gas deposits in Saskatchewan. This information can also be utilized by industry for generating new natural gas plays.

Twenty four formations have been identified as having potential gas resources; several of which are considered to be conceptual in nature. Many of the play areas of the traditional gas producing formations have increased in size, which is indicative of exploration and development in areas that were once thought of as marginal or non-economic because of low permeability reservoirs. Considerable advances in drilling and completion techniques over recent years have also helped make these less permeable reservoirs more

viable as potential targets. Conceptual plays include those intervals where evidence of hydrocarbon potential exists, for example: a farm using gas from an interval that has no commercial value; an interval that is capable of commercial oil production but in which no gas reserves have been identified; intervals where commercial quantities of gas have been produced but no multi-well pools have been established, and; formations in which commercial production has been achieved on the Alberta side of the border but hydrocarbon potential has yet to be proven in Saskatchewan.

The new map series shows a greater distribution of the potential for gas exploration both stratigraphically and areally. As exploration has shifted to new areas and into previously bypassed intervals, the geological understanding of the Western Canada Sedimentary Basin in Saskatchewan continues to evolve.