

## **Preliminary Sedimentology of Milk River Equivalent in the New Abbey/Lacadena Gas Fields, Saskatchewan**

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### **Abstract**

The main purpose of this report is to document aspects of the sedimentology of the Milk River equivalent (Myhr and Meijer-Drees, 1976) in the new Abbey and Lacadena gas fields in southwest Saskatchewan. The study focuses on 54m of continuous core cut by Husky at 11-24-21-19W3M, an early development well drilled in late 2001 near the center of the reservoir. This core was logged for basic attributes followed by preparation of 61 thin sections to investigate mineralogy, texture and various reservoir quality issues. Results are presented along with brief discussions of, and comparisons with Hatton area Milk River equivalent (MRE). A secondary purpose of the report is to discuss implications of the documented sedimentology to historic and modern models of MRE deposition.

This report does not discuss trapping mechanisms in the Abbey/Lacadena fields. Pedersen (2003) indicates that the reservoir, as currently delineated, sits on an areally large, low relief structural high, but that stratigraphic controls may be important. Well logs cannot be used to make estimates of net pay due to extremely high shale content (Meijer-Drees, 1972). The fields have pushed MRE production 75km northeast of pre-discovery limits. Over 440 wells are currently producing at Abbey/Lacadena at rates of  $\sim 1 \times 10^6 \text{ m}^3/\text{d}$  to over  $29 \times 10^6 \text{ m}^3/\text{d}$  ( $\sim 35 \text{ mcf/d}$  to over  $1 \text{ mmcf/d}$ ). By the end of the third quarter of 2003, almost  $764 \times 10^6 \text{ m}^3$  (27bcf) of gas had been produced from the fields.