

**AAPG Annual Meeting  
March 10-13, 2002  
Houston, Texas**

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## **Sequence Stratigraphy and Reservoir Quality of Alluvial/Lacustrine Reservoirs in the Albert Formation, Horton Group (Mississippian), Moncton Basin, New Brunswick, Canada**

Sequence stratigraphy has proved to be a powerful approach to the modeling of stratal successions in increasingly diverse types of sedimentary basin, including lacustrine basins. New core data from a drilling program in the Moncton Basin of eastern Canada provides an opportunity to apply a sequence stratigraphy to the Mississippian Horton Group, specifically the alluvial-lacustrine Albert Formation.

A low resolution tectonic sequence is attributable to basin initiation (basal conglomerates - Dawson Settlement Member), deepening (sediment starvation - mudstone and oil shale of the Frederick Brook Member), and final infilling (mixed sandstone and mudstone - Hiram Brook Member). Lithofacies interpretations from core, and geophysical evidence further indicates that the higher resolution sequences would have formed under the influence of a predominantly wet climate. Accordingly, architectures typical of "overfilled" or "Newark" type basins are identified, such as well-preserved high-relief lacustrine deltas. Lithofacies successions also suggest that interbasinal thresholds also may have influenced architecture. Advances in SEM and image-analysis technology are also providing more quantitative porosity and cement data for samples from the new core, and confirm existing diagenetic models.