

**AAPG Annual Convention
Salt Lake City, Utah
May 11-14, 2003**

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Oil, Gas, and Oil Shale Resources of Southern New Brunswick, Eastern Canada

Southern New Brunswick is one of the oldest 'oil provinces' in the world, although production has always been modest! Petroleum has been exploited since 1849, when solid bitumen (Albertite) from Albert Mines in the southeast of New Brunswick was extracted and shipped to the northeast US. In 1859, four oil wells were drilled in the nearby village of Dover (~ 3000 barrels eventually being recovered) and, in 1909, the Stoney Creek oil and gas field was discovered (total production over 80 years: ~ 28.7 bcf gas, ~ 800,000 barrels oil).

The petroleum in all cases was located within the Albert Formation (Tournasian, Lower Carboniferous) of the Horton Group, which is a succession of conglomerate, shale and sandstone interpreted as alluvial-lacustrine in origin. These early commercial finds, and the long-identified but still undeveloped ~ 67 x10⁶ barrels of shale oil, are all located in the southeast of the Moncton sub-basin. Exploration elsewhere in the sub-basin was concentrated along its southern margin and resulted only in minor oil shows.

Recent construction across southern New Brunswick of a natural gas pipeline (taking offshore gas to New England), has renewed interest in the Albert Formation. The McCully commercial gas discovery ("hundreds of net bcf") has been made in overpressured, 'tight' Albert Formation sandstones in the southwest of the sub-basin. These sandstones demonstrate that prospects may have been overlooked: the McCully structure is not mappable at the surface, and specific drilling and fracturing techniques must be utilized for accurate field evaluation.