

Distribution and petrology of sandstone identified in core from the Dawson Settlement Member, Albert Formation (Carboniferous), Moncton Basin, New Brunswick

Kevin Sinnott and David Keighley

Department of Geology, Saint Mary's University, Halifax, NS B3H 3C3

Renewed interest in the commercial production of petroleum in the Albert Formation of the Moncton Basin has resulted in new drill-core being available for study. The Boudreau well #1 and the Albert Mines well #4 have been logged and sampled. A similar lithological succession has been identified in the Dawson Settlement Member (lower Albert Formation) of these two wells; sandstone, mudstone and sandstone interbedded with mudstone. The sandstone has a grain size ranging from very coarse to fine, and petroleum is present in some intervals.

Analysis of samples has been by thin section microscopy and Scanning Electron Microscopy. New EDX software has meant that phase mapping of thin sections can calculate precise values for porosity, interstitial phases, and detrital components. Analysis of interstitial phases has confirmed previous studies of the diagenetic history: two phases of dissolution of plagioclase and/or K-feldspars with an intervening event involving carbonate precipitation. The latter phase can be seen in fractures and as disseminated cement in the core.