
Architecture and geometry of a braided channel complex in the Wolfville Formation, Nova Scotia

JORDAN NICKERSON

Department of Earth Sciences, Dalhousie University, Halifax, Nova Scotia B3H 4J7

The Wolfville Formation outcrops along the shoreline of the Minas Basin of the Bay of Fundy of Nova Scotia. Cambridge Cove contains an exceptionally well preserved outcrop section in 2- and 3-D exposures of the braided channel depositional environment of the Wolfville Formation. These outcrops demonstrate the stratigraphic complexities associated with this environment. The aim of this study is two fold: (1) to investigate heterogeneity of a braided channel complex including fluid migration baffles, interconnectivity between channel bodies, and barriers of fluid flow within stratigraphic packages; and (2) to discern the potential of these outcrops for other early Mesozoic syn-rift and post-rift reservoirs in the subsurface. Geological modeling of the study area is planned using data collected from the outcrop in Cambridge Cove. Using LIDAR, stratigraphic descriptions, ground penetrating radar, and scintillometer and permeameter logs, data will be incorporated into geological modeling software to demonstrate how minor changes in deposition can effect commercial reservoir depletion.