
**Stratigraphy and salt tectonics of Mississippian–
Pennsylvanian strata of the northern Cumberland Basin,
Maringouin Peninsula, southeastern New Brunswick**

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On the Maringouin Peninsula of southeastern New Brunswick, detailed field work has confirmed a succession of upper Mississippian strata comprising salt and carbonate (Pugwash Mines and Lime-kiln Brook formations), and redbeds (Maringouin, Shepody, and Enragé formations), paraconformably–disconformably overlain by lower Pennsylvanian clastics (Boss Point Formation) that collectively have been tightly folded and faulted by diapirism of Mississippian salt. To the north, these strata are overlain with angular unconformity by very gently dipping redbeds of the Grande Anse Formation. A recently revised palynostratigraphy from the nearby Joggins section assigns Boss Point Formation strata to the *R saetosa* zone (Yeadonian–Langsettian, ~320–319 Ma); the Grande Anse Formation best fits the *R fulva* zone (Langsettian, ~319–318 Ma). This suggests very rapid salt expulsion and deformation that may have been completed by the time of deposition, south of the diapir, of the uppermost Joggins Formation to basal Ragged Reef Formation.

Structurally, the Boss Point Formation succession is characterised by shallowly east-plunging to subhorizontal, open, locally kink-like, north-verging folds. Sporadic faults indicate two generations of fault propagation. Early, steep to subvertical, strike-slip faults are commonly developed as conjugate pairs of E-W-striking dextral faults and N-S-striking sinistral faults. The dextral faults are commonly bedding sub-parallel, have narrow (< 10 cm) damage zones, and occur at the interface between mudstone and coarser-grained sandstone and conglomerate. Later, moderately north- and south-dipping reverse faults and subvertical, E-W-striking normal faults are associated with north-verging, tight to rarely isoclinal fault-bend folds in Pugwash Mines Formation gypsum and are thus related to diapirism. Proximal to the unconformity, joints appear to be radial about an open fold axis. Disturbance of the Grande Anse Formation and the unconformity itself appears to be minimal. This suggests that some strike-slip faults, such as the Harvey-Hopewell and Shepody faults, may run beneath outcrop of the Grande Anse Formation and were not substantially active following halokinesis.