

Potash / Potasse

POTASH IN NEW BRUNSWICK

The Middle Devonian to Early Permian Maritimes Basin of eastern Canada represents a large (148,000 km²) intermontane basin that formed in the wake of mountain building processes which created the northern Appalachian Mountains (Figure 1). New Brunswick possesses the largest onshore part of the basin covering an area of ~25,000 km². In the early stages of basin development the area was undergoing extension or transtension, resulting in reactivation of the northeast-trending basement faults and compartmentization of the Maritimes Basin into a number of subbasins and adjoining basement uplifts (Figure 2). Late Devonian to Early Carboniferous basin-fill consists of locally-derived clastic debris from adjacent uplifted areas. During the latter part of the Early Carboniferous clastic deposition was interrupted by several marine incursions into parts of the basin. The extensive evaporite deposits that contain New Brunswick's potash and salt formed during this period of relative tectonic quiescence. During the Late Carboniferous sedimentary fill became more distally-derived and overstepped older basin strata and basement.

Figure 3 shows the distribution of known potash and salt resources, and areas with potential for these types of deposits in the southern part of the province. PotashCorp operates the only producing potash and salt mine in the province, and is currently developing another mine near the existing facility to extract ore from a newly discovered deposits (Figure 4). The Millstream deposit (Figure 3) has recently been acquired by Atlantic Potash Corp, who have entered into a three year lease agreement to explore and develop the deposit, which is located in the southwestern part of the Cocagne Subbasin west of Sussex. Some of the major advantages of mining potash in New Brunswick include the close proximity of some deposits to the port of Saint John (Figure 5) and the favourable infrastructure that the Province has to offer.

REFERENCES

St. Peter, C.J. and Johnson, S.C. 2009. Stratigraphy and structural history of the late Paleozoic Maritimes Basin in southeastern New Brunswick, Canada. New Brunswick Department of Natural Resources, Minerals, Policy and Planning Division, Memoir 3, 348 p.

Webb, T.C. 2009. New Brunswick potash: A review of developments and Potential Exploration alternatives. New Brunswick Department of Natural Resources Minerals, Policy and Planning Division, Information Circular 2008-4 (CD-ROM), 21p.

Figure 1. Map showing the distribution of the Mid Devonian - Early Permian Maritimes Basin of Atlantic Canada.

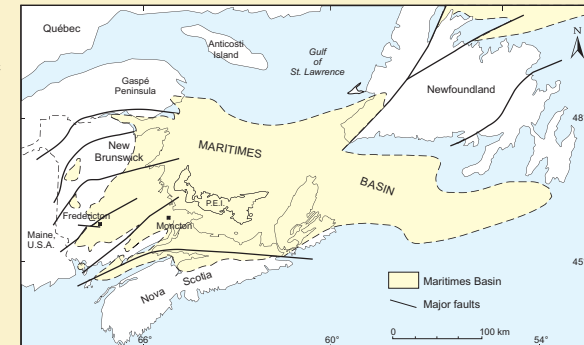


Figure 3. Map indicating areas in southern New Brunswick with potential for potash deposits based on gravity and/or regional geological features (after Webb 2008).

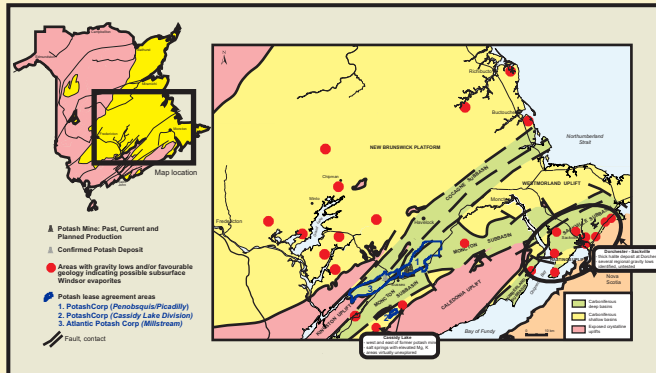


Figure 2. Map showing the distribution of subbasins, uplifts and platforms in the Maritimes Basin of southern New Brunswick (after St. Peter and Johnson 2009).

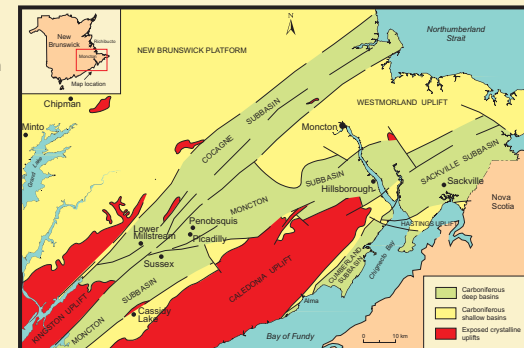


Figure 4. Photograph of PotashCorp's existing Penobscis facility (left) and construction at their new Picadilly facility (right) in southern New Brunswick near Sussex.



Figure 5. Photograph of PotashCorp's potash terminal at the port of Saint John in southern New Brunswick.

