

**Revision of the Upper Carboniferous to Lower Permian stratigraphy in the central Maritimes Basin of eastern Canada**P.S. Giles<sup>1</sup> and J. Utting<sup>2</sup><sup>1</sup>*Geological Survey of Canada - Atlantic, Box 1006, Dartmouth, Nova Scotia B2Y 4A2, Canada <giles@agcux.bio.ns.ca>*<sup>2</sup>*Geological Survey of Canada - Calgary, 3303-33rd Street N.W., Calgary, Alberta T2L 2A7, Canada <JUutting@NRCan.gc.ca>*

Synthesis of lithostratigraphic and biostratigraphic data for late Namurian to lower Permian rocks of the western Maritimes Basin in the Gulf of St. Lawrence and on Prince Edward Island confirms that a regionally significant unconformity separates Westphalian B and younger strata from older Carboniferous rock units. Earliest Westphalian rocks above this over-stepping unconformity range in age from Westphalian B in deeper parts of the basin, to Westphalian C and D in areas more proximal to the basin margin. We recognize a five-part subdivision of Westphalian-Permian strata, comparable only in part with earlier work. At the base, ranging in age from Westphalian B to early Stephanian, is the Bradelle Formation, sand-dominated, and containing typical coal measures facies. The top of the Bradelle Formation is a diachronous facies boundary. Overlying fine-grained red strata are assigned to the Green Gables Formation, significantly expanded in definition from earlier work. The Green Gables Formation is overlain by the sandstone-dominated Cable Head Formation (Stephanian)

which blankets the entire western Maritimes Basin. The Naufrage Formation overlies the Cable Head abruptly but apparently conformably, and comprises fine-grained red strata with abundant pedogenic carbonate as nodules and discontinuous beds. The Naufrage Formation is transitional upwards into a thick, sandstone-dominated succession of Permian age which was included within the Naufrage Formation by earlier workers. The Permian sandstone may lie directly on older strata where salt flow has elevated older rocks to produce local unconformities. Correlation of this five-part subdivision with onshore rock units is only partially successful, perhaps reflecting differing data sources (outcrop versus well cuttings for example). The stratigraphic framework which emerges from our synthesis suggests close comparison with the Sydney Basin, where a significant unconformity separates Westphalian B to Stephanian strata of the Morien Group from early Namurian rocks of the Mabou Group.