

Lithologies at the Pennsylvanian/Pre-Pennsylvanian contact in New Brunswick

*M.C. Graves, Department of Geology
Dalhousie University, Halifax, N.S. B3H 3J5*

Field work in the summer of 1981 together with information provided by test holes of the Carboniferous Drilling Project provide a unified view of the nature of the lower contact of the Pictou Group lithologies that cover 35% of New Brunswick.

The major Carboniferous lithologies at the contact are (1) the Hopewell

lithology of red, poorly-sorted, lithic conglomerates with a local provenance; (2) the Boss Point lithology of grey, mature clastic rocks of three varieties — (2a) Boss Point Formation thick sandstone-siltstone-shale sequences, (2b) quartz-pebble conglomerate and (2c) clean, quartz sandstone of a A Member of the Clifton Formation —; and (3) the Pictou lithology of green and red lithic

conglomerates and coal seams. Basalt occurs locally at or near the top of the Hopewell lithology and a buff hard siltstone rests atop the Hopewell lithology in portions of the central part of the New Brunswick Platform.

The three Boss Point sub-lithologies have distinct outcrop areas. The clean quartz sandstone is restricted to the northern-most portion of the outcrop area between Bathurst and Red Bank on the Little Southwest Miramichi River and lies stratigraphically between Late Namurian Hopewell lithology and Pictou lithology of Westphalian C age. The quartz-pebble conglomerate is a thin unit which outcrops in the western portion of the New Brunswick platform to the west of Bloomfield Ridge on the Southwest Miramichi River and Upper

Thornes Brook near New Canaan. Late Namurian to Early Westphalian ages have been reported from pollen assemblages collected from this unit. In the southern part of the Moncton Basin and in the Cumberland Basin thick sequences of Boss Point Formation span the mid-Namurian to Westphalian C interval. The Boss Point Formation is typified by mature and ubiquitously cross-bedded grey sandstones and shale, as well as beds with a high content of coalified plant fossils.

This project was a part of the Carboniferous Drilling Project which was a Federal - Provincial Development Project funded under the Minerals and Fuels Subsidiary Agreement of the Canada-New Brunswick General Development Agreement by the Government of New Brunswick and the Department of Regional Economic Expansion.