

**The Stoney Creek Oil and Gas Field; Its Bearing on the Lower Carboniferous
Paleogeography of the Moncton Subbasin**

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The Stoney Creek Oil and Gas Field is a producing field in the Late Paleozoic Moncton Subbasin of New Brunswick. The field is located 16 km south of Moncton and occurs within lacustrine/fluviol-deltaic sandstones of the Lower Carboniferous Albert Formation. The field lies along the south flank of the Westmorland Uplift, a granitoid complex around which the eastern part of the Moncton Subbasin is bifurcated.

The Albert Formation at Stoney Creek dips toward the south. Red beds of the Hillsborough and Weldon Members of the Moncton Formation overly the Albert Formation throughout the field and thicken quickly to the south as a wedge between the Albert Formation and the unconformably overlying Enrage Formation.

The lacustrine shales and siltstones of the Albert Formation thicken from the north to the south across the Stoney Creek field. Sandstone sequences interbedded with the shales and siltstones also thicken towards the south and presumably into the deeper part of the Moncton Subbasin. The Albert sandstones within the field and in the Irving/Chevron Hillsborough No. 1 well, 5 km to the south, are subarkosic and conspicuously lacking in volcano-

genic detritus. The thickening of the Albert Formation away from the Westmorland Upland indicates that the uplift had a controlling influence on the accumulation and facies distribution of the Albert Formation sediments.

It has, in the past 25 years, been tentatively argued that the provenance of the sandstones at Stoney Creek lies to the south, perhaps as far south as the granitic terrains of Nova Scotia. However, surface paleocurrent measurements to the east of the field indicate south and southwest transport directions for the sands. The new paleocurrent data imply the existence of a local depocenter to the southwest of the Stoney Creek Field. The increase in quantity and thickness of sandstone to the south and southwest provide supporting evidence. The absence of volcanic detritus in the Stoney Creek sandstones strongly implies that the crystalline volcanoclastic and volcanic terrains of the Caledonian Uplift to the south, did not supply sediment to the field. Presently available data suggest that the source of the Albert sandstones at Stoney Creek was to the east and/or northeast, probably from the largely granitic Westmorland Uplift.