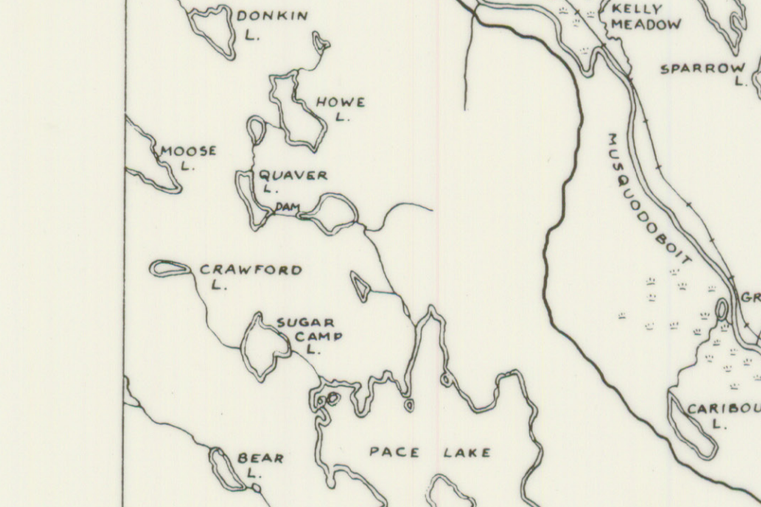
Geology by R.H. Mac Neill, 1956



MUSQUODOBOIT 11D/14E

SURFICIAL GEOLOGY

SCALE 1:50,000

1.25 inches to 1 mile approximately

1 0 1 2 3 Miles

1000 500 0 1000 2000 3000 4000 Metres

NOVA SCOTIA RESEARCH FOUNDATION
CORPORATION

LEGEND

- DRUMLIN & MORAINE
- KAME
- ESKER
- DELTA
- TILL AREAS (undiff.)
- SWAMP
- ROADS & TRAILS
- STREAMS

DESCRIPTIVE NOTES

General

The Musquodoboit East map area is a rugged, hilly area often containing many ridges, which levels out into a relatively flat area bounded by ridges and hills. Ridges and hills are generally rounded in outline. Elevations range from sea-level in the south to 120 metres along the Musquodoboit River Valley.

Bedrock Geology

Sedimentary, igneous and metamorphic rocks underlie the area and are divided into (1) the Cambro-Ordovician Meguma Group, consisting of the Goldenville Formation (largely quartzites) and the Halifax Formation (largely slates), (2) the Lower to Mid-Devonian rocks and (3) the Windsor Group of Upper Mississippian Age.

The Goldenville Formation underlies 50 per cent of the area and includes quartzites, greywacke and slates. The Halifax Formation underlies 2 per cent of the area and includes slates, quartzites and schists. The Lower to Mid-Devonian rocks underlie 43 per cent of the area and includes granitic and allied rocks. The Windsor Group underlies 5 per cent of the area and includes limestone, gypsum, shale and sandstone. (Percentages are estimated.)

Glacial Deposits

Till and Drumlins

The tills of this area were divided into two types. The tills in the Meaghers Grant--Elderbank area and clay-to-silt in matrix with quartzites, slates and granitics as the rock fraction.

The till is red to red-brown in colour and the compactness varies from loosely to semi-compacted. The tills of the Elderbank area became progressively poorer, varying from a good clay till to a fragmental or bedrock till. This latter till is composed of angular local rock fragments with silt, clay and sand.

The tills in the second area, the Musquodoboit River Valley, were generally thin and poor. The tills are silt-clay matrix with added sand and gravel. Large portions of the area were barren and rocky with large areas of outcropping rock.

Glaciofluvials

There is one main area of glaciofluvial deposits along the Musquodoboit River Valley. The main deposits are along the east side of the valley, and are generally a kame type of deposit, consisting of sand and gravel materials. Rock fragments are mainly angular to subangular local granitics as well as quartzites and slates.

A deltaic deposit at Musquodoboit Harbour, contains sand and gravel with foreset beds and cross-bedding which indicate meltwater flow was in a southeast direction. Also at the northwest corner of the delta (at Little Scotch Land) is a deposit suggesting a small glacial dam. The materials of the delta are quite coarse, generally in the pebble to cobble size range.