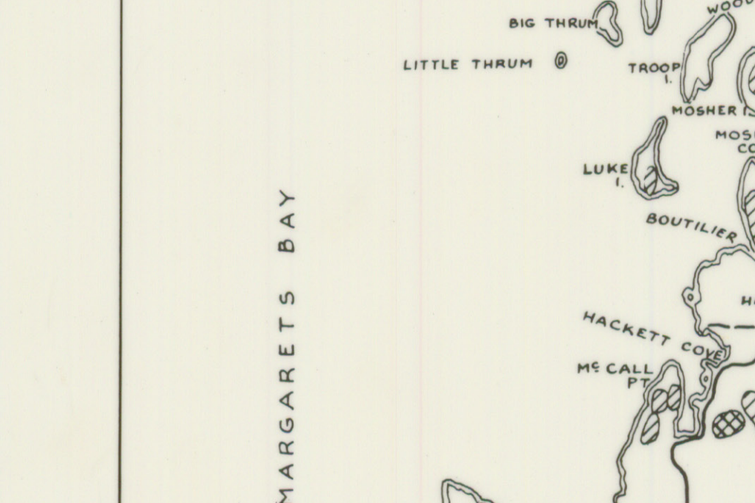
Geology by R.H. Mac Neill, 1956



HALIFAX 11D/12W

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
- GLACIAL STRIAE

DESCRIPTIVE NOTES

GENERAL

The Halifax west map area has a low, hilly topography, largely a reflection of the underlying bedrock. Elevations are low, ranging from slightly over 400 feet in the northern area, to sea level along the coast. Drainage is to the south into St. Margarets Bay via a number of small rivers and streams.

BEDROCK GEOLOGY

Igneous rocks largely underlie the area, being wholly or mainly Lower and Mid-Devonian in age, including granitic and allied rocks. These rocks underlie 90 per cent of the area. Approximately 4 per cent of the area is underlain by the Goldenville Formation of Lower Ordovician age and includes quartzite, greywacke and slates. Three per cent is underlain by the Meguma Halifax Formation of Lower Ordovician age and includes slate, quartzite and schist. Three per cent is underlain by the Windsor Group of Mississippian age and includes limestone, gypsum, shale, sandstone, and conglomerate.

QUATERNARY GEOLOGY

Till and Drumlins

Till is relatively thin over the entire area. An average depth to bedrock is 5-10 feet although it varies from 0-15 feet in some areas.

The till is a light brown to buff to red brown in color, with a silt-clay matrix, containing often large amounts of locally derived granite and quartzite fragments. Compactness of the till, although generally semi-compacted, is determined by the amount of granite, sand and gravel present.

Large boulders are numerous, being of fairly resistant granite which has generally been transported for relatively short distances. Erratic pebbles and cobbles, quartzites and slates, make up only a small (5 to 10%) portion of the rock fragments.

The topography is largely bedrock controlled. Till is generally absent or very thin along ridges and thickens on the lower slopes of the ridges and in the swales.

Glaciofluvials

There are two main areas of glaciofluvial deposits which were examined. In these deposits, boulders and cobbles are predominantly igneous, almost wholly granitic, while the pebbles are (80-90%) granite with minor amounts of quartzites and slates.

The material itself would suggest that it is an ablation moraine, showing little or no stratification and seems simply to have been "dumped" there by the ice. There does not appear to have been much water action, as the materials in the kames are local, a mixture of sand, bedrock till, gravel and silt. The slight washing and stratification indicate a southerly water flow direction.