UNIACKE 11D/13W

SURFICIAL GEOLOGY

SCALE 1:50,000

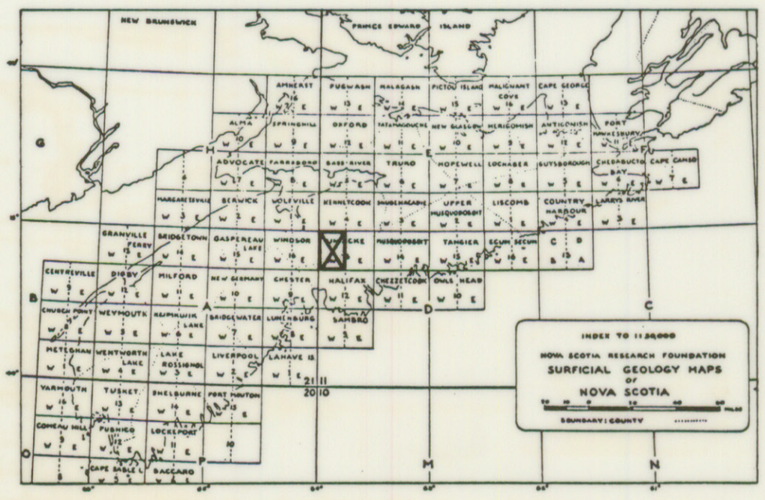
1.25 inches to 1 mile approximately

1 0 1 2 3 Miles

1000 500 0 1000 2000 3000 4000 Metres

NOVA SCOTIA RESEARCH FOUNDATION CORPORATION

Geology by R.H. Mac Neill, 1956



LEGEND

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

DESCRIPTIVE NOTES

BEDROCK

The Uniacke Map Sheet covers an area underlain by Cambro-Ordovician Meguma Quartzites and slates, Devonian granite, and sedimentary rocks of the Windsor group. Weathering and erosion have reduced the original topographic expression to that of the present peneplane.

DRAINAGE

The area is drained by a considerable number of small streams, but there are innumerable swampy or boggy areas and many lakes and stillwaters. Much of the map area is unsuitable for agriculture because of the wetness or the very thin soil cover, and the prevalence of outcrop areas.

GLACIATION

There is conclusive evidence that the area has been subjected to glacial action at least twice. The earliest ice moved, as part of the Continental ice mass, from the northwest-to-almost-northerly direction. This ice advance apparently stripped most, if not all, of the previously deposited glacial debris from the area, along with the weathered bedrock, and deposited this material in the form of drumlins and, additionally, as thin till. Not all areas received equivalent cover. Where the rock was resistant, there was little debris removed, hence there was less material to be deposited.

The latest ice movement was from the northeasterly direction and was that of the local ice cap which existed in the last stages of deglaciation in the Atlantic Provinces. It was quite active up to approximately 12000 years ago.

DRUMLINS AND TILL

Drift in the form of drumlins is more plentiful in the western part, and this is to be attributed to the relatively abundant drift derived from the Windsor Group sediments and the Halifax slates of the Meguma Group. Granite areas contributed little to the drift. The drumlins are well wooded or are farmed as are the areas which are covered by thick till sheets.

Till generally thinly covers the glaciated bedrock and very frequently reflects the bedrock topographic expression.

BRIDGEWATER TILLITE

Along highway 101, northeast of Fivemile Lake the glaciated Halifax slates are occasionally mantled with Bridgewater tillites, now considered to be the remnants of an earlier till sheet. It has not been possible to give this a definite age, but it may be Illinoian or earlier. This tillite is similar to that found in other places along the Atlantic flank of the province, particularly in Halifax and Lunenburg counties, but also in places along the Eastern Shore.

GLACIOFLUVIALS

Glaciofluvial sediments are found in the Newport Corner area where considerable outwashed sands and gravels may be found in company with several kames. The meltwater discharged westwardly by the way of the St. Croix River to the Avon estuary.

Small kames may be found north of Wright Lake and one may be seen on the old Annapolis Road approximately 2 mi. south of Tomahawk Lake.

At the north end of Shubenacadie Lake (Grand Lake) an esker and associated outwash deposits occur. Otherwise there is a dearth of glaciofluvial debris.

STRIAE

Striae may be grouped into two sets: those which trend toward the southeastward and are attributed to the last major ice movement of the Wisconsin, and those which trend toward the southwestward and are considered to be the result of late glacial action from local and residual ice centres in the province.