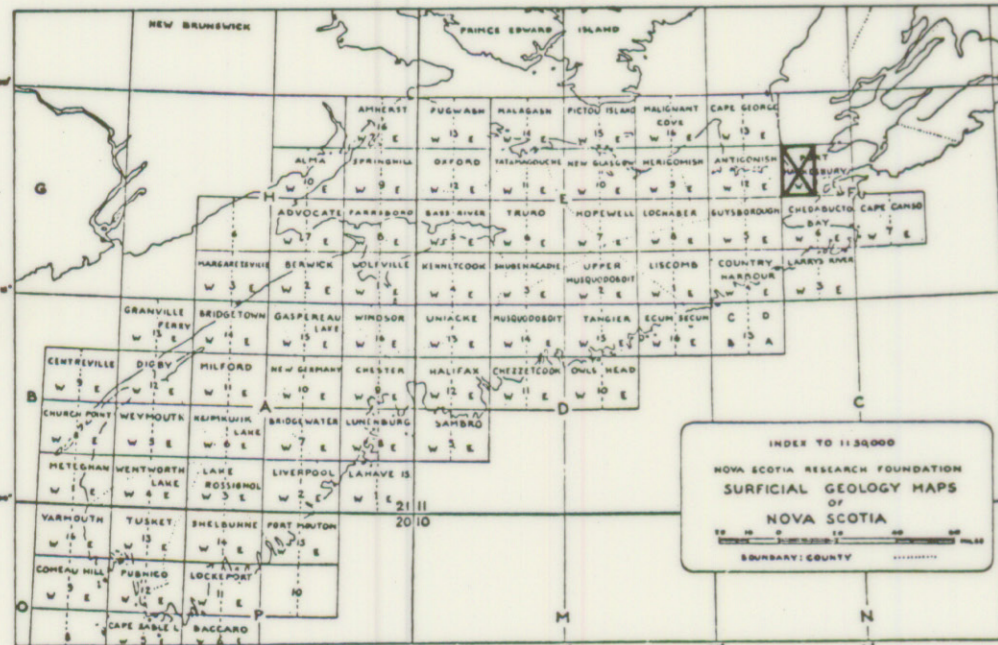
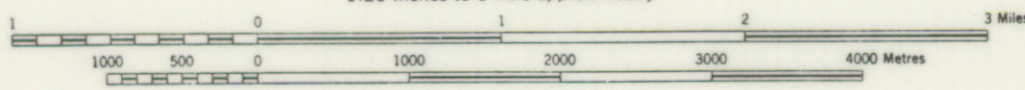


Geology by R.H. MacNeill, 1956



PORT HAWKESBURY IIF/IIW SURFICIAL GEOLOGY

SCALE 1:50,000
1.25 inches to 1 mile approximately



NOVA SCOTIA RESEARCH FOUNDATION
CORPORATION

LEGEND

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

DESCRIPTIVE NOTES

Relief in the Antigonish County section of this map sheet ranges from 300-600 ft. The area across part of the highlands adjacent to the Antigonish basin.

BEDROCK GEOLOGY

The oldest rocks of this area are those of the Horton Group consisting of sandstones, shales and conglomerates which are Mississippian in age. The Horton is overlain by the fossiliferous Canso Group, mainly made up of shales, sandstones, conglomerates, limestone and volcanics.

QUATERNARY GEOLOGY

TILL AND DRUMLINS
Variations in the thickness of the drift is often great over short distances. One hill may have barely enough drift to cover the rock, while the next is covered with thick drift from base to summit. Thicknesses vary from a smear in most areas to 10 ft. in other sections. The natural sections exposed along the cliffs of the sea illustrate the abruptness of the variations in thickness. The thickness of the drift over the area considered, averages no more than ten ft.

The topography of the drift covered area is due partly to the topography of the drift, and partly to the topography of the rock below the drift. Either one of these elements may be the controlling factor.

In the Bellefontaine section, where the drift is thin and uniformly distributed, the surface topography corresponds closely with that of the rock beneath. The rock that outcrops in streams, road cuts and along the coast consists of sandstone, shale and limestone. The till in this area consists of a reddish-brown silty clay matrix containing subangular to subrounded pebbles and cobbles of metasediments, sandstone, conglomerate and volcanics. Southward across Trunk 4 highway in the very

high areas, the till is very rocky and large boulders occur on the surface.

The section from McDonald's Brook to Auld Cove appears to have a thicker cover of till than the Bellefontaine area. The bedrock is sandstone in road cuts and sandstone and conglomerate along the coast. The till is reddish-brown, and in several places quite gravelly. Sandstone is the predominant rock type. The higher area south-west of Trunk 4 highway is similar to those south of Bellefontaine and is characterized by a rocky till.

GLACIOFLUVIALS
The principal drainage for this map

area was the Havre Boucher Brook. Meltwater flowed down this brook from the higher elevations inland of Bellefontaine and Auld Cove. Meltwater also flowed northwest off the edge of the ice-sheet and over the cliffs along the coast from Bellefontaine to Auld Cove. The material consists of fine sands and gravels which become coarser toward the highlands. Stratification is good in these kames, some of which attain a height of forty ft. Rocks are subrounded pebbles and cobbles of metasediments, sandstones, conglomerates and volcanics. Many of the kames have been truncated by the sea, their original extent having been somewhat greater than at present.