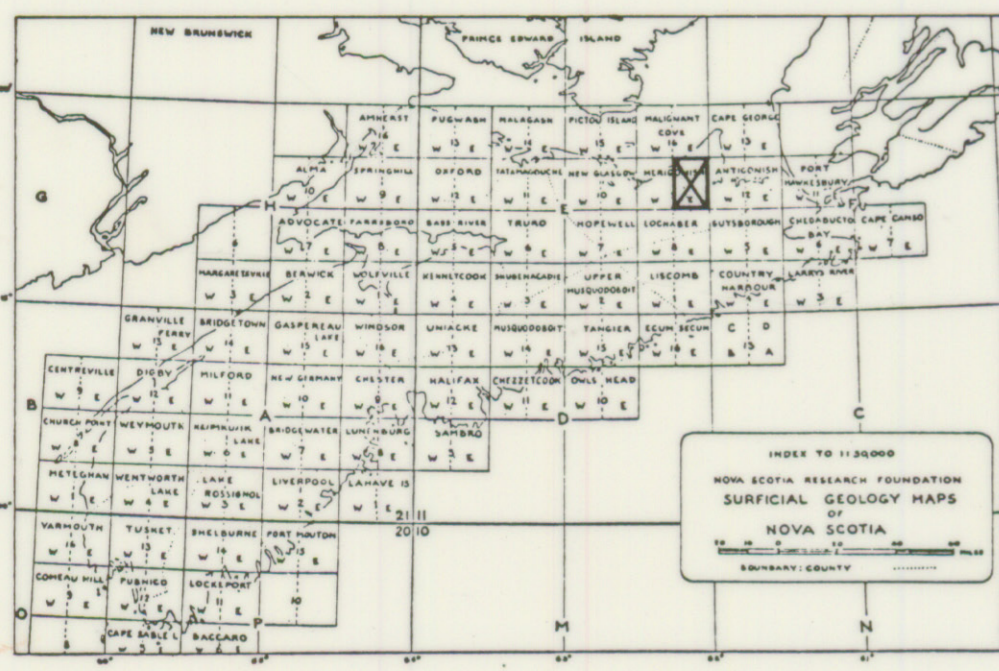




Geology by R.H. Mac Neill, 1956



# MERIGOMISH 11E/9E

## SURFICIAL GEOLOGY

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

NOVA SCOTIA RESEARCH FOUNDATION  
CORPORATION

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

**DESCRIPTIVE NOTES**

**BEDROCK GEOLOGY**  
The area covered by Merigomish Map Sheet is underlain by the igneous, sedimentary, and metamorphic rocks found in the Lower Ordovician to Upper Mississippian period rock assemblages of this part of Nova Scotia.

**QUATERNARY GEOLOGY**  
**Till and Drumlins**  
The till is generally a silty, sandy, clayey type usually fairly well supplied with rock fragments, up to small boulder size, almost entirely derived from the rocks found to the northward and/or those of the immediate area. The depth of the till varies from almost zero to a maximum, except occasionally, of 6 feet with 1½-3 feet being an approximate

average depth. Most of the high land areas has only a very thin till cover, and the bedrock frequently outcrops. Till has been deposited on the north flank of the Brierley Brook valley by a tongue of ice moving along the valley in probably a southwesterly direction, otherwise the till appears to have been deposited by an ice sheet moving generally north to south.

A few small drumlins may be found south and southwest of Gaspereaux Lake with the occasional few to the south of Ashdale. A small cluster of drumlins also may be found beginning about 2 miles northwest of Furlbrook and extending into the town of Antigonish. There are only a few others to be found in other parts of the map sheet.

**Glaciofluvials**  
Kames and deltaic deposits occur

in a number of areas. Between Marrayale Point and Arisling the deltaic deposits appear to have been deposited by meltwater flowing northward off the southern uplands. In the Pleasant Valley-Clydesdale Valley area there are relatively large kames with equally large deposits of deltaic sands and gravels. These kames were deposited at the ice edges, and the deltas resulted from the eastward flowing waters spreading out on the valley floor of what is now the Rights River and depositing the sands and gravels there. Kames occur north of a large delta northeast of Sylvan Valley. The meltwater which carried in these deltaic sediments flowed southward toward what is now the Brierley Brook valley, and drained eastward via the stream now named the Rights River to the sea via Antigonish Harbour.

At Marrayale a series of kames and small deltas occur, and a kame delta may be found at Big Marsh. About 2½ miles south of Marrayale a delta was formed by meltwater

depositing its load as it flowed eastward toward the Rights River Valley.

The Barneys Brook-Marshy Hope valley has a number of kames, and at James River there is an extensive kame and kettle area with attendant deltas having an esker in the northern part. The valley area south of James River has an extensive delta outwash deposit which extends southward into the Addington Focks region. The meltwater which gave rise to these glaciofluvials flowed northward up to the Ohio River and emptied into the valley at James River, but some of it was diverted eastward down the West River where it deposited a large delta in the valley near Salt Springs.

Both sides of the Ohio Valley, from about 1½ miles north of St. Joseph southward are festooned with kames and silted deltas, with a such larger delta-kame-esker complex in the St. Joseph area.