

UNIT #	DESCRIPTION OF UNIT AND FACIES	SEDIMENTARY AND TOPOGRAPHIC EXPRESSION	THICKNESS	LITHOLOGICAL ASSOCIATION OF CLASTS	GENETIC CLASSIFICATION	NATURE AND DEPTH OF WEATHERING
1	Unconsolidated deposits	Temperately water, hummocky and low, broad, rounded, high ridges	0 to 20 m maximum	A transposition of local till clasts	Glacial outwash	Deep weathering, due to porous nature of deposits
2	Laminated till (clast-free)	Red-brown, loam, sandy till	3 to 6 m average	Carbonaceous conglomerates, sand, silt, clay (various)	Aluvial till	Deep weathering, due to porous nature of deposits
3	Laminated till	Commonly red, moderately greenish to brown, loam, sandy till, with occasional pebbles of local origin, up to 20% of the matrix. Matrix is composed of local till with the pebbles and clay, up to 10% of the matrix.	6 to 12 m average, up to 20 m maximum	Quartzite, granite, gneiss, schist, mica schist, amphibolite, and other igneous and metamorphic rocks	Basal tillage till (Hawkes, 1962)	Weathering is moderate to coarse, granitic and schistose clasts, and coarse conglomerates, are clearly visible in the matrix. The matrix is composed of local till with the pebbles and clay, up to 10% of the matrix. These clasts of Carboniferous rocks, and schistose clasts, are clearly visible in the matrix. The matrix is composed of local till with the pebbles and clay, up to 10% of the matrix.
4	Red till (Hawkes Type "Hawkes")	A matrix of red till and quartzite pebbles, with occasional pebbles of local origin, up to 20% of the matrix.	4 to 6 m average	80% - 100% quartzite clasts, 10% - 20% granite, 10% - 20% mica schist, 10% - 20% amphibolite, 10% - 20% other igneous and metamorphic rocks	Basal tillage till (Hawkes, 1962)	Weathering is moderate to coarse, granitic and schistose clasts, and coarse conglomerates, are clearly visible in the matrix. The matrix is composed of local till with the pebbles and clay, up to 10% of the matrix.
5	Quartzite till	Blue-grey to grey, loam, sandy till, with occasional pebbles of local origin, up to 20% of the matrix. Matrix is composed of local till with the pebbles and clay, up to 10% of the matrix.	2 to 6 m average, up to 10 m maximum	Quartzite clasts, 100% quartzite clasts, 10% - 20% granite, 10% - 20% mica schist, 10% - 20% amphibolite, 10% - 20% other igneous and metamorphic rocks	Glacial tillage till (Hawkes, 1962)	Weathering is moderate to coarse, granitic and schistose clasts, and coarse conglomerates, are clearly visible in the matrix. The matrix is composed of local till with the pebbles and clay, up to 10% of the matrix.
6	Granite till	Yellow-brown, loam, sandy till, with occasional pebbles of local origin, up to 20% of the matrix. Matrix is composed of local till with the pebbles and clay, up to 10% of the matrix.	2 to 6 m average, up to 10 m maximum	Clasts of granite, gneiss, schist, mica schist, amphibolite, and other igneous and metamorphic rocks	Till	Weathering is moderate to coarse, granitic and schistose clasts, and coarse conglomerates, are clearly visible in the matrix. The matrix is composed of local till with the pebbles and clay, up to 10% of the matrix.
7	Highly weathered Carboniferous (not mineralized)	Brown, iron-stained, sandy till, with occasional pebbles of local origin, up to 20% of the matrix. Matrix is composed of local till with the pebbles and clay, up to 10% of the matrix.	2 to 6 m average, up to 10 m maximum	Clasts of granite, gneiss, schist, mica schist, amphibolite, and other igneous and metamorphic rocks	Flow sheet (Hawkes, 1962)	Weathering is moderate to coarse, granitic and schistose clasts, and coarse conglomerates, are clearly visible in the matrix. The matrix is composed of local till with the pebbles and clay, up to 10% of the matrix.
8	Granite till	Yellow-brown, loam, sandy till, with occasional pebbles of local origin, up to 20% of the matrix. Matrix is composed of local till with the pebbles and clay, up to 10% of the matrix.	2 to 6 m average, up to 10 m maximum	Clasts of granite, gneiss, schist, mica schist, amphibolite, and other igneous and metamorphic rocks	Till	Weathering is moderate to coarse, granitic and schistose clasts, and coarse conglomerates, are clearly visible in the matrix. The matrix is composed of local till with the pebbles and clay, up to 10% of the matrix.
9	Basal till	Dark grey, compact, carbonaceous, clayey till	2 to 6 m average, up to 10 m maximum	Clasts of granite, gneiss, schist, mica schist, amphibolite, and other igneous and metamorphic rocks	Basal tillage till (Hawkes, 1962)	Weathering is moderate to coarse, granitic and schistose clasts, and coarse conglomerates, are clearly visible in the matrix. The matrix is composed of local till with the pebbles and clay, up to 10% of the matrix.
10	Basal till	Dark grey, compact, carbonaceous, clayey till	2 to 6 m average, up to 10 m maximum	Clasts of granite, gneiss, schist, mica schist, amphibolite, and other igneous and metamorphic rocks	Basal tillage till (Hawkes, 1962)	Weathering is moderate to coarse, granitic and schistose clasts, and coarse conglomerates, are clearly visible in the matrix. The matrix is composed of local till with the pebbles and clay, up to 10% of the matrix.
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12	Basal till	Dark grey, compact, carbonaceous, clayey till	2 to 6 m average, up to 10 m maximum	Clasts of granite, gneiss, schist, mica schist, amphibolite, and other igneous and metamorphic rocks	Basal tillage till (Hawkes, 1962)	Weathering is moderate to coarse, granitic and schistose clasts, and coarse conglomerates, are clearly visible in the matrix. The matrix is composed of local till with the pebbles and clay, up to 10% of the matrix.

LEGEND

TRASSIC

12 Basal, sandstone, shale

LATE CARBONIFEROUS OR YOUNGER

11 Unlithified, diabase, gabbro, rhyolite and clastic sedimentary rocks

LATE CARBONIFEROUS

CANADIAN GROUP

10 Marginal basin sedimentary rocks

EARLY CARBONIFEROUS

WINDSOR GROUP

9 Marine and marginal basin sedimentary rocks

HORTON GROUP

8 Continental and marginal basin sedimentary rocks

PRE-CARBONIFEROUS

7 Unlithified sedimentary and volcanic rocks

MIDDLE TO LATE DEVONIAN

6 Mixed sedimentary and volcanic rocks

DEVONIAN

5 Granite, Sa, mainly granite (age uncertain)

EARLY DEVONIAN

4 FORTROCK FORMATION: marine clastic rocks, minor volcanics
KNOXDART FORMATION: non-marine clastic rocks

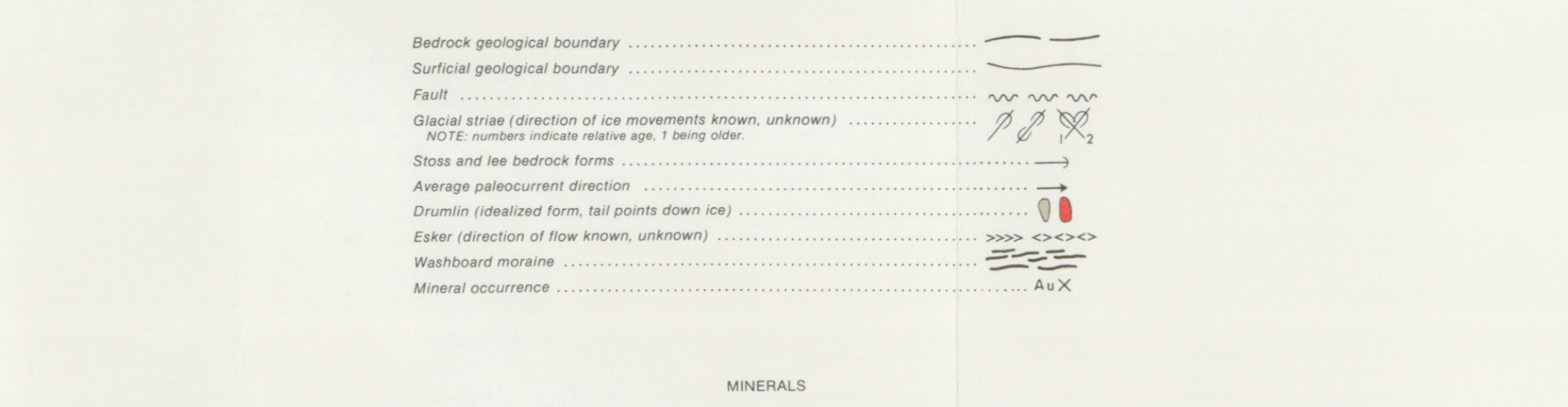
ORDOVICIAN TO LATE SILURIAN

3 BERTIE, KENTVILLE, NEW CANAAN FORMATIONS AND ARISAIG GROUP: marine and non-marine clastic rocks, minor volcanics

EARLY ORDOVICIAN (?)

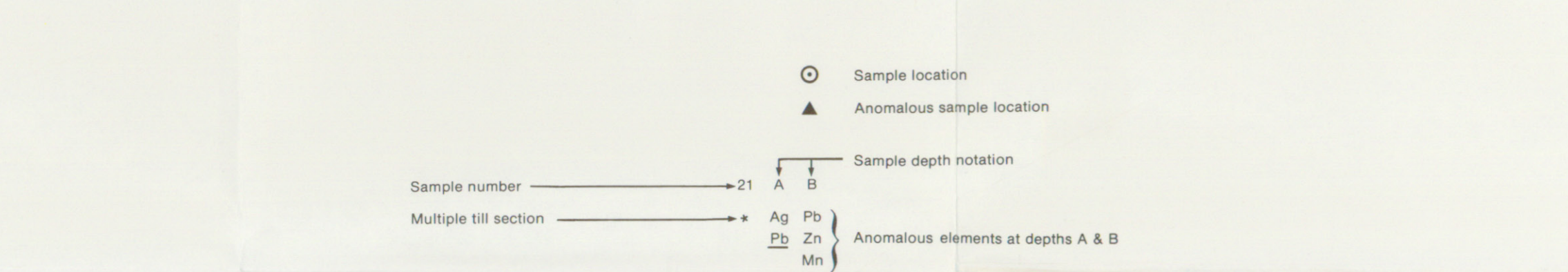
2 HALIFAX FORMATION: slate, schist, minor quartzite

1 GOLDENVILLE FORMATION: quartzite, gneiss, greywacke, minor slate



MINERALS

Andalusite	And	Gold	Au
Arsenic	As	Iron	Fe
Barite	Ba	Lead	Pb
Beryllium	Be	Manganese	Mn
Spontium	Sr	Silver	Ag
Copper	Cu	Tungsten	W
Zinc	Zn		



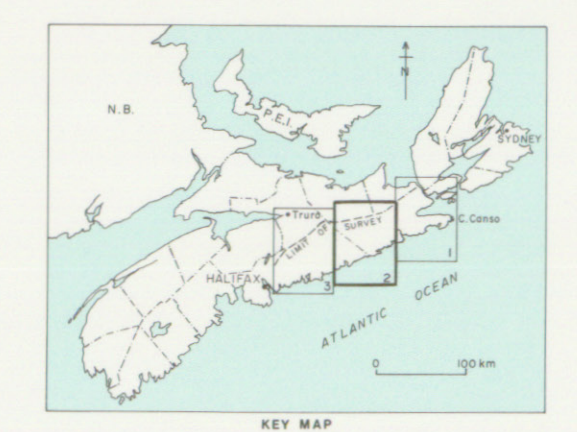
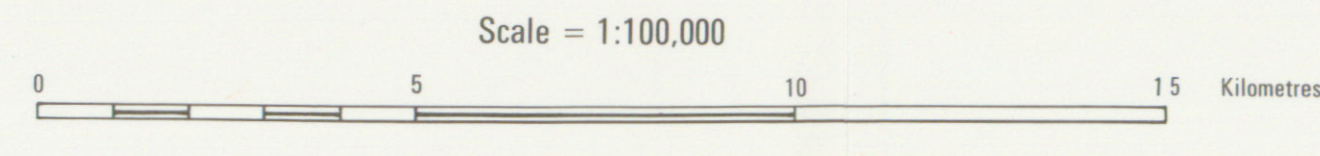
NOTE

1. This systemically sampled at various depths indicated by letter notation A, B, or C. Samples are from one till horizon or from two or three till horizons (multiple till sections). Multiple till sections are designated with an asterisk below sample number. Map-unit block above sample depth notation for multiple till sections indicates composition of till type at that depth. Anomalous elements are labeled under corresponding sample depth notation.

2. Anomalous values of elements calculated for each till type using the formula $M \pm 2 \sigma$ (mean plus two standard deviations; Hawkes and Webb, 1962) except where the mean value for the till type is unusually high or infeasible (< 10 samples). These "anomalous" elements are underlined.

Pleistocene geology by R. R. Shea and J. R. Dickie, 1977. Bedrock geology adapted from "Geological Map of the Province of Nova Scotia," Department of Mines, Nova Scotia, 1965.

SHEET 2
PLEISTOCENE GEOLOGY
EASTERN SHORE REGION
NOVA SCOTIA
1979



To accompany Nova Scotia Department of Mines
Paper 79 - 4 by R. R. Shea and J. H. Fowler

A Joint Program of the Nova Scotia Department of Mines and
The Canada Department of Regional Economic Expansion