



LEGEND

This legend is common to Open Files 1598 to 1612, and 1628 to 1631. Coloured legend blocks indicate map units that appear on this map. Not all map symbols shown in the legend necessarily appear on this map.

SURFICIAL DEPOSITS

QUATERNARY

HOLOCENE

FLUVIAL SEDIMENTS: alluvium; gravel and sand, 2–20 m thick.

- Ap Alluvial plains: active braided floodplains; includes active proglacial outwash.
- At Alluvial terraces
- Af Alluvial fans

MARINE AND GLACIAL MARINE SEDIMENTS: gravel, silt, sand, and clay, 1–20 m thick, deposited in deltaic and beach environments during regression of the postglacial sea.

- Mr Beach sediments: gravel and sand, 1–5 m thick, forming ridges and swales.
- Mi Deltaic sediments: clay, silt, sand, and gravel, 5–20 m thick, forming coarsening upward sequences under dissected terraces.
- Mv Deepwater proglacial silt veneers: silt, clay silt, and fine sand with dropstones, 1–2 m thick.
- Mb Deepwater proglacial silt blankets: silt, clay silt, and fine sand with dropstones and minor gravel, 2–10 m thick.

GLACIAL LACUSTRINE SEDIMENTS: clay, silt, sand, and gravel deposited in glacial dammed lakes in deepwater, beach and deltaic environments.

- Lr Beach sediments: sand and gravel, 1–5 m thick, forming beach ridges.
- Lt Deltaic sediments: clay, silt, sand, and gravel, 5–20 m thick, forming coarsening upward sequences under dissected terraces.
- Lv Deepwater proglacial silt veneers: silt, clay silt, and fine sand with dropstones, 1–2 m thick.
- Lb Deepwater proglacial silt blankets: silt, clay silt, and fine sand with dropstones, 2–5 m thick.

GLACIOFLUVIAL SEDIMENTS: gravel and sand, 1–10 m thick, deposited behind, at, and in front of the ice margin.

- Gp,t,l Proglacial outwash: gravel and sand, 1–10 m thick, forming braided floodplains, Gp; terraces, Gt; and fans, Gf.
- Gr,h Ice contact stratified drift: gravel and sand, 1–5 m thick, forming eskers, G; and kames, Gh.

EARLY HOLOCENE AND WISCONSINAN

- Tm End moraine: 5–50 m high, composed of or mantled by till, extensively kettled in places; large features mainly covered by debris-rich relict glacial ice.
- Tv Till veneer: 0.5–2 m thick and discontinuous.
- Tvw Till veneer: 0.5–2 m thick, surface armored by stones due to washing by subglacial meltwater.
- Tb Till blanket: 2–10 m thick forming an undulating blanket with drumlins and ribbed moraines in places.
- Tbr Till blanket: 2–10 m thick forming ribbed (Rogen) moraines.

BEDROCK PRE-QUATERNARY

- R ROCK: rock of various compositions and ages (Jackson and Sangster, 1987) variably modified by glacial erosion during the Quaternary and with pebbly till cover; hilly and hummocky surfaces, ice moulded in places, with lake basins in subglacially scoured regions; smooth surfaces exhibiting little or no sign of glacial erosion in particular instances (Dyke, 1983); cliffs resulting from glacial over-steepening in places veneered by thin till, commonly bouldery.

Geological boundary (defined, assumed) ————

Areas covered by periglacial icefields during the Little Ice Age (indicated by a white pattern) ————

Kettle (large) ————

Glacial lake spillway ————

Glacial lake limit ————

Marine limit ————

Escarpment ————

Lateral meltwater channel; barb on upslope side ————

Subglacial and proglacial meltwater channel (small) ————

Esker ————

Kame ————

Ice contact face ————

Ribbed moraine ————

Lateral moraine ————

End moraine ————

Margin of dispersal train; teeth toward axis, steep side of teeth face down ice ————

Drumlinoid hill ————

Crag-and-tail ————

Ice moulded bedrock ————

Striae (ice flow direction known, unknown) ————

Crossed striae (numbers indicate relative age, 1 being the oldest) ————

Field observation site: boundary clarification (bc), boundary gravel (bg), clay (cl), clastiferous (ca), gravel (g), gravelly sand (gs), mud (m), muddy sand (ms), rock (r), sand (s), sandy gravel (sg), stony mud (sm), till (t)

Field observation site: material as above near rock outcrop ————

Marine limit elevation (metres) ————



Geology by A.S. Dyke, 2002
 Field data provided by De Beers Canada Inc., 2002
 Digital cartography by M.M. Proulx, Earth Sciences Sector Information Division (ESS Info)
 This map was produced from processes that conform to the ESS Info Publishing Services Subdivision Quality Management System, registered to the ISO 9001:2000 standard

OPEN FILE 1609
SURFICIAL GEOLOGY
ASTA LAKE
 BAFFIN ISLAND
 NUNAVUT

Scale 1:50 000/Échelle 1/50 000

Universal Transverse Mercator Projection
 North American Datum 1983
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Any revisions or additional geological information known to the user would be welcomed by the Geological Survey of Canada.

Digital base map from data compiled by Geomatics Canada, modified by ESS Info

Locational accuracy of the base appears to be ±100m based on plotting of GPS measured field site locations

Proximity to the North Magnetic Pole causes the magnetic compass to be erratic in this area. Mean magnetic declination 2003, 38°56'W, decreasing 45.5' annually

Elevations in metres above mean sea level

47 E/13 OF 1601	47 E/14 OF 1600	47 E/15 OF 1599	47 E/16 OF 1598
47 E/17 OF 1602	47 E/18 OF 1603	47 E/19 OF 1604	47 E/20 OF 1605
47 E/21 OF 1606	47 E/22 OF 1607	47 E/23 OF 1608	47 E/24 OF 1609
47 E/25 OF 1610	47 E/26 OF 1611	47 E/27 OF 1612	47 E/28 OF 1613
47 E/29 OF 1614	47 E/30 OF 1615	47 E/31 OF 1616	47 E/32 OF 1617
47 E/33 OF 1618	47 E/34 OF 1619	47 E/35 OF 1620	47 E/36 OF 1621

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