



LEGEND

This legend is common to Open Files 1598 to 1613, 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, sand, silt, 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.i.f** Proglacial outwash: gravel and sand, 1–10 m thick, forming braided floodplains, Gp: terraces, Gt: fans, Gf.
- Gp.h** Ice contact stratified drift: gravel and sand, 1–5 m thick, forming eskers, Gc: and kames, Gh.

EARLY HOLOCENE AND WISCONSINAN

TILL: nonsorted stony muds, 0.5–60 m thick, deposited in subglacial and ice marginal environments; lithic composition generally reflects underlying bedrock.

- Tm** End moraines: 5–30 m high, composed of or mantled by till, extensively kettled in places; large features mainly sored by debris-rich retic glacier ice.
- Tv** Till veneer: 0.5–2 m thick and discontinuous.
- Tv.w** Till veneer: 0.5–2 m thick, surface armoured 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 patchy 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 peninsular interiors (Dyke, 1993); cliffs resulting from glacial over-steepening, in places veneered by thin till, commonly bouldery.

Geological boundary (defined, assumed)
 Areas covered by perennial icefields during the Little Ice Age (indicated by a white pattern)
 Kettle (large)
 Glacial lake spillway
 Glacial 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 (bdl), boundary gravel (bg), clay (cl), claystone (cl), gravel (g), gravely 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. Prouk, 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
 Projection transversale universelle de Mercator / Système de référence géodésique nord-américain, 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 43.9' 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 D/13 OF 1628	47 D/14 OF 1629	47 D/15 OF 1630	47 D/16 OF 1631

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