

LEGEND

This legend is common to Open Files 4683 to 4701. 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

COLLUVIUM: block and rubble accumulations, 1–50 m thick.

- Ca** Talus: active block and rubble accumulations as much as 50 m thick forming talus (berms) aprons and fans below cliffs resulting from rock falls and debris flow; commonly crossed by debris flow channels and levees.
- Cr** Rock glacier debris: talus, generally 10–50 m thick, deformed by active flow of interstitial or buried ice to form rock (talus) glaciers with transverse ridges and furrows, and pits, and with steep, unstable sides and fronts.

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

- Ap** Alluvial plains: active braided floodplains; includes active proglacial outwash.
- At** Alluvial terraces: gravel and sand, 2–20 m thick.
- Af** Alluvial fans: gravel and sand, 2–20 m thick.

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

- Mr** Beach sediments: gravel and sand, 1–5 m thick, forming ridges and swales.
- Mt** 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 LAQUSTRINE SEDIMENTS: clay, silt, sand, and gravel deposited in glacial dammed lakes in deepwater, beach, and deltaic environments.

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

EARLY HOLOCENE AND WISCONSINAN

Tm End moraines: 5–60 m high, composed of or mantled by till, extensively settled in places; large features mainly covered by debris-rich melt glacier ice.

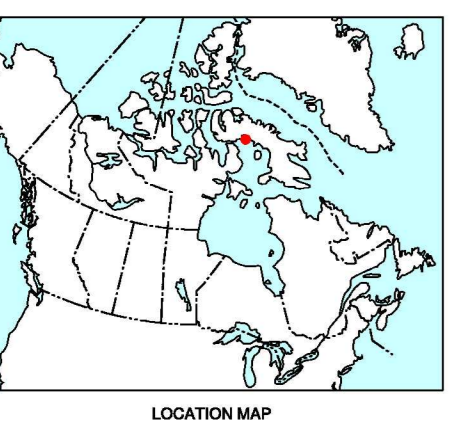
- Tv** Till veneer: 0.5–2 m thick and discontinuous.
- Tvw** Washed till veneer: 0.5–2 m thick; surface armored by stones due to washing by subglacial meltwater.
- Tb** Till blanket: 2–10 m thick forming an undulating blanket with drumlins and ribbed moraines in places.
- Tr** Ribbed till blanket: 2–10 m thick forming ribbed (Rogen) moraines.

BEDROCK

PRE-QUATERNARY

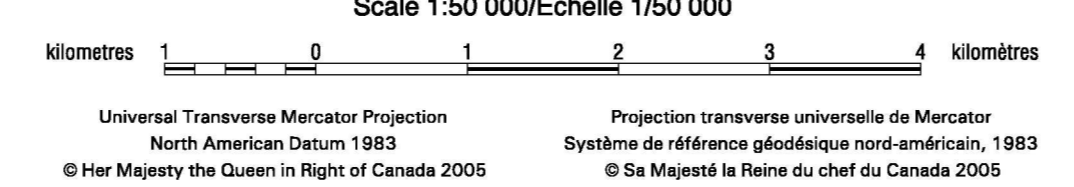
R ROCK: rock of various compositions and ages (Jackson and Sangster, 1987) variously modified by glacial erosion during the Quaternary and with patchy till cover; hilly and hummocky surfaces, ice moulded in places, with lake basins in subglacially scoured regions; smooth surfaces exhibiting little or 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 periglacial icefields during the Little Ice Age (indicated by a white pattern)
 Glacial lake spillway
 Glacial lake limit
 Marine limit
 Marine limit elevation in metres 80
 Weakly developed strandline
 Cliff in bedrock
 Lateral meltwater channel; barb on upslope side
 Subglacial and proglacial meltwater channel (large, small)
 Esker
 Kame
 Ice contact face
 Ribbed moraine
 Lateral moraine
 End moraine
 Margin of glacial dispersal limit; teeth toward axis, steep side of teeth face down ice
 Lateral sliding boundary; teeth on sliding side, cold-based ice on other side; steep side of teeth face down ice
 Iceberg scour
 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: bouldery diamiction (bd), bouldery gravel (bg), diamiction (d), gravel (g), gravelly sand (gs), mud (m), muddy sand (ms), rock (r), sand (s), sandy gravel (sg), stony mud (sm), till (t) + 1
 Field observation site: material as above near rock outcrop + 10
 Radiocarbon date (Date Material) (Lab no. Elevation (m))



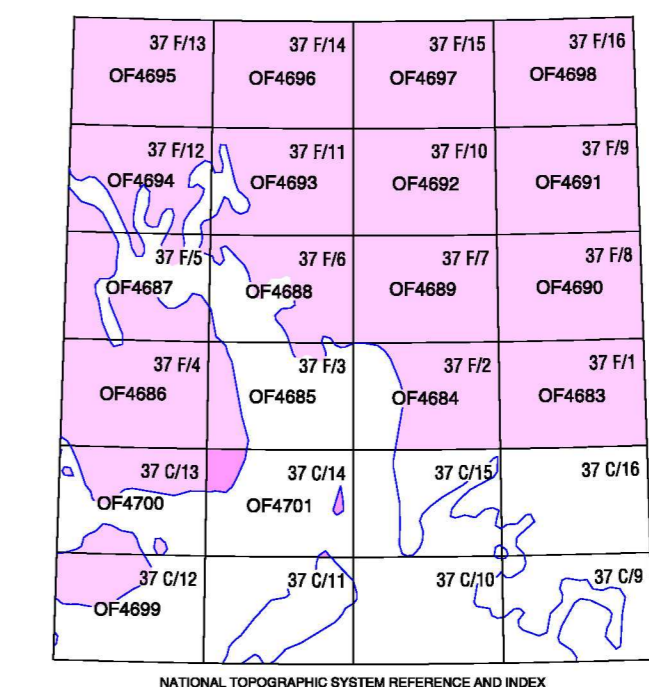
Author: A.S. Dyke
 Geology by A.S. Dyke, 2004
 Field data provided by De Beers Canada Corporation, 2003
 Digital cartography by M.M. Proulx, Earth Sciences Sector Information Division (ESS Info)
 This map was produced from processes that conform to the ESS Info Publishing Services Subdivision Quality Management System, registered to the ISO 9001:2000 standard
 Any revisions or additional geological information known to the user would be welcomed by the Geological Survey of Canada

OPEN FILE 4701
 SURFICIAL GEOLOGY
CAPE THABITZIER EAST
 BAFFIN ISLAND
 NUNAVUT



Scale 1:50 000/Échelle 1/50 000
 Universal Transverse Mercator Projection
 North American Datum 1983
 © Her Majesty the Queen in Right of Canada 2005
 Projection transversale universelle de Mercator
 Système de référence géodésique nord-américain, 1983
 © Sa Majesté la Reine en chef du Canada 2005

Digital base map from data compiled by Geomatics Canada, modified by ESS Info
 Locational accuracy of the base appears to be ±100 m 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 2005, 41°01'W, decreasing 36.7' annually
 Elevations in metres above mean sea level
 Contour Interval 20 m
 Field altimetry and the placement and trend of raised shorelines may conflict significantly with the contours



REFERENCES

Dyke, A.S.
 1992. Landscapes of cold-centred Late Wisconsinan ice caps, Canadian Arctic. Progress in Physical Geography, v. 17, p. 223–247.
 Jackson, G.D., and Sangster, D.F.
 1987. Geology and resource potential of a proposed national park, Bylot Island and northwest Baffin Island, Northwest Territories. Geological Survey of Canada, Paper 87-17, 31 p.

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