



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)  
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Any revisions or additional geological information known to the user  
would be welcomed by the Geological Survey of Canada

OPEN FILE 4690  
SURFICIAL GEOLOGY  
**UPPER ISORTOQ LAKE 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 du chef du Canada 2005  
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

Digital base map from data compiled by Geomatics Canada, modified by ESS Info  
Locational accuracy of the base appears to be  $\pm 100$  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,  $43^{\circ}14'$  W, decreasing  $45.4'$  annually  
Field observation site: material as above near rock outcrop

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37 F17 OF4689	37 F18 OF4690	37 F19 OF4691	37 F20 OF4692
37 F21 OF4693	37 F22 OF4694	37 F23 OF4695	37 F24 OF4696
37 F25 OF4697	37 F26 OF4698	37 F27 OF4699	37 F28 OF4700
37 F29 OF4701	37 F30 OF4702	37 F31 OF4703	37 F32 OF4704
37 F33 OF4705	37 F34 OF4706	37 F35 OF4707	37 F36 OF4708
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- 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.
- Talus:** active block and rubble accumulations as much as 50 m thick forming talus (crni) scours and fans below cliffs resulting from rock falls and debris flows; commonly crossed by debris flow channels and levees.
- 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.
- Alluvial plains:** active braided floodplains; includes active proglacial outwash.
- Alluvial terraces:** gravel and sand, 2–20 m thick.
- 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.
- Beach sediments:** gravel and sand, 1–5 m thick, forming ridges and swales.
- Deltaic sediments:** clay, silt, sand, and gravel, 5–20 m thick, forming coarsening upward sequences under dissected terraces.
- Deepwater proglacial silt veneers:** silt, clay silt, and fine sand with dropstones, 1–2 m thick.
- 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 glacier dammed lakes in deepwater, beach, and deltaic environments.
- Deltaic sediments:** clay, silt, sand, and gravel, 5–20 m thick, forming coarsening upward sequences under dissected terraces.
- Deepwater proglacial silt veneers:** silt, clay silt, and fine sand with dropstones, 1–2 m thick.
- 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.
- Proglacial outwash:** gravel and sand, 1–10 m thick, forming braided floodplains, Gp; terraces, Qt, and fans, Qt.
- Ice contact stratified drift:** gravel and sand, 1–5 m thick, forming eskers, Gc; and kames, Gh.
- EARLY HOLOCENE AND WISCONSINAN**
- TILL:** non-sorted stony muds, 0.5–60 m thick, deposited in subglacial and ice marginal environments; lithic composition generally reflects underlying bedrock.
- End moraines:** 5–60 m high, composed of or mantled by till, extensively kettled in places; large features mainly coring by debris-rich melt glacier ice.
- Till veneer:** 0.5–2 m thick and discontinuous.
- Washed till veneer:** 0.5–2 m thick, surface armoured by stones due to washing by subglacial meltwater.
- Till blanket:** 2–10 m thick forming an undulating blanket with drumlins and ribbed moraines in places.
- Ribbed till blanket:** 2–10 m thick forming ribbed (Rogen) moraines.
- BEDROCK**
- PRE-QUATERNARY**
- ROCK:** rock of various compositions and ages (Jackson and Sangster, 1967) variously modified by glacial erosion during the Quaternary and with patchy till cover; till 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 .....  
Weakly developed strandline .....  
Cliff in bedrock .....  
Lateral meltwater channel; barb on upglacier side .....  
Subglacial and proglacial meltwater channel (large, small) .....  
Esker .....  
Kame .....  
Ice contact face .....  
Ribbed moraines .....  
Lateral moraine .....  
End moraine .....  
Margin of glacial dispersal train; teeth toward axis, steep side of teeth face down ice .....  
Lateral sliding boundary; teeth on sliding side, cold-based ice on other side; steep sides 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: boundary disjunct (rd), bouldery gravel (Bg), diamict (rd), gravel (G), gravelly sand (gs), mud (m), muddy sand (ms), rock (r), sand (s), sand/gravel (sg), stony mud (sm), silt (f) .....  
Field observation site: material as above near rock outcrop .....  
Radiocarbon date .....  
Date .....  
Material .....  
Lab no .....  
Elevation (m) .....

**REFERENCES**

Dyke, A.S., 1993. Landscapes of cold-climate Late Wisconsinan ice caps, Canadian Arctic; Progress in Physical Geography, v. 17, p. 223–247.  
Jackson, G.B. and Sangster, D.F., 1967. 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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