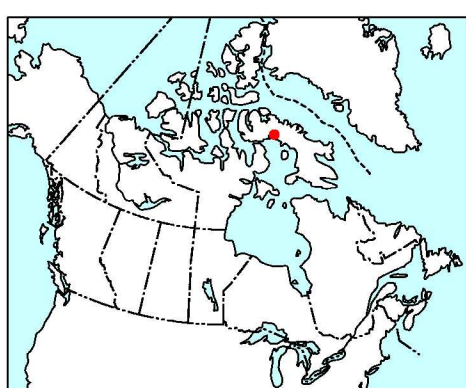


- LEGEND**
- This legend is common to Open File 4683 to 4701.  
Coloured legend blocks indicate map units that appear on this map.  
Not all map symbols shown in the legend necessarily appear on this map.
- SURFICIAL DEPOSITS**
- QUATERNARY**
- HOLOCENE**
- COLLUVIUM:** block and rubble accumulations, 1–50 m thick.
- Ca** Talus: active block and rubble accumulations as much as 50 m thick forming talus (cone) aprons and fans below cliffs resulting from rock falls and debris flows; commonly crossed by debris flow channels and levees.
- Cr** Rock glacial 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 postglacial 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 LACUSTRINE SEDIMENTS:** clay, silt, sand, and gravel deposited in glacier 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,l,f** Proglacial outwash: gravel and sand, 1–10 m thick, forming braided floodplains, Gp: terraces, Gf: fans, and Gp,l: ice contact stratified drift.
- Gr,h** Ice contact stratified drift: gravel and sand, 1–5 m thick, forming eskers, Gc: and kames, Gh.
- EARLY HOLOCENE AND WISCONSINAN**
- Tm** Till: non-sorted stony muds, 0.5–60 m thick, deposited in subglacial and ice marginal environments; lithic composition generally reflects underlying bedrock.
- Tv** End moraine: 5–80 m high, composed of or mantled by till, extensively kettled in places; large features mainly caused by debris-rich melt glacier ice.
- Tv** Till veneer: 0.5–2 m thick and discontinuous.
- Tw** Washed 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** Ribbed till blanket: 2–10 m thick forming ribbed (frogen) 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; lithic 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, 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) .....  
Glacial lake spillway .....  
Glacial lake limit .....  
Marine limit .....  
Marine limit elevation in metres ..... 60  
Weakly developed strandline .....  
Cliff in bedrock .....  
Lateral meltwater channel, bath 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 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 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 diamict (bd); bouldery gravel (bg); diamict (di); gravel (g); gravelly sand (gs); mud (m); muddy sand (ms); rock (r); sand (s); sand gravel (sg); stony mud (sm); till (t)  
Field observation site: material as above near rock outcrop .....  
Radiocarbon date .....  
Date .....  
Material .....  
Lab no .....  
Elevation (m) .....  
10



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 4689  
SURFICIAL GEOLOGY  
**SEPARATION LAKE**  
BAFFIN ISLAND  
NUNAVUT

Scale 1:50 000/Echelle 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

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, 45°18'W, decreasing 1° 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

37 113 OF4685	37 114 OF4686	37 115 OF4687	37 116 OF4688
37 117 OF4689	37 118 OF4690	37 119 OF4691	37 120 OF4692
37 121 OF4693	37 122 OF4694	37 123 OF4695	37 124 OF4696
37 125 OF4697	37 126 OF4698	37 127 OF4699	37 128 OF4700
37 129 OF4701	37 130 OF4702	37 131 OF4703	37 132 OF4704

NATIONAL TOPOGRAPHIC SYSTEM REFERENCE AND INDEX TO ADJOINING GEOLOGICAL SURVEY OF CANADA MAPS

REFERENCES

- Dyke, A.S., 1983. Landscapes of cold-centred Late Wisconsinan ice caps, Canadian Arctic: Progress in Physical Geography, 17, p. 223–247.  
Jackson, G.D. and Sangster, D.J., 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.

**OPEN FILE  
DOSSIER PUBLIC  
4689**  
GEOLOGICAL SURVEY OF CANADA  
COMMISSION GÉOLOGIQUE DU CANADA  
2005

Recommended citation:  
Dyke, A.S., 2005. Surficial geology, Separation Lake, Baffin Island, Nunavut. Geological Survey of Canada, Open File 4689, scale 1:50 000.