



**LEGEND**

This legend is common to Open Files 1598 to 1613, and 1628 to 1631. Coloured legend boxes 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.
- 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.

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

**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: 5–60 m high, composed of or mantled by till, extensively kettled in places; large features mainly covered by debris-rich relic glacier ice.
- Tv Till veneer: 0.5–2 m thick and discontinuous.
- Tvw 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**

**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 constrictor meanders (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 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: bouldery diamiction (bd), bouldery gravel (bg), clay (c), diamiction (d), 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 1598  
SURFICIAL GEOLOGY  
**QUARTZ LAKE**  
BAFFIN ISLAND  
NUNAVUT

Scale 1:50 000/Échelle 1/50 000

Universal Transverse Mercator Projection  
North American Datum 1983  
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Projection transversale méridienne 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, 44°09'W, decreasing 46' annually

Elevations in metres above mean sea level

47 E15 OF 1601	47 E14 OF 1600	47 E15 OF 1599	47 E16 OF 1598
47 E12 OF 1602	47 E11 OF 1603	47 E10 OF 1604	47 E9 OF 1605
47 E8 OF 1609	47 E6 OF 1608	47 E7 OF 1607	47 E6R OF 1606
47 E4 OF 1610	47 E3 OF 1611	47 E2 OF 1612	47 E1 OF 1613
47 D13 OF 1628	47 D14 OF 1629	47 D15 OF 1630	47 D16 OF 1631



Recommended citation:  
Dyke, A.S.  
2003: Surficial geology, Quartz Lake, Baffin Island, Nunavut; Geological Survey of Canada, Open File 1598, scale 1:50 000.