



LEGEND

SURFICIAL MATERIALS

QUATERNARY

NONGLACIAL ENVIRONMENT

- E** **ECOLIUM DEPOSITS:** well sorted, coarse to fine sand, deposited by wind, commonly > 2 m thick, forming extensive surface cover, interbedded with organic material and thin sheets of siltstone; surfaces well vegetated and characterized by polygonal patterned ground.
- C** **COLLUVIAL DEPOSITS:** coarse sand, gravel, and boulders derived from bedrock and surficial materials and deposited by mass wasting processes as lake aprons, fans and talus cones at the base of slopes.
- Ab** **ALLUVIAL DEPOSITS:** sediments transported or modified by periodic, modern fluvial and glacial action; sparsely vegetated.
- Al** **ALLUVIAL DEPOSITS:** coarse sand, gravel, and boulders forming fan-shaped deposits at the base of slopes; thickness in tens of metres.
- Mn** **MARINE DEPOSITS:** sediments related to marine inundation during two or more periods of higher relative sea level that are probably related to glacial isostatic depression; sparsely vegetated.
- Md** **MARINE DEPOSITS:** coarse sand, gravel, and boulders; 1 to 5 m thick, commonly forming ridges of beaches, bars, and spits.
- MR** **Marine deposit and bedrock, undifferentiated:** thin (< 2 m), discontinuous sediments and bedrock.

GLACIAL AND PROGLACIAL ENVIRONMENTS

GLACIOFLUVIAL DEPOSITS: sediments and landforms either deposited or modified by meltwater in contact with or in front of glacier ice.

- Go** **Outwash:** well sorted, coarse sand, gravel, and boulders 5 to > 10 m thick forming broadened plains and terraces; not presently subject to flooding; commonly forested.
- Ga, Ga'** **Stratified and nonstratified drift (undifferentiated):** well sorted to poorly sorted sand and gravel forming low paths and terraces on lowlands, preferentially along valley margins; commonly thin and discontinuous. Early deposited as meltwater either glacial lake or marine environments, or both.
- GK, GK'** **Ice contact stratified drift:** well sorted to poorly sorted sand and gravel, 5 to 60 m thick, deposited either within or against glacier ice; commonly forming isolated hummocks or short ridges.
- GM** **Outwash:** < 2 m thick, overlying thin (> 3 m) sequences of older marine sediments; may be more common than indicated.

GLACIAL LAKE DEPOSITS: sediments and landforms either deposited or modified within lakes formed by glacier ice; includes areas covered by glacial lakes but with little or no lake sediment.

- L** **Lake sediment (undifferentiated):** well sorted to poorly sorted muddy sand, coarse gravel and boulders; commonly thin (< 1 m) and discontinuous, although thick (> 20 m) and extensive in valleys on northeastern Baffin Island; forms benches at former lake margins.
- Ld** **Deltaic sediments:** coarse sand, gravel, and boulders forming deltaic deposits at locations of retreating streams.

GLACIAL ENVIRONMENT

GLACIAL DEPOSITS: sediments transported by either foreign or native glacier ice and deposited directly from ice by meltwater during retreat, and from ice marginal meltwater streams.

- D'** **Foreign drift (undifferentiated):** muddy sand to sandy siltstone characterized by abundant foreign erratics and including fragments of marine shells, typically < 1 to 2 m thick and commonly discontinuous over bedrock. D' must be mostly sand; diameters: 1 to > 10 m. Can include sediments deposited within a glaciomarine environment.
- D** **Native drift (undifferentiated):** sandy siltstone characterized by angular crystalline boulders, commonly forming a thin (< 1 m) continuous to discontinuous mantle on bedrock, 5 to > 10 m thick in areas of hummocks.
- Dm, Dm'** **Ice marginal drift:** poorly sorted gravel to boulder gravel; deposited or modified by ice or meltwater, or both, along an ice margin, characterized by short moraine ridges and by meltwater channels that outline ice marginal positions.
- DG** **Bouldery drift:** angular, crystalline erratics of single clast thickness mantling thick (> 3 m) glaciofluvial deposits.

BEDROCK

PRE-QUATERNARY

- Rk** **Sedimentary rock (poorly consolidated to unconsolidated):** sandstone, mudstone and coal of Cretaceous and Tertiary age; forms ridges towards the southern Bylot Island and on northern Baffin Island, adjacent to Eclipse Sound; mantled by sand and mud formed by in situ weathering of bedrock, and by scattered boulder erratics.
- Rp** **Sedimentary rock (poorly consolidated):** limestone, dolomite, sericitic quartzite, albite, shale, and conglomerate of Proterozoic age; generally heavy and thin metamorphosed, highly siliceous; surfaces mantled by talus, erratics, and gneiss.
- Rx** **Crystalline rock (igneous and metamorphic):** rocks of Archean/Proterozoic age; on central Baffin Island forms rugged mountains dominated by mountain glaciers and characterized by classic landforms of alpine glaciation, including cirques, arêtes, cols, and horns; on Bylot Island, and on Baffin Island, forms broad, rounded hills and upland areas and locally supports small ice caps; surface marked by a coarse angular rubble of talus, erratics, and gneiss.

NOTES

- The terms "foreign" and "native" are used to distinguish glaciers and glacial deposits associated with regional ice sheets from those that are associated with local ice caps and mountain glaciers originating within the study area.
- The asterisk (*) denotes sediments containing a significant component of foreign debris and associated with a foreign glacial event.
- The Quaternary geology of Bylot Island embodies a significant length of time and records several distinct periods of glaciation, by both foreign and native glaciers, and of marine inundation. The map units have not been systematically subdivided to record the different events because surficial sediments are commonly thin (< 2 m) thick and discontinuous, and units of different ages and events cannot be readily distinguished throughout the map area on the basis of available evidence.

MAP 1668A
SURFICIAL GEOLOGY
BYLOT ISLAND AND ADJACENT AREAS
DISTRICT OF FRANKLIN
NORTHWEST TERRITORIES
Scale 1:250 000 - Échelle 1/250 000

Geology by R.A. Klassen 1978, 1979, 1981
Geological cartography by E. Bégin, Geological Survey of Canada
Colour separations were produced using digital methods
Any revisions or additional geological information known to the user would be welcomed by the Geological Survey of Canada
Base map assembled by the Geological Survey of Canada from maps 30C (1986) and 30B (1980) and parts of maps 48D (1981) and 38A, 42A (1980), published at the same scale by the Surveys and Mapping Branch

Copies of the topographical editions covering this map area may be obtained from the Canada Map Office, Department of Energy, Mines and Resources, Ottawa, Ontario, K1A 0S9
The proximity of the North Magnetic Pole causes the magnetic compass to be erratic in the area
Mean magnetic declination 1993, 61°20' W, decreasing 21.7' annually. Readings vary from 57°48' W in the SE corner to 64°58' W in the NW corner of the map
Elevations in feet above mean sea level

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