



LEGEND

Note: some map units and symbols shown in the legend may not appear on this map

SURFICIAL GEOLOGY

QUATERNARY

AC Alluvium: silt, sand, and gravel deposited in channels and on floodplains; may include alluvium in terraces which formed as stream cut to present level in glacial and marine sedimentary fill.

AD Deltaic sediments: sand, gravel, and boulders deposited where modern streams enter lakes or floodplains.

AM Alluvium and marine sand or silt: undifferentiated, occurs as flat areas consisting of modern alluvium mixed with silt and sand that were washed from slopes by wave action or deposited in the sea by meltwater streams.

AG Alluvium and outwash gravel: undifferentiated, occurs as flat areas in stream valleys or abandoned channels above marine limit.

LACUSTRINE DEPOSITS: materials deposited in glacial lakes since the retreat of the western side of the Keewatin Ice Divide, and glacial deposits modified by lacustrine processes.

LN Nearshore sediments: generally well sorted sand, gravel, cobbles, or boulders deposited as beaches, bars, spits, and ice-pointed ridges.

LD Deltaic sediments: sand, pebbly sand, and gravel deposited in glacial lakes by glacial or non-glacial meltwater streams; subsequently abandoned as glacial lakes drained.

MARINE DEPOSITS: materials deposited in the Tyrrell Sea and glacial deposits modified by marine processes.

MD Deltaic sediments: sand, pebbly sand, and gravel deposited in the Tyrrell Sea by glacial or non-glacial streams.

MN Nearshore sediments: generally well sorted sand, gravel, cobbles, or boulders deposited as beaches, bars, spits, and ice-pointed ridges.

MW Offlap sediments: thin sheet of sand deposited by a migrating shoreline; generally in lake basins.

MO Offshore sediments: clay-rich and silty sand deposited in a deep water environment; may occur anywhere below marine limit but distribution is patchy above 60 m a.s.l.; thickest deposits generally occur in major river valleys.

MO Mottled pattern on airphoto. Mottled pattern on airphoto.

GLACIOFLUVIAL DEPOSITS: water-sorted sediments deposited in stream channels, or as a glacier, largely as a result of meltwater flow.

OK Ice contact stratified drift: sand and gravel deposited near ice margin over or around ice or in ice tunnels, commonly as eskers but includes isolated hummocky deposits of uncertain origin.

OS Outwash: gravel, sand, and silt with terraced, hummocky, and knotted surfaces; deposited by meltwater streams in areas above local sea level or level of proglacial lake. Includes 1) sediment deposited between the esker ridge and valleyfills; commonly over stagnant ice that forms temporary floor; 2) outwash fans; 3) outwash plains; and 4) materials on the floor or at the mouth of meltwater channels.

OG Og, silt, sand, and fine gravel: distal fine sediment debouching from the esker margin; commonly in depressions between the esker ridge and valleyfills.

GH Disintegration moraine: till, sand, and gravel, undifferentiated, occurs as short ridges or hummocks, probably deposited in holes and crevasses in stagnant ice; ridge orientation may form a reticulate pattern.

TILL DEPOSITS: Poorly sorted sediments with distinctive forms deposited directly by glacial ice.

TP Till plain: generally sandy, silty, noncohesive grey till; includes areas of clay-rich till.

TR Ribbed (rogen) moraine: generally bouldery till in places sand and silt; forming hummocks and straight to sinuous ridges; generally less than 1 km long.

TH Hummocky till: till without significant boulder content; occurs as short ridges or hummocks, probably deposited in holes and crevasses in stagnant ice; ridge orientation may form a reticulate pattern.

TM Till and marine silt, undifferentiated: till-covered landforms blanketed by marine sediments or marine deposits in depressions among till landforms.

ROCK PRE-QUATERNARY

R Precambrian intrusive igneous and metamorphic rocks, red volcanic rocks, and unmetamorphosed sedimentary rocks.

R Surface comprises more than 80% outcrop.

RV Surface comprises 20 to 80% outcrop, or bedrock is mantled with an average of less than 1 m of the surficial deposit indicated.

Geological boundary

Small bedrock outcrop

Drumlin or fluting

Crag and tail (direction of ice flow known)

Glacial striae (direction of ice movement known, unknown location of measurement at centre of staff, older striation drawn with broken staff)

Linear feature related to ice flow

Trend of ribbed or minor moraine ridges

De Geer moraines: straight, approximately 2 m high end moraine ridges built parallel to an ice front; possibly deposited annually by flowing ice submerged in a sea or lake

Hummocky moraine

Esker: projected beneath water surfaces where known

Meltwater channel: steep-sided channel commonly cut in bedrock or till

Limit of marine submergence

Trend of nearshore ridges originating as beaches, bars, and ice-shoed ridges

Escarpment: generally in unconsolidated sediments

Area of ridges formed by pack-ice shove

Permanently drained postglacial lake basin; may include deposits of silty sediment with up to 15% organic carbon

Turbid lake: contains continual load of suspended sediment during ice-free periods; rarely occurs above marine limit and indicates instability or alteration of the active layer due to wave washing or solifluction processes

Eolian deposits: commonly formed where ice shove or bank failures have disrupted the vegetation mat over alluvial sand

Radiocarbon date

Geology by J. M. Aylsworth and M. D. Clarke, based on airphoto interpretation

Striae measurements by J. G. Fyles, R. C. Shields, and J. A. Fraser, 1964

Thematic information on this map is, in part, reproduced directly from author's copy

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

Base map enlarged from 1:250 000 scale, published by the Surveys and Mapping Branch in 1966

Copies of the topographical edition of this map may be obtained from the Canada Map Office, Department of Energy, Mines and Resources, Ottawa, K1A 0G5

Mean magnetic declination 1989, 12°39' East, decreasing 21.8' annually. Readings vary from 10°26' in the SE corner to 14°37' in the NW corner of the map area

Elevations in feet above mean sea level

DESCRIPTIVE NOTES

During deglaciation the ice front retreated eastward towards the Keewatin Ice Divide, damming a large glacial lake in Thebes River valley and Beverly Lake basin. A series of high level shorelines records a maximum lake level of 220 m in the west, dropping to 210 m in the east of this map area; shorelines continued to lower as progressively lower, northward draining, outlets became ice free. When the ice dam was breached, marine waters inundated the basin to some undetermined depth. As it is impossible to differentiate between marine and lacustrine beaches in the absence of shells and as shells were only found at one location, at 110 m, the elevation of 120 m was arbitrarily selected to separate the lower marine deposits from the higher lacustrine beaches.

MAP 38-1989

SURFICIAL GEOLOGY

DUBAWNT LAKE

DISTRICT OF KEEWATIN

NORTHWEST TERRITORIES

Scale 1:125 000 - Échelle 1/125 000

Map Library / Cartothèque

1989

Geological Survey of Canada / Commission Géologique du Canada

Recommended citation: Aylsworth, J.M., 1989. Surficial geology, Dubawnt Lake, District of Keewatin, Northwest Territories. Geological Survey of Canada, Map 38-1989, scale 1:125 000.

Canada

MAP 38-1989

SURFICIAL GEOLOGY

DUBAWNT LAKE

DISTRICT OF KEEWATIN

NORTHWEST TERRITORIES

Scale 1:125 000 - Échelle 1/125 000

Map Library / Cartothèque

1989

Geological Survey of Canada / Commission Géologique du Canada

Recommended citation: Aylsworth, J.M., 1989. Surficial geology, Dubawnt Lake, District of Keewatin, Northwest Territories. Geological Survey of Canada, Map 38-1989, scale 1:125 000.