

**LEGEND**

This legend is common for maps 1847A to 1851A  
 \*Some units or symbols may not appear on this map

**QUATERNARY**

**HOLOCENE**

**NONGLACIAL ENVIRONMENT**

**14** ALLUVIUM: sand and gravel with detrital organic beds; commonly less than 5m thick; occurs as braided floodplains

**MARINE SEDIMENTS:** gravel, sand, silt and clay in coarsening upward sequences; 1-30m thick; deposited in littoral, deltaic and offshore environments during regression of the postglacial sea

**13** Littoral deposits: bouldery and flaggy gravel; 2-6m thick; occurs as flights of emerged beach ridges. West coast flights of boulder beaches developed on end moraines; some east coast flights of gravel and shingle beaches are derived from shattered limestone

**12** Deltaic deposits: planar- and cross-bedded sand and silt locally containing organic detritus and algal mats; occurs as a coarsening upwards sequences 5-30m thick; fossiliferous; forms terraces where debris from the glacier snout and glaciofluvial sediments emptied into the sea

**11a, 11b** Offshore and sub-littoral deposits: stratified sand and silt with few ice rafted boulders and dropstones; in some places gravelly near the surface; sparsely fossiliferous. 11a, blanket deposits 1-10m thick, forming plains, extensively covered by mudflats; 11b, veneer deposits, less than 1m thick, mimicking the surface form of underlying rock

**PROGLACIAL AND GLACIAL ENVIRONMENT**

**10** GLACIOMARINE DEPOSITS and MARINE VENEERTILL: stony sandy silt or stony clay with ice rafted boulders and dropstones; poorly sorted, locally massive; contains shell fragments; 1-5m thick; mantles and mimics underlying till surfaces

**9** GLACIOLACUSTRINE DEPOSITS: silt and fine sand; 1-3m thick; deposited in valleys occupied by temporary glacier- or moraine-dammed lakes; forms veneers over till

GLACIOFLUVIAL DEPOSITS: poorly stratified sand and gravel; 1-10m thick; deposited behind, at, and in front of the ice margin by glacial meltwater

**8** Outwash: cross-stratified sand and rounded gravel; 1-10m thick; occurs as kettled terraces and braided fans

**7** Kame and esker deposits: poorly sorted sand and gravel with rounded boulders; 5-15m thick; forms isolated hummocks and sinuous ridges. Below marine limit, eskers have been intensively modified by wave action

**EARLY HOLOCENE AND LATE PLEISTOCENE (WISCONSINAN)**

**GLACIAL ENVIRONMENT**

**6** Hummocky till: chiefly granitic till; 5-30m thick; forms a prominent hummocky ridge marking a major recessional ice margin, and diffuse zones marking boundaries between ice regimes

**5** Till blanket: 1-10m thick; forms gently rolling plains; some areas have large frost fissures

**4** Till veneer: less than 1m thick; occurs in patches over rock and is interspersed with rock outcrop; deposits are thin enough to reveal details of underlying rock structure

Bouldery local till: bouldery till consisting of blocky clasts in a sandy matrix, together with a small number of far-travelled erratics

**3** Till blanket: 1-5m thick; forms a nearly flat plain with zones of shallow, ephemeral ice-marginal channels

**2** Till veneer: less than 1m thick; overlies bedrock as a distinct unit, or grades laterally and vertically into outcrop and broken rock

**PERIGLACIAL AND GLACIAL ENVIRONMENT**

**1** BROKEN ROCK/FELSENMEER: blocky rubble derived from the disaggregation of bedrock by frost riving and by hydration or chemical weathering along micro fractures; blocks are 0.5-2m across and have unweathered surfaces; unit grades downwards into coherent bedrock

**PRE-QUATERNARY**

**ROCK, Precambrian:** bare, coherent outcrop of various lithologies and ages; locally glacially polished and striated; scoured into streamlined bedforms, and deeply eroded into U-shaped troughs in the western highlands

**A** Acheban deformed and metamorphosed sedimentary rocks of the Penrhyn Group, including marble, quartzite, and pelitic gneiss; forms glacially eroded valleys

**A** Archean granitoid and other rocks including tonalite, granite, gneiss, metavolcanics, and banded iron formations; forms rugged highlands and uplands

Geological boundary .....  
 Gossan .....  
 Small outcrop .....  
 Station (ice flow direction known, unknown) .....  
 Crag and talus .....  
 Till flute, drumlin .....  
 Roche moutonnée .....  
 Moraine (end, lateral, minor) .....  
 Drift dispersal plume .....  
 Outcrop scoured by meltwater .....  
 Esker, (direction of flow known, unknown), washed esker .....  
 Shallow, subglacial drainageway .....  
 Lateral meltwater channel .....  
 Proglacial channel .....  
 Glacial lake trimline .....  
 Beach ridge .....  
 Marine limit .....  
 Delta .....  
 Soil/fluctuation megalobes .....  
 Large ice wedge polygons .....  
 Frost-heaved joint lineation .....  
 Sample site .....  
 Fossil locality .....  
 Archaeological sites .....  
 Radiocarbon date locality .....  
 Date .....  
 Material .....  
 Lab no .....  
 Elevation (m) .....

Geology by L.A. Dredge, 1990, 1991

The author acknowledges the field assistance of M. Coyle, P. Mikiyungiak, and D. Russell, and logistical support from Polar Continental Shelf Project

Geological cartography by L. Daley, 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 at the scale of 1:250 000 published by the Army Survey Establishment R.C.E. in 1979

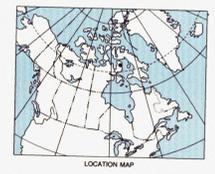
Copies of the topographical edition of this map may be obtained from the Canada Map Office, Department of Natural Resources Canada, Ottawa, Ontario, K1A 0E9

The proximity of the North Magnetic Pole causes the magnetic compass to be erratic in this area

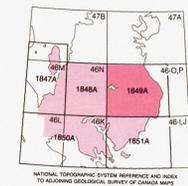
Mean magnetic declination 1994, 38°11' W, decreasing 16.4' annually. Readings vary from 34°31' W in the SW corner to 41°31' W in the NE corner of the map

Elevations in feet above mean sea level

Copies of this map may be obtained from the Geological Survey of Canada, 601 Booth Street, Ottawa, Ontario K1A 0E8, 3903 33rd Street, N.W., Calgary, Alberta T2C 2A7



MAP 1849A  
 SURFICIAL GEOLOGY  
**BARROW RIVER**  
 DISTRICT OF FRANKLIN  
 NORTHWEST TERRITORIES  
 Scale 1:200 000 - Echelle 1/200 000



GEOLOGICAL SURVEY OF CANADA  
 COMMISSION GÉOLOGIQUE DU CANADA  
 APR 20 1995

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Recommended citation:  
 Dredge, L.A.  
 1994. Surficial geology, Barrow River, District of Franklin, Northwest Territories; Geological Survey of Canada, Map 1849A, scale 1:200 000