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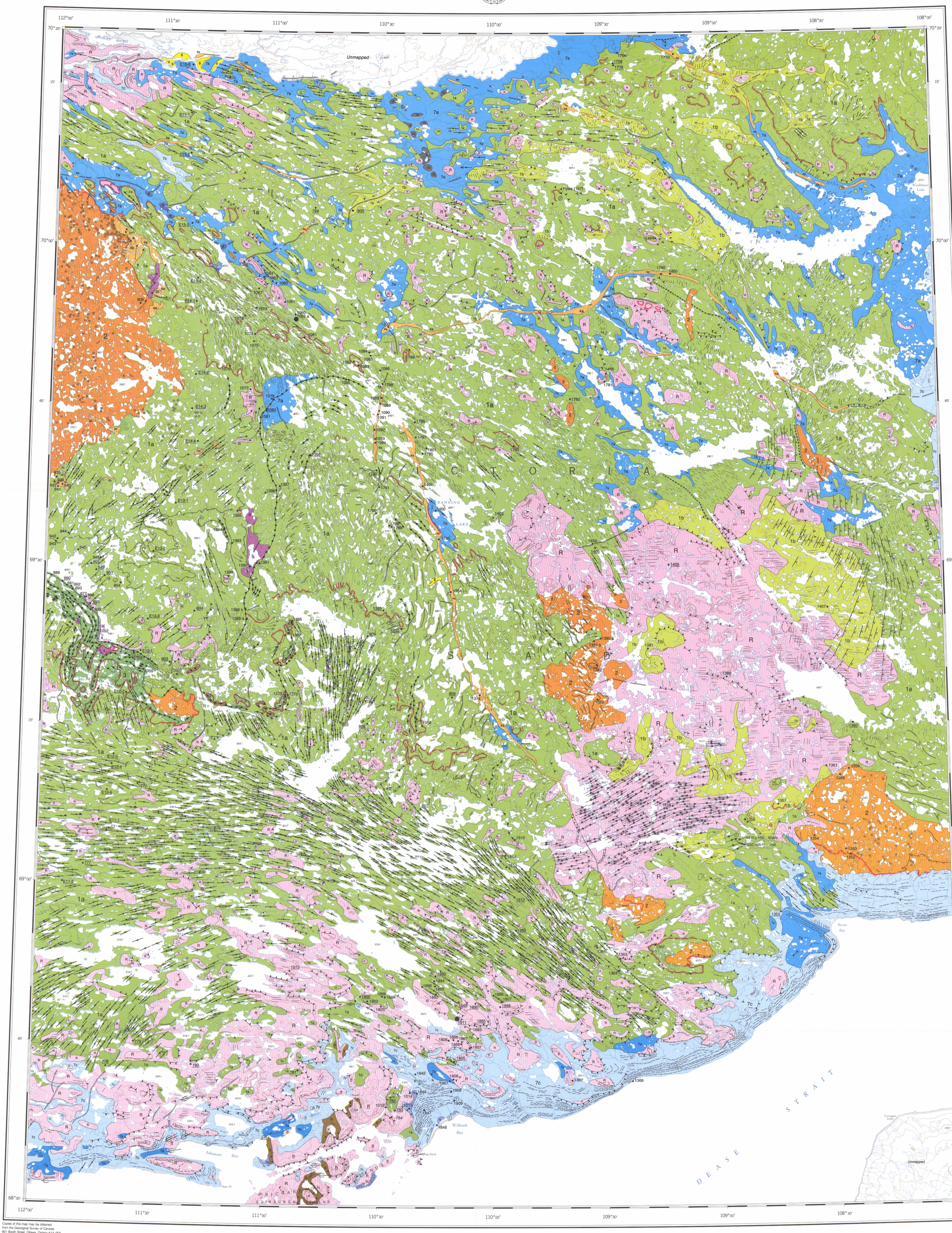
GEOLOGICAL SURVEY OF CANADA | COMMISSION GÉOLOGIQUE DU CANADA




Copies of this map may be obtained from the Geological Survey of Canada:
601 Booth Street, Ottawa, Ontario K1A 0E8
3303-33rd Street, N.W., Calgary, Alberta T2L 2A7

Published 1992

## LEGEND

**SURFICIAL GEOLOGY**
**QUATERNARY**
**HOLOCENE-LATE WISCONSINAN**
**NONGLACIAL ENVIRONMENT**

10 — ***ORGANIC DEPOSITS:*** *silty to sandy organic-rich sediments; 1-3 m thick; resting on a variety of poorly drained substrates; peat is present locally; mudboils, hummocks, and willow thickets are common*

9 — ***COLLUVIAL DEPOSITS:*** *massive diamicton consisting of compact, stony, sandy silt, calcareous debris and rubble; 1-2 m thick; consists of reworked primary sediment; occurs as solifluction lobes, terraces, or slump bowls, particularly in thermokarst terrain; only large colluvial occurrences that can clearly be distinguished from till are shown*

8 — ***FLUVIAL DEPOSITS:*** *gravel to gravelly sand near channels and silty sand and minor silt or clay, together with eolian and colluvial deposits, on floodplains; 10-20 m thick on alluvial terraces and 1-2 m thick on strath terraces; frost fissures, 1-2 m deep, are common in gravelly sediments*

***MARINE DEPOSITS:*** *sediments deposited by marine processes (waves, currents, suspension, flocculation, and sea ice) as well sorted sediment during regression of the postglacial sea; occurs as ridges and veneers on large coastal platforms and as terraces marking regressive sea level events. Sediments may have been disturbed by pack ice and iceberg scour*

7c — ***Undifferentiated deposits:*** *complex of silt and sandy silt on bedrock, diamicton, or locally, gravel; discontinuous veneer 1-3 m thick*

7b — ***Littoral deposits:*** *gravel and gravelly sand; 1-4 m thick; occurs as flights of raised strandlines; locally disturbed by ice push*

7a — ***Sublittoral deposits:*** *silt to sandy silt and clay, locally stony; 1-5 m thick; overlies glaciomarine sediment; occurs as offshore facies downslope from deltas and beach terraces; forms a veneer scoured by drifting ice*

**LATE WISCONSINAN**
**GLACIAL ENVIRONMENT**

6 — ***GLACIOMARINE DEPOSITS:*** *gravel to gravelly sand, and sand as delta fan features; massive (10-30 m thick) silt and clay in prodelta and subaqueous fan deposits*

5 — ***GLACIOLACUSTRINE DEPOSITS:*** *gravelly sand, silt, and clay; 1-5 m thick; deposited as fans or deltas in shallow water; found in flat, but dissected areas*

***GLACIOFLUVIAL DEPOSITS:*** *sediments deposited in subglacial cavities and in lakes or the sea by glaciofluvial processes*

4b — ***Outwash deposits:*** *gravel and sand; 2-20 m thick; occurs as terraces and deltas*

4a — ***Ice contact deposits:*** *gravel, sand, minor silt and clay; 10-20 m thick; occurs as sharp-crested and flat-topped eskers*

***GLACIAL DEPOSITS:*** *till and stratified sediments deposited in ice marginal, subglacial, and supraglacial positions by a variety of processes*

3 — ***Morainal deposits:*** *interbedded diamicton, sand, and gravel, horizontally bedded with ice core; 5-50 m thick; diamicton commonly comprises about 50% of sediment thickness; forms linear ridges (end moraines and lateral moraines); sedimentation occurred subaerially or subaqueously at the ice margin by sediment gravity flow, thrusting and shearing, and glaciofluvial deposition*

2 — ***Hummocky deposits:*** *interbedded diamicton (till flows), sand, gravel, and silt; 10-50(?) m thick; diamicton is usual surface sediment with large polygons; large areas of hummocks and depressions are common; less common are linear (rim) ridges and small moulin kames which contain sand and gravel; originates both as subglacial ice press and supraglacial sediment gravity flows or meltout; redistribution of sediment by thaw slumping over buried (glacial?) ice continues today*

***Ground moraine deposits:*** *diamicton and stratified sediments mainly deposited subglacially*

1b — ***Till veneer:*** *thin, patchy diamicton; 1 m or less; large areas of flat terrain, commonly bedrock controlled*

1a — ***Till blanket:*** *massive diamicton (till); 1-5 m thick; in places interbedded with (or underlain by) sand and gravel; locally flutings present where drift is thin (1-2 m), and drumlins occur where drift is thick (10-15 m)*

**PRE-QUATERNARY**
**BEDROCK**

R, R — ***Carbonate rock (Paleozoic):*** **R,** *flat-lying and jointed; fractures can control the location of modern rivers;* **R,** *sandstone, siltstone, shale, and carbonate (Precambrian or Cambrian)*

*Geological boundary*
*Cliff in bedrock*
*Bedrock folding*
*Bedrock fracture, joint*
*Striae (ice flow direction known)*
*Crag and tail*
*Drumlin, drumlinoid ridge*
*Rock drumlin*
*Flutings*
*Small oriented ridges*
*S-form (flow direction known)*
*Lateral ridge*
*Moraine ridge*
*Ice-pressed ridges*
*Transverse ridges*
*De Geer moraine*
*Esker (direction of flow inferred; unknown)*
*Isolated kame*
*Meltwater scour (subglacial)*
*Subglacial channel*
*Meltwater channel (surface)*
*Limit of submergence (marine; defined, approximate)*
*Limit of submergence (lake; defined, approximate)*
*Raised strandline features*
*Washover bar (on drumlin) - current direction toward apex of semi-circle*
*Thermokarst depression (stable)*
*Active thaw slump*
*Fossil locality (marine)* (F)
*Ground observation, sample location (GSC), E.B.A. Consultants* • 1810 • 1792 • E11-2
*Major study site/camp*
*Radiocarbon date* — Date | Material; Lab no | Elevation (m)

*Geology by D.R. Sharpe, 1983-1985, 1987.*
*The author acknowledges the participation of F.M. Nixon, 1983*

*Geological cartography by P. St-Amour, 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*

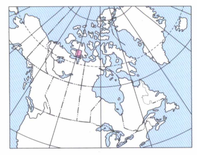
*Base map assembled by the Geological Survey of Canada from maps 77C (1966), and parts of maps 77F (1966) and 77B (1962), published at the same scale by the Army Survey Establishment, R.C.E.*

*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 0E9*

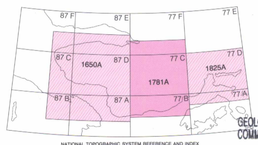
*The proximity of the North Magnetic Pole causes the magnetic compass to be erratic in this area*

*Mean magnetic declination 1992, 33°26′ E, decreasing 30.2′ annually. Readings vary from 33°50′ E in the NE corner to 37°54′ E in the SW corner of the map*

*Elevations in feet above mean sea level*



INDEX MAP




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



MAP 1781A

SURFICIAL GEOLOGY

# BANNING LAKE AREA

DISTRICT OF FRANKLIN

NORTHWEST TERRITORIES

Scale 1:250 000 - Échelle 1/250 000

Kilometres 5 0 5 10 15 20 Kilometres

Universal Transverse Mercator Projection
CM 111°, Scale Factor 0.9996





Recommended citation:
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Canada



1781A