

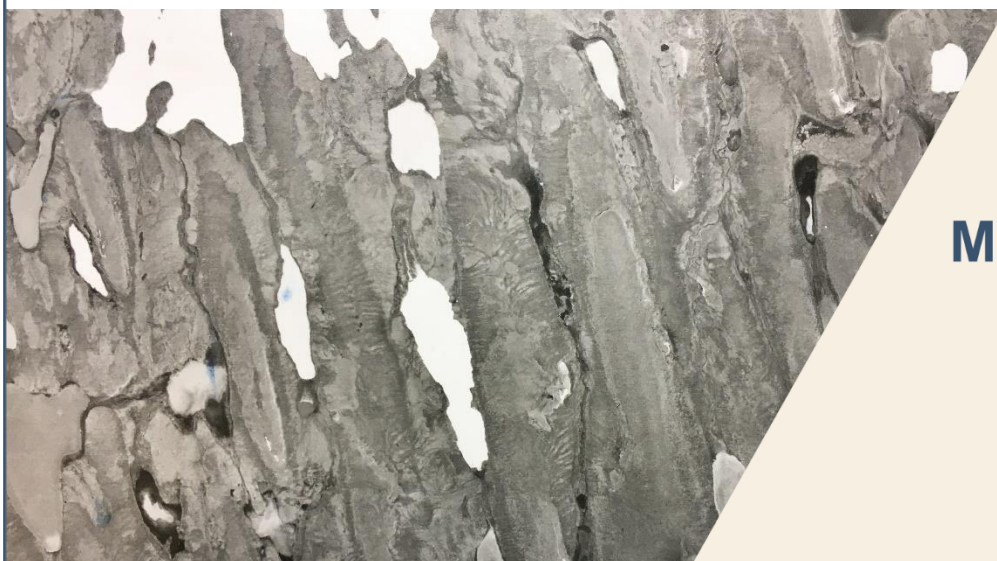


Natural Resources
Canada

Ressources naturelles
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CANADIAN GEOSCIENCE MAP 442 **RECONNAISSANCE SURFICIAL GEOLOGY** **JOE LAKE NORTH**

Nunavut
NTS 66-J north



Map Information Document

Geological Survey of Canada
Canadian Geoscience Maps

2022

Canada 



MAP NUMBER

Natural Resources Canada, Geological Survey of Canada
Canadian Geoscience Map 442

TITLE

Reconnaissance surficial geology, Joe Lake north, Nunavut, NTS 66-J north

SCALE

1:100 000

CATALOGUE INFORMATION

Catalogue No. M183-1/442-2022E-PDF
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ABSTRACT

The northwest part of the Joe Lake North map area is dominated by glaciated granitic and gneissic bedrock, and small lake basins. The remainder of the area is gently rolling terrain consisting of a major north-trending drumlin field, four esker systems, and marine deposits that lie between the drumlins. Postglacial marine deposits occupy much of the terrain in the north part of the map area. The limit of postglacial marine submergence is at about 180 m a.s.l. in the southwest, and at about 170 m elsewhere, as determined by wave-washed trimlines on drumlins, and several ice-contact deltas on eskers. Well formed beaches are rare, but drumlins have been reworked to varying degrees. Those at higher elevations in the south have been only slightly modified by postglacial seas, whereas those at lower elevations in the north are covered by a veneer of marine deposits.

RÉSUMÉ

La partie nord-ouest de la région cartographique de Joe Lake Nord est dominée par des affleurements d'un substratum rocheux granitique et gneissique modifié par l'action des glaciers et de petits bassins lacustres. Le reste de la région présente un terrain légèrement vallonné marqué d'un important champ de drumlins de direction nord, de quatre systèmes d'esker et de dépôts marins occupant les zones entre les drumlins. Les dépôts marins postglaciaires occupent une grande partie du terrain dans la portion nord de la région cartographique. La limite de l'invasion marine postglaciaire se situe à environ 180 m ASL dans le sud-ouest, et à environ 170 m ailleurs, tel que déterminé par des épaulements de lessivage par les vagues sur les drumlins et plusieurs deltas juxtaglaciaires sur les eskers. Les plages bien formées sont rares, mais les drumlins ont été retravaillés à des degrés divers. Ceux qui se trouvent à des altitudes plus élevées dans le sud n'ont été que légèrement modifiés par les mers postglaciaires, tandis que ceux qui se trouvent à des altitudes inférieures dans le nord sont recouverts d'un placage de dépôts marins.

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SHEET 1 OF 1, RECONNAISSANCE SURFICIAL GEOLOGY

GENERAL INFORMATION

Author: L.A. Dredge

Geology based on aerial photography interpretation by L.A. Dredge

Geological data conforms to Surficial Data Model v. 2.4.0 (Deblonde et al., 2019).

Geomatics by L. Robertson

Cartography by D. Viner

Scientific editing by L. Ewert

Initiative of the Geological Survey of Canada, conducted under the auspices of the GEM2 Rae Glacial Synthesis project as part of Natural Resources Canada's Geo-mapping for Energy and Minerals (GEM) program

Map projection Universal Transverse Mercator, zone 14
North American Datum 1983

Base map at the scale of 1:50 000 from Natural Resources Canada, with modifications
Elevations in metres above mean sea level

Shaded-relief image derived from the digital elevation model supplied by Geospatial Data Extraction CDED

Illumination: azimuth 315°, altitude 45°, vertical factor 1x

Proximity to the North Magnetic Pole causes the magnetic compass to be erratic in this area.

Mean magnetic declination 2022, 0°48'E, increasing 8.4' annually

Readings vary from 0°46'W in the NE corner to 2°19'E in the SW corner of the map.

This map is not to be used for navigational purposes.

Title photograph: Part of the drumlin field, and intervening marine deposits. Marine-limit trimlines are visible on some drumlins. Ice flow is towards the north. Photo from the National Air Photo Library. NAPL photo A14909-50

The Geological Survey of Canada welcomes corrections or additional information from users (gscpublications-cgcpublishations@nrcan-rncan.gc.ca).

Data may include additional observations not portrayed on this map. See map info document accompanying the downloaded data for more information about this publication.

This publication is available for free download through
GEOSCAN (<https://geoscan.nrcan.gc.ca/>).

MAP VIEWING FILES

The published map is distributed as a Portable Document File (PDF), and may contain a subset of the overall geological data for legibility reasons at the publication scale.

CARTOGRAPHIC REPRESENTATIONS USED ON MAP

This map utilizes ESRI Cartographic Representations in order to customize the display of standard GSC symbols for visual clarity on the PDF of the map only. The digital data

still contains the original symbol from the standard GSC symbol set. The following legend features have Cartographic Representations applied:

-Geomorphology polygons

REFERENCES

Deblonde, C., Cocking, R.B., Kerr, D.E., Campbell, J.E., Eagles, S., Everett, D., Huntley, D.H., Inglis, E., Parent, M., Plouffe, A., Robertson, L., Smith, I.R., and Weatherston, A., 2019. Surficial Data Model: the science language of the integrated Geological Survey of Canada data model for surficial geology maps; Geological Survey of Canada, Open File 8236, ver. 2.4.0, 1 .zip file.
<https://doi.org/10.4095/315021>

AUTHOR CONTACT

Questions, suggestions, and comments regarding the geological information contained in the data sets should be addressed to:

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Ottawa ON

K1A 0E8

gscpublications-cgcpublishations@nrcan-rncan.gc.ca

COORDINATE SYSTEM

Projection: Universal Transverse Mercator

Units: metres

Zone: 14

Horizontal Datum: NAD83

Vertical Datum: mean sea level

BOUNDING COORDINATES

Western longitude: 100°00'00"W

Eastern longitude: 98°00'00"W

Northern latitude: 67°00'00"N

Southern latitude: 66°30'00"N

SOFTWARE VERSION

Data has been originally compiled and formatted for use with ArcGIS™ desktop version 10.7.1 developed by ESRI®.

DATA MODEL INFORMATION

Surficial

The Geological Survey of Canada (GSC) through the Geo-mapping for Energy and Minerals Program (GEM) has undertaken the Geological Map Flow to develop protocols for the collection, management (compilation, interpretation), and dissemination of surficial and bedrock geology data and map information. To this end, a data model has been created.

The Surficial Data Model (SDM) was designed using ESRI geodatabase architecture. The XML workspace document provided can be imported into a geodatabase, and the geodatabase will then be populated with the feature datasets, feature classes, tables, relationship classes, subtypes, and domains.

Shapefile and table (.dbf) versions of the data are included within the data. Column names have been simplified and the text values have been maintained within the shapefile attributes. The direction columns are numerical, to display rotation for points, and the symbol fields will hold the correct values to be matched to the appropriate style file.

For a more in depth description of the data model please refer to the official publication:

Deblonde, C., Cocking, R.B., Kerr, D.E., Campbell, J.E., Eagles, S., Everett, D., Huntley, D.H., Inglis, E., Parent, M., Plouffe, A., Robertson, L., Smith, I.R., and Weatherston, A., 2019. Surficial Data Model: the science language of the integrated Geological Survey of Canada data model for surficial geology maps; Geological Survey of Canada, Open File 8236, ver. 2.4.0, 1 .zip file.
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