References and related information:

Craig, B.G., 1961. Surficial geology, northern District of Keewatin; Geological Survey of Canada, Map 7-1961, scale 1:1 013 760. https://doi.org/10.4095/108770

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., 2017. Surficial Data Model, version 2.3.0: revisions to the science language of the integrated Geological Survey of Canada data model for surficial geology maps; Geological Survey of Canada, Open File 8236, 1 .zip file. https://doi.org/10.4095/302717

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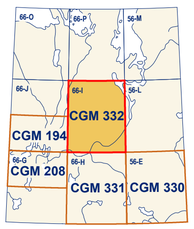
Thomas, R.D., 1982. Surficial geology, Montresor River, District of Keewatin; Geological Survey of Canada, Map 10-1981, scale 1:250 000. https://doi.org/10.4095/109310

Abstract

This new surficial geology map product represents the conversion of Map 10-1981 and its legend, using the Geological Survey of Canada's Surficial Data Model (SDM version 2.3) (GSC Open File 8236). All geoscience knowledge and information from Map 10-1981 that conformed to the current SDM were maintained during the conversion process. Supplementary, limited legacy information was added to complement the converted geoscience data. This consists of glacial striations from Craig (1961); these are identified in the accompanying geodatabase. The purpose of converting legacy map data to a common science language and a common legend is to enable and facilitate the efficient digital compilation, interpretation, management, and dissemination of geological map information in a structured and consistent manner. This provides an effective knowledge management tool designed around a geodatabase that can expand, following the type of information to appear on new surficial geology maps.

Résumé

Ce nouveau produit cartographique de la géologie des formations superficielles correspond à la conversion de la Carte 10-1981 et de sa légende, en se servant du Modèle de données pour les formations superficielles (MDFS version 2.3) de la Commission géologique du Canada (Dossier public 8236). Toutes les connaissances et l'information de nature géoscientifique de la Carte 10-1981 qui sont en conformité avec le modèle de données ont été conservées pendant le processus de conversion. Une faible quantité d'information préexistante a été ajoutée en complément aux données géoscientifiques converties. Il s'agit de stries glaciaires tirées de Craig (1961). Ces entités sont identifiées dans la géodatabase du présent produit cartographique. Le but de la conversion de cartes publiées antérieurement suivant un langage scientifique commun et une légende commune est de permettre et de faciliter la compilation, l'interprétation, la gestion et la diffusion efficaces de l'information géologique cartographique en mode numérique de façon structurée et cohérente. Cette façon de faire offre un outil efficace de gestion des connaissances élaboré à l'aide d'une géodatabase qui pourra évoluer suivant le type d'information à paraître sur les nouvelles cartes des formations superficielles.



National Topographic System reference and index to adjoining published Geological Survey of Canada maps

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Natural Resources Canada | Ressources naturelles Canada

CANADIAN GEOSCIENCE MAP 332

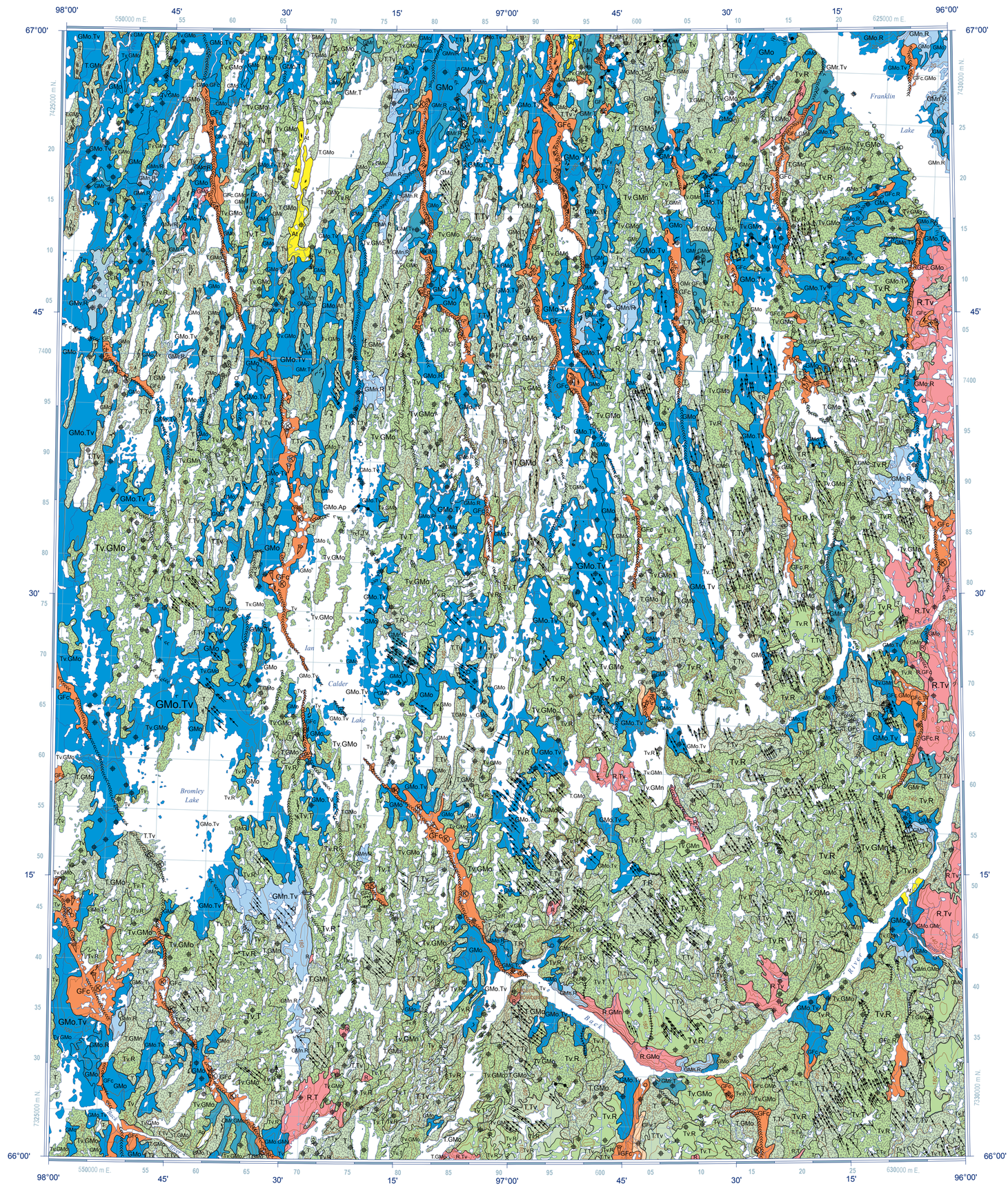
SURFICIAL GEOLOGY

MONTRESOR RIVER

Nunavut

NTS 66-I

1:250 000



QUATERNARY

NONGLACIAL ENVIRONMENT

ALLUVIAL SEDIMENTS: silt, sand, and fine gravel; moderately to well sorted but commonly interstratified with beds of distinctly different grain sizes; crossbedding, scour-and-fill structures, and ripple marks common; up to 5 m thick.

Ap — **Floodplain sediments:** silt, sand, and gravel; variable thickness; seasonally flooded, unvegetated.

At — **Alluvial terraced sediments:** silt, sand, and gravel; variable thickness; above present flood zone, vegetated.

PROGLACIAL AND GLACIAL ENVIRONMENT

GLACIOMARINE SEDIMENTS: silty, sand, and in places clay or gravel; generally less than 10 m but up to 75 m thick; deposited in high stand of the sea during glacial retreat.

GMr — **Beach sediments:** sand and silt or gravel; horizontal and cross-stratified; variable thickness, from less than 1 m overlying bedrock to a few metres thick; occurs as beaches and terraces; littoral and nearshore; may overlie bedrock locally.

GMn — **Littoral and nearshore sediments:** sand and silt or gravel, horizontal and cross-stratified; veneer commonly less than 1 m thick over bedrock; occurs as beaches and terraces.

GMo — **Offshore sediments:** silt and clay, commonly rhytmically bedded; variable thickness; offshore environment; may overlie bedrock locally.

GMv — **Glaciomarine veneer:** silt and clay; commonly rhytmically bedded; less than 1 m thick over bedrock.

GFc — **Glaciofluvial ice-contact sediments:** sand and gravel; irregular to cross-stratified with poor to moderate sorting; up to 30 m thick; occurs as ice-contact deltas, sinuous ridges, isolated hummocks, local blanket deposits, and esker and kame complexes; may overlie bedrock locally.

GFv — **Glaciofluvial veneer:** sand and gravel; commonly less than 1 m thick over bedrock; ice-contact sediment veneer.

GLACIAL ENVIRONMENT

Tv — **Till veneer:** diamicton; commonly less than 1 m thick; overlies bedrock; when lag deposit overlay is present, the upper meter of till is abnormally sandy due to either removal of fines by wave action or intermixing of marine, glaciolacustrine or glaciofluvial sand.

T — **Till, undifferentiated:** silty, gravelly sand (diamicton) with less than 10% clay; nonsorted, nonstratified, compact but unlithified; generally 7 m up to 20 m thick; boulders up to 2 m long common on the surface; occurs mainly as blanket on underlying bedrock or as hummocks and ridges (moraines); where washed scoured lag overlay is present, the upper meter is abnormally sandy due to either removal of fines by wave action or intermixing of marine, glaciolacustrine or glaciofluvial sand.

PRE-QUATERNARY

R — **Bedrock, undifferentiated:** Precambrian igneous and metamorphic crystalline rock of variable composition and structure.

Complex units: two map-unit designators are used in cases where the surficial cover forms a complex area and the map units are too small to be mapped individually, yet constitute a significant areal extent of the total polygon (e.g. Tv.GMn designates an area of till veneer with glaciomarine littoral sediments). In such instances a dot ('.') is used to separate the map-unit designator.

Stratigraphic relationship: a stratigraphic relationship is shown with two map-unit designators separated by a slash ('/') (e.g. GMn/R designates thin glaciomarine littoral sediments overlying bedrock).

Lag deposit

Kettle

Geological contact, defined

Beach crest

Meltwater channel:
- *Minor, paleocurrent direction unknown*
- *Minor, paleocurrent direction known*

Moraine ridge:
- *Minor*
- *Major*

Esker:
- *Paleocurrent direction unknown*
- *Paleocurrent direction known*

Drumlinoid

Crag-and-tail

Ice-contact delta, paleocurrent direction known

Striation:
- *Ice flow direction unknown*
- *Ice flow direction known*

Station location:
- *Remote observation*
- *Ground observation*

Recommended citation
Geological Survey of Canada, 2017. Surficial geology, Montresor River, Nunavut, NTS 66-I; Geological Survey of Canada, Canadian Geoscience Map 332 (preliminary, Surficial Data Model v. 2.3 conversion of Map 10-1981), scale 1:250 000. https://doi.org/10.4095/306187

Celebrating 175 yrs

Geological Survey of Canada
Canadian Geoscience Maps

Canada

Author: Geological Survey of Canada

Geology by R.D. Thomas, 1976, 1977.

Geology conforms to Surficial Data Model v. 2.3

Data conversion by D.E. Kerr, 2015, 2016

Geomatics by S. van Stavel

Cartography by D. Viner

Initiative of the Geological Survey of Canada, conducted under the auspices of Natural Resources Canada's Geo-mapping for Energy and Minerals (GEM) program

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

SURFICIAL GEOLOGY

MONTRESOR RIVER

Nunavut

NTS 66-I

1:250 000

5 0 5 10 15 20 km

Base map at the scale of 1:250 000 from Natural Resources Canada, with modifications.
Elevations in metres above mean sea level

Proximity to the North Magnetic Pole causes the magnetic compass to be erratic in this area.
Mean magnetic declination 2017, 3°20'W, increasing 1.2' annually. Readings vary from 1°23'W in the SW corner to 5°23'W in the NE corner of the map.

This map is not to be used for navigational purposes.

The Geological Survey of Canada welcomes corrections or additional information from users.

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 (http://geoscan.nrcan.gc.ca/).

This publication has been scientifically reviewed, but it has not undergone a formal edit.

CANADIAN GEOSCIENCE MAP 332

SURFICIAL GEOLOGY

MONTRESOR RIVER

Nunavut

NTS 66-I