

References

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Surficial Readings

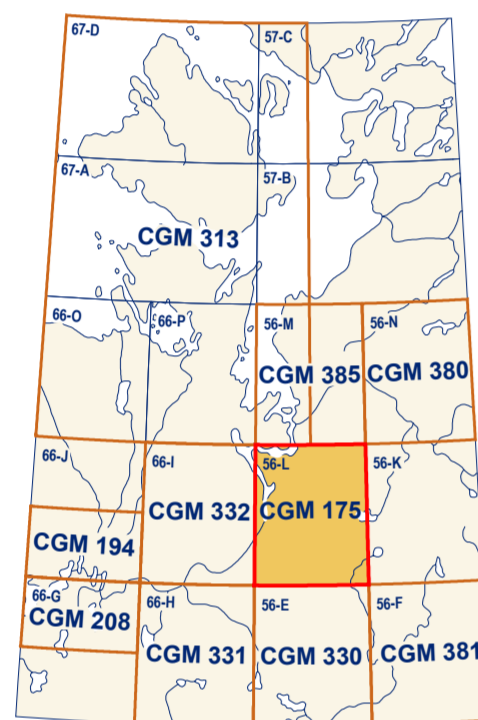
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Abstract

This new surficial geology map product represents the conversion of Preliminary Map 6-1981 (Thomas and Dyke, 1982) and its legend, using the Geological Survey of Canada's Surficial Data Model (SDM version 2.3.14) (Deblonde et al., 2018). All geoscience knowledge and information from Preliminary Map 6-1981 that conformed to the current SDM were maintained during the conversion process. The purpose of converting legacy map data to a common science language and 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 préliminaire 6-1981 (Thomas et Dyke, 1982) et de sa légende, en se servant du Modèle de données pour les formations superficielles (MDFS version 2.3.14) de la Commission géologique du Canada (Deblonde et al., 2018). Toutes les connaissances et l'information de nature géoscientifique de la Carte préliminaire 6-1981 qui sont en conformité avec le modèle de données ont été conservées pendant le processus de conversion. 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 de la géologie des formations superficielles.



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

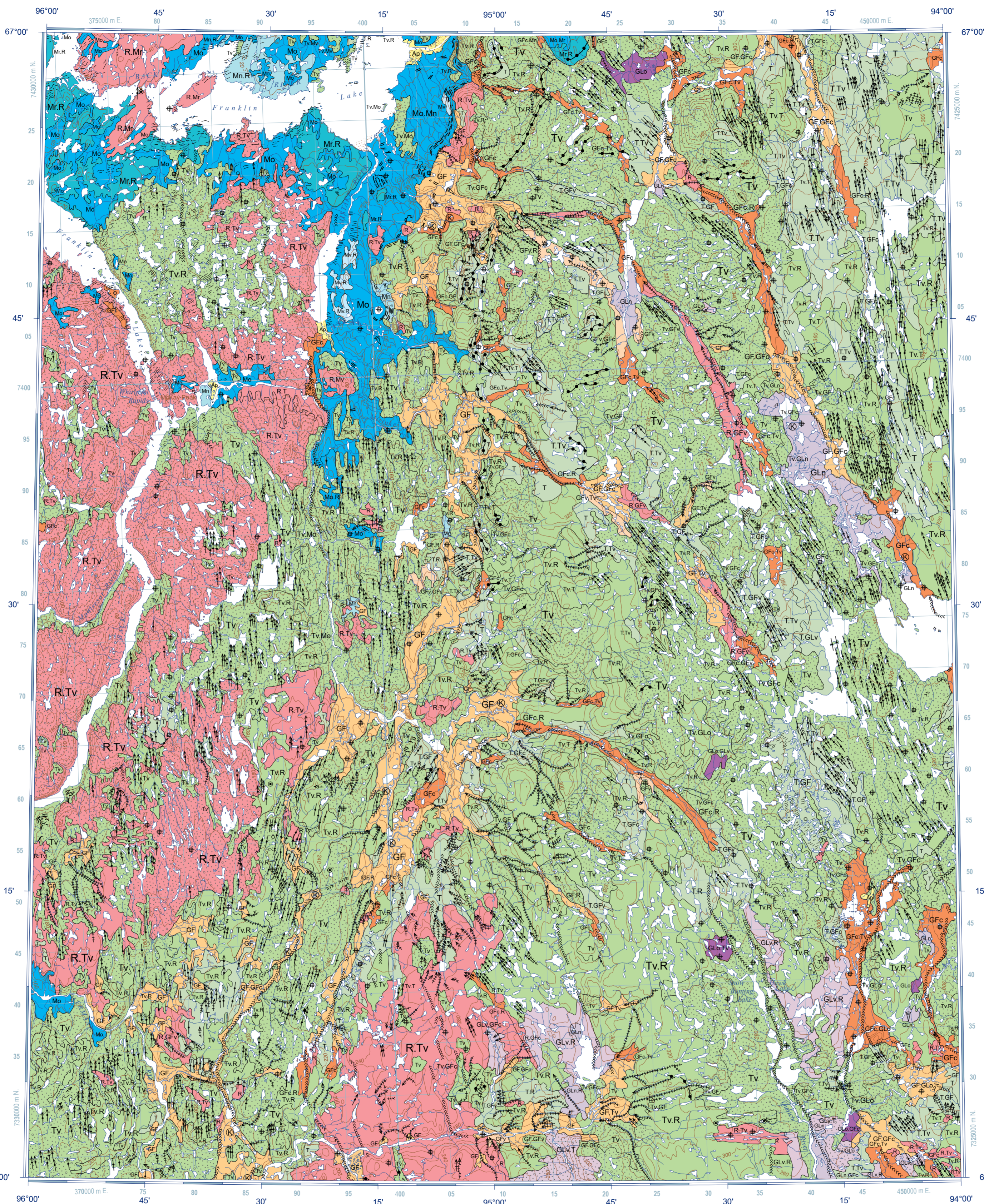
Catalogue No. M183-1/175-2018E-PDF  
ISBN 978-1-100-23407-6  
<https://doi.org/10.4095/311262>

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CANADIAN GEOSCIENCE MAP 175  
SURFICIAL GEOLOGY  
MISTAKE RIVER

Nunavut  
NTS 56-L  
1:250 000



QUATERNARY

POST LAST GLACIATION

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

LAST GLACIATION

**PROGLACIAL AND GLACIAL ENVIRONMENT**  
**MARINE SEDIMENTS:** silt, 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.  
**Beach sediments:** sand and silt or gravel, horizontal and cross-stratified; commonly less than 1 m thick; occurs as beaches overlying bedrock.  
**Littoral and nearshore sediments:** sand and silt or gravel, horizontal and cross-stratified; from 2 m to a few metres thick; occurs as beaches and terraces; may locally overlie bedrock.  
**Offshore sediments:** silt and clay, commonly rhythmically bedded; generally less than 10 m, but up to 75 m thick; deposited in deep-water environments.  
**Marine veneer:** silt, sand, and, in places, clay or gravel; commonly less than 1 m thick; deposited in deep-water environments; overlying bedrock.  
**GLACIOLACUSTRINE SEDIMENTS:** silty fine sand to gravely coarse sand, poorly sorted and stratified; generally 1–2 m, but up to 10 m thick; deposited in proglacial lakes.  
**Littoral and nearshore sediments:** sand, with well developed cross-stratification; variable thickness; occurs as beaches and terraces; may locally overlie bedrock.  
**Offshore sediments:** silty sand, with poorly developed subhorizontal stratification; occurs as blanket or veneer in depressions.  
**Glaciolacustrine veneer:** silty fine sand to gravely coarse sand; commonly less than 1 m thick; may locally overlie bedrock.  
**GLACIOLUVIAL SEDIMENTS:** sand and gravel deposited in, around, or near a glacier, largely as a result of meltwater stream flow.  
**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 locally overlie bedrock.  
**Glaciofluvial veneer:** sand to gravel; commonly less than 1 m thick; may locally overlie bedrock.  
**Glaciofluvial sediments, undifferentiated:** sand and gravel, massive to well stratified and sorted; up to 70 m thick; with smooth, flat to inclined surfaces; occurs as deltas, fans, or terraced valley-fill deposits; may locally overlie bedrock.

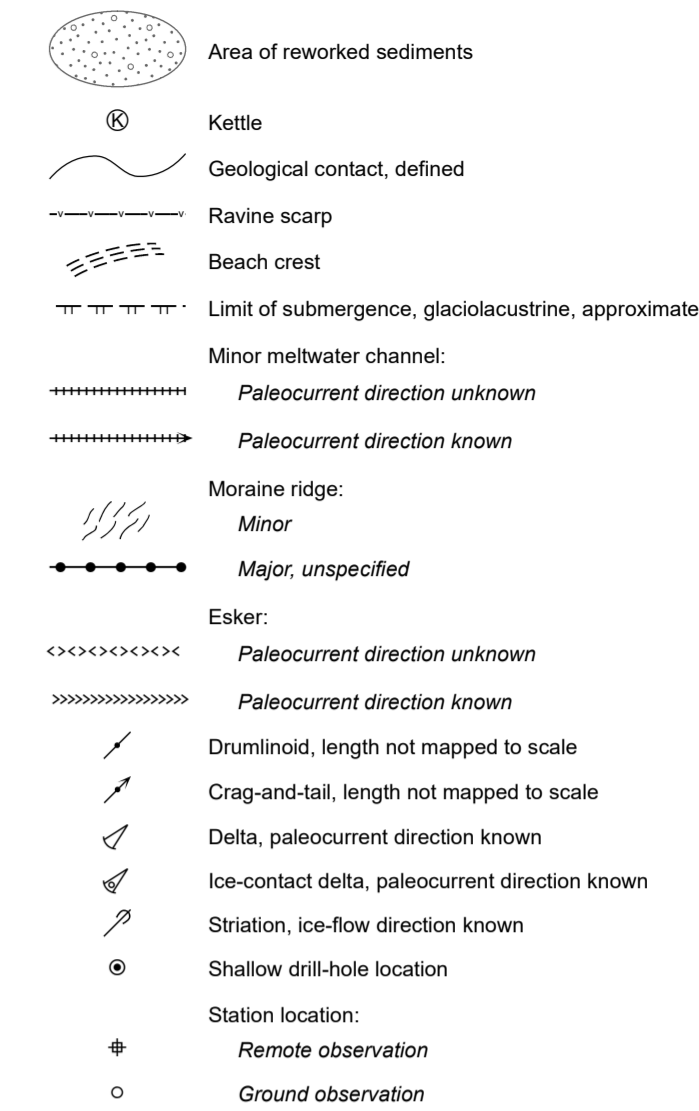
GLACIAL ENVIRONMENT

**GLACIAL SEDIMENTS (TILL):** poorly sorted till (diamicton) deposited directly by glacial ice.  
**Till veneer:** silty, gravely sand (diamicton) with less than 10% clay, nonsorted, nonstratified, commonly less than 1 m thick overlying bedrock; boulders common on the surface; occurs as veneer on underlying bedrock or as thin hummocks and ridges (moraines); where washed scoured lag overlay is present, the upper metre is abnormally sandy due to either removal of fines by wave action or intermixing of marine, glaciolacustrine, or glaciofluvial sand.  
**Till, undifferentiated:** silty, gravely sand (diamicton) with less than 10% clay, nonsorted, nonstratified, compact but unthrifted; 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 metre is abnormally sandy due to either removal of fines by wave action or intermixing of marine, glaciolacustrine, or glaciofluvial sand.

PRE-QUATERNARY

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

**Complex units:** two map-unit designators separated by a dot (.) are used where the surficial cover forms a complex area and the units are too small to be mapped individually (e.g. Tv.GFc designates an area of till veneer with numerous patches of ice-contact sediments).



CANADIAN GEOSCIENCE MAP 175

Author: Geological Survey of Canada  
Geology by R.D. Thomas (east half) and A.S. Dyke (west half), 1976 and 1977  
Final compilation by R.D. Thomas, 1981  
Geology conforms to Surficial Data Model v. 2.3.14 (Deblonde et al., 2018).  
Geological data conversion by D.E. Kerr, 2012 and 2017  
Geology has been spatially adjusted to fit the updated base.  
Geomatics by S. Eagles and C.D. Stevens

SURFICIAL GEOLOGY  
MISTAKE RIVER

Nunavut  
NTS 56-L  
1:250 000



Cartography by M.J. Baldock  
Scientific editing by A. Weatherston  
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 15 North American Datum 1983  
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 2019, 6°19'W, decreasing 3.2' annually  
Readings vary from 4°21'W in the SW corner to 8°22'E 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 (<https://geoscan.nrcan.gc.ca/>).

Recommended citation  
Geological Survey of Canada, 2019. Surficial geology, Mistake River, Nunavut, NTS 56-L; Geological Survey of Canada, Canadian Geoscience Map 175 (Surficial Data Model v. 2.3.14 conversion of Map 6-1981), scale 1:250 000. <https://doi.org/10.4095/311262>

Geological Survey of Canada  
Canadian Geoscience Maps



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