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., 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

Dyke, A.S., 1993. Landscapes of cold-centred Late Wisconsinan ice caps, Arctic Canada; Progress in Physical Geography: Earth and Environment, v. 17, Issue 2, p. 223–247. https://doi.org/10.1177/030913339301700208

Dyke, A.S., 2000. Surficial geology, Phillips Creek, Baffin Island, Nunavut; Geological Survey of Canada, Map 1961A, scale 1:250 000. https://doi.org/10.4095/211526

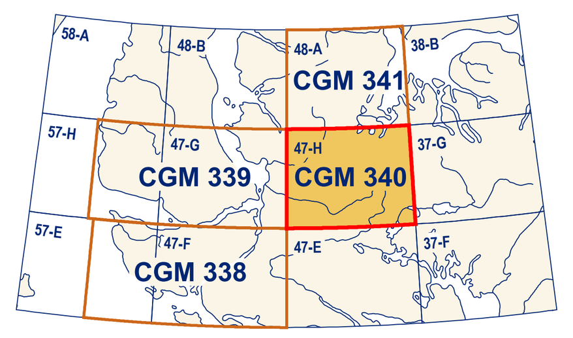
Jackson, G.D. and Sangster, D.F., 1987. Geology and resources potential of a proposed national park, Bylot Island and northwest Baffin Island, Northwest Territories; Geological Survey of Canada, Paper 87-17, 31 p. https://doi.org/10.4095/122369

Abstract

This new surficial geology map product represents the conversion of Map 1961A and its legend, using the Geological Survey of Canada's Surficial Data Model (SDM version 2.3) (Open File 8236). All geoscience knowledge and information from Map 1961A that conformed to the current SDM were maintained during the conversion process. Additional marginal notes on the original publication are not included here. 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 1961A 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 1961A qui sont en conformité avec le modèle de données ont été conservées pendant le processus de conversion. Des notes marginales présentes en complément sur la carte originale ne sont pas incluses ici. 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.

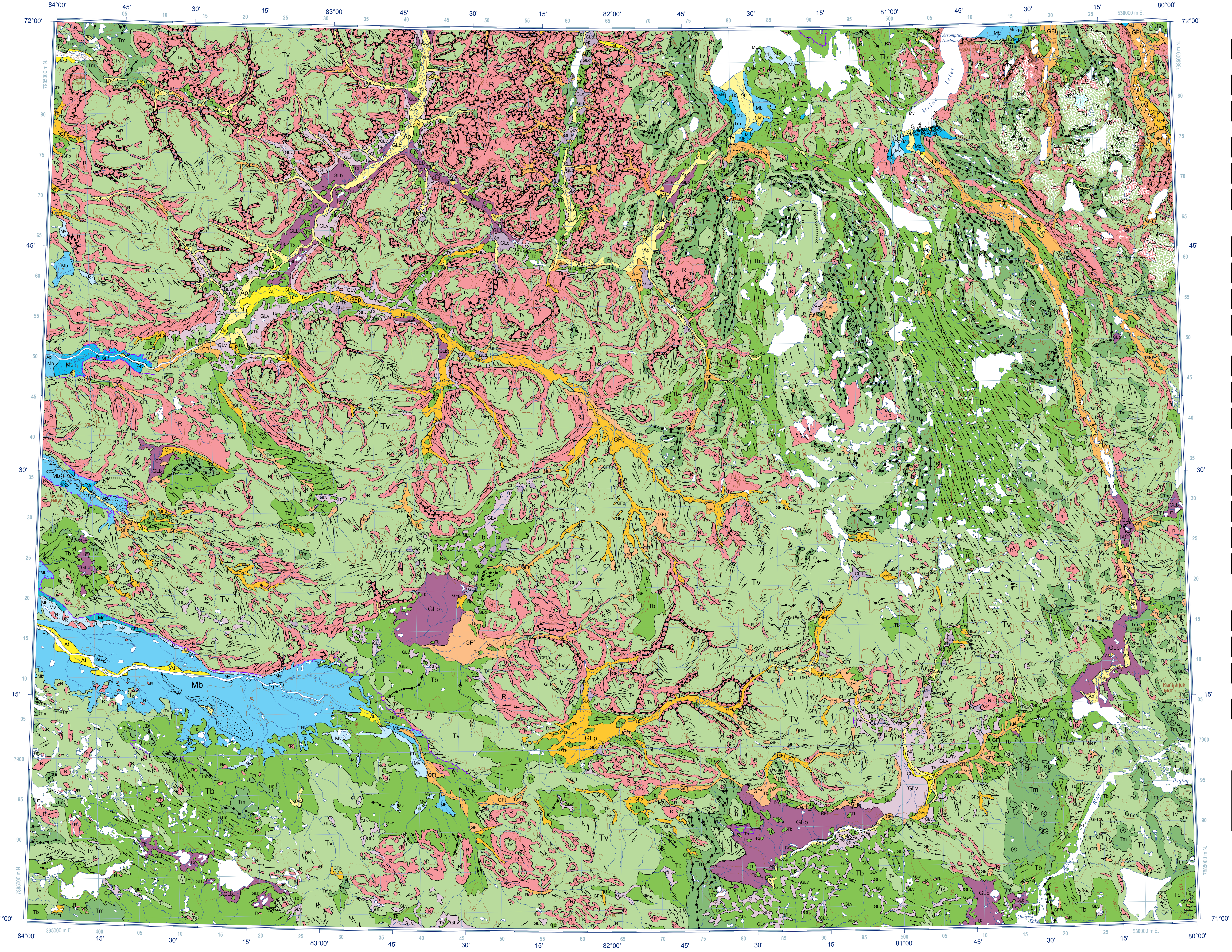


National Topographic System reference and index to adjoining published Geological Survey of Canada maps

Catalogue No. M183-1/340-2017E-PDF
ISBN 978-0-660-23987-3
https://doi.org/10.4095/306430

Natural Resources Canada / Ressources naturelles Canada

CANADIAN GEOSCIENCE MAP 340
SURFICIAL GEOLOGY
PHILLIPS CREEK
Baffin Island, Nunavut
NTS 47-H
1:250 000



QUATERNARY

HOLOCENE

- **I** — **Glacier ice.**

COLLUVIAL DEPOSITS: block and rubble accumulations; 1–50 m thick.

- **Ca** — **Talus scree deposits:** block and rubble accumulations; as much as 50 m thick; active; forming talus (scree) aprons and fans below cliffs resulting from rock falls and debris flows; commonly crossed by debris flow channels and levées.
- **Cg** — **Rock glacier:** talus; generally 10–50 m thick; deformed by active flow of interstitial or buried ice to form rock (talus) glaciers with transverse ridges and furrows, and pits with steep, unstable sides and fronts.

ALLUVIAL SEDIMENTS: alluvium, gravel and sand; 2–20 m thick.

- **Ap** — **Alluvial floodplain sediments:** gravel and sand; 2–20 m thick; active braided floodplains; includes active proglacial outwash.
- **Af** — **Alluvial fan sediments:** gravel and sand; 2–20 m thick; forming fans.
- **At** — **Alluvial terraced sediments:** gravel and sand; 2–20 m thick; forming terraces.

MARINE AND GLACIOMARINE SEDIMENTS: gravel, sand, silt, and clay; 1–20 m thick; deposited in deltaic and beach environments during regression of the postglacial sea.

- **Mr** — **Beach sediments:** gravel and sand; 1–5 m thick; forming ridges and swales.
- **Md** — **Deltaic sediments:** clay, silt, sand, and gravel; 5–20 m thick; forming coarsening upward sequences under dissected terraces.
- **Mv** — **Marine veneer:** silt, clay silt, and fine sand with dropstones; veneer 1–2 m thick; deepwater proglacial environment.
- **Mb** — **Marine blanket:** silt, clay silt, and fine sand with dropstones and minor gravel; 2–10 m thick; deepwater proglacial environment.

GLACIOLACUSTRINE SEDIMENTS: clay, silt, sand, and gravel deposited in glacier dammed lakes in deepwater and deltaic environments.

- **GLd** — **Deltaic sediments:** clay, silt, sand, and gravel; 5–20 m thick; forming coarsening upward sequences under dissected terraces.
- **GLv** — **Glaciolacustrine veneer:** silt, clay silt, and fine sand with dropstones; 1–2 m thick; deepwater proglacial environment.
- **GLb** — **Glaciolacustrine blanket:** silt, clay silt, and fine sand with dropstones; 2–5 m thick; deepwater proglacial environment.

GLACIOFLUVIAL SEDIMENTS: gravel and sand; 1–10 m thick; deposited behind, at, and in front of the ice margin.

- **GFp** — **Outwash plain sediments:** gravel and sand; 1–10 m thick; forming proglacial braided floodplains.
- **GFt** — **Terraced sediments:** gravel and sand; 1–10 m thick; forming proglacial terraces.
- **GFf** — **Outwash fan sediments:** gravel and sand; 1–10 m thick; forming proglacial fans.
- **GFc** — **Ice-contact sediments:** gravel and sand; stratified; 1–5 m thick; forming kames.
- **GFr** — **Esker sediments:** gravel and sand; stratified; 1–5 m thick; forming eskers.

EARLY HOLOCENE AND WISCONSINAN

GLACIAL SEDIMENTS (TILL): nonsorted stony muds; 0.5–60 m thick; deposited in subglacial and ice marginal environments; lithic composition generally reflects underlying bedrock.

- **Tm** — **End moraine complex:** diamicton; 5–60 m high; composed of or mantled by till; end moraines extensively kettled in places; large features mainly cored by debris-rich relict glacier ice.
- **Tv** — **Till veneer:** diamicton; 0.5–2 m thick; discontinuous.
- **Tb** — **Till blanket:** diamicton; 2–10 m thick; forming an undulating blanket with drumlinoids and ribbed moraines in places.

PRE-QUATERNARY

- **R** — **Bedrock, undifferentiated:** rock of various compositions and ages (Jackson and Sangster, 1987); variously modified by glacial erosion during the Quaternary; hilly and hummocky surfaces, ice moulded in places, with lake basins in subglacially scoured regions; smooth surfaces exhibit little or no sign of glacial erosion in peninsular interiors (Dyke, 1993); cliffs resulting from glacial over-steepening.

Table 1. Radiocarbon age.

Map ID	Lab number	Latitude	Longitude	Elevation (m a.s.l.)	Material	Radiocarbon Age (BP)
1	S-3395	71.887608	80.871029	1	Whalebone	990 ± 80
2	S-3517	71.885002	80.889889	6.5	Whalebone	920 ± 130
3	GSC-5289	71.887985	80.836406	32	Shells	5890 ± 80
4	S-3397	71.886987	80.897562	1.5	Whalebone	1070 ± 80
5	GSC-5376	71.886784	80.912223	2.5	Shells	3250 ± 70
6	S-3398	71.886918	80.852058	11.75	Whalebone	2540 ± 90
*	GSC-328			46	Shells	6400 ± 150

* Precise location unknown

Dates are reported in the tables according to the reporting protocols of the various laboratories. All dates on terrestrial materials are normalized to the -25 per mil PDB standard. However, dates on marine materials are reported inconsistently. GSC marine dates are reported with a 400 year reservoir correction. S dates are reported without normalization and without a reservoir correction.

Area covered by perennial icefields during the Little Ice Age
Area of active wind erosion; minor attached dunes
Kettle:
Large
Small
Geological contact, defined
Direction of eroding wind
Limit of submergence:
Marine, defined
Glaciolacustrine, defined
Glaciolacustrine spillway, paleoflow known
Meltwater channel:
Minor, subglacial and proglacial, paleoflow direction known
Lateral, barb on upslope side
Moraine:
Major, lateral
Major, end
Ice-contact scarp
Esker, paleoflow direction known
Drumlinoid, length not mapped to scale
Crag-and-tail, length not mapped to scale
Fluted bedrock, ice flow direction known
Margin of dispersal train, teeth toward plume axis, steep side of teeth face down ice
Bedrock scarp
Striation, ice flow direction known
Dated sample location, radiocarbon, *see* Table 1

Recommended citation
Geological Survey of Canada, 2018. Surficial geology, Phillips Creek, Baffin Island, Nunavut, NTS 47-H; Geological Survey of Canada, Canadian Geoscience Map 340 (preliminary, Surficial Data Model v. 2.3 conversion of Map 1961A), scale 1:250 000. https://doi.org/10.4095/306430

Celebrating 175 yrs
Geological Survey of Canada
Canadian Geoscience Maps

Canada

Author: Geological Survey of Canada

Geology by A.S. Dyke, 1991

Geology conforms to Surficial Data Model v. 2.3

Data conversion by D.E. Kerr, 2016

Geology has been spatially adjusted to fit the updated base.

Geomatics by S. Eagles

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 17. 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

SURFICIAL GEOLOGY
PHILLIPS CREEK
Baffin Island, Nunavut
NTS 47-H
1:250 000

5 0 5 10 15 20 km

Proximity to the North Magnetic Pole causes the magnetic compass to be erratic in this area. Mean magnetic declination 2018, 31°45'W, decreasing 40.8' annually. Readings vary from 28°54'W in the SW corner to 34°14'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 340
SURFICIAL GEOLOGY
PHILLIPS CREEK
Baffin Island, Nunavut
NTS 47-H