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., 2018. 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. 2.3.14, 1 .zip file. https://doi.org/10.4095/308178

Dredge, L.A., 2004a. Surficial geology, McBeth Fiord, west half, central Baffin Island, Nunavut; Geological Survey of Canada, Map 2074A, scale 1:250 000, 1 .zip file. https://doi.org/10.4095/216170

Suggested readings

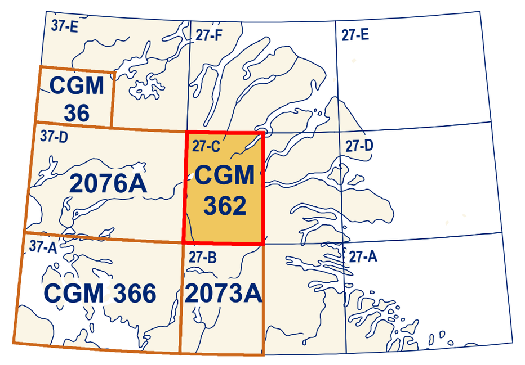
Dredge, L.A., 2004b. Till geochemistry results, central Baffin Island, Nunavut (NTS 37-A, 37-D, 27-B, 27-C); Geological Survey of Canada, Open File 4543, 1 .zip file. https://doi.org/10.4095/214996

Abstract

This new surficial geology map product represents the conversion of GSC Map 2074A (Dredge, 2004a) 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 Map 2074A that conformed to the current SDM were maintained during the conversion process. Some information in the original marginal notes is not included here. Supplementary legacy information was added to complement the converted geoscience data. This consists of striations from Dredge (2004b and unpublished field data). 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 2074A (Dredge, 2004a) 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 2074A qui sont en conformité avec le modèle de données ont été conservées pendant le processus de conversion. Certains éléments d'information contenus dans les notes marginales de la carte originale ne sont pas inclus ici. Des éléments d'information existants ont été ajoutés en complément aux données géoscientifiques converties. Il s'agit de stries glaciaires tirées de Dredge (2004b et données de terrain inédites). 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

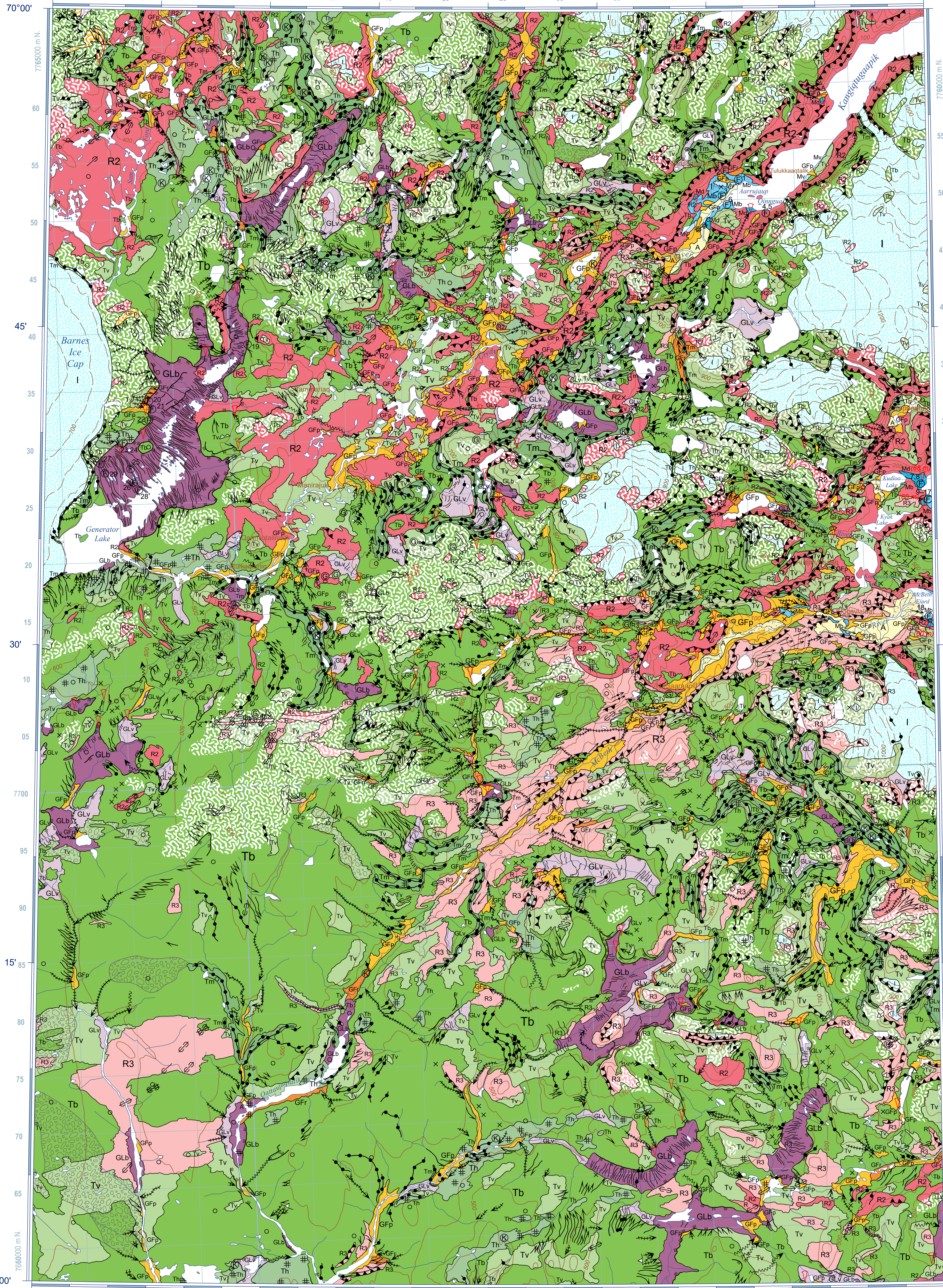
Catalogue No. M183-1/362-2018E-PDF
ISBN 978-0-660-26501-8
https://doi.org/10.4095/308464

NATURAL RESOURCES CANADA
GEOLOGICAL SURVEY OF CANADA
CANADIAN GEOSCIENCE MAP 362
CANADA-NUNAVUT GEOSCIENCE OFFICE
OPEN FILE MAP 2019-01

SURFICIAL GEOLOGY

McBETH FIORD WEST

central Baffin Island, Nunavut
NTS 27-C west
1:250 000



QUATERNARY

HOLOCENE

I — **Glacier ice:** ice; 5–800 m thick; forming ice caps and outlet glaciers.

A — **Alluvial sediments, undifferentiated:** gravel, sand, and boulders; 1–5 m thick; forming nonglacial floodplains, terraces, valley-bottom deposits, and active proglacial outwash.

MARINE SEDIMENTS: sediments deposited during regression of a high postglacial sea.

Md — **Deltaic sediments:** silt, sand, and gravel; sand and gravel topsets grading downwards to foresets of fine-grained sand or silt; 2–15 m thick; sparsely fossiliferous; forming terraces and plains where meltwater streams emptied into the regressing sea.

Mv — **Marine veneer:** silt, sand, and gravel; 0.5–2 m thick; discontinuous cover of littoral and offshore sediments including beach ridges and sea-ice-rafted debris; mimicking surface of underlying till or rock.

Mb — **Marine blanket:** sand and silt with some sea-ice-rafted debris; 2–10 m thick; forming continuous cover of sublittoral and offshore sediments.

GLACIOLACUSTRINE SEDIMENTS: sediments deposited in glacier- or moraine-dammed lakes fronting the ice margin.

GLv — **Glaciolacustrine veneer:** sandy sediments; 0.5–2 m thick; forming plains interspersed with till or rock.

GLb — **Glaciolacustrine blanket:** sand and mud with ice-rafted dropstones; 2–10 m thick; forming flat to undulating plains interspersed with small morainal ridges.

GLACIOFLUVIAL SEDIMENTS: gravel and sand; 2–20 m thick; deposited behind, at, and in front of the ice margin.

GFp — **Outwash plain sediments:** gravel and sand; stratified; 2–15 m thick; locally kettled; grading to deltaic sediments near marine limit; outwash deposited in a proglacial environment as valley trains, braidplains, terraces, and fans.

GFr — **Esker and ice-contact sediments:** sandy to bouldery gravel; poorly stratified or sorted; 5–20 m thick; forming esker ridges and kame hummocks; deposited in a subglacial environment along meltwater corridors.

EARLY HOLOCENE AND WISCONSINAN

GLACIAL SEDIMENTS (TILL): stony diamicton deposits with a pebbly sand or silty sand matrix; generally unsorted; deposited in subglacial and ice-marginal environments; lithic composition generally reflects underlying bedrock type.

Th — **Hummocky till:** diamicton; 2–30 m thick; forming rolling to hummocky terrain; may contain remnant glacial ice.

Tm — **End-moraine complex:** diamicton; 5–60 m thick; extensively kettled in places; forming broadly arcuate ridges that were deposited along ice margins; near glaciers and ice caps this unit may contain or overlie remnant glacial ice.

Tv — **Till veneer:** diamicton; 0.5–2 m thick; discontinuous cover mimicking topography of underlying bedrock.

Tb — **Till blanket:** diamicton; 2–10 m thick; forming undulating plains with fluted or drumlinized areas and areas of boulder fields; deposited mainly in a subglacial environment by basal melting.

PALEOZOIC AND PRECAMBRIAN

R2 — **Igneous bedrock:** granite and gneiss; forming resistant hills commonly overlain by bouldery till with a sandy matrix; mafic and ultramafic rocks, chiefly of the Bravo Lake formation.

R3 — **Metamorphic bedrock:** marble of the Flint Lake formation; commonly forming small outcrops in valleys; weathers to grus and silt; clastic metasedimentary rocks, chiefly psammite, pelite, wacke, and quartzite of the Longstaff Bluff and Dewar Lakes formations; commonly forming plains or ridge-and-valley topography; overlying till commonly has a silty sand matrix.

R — **Bedrock, undifferentiated:** sulphide-bearing black pelite, with oxidized pelite, psammite, and iron-formation of the Astarte River formation; forming rolling plains and some ridge-and-valley topography; overlying till has a silty sand matrix.

Areas of lichen kill by Little Ice Age snowbanks and snowfields
Prominent ice-wedge polygons
Boulder field
Kettle, small
Geological contact, defined
Landslide or rockslide, direction known
Beach crest
Limit of submergence, glaciolacustrine, defined
Overflow channel or spillway from glacial lake
Meltwater channel:
- *Minor, paleoflow known*
- *Minor lateral*

Moraine ridge:
- *Minor, De Geer or sublacustrine moraine*
- *Major, end*

Ice-contact scarp
Esker, paleocurrent direction known
Drumlinoid ridge, length not mapped to scale
Crag-and-tail, length not mapped to scale
Ice-moulded bedrock, direction known, length not mapped to scale
Bedrock scarp
(68 m) Perched delta, paleocurrent unspecified, elevation in metres
River icing or seepage
Kame or conical gravel hill
Striation:
- *Well defined, ice-flow direction unknown*
- *Well defined, ice-flow direction known*

Gossan
Small bedrock outcrop
Holocene fossil locality, with fossil number (*see* Table 1)
Station location, ground observation and sample site

Table 1. Radiocarbon ages.

Fossil Site Number	Lab. Number	Uncorrected radiocarbon age (BP)*	$\delta^{13}C$ (0/00)	Normalized radiocarbon age (BP)**	Latitude	Longitude	Elevation (m a.s.l.)	Material	Species
1	I-1835	1860 ± 110	—	—	69.867573	70.428974	50	Peat	—
2	I-1932	7940 ± 130	—	—	69.874806	70.460436	51	Shells	*Clinocardium ciliatum*
3	GSC-583	2770 ± 140	—	—	69.854842	70.466917	6	Shells	*Hiatella arctica*
4	GSC-631	6220 ± 140	—	—	69.840922	70.367316	31	Shells	*Hiatella arctica*
5	GSC-584	3450 ± 170	—	—	69.840922	70.367316	6	Plant detritus	—
6	I-1556	6420 ± 140	—	—	69.848045	70.455494	46	Shells	*Macoma baltica*
7	I-1602	7900 ± 210	—	—	69.626749	70.024083	33	Shells	*Chlamys islandicus*
8	I-1673	7970 ± 340	—	—	69.626749	70.024083	34	Shells	—
9	I-1554	7030 ± 190	—	—	69.614443	70.007864	26	Shells	*Chlamys islandicus*
10	I-1555	2800 ± 140	—	—	69.614443	70.007864	5	Shells	*Mytilus edulis*
11	I-1596	6150 ± 170	—	—	69.614443	70.007864	31	Shells	*Mytilus edulis*
12	I-1597	4090 ± 150	—	—	69.614443	70.007864	14	Shells	*Mytilus edulis, Macoma baltica*
13	I-1598	7200 ± 150	—	—	69.614443	70.007864	41	Shells	*Clinocardium ciliatum*
14	I-1599	2990 ± 140	—	—	69.614443	70.007864	8	Shells	*Macoma baltica*
15	I-1600	3520 ± 230	—	—	69.614443	70.007864	11	Shells	*Mya pseudoarenaria*
16	I-1601	3530 ± 130	—	—	69.614443	70.007864	13	Shells	*Mytilus edulis*
17	I-1672	7080 ± 170	—	—	69.614443	70.007864	35	Shells	*Mytilus edulis, Astarte* sp.
18	I-2696	5190 ± 120	—	—	69.522439	70.010380	29	Shells	—
19	GSC-1087	3650 ± 140	-22.2	3830 ± 140	69.737952	71.545656	476	Plant detritus	Moss
20	GSC-1244	3690 ± 250	-22.7	3730 ± 250	69.692507	71.767524	476	Plant detritus	Moss
21	GSC-1621	2240 ± 390	—	—	69.686213	71.760189	476	Plant detritus	Moss
22	GSC-1276	3080 ± 170	-24.1	3090 ± 170	69.677506	71.767613	476	Plant detritus	Moss
23	GSC-1168	4600 ± 290	—	—	69.659460	71.823669	476	Plant detritus	Moss
24	GSC-1304	2480 ± 151	-22.1	2520 ± 151	69.659460	71.823669	476	Plant detritus	Moss
25	GSC-1315	2600 ± 150	-23.8	2620 ± 150	69.639048	71.807347	455	Plant detritus	Moss
26	GSC-1622	2180 ± 240	—	—	69.628351	71.799238	423	Plant detritus	Moss
27	GSC-1325	1480 ± 160	-21.7	1530 ± 160	69.642519	71.875435	423	Plant detritus	Moss
28	GSC-1177	1560 ± 140	-19.2	1660 ± 140	69.622529	71.787483	412	Plant detritus	Moss
29	GSC-1239	1240 ± 210	-23.2	1270 ± 210	69.635330	71.864779	403	Plant detritus	Moss

* Uncorrected radiocarbon age, age not corrected for isotopic fractionation or for a marine reservoir effect.
** Normalized radiocarbon age, normalized to $\delta^{13}C$ = -25‰ PDB.

Recommended citation
Geological Survey of Canada, 2019. Surficial geology, McBeth Fiord west, central Baffin Island, Nunavut, NTS 27-C west; Geological Survey of Canada, Canadian Geoscience Map 362 (Surficial Data Model v. 2.3.14 conversion of Map 2074A); Canada-Nunavut Geoscience Office, Open File Map 2019-01, scale 1:250 000. https://doi.org/10.4095/308464

GSC CANADIAN GEOSCIENCE MAP 362 • CNGO OPEN FILE MAP 2019-01

Geological Survey of Canada
Canadian Geoscience Maps

Author: Geological Survey of Canada

Geology based on fieldwork by L.A. Dredge, E. Little, P. Toole, H. Bonish, R. Chouinard, J. Severin, and A. Tizzard, 2001 and 2002

Geological compilation by L.A. Dredge, 2003

Geology conforms to Surficial Data Model v. 2.3.14 (Deblonde et al., 2018).

Geological data conversion by D.E. Kerr, 2016 and 2017

Geology has been spatially adjusted to fit the updated base.

Geomatics by S. Eagles and C.D. Stevens

SURFICIAL GEOLOGY
McBETH FIORD WEST
central Baffin Island, Nunavut
NTS 27-C west
1:250 000

5 0 5 10 15 20 km

Cartography by D. Viner

Scientific editing by A. Weatherston

Joint initiative of the Geological Survey of Canada and the Canada-Nunavut Geoscience Office, conducted under the auspices of the Information Management Project as part of Natural Resources Canada's Geo-Mapping for Energy and Minerals (GEM) program

Map projection Universal Transverse Mercator, zone 19
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

Mean magnetic declination 2019, 33°13'W, decreasing 35.0' annually
Readings vary from 32°17'W in the SW corner to 34°05'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 (https://geoscan.nrcan.gc.ca/).

NATURAL RESOURCES CANADA
GEOLOGICAL SURVEY OF CANADA
CANADIAN GEOSCIENCE MAP 362
CANADA-NUNAVUT GEOSCIENCE OFFICE
OPEN FILE MAP 2019-01
SURFICIAL GEOLOGY
McBETH FIORD WEST
central Baffin Island, Nunavut
NTS 27-C west