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

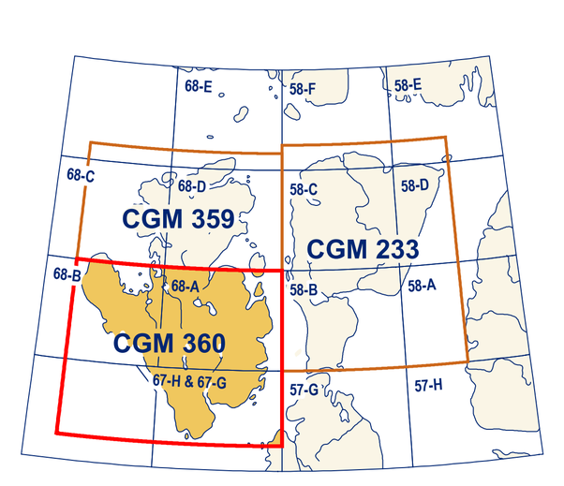
Morris, T.F. and Dyke, A.S., 1991. Surficial geology, southern Prince of Wales Island, District of Franklin, Northwest Territories; Geological Survey of Canada, Map 1690A, scale 1:250 000. https://doi.org/10.4095/133954

Abstract

This new surficial geology map product represents the conversion of part of GSC Map 1690A (Morris and Dyke, 1991) 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 1690A 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 d'une partie de la Carte 1690A (Morris et Dyke, 1991) et de la légende de celle-ci, 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 1690A 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 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 360

SURFICIAL GEOLOGY

SOUTHERN PRINCE OF WALES ISLAND

Nunavut

NTS 68-A and parts of 68-B, 67-H & 67-G

1:250 000

Legend

QUATERNARY

POST-LAST GLACIATION

NONGLACIAL ENVIRONMENT

- **Ap** — **Alluvial floodplain sediments:** gravel and sand; 2–20 m thick; forming braided floodplains.
- **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 low terraces.

MARINE 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, sand, silt, and gravel; coarsening-upward sequences; 5–20 m thick, forming dissected terraces.

LAST GLACIATION

POSTGLACIAL AND GLACIAL ENVIRONMENT

GLACIOMARINE SEDIMENTS: clay, silt, sand, and gravel; 1–30 m thick; deposited in deep-water ice-marginal and proglacial environments while the sea stood at or near marine limit.

- **GMm** — **Submarine moraine complex:** clay, silt, sand, and minor gravel; 10–30 m thick; ice-contact sediment; forming end-moraine ridges, extensively kettled and dissected in places.
- **GMv** — **Marine veneer:** silt, clay silt, and fine sand; 1–2 m thick; deep-water proglacial silt veneers.
- **GMb** — **Marine blanket:** silt, clay silt, and fine sand with minor gravel, diamicton beds, and dropstones; 2–30 m thick; deep-water proglacial silt forming plains and blanketing low-angle slopes; extensively disrupted by thermokarst in places.

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

- **GFp** — **Proglacial outwash-plain sediments:** gravel and sand; 1–5 m thick; forming braided floodplains.
- **GFf1** — **Proglacial subaerial outwash-fan sediments:** gravel and sand; 1–5 m thick; forming fans.
- **GFh** — **Hummocky sediments:** gravel and sand; stratified drift; 5–10 m thick; ice-contact sediments deposited as kames.
- **GFr** — **Esker sediments:** gravel and sand; stratified drift; 5–10 m thick; ice-contact sediments deposited as esker ridges.

GLACIAL ENVIRONMENT

GLACIAL SEDIMENTS (TILL): stony muds; nonsorted; 0.5–60 m thick; deposited or remoulded during three main regional ice-flow phases; occurring as six distinct morphological facies; main flow phases are oriented north-northwestward, unit Tr (phase 1, older flow); northward curving to northwestward, unit Tr (phase 2, intermediate flow); and eastward, unit Tb (phase 3, younger flow).

- **Tm** — **End moraine complex:** diamicton; variable thickness; 5–60 m high; mantled by till; ridges extensively kettled in places; formed during deglaciation after third (youngest) phase of regional ice flow.
- **Tr** — **Ridged moraine:** diamicton; variable thickness; 2–5 m high; short, sinuous, subparallel ridges; ribbed moraine field mantled by till; associated with northwestward ice flow of phases 1 and 2 (older and intermediate flows).
- **Ts** — **Streamlined till:** diamicton; variable thickness; drumlinoid ridges; 5–30 m high; mantled by till; associated with intermediate and older flows.
- **Tv** — **Till veneer:** diamicton; 0.5–2 m thick; discontinuous; surface mimics form of underlying rock surface; associated with various regional ice-flow phases.
- **Tb** — **Till blanket:** diamicton; 2–5 m thick; forming a blanket on broad interfluves and fields/plain of streamlined drumlinoid ridges a few metres high in lower areas; associated with younger flow.
- **T** — **Till plain, undifferentiated:** diamicton; variable thickness; with megaflutings, kilometres wide, 5–10 km long, and only a few metres high; associated with older flow.

PRE-QUATERNARY

BEDROCK: rock of various lithologies and ages; hilly and hummocky, with basins, steep slopes, and cliffs, and ice-moulded forms produced by glacial scouring, and with channels cut by meltwater; includes patches of thin till and minor scree aprons along coastal cliffs.

- **R1** — **Sedimentary bedrock:** limestone, dolostone, mudstone, sandstone, and conglomerate of lower Paleozoic age; surface commonly frost shattered to platy felsenmeer.
- **R** — **Bedrock, undifferentiated:** igneous and metamorphic rocks; gneiss with minor marble and quartzite of Precambrian age; joint blocks slightly displaced by frost heave but essentially unweathered.

K — *Kettle, large*

Geological contact:
- *Defined*
- *Approximate, gradational*

Retrogressive thaw flowslide

Iceberg scour

Meltwater channel:
- *Minor, subglacial and proglacial, paleoflow known*
- *Lateral, barb on upslope side*
- *Major, subglacial and proglacial, paleoflow unspecified*

Moraine:
- *Minor, ribbed*
- *Major, lateral*
- *Major, end*

Ice-contact scarp

Esker:
- *Paleoflow not inferred*
- *Paleoflow inferred*

Drumlinoid, length not mapped to scale

Drumlin:
- *Large, length mapped to scale*
- *Small, length not mapped to scale*

Crag-and-tail, length not mapped to scale

Glacial grooving of till surface, ice-flow direction unspecified, length not mapped to scale

Fluted bedrock, ice-flow direction known, length not mapped to scale

Margin of dispersal plume; teeth toward plume axis, steep side of teeth face down ice

Bedrock scarp

Kame

Sample location:
- *Dated, radiocarbon*
- *Till*

Recommended citation
Geological Survey of Canada, 2018. Surficial geology, southern Prince of Wales Island, Nunavut, NTS 68-A and parts of 68-B, 67-H & 67-G; Geological Survey of Canada, Canadian Geoscience Map 360 (Surficial Data Model v. 2.3.14 conversion of part of Map 1690A), scale 1:250 000. https://doi.org/10.4095/308364

CANADIAN GEOSCIENCE MAP 360

Geological Survey of Canada
Canadian Geoscience Maps

Author: Geological Survey of Canada

Geology by T.F Morris and A.S. Dyke, 1984, 1985, and 1986

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

Data conversion by D.E. Kerr, 2015, 2016, and 2017

Geology has been spatially adjusted to fit the updated base.

Geomatics by S. Pearce, S. van Stavel, S. Eagles, R. Cocking, and M. Smith

Cartography by N. Côté

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

SURFICIAL GEOLOGY

SOUTHERN PRINCE OF WALES ISLAND

Nunavut

NTS 68-A and parts of 68-B, 67-H & 67-G

1:250 000

5 0 5 10 15 20 km

Map projection Universal Transverse Mercator, zone 14
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 2018, 7°10'W, increasing 1.1' annually
Readings vary from 0°43'E in the SW corner to 15°52'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/).

Canada

CANADIAN GEOSCIENCE MAP 360

SURFICIAL GEOLOGY

SOUTHERN PRINCE OF WALES ISLAND

Nunavut

NTS 68-A and parts of 68-B, 67-H & 67-G