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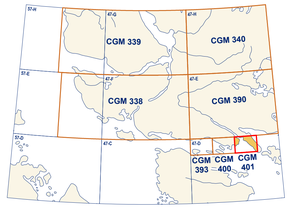
Abstract

This new surficial geology map product represents the conversion of Open File 1630 (Dyke, 2004) 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 Open File 1630 that conformed to the 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 du Dossier public 1630 (Dyke, 2004) 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 du Dossier public 1630 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

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Natural Resources Canada | Ressources naturelles Canada

CANADIAN GEOSCIENCE MAP 401

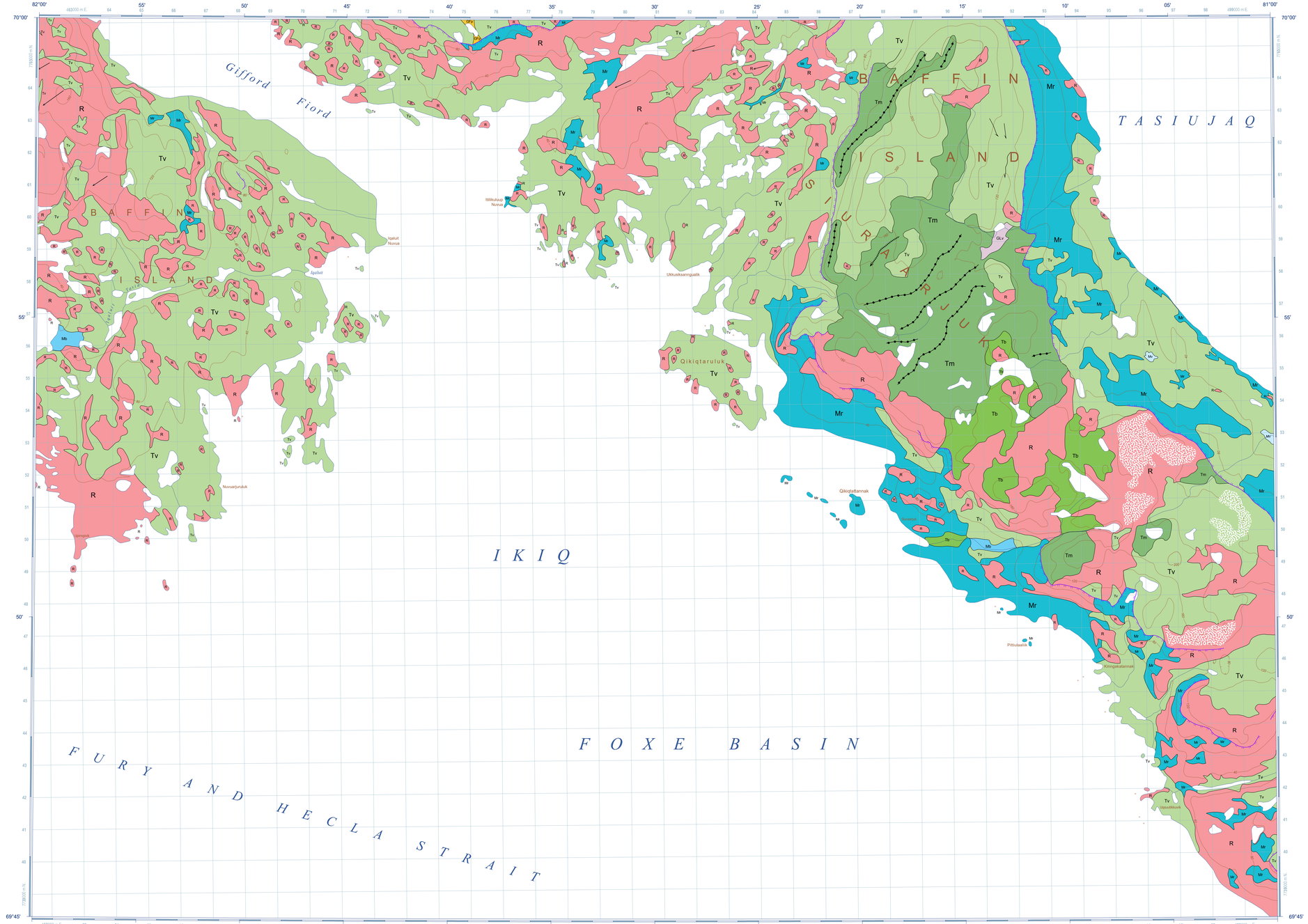
SURFICIAL GEOLOGY

SIURAARJUK

Baffin Island, Nunavut

NTS 47-D/15

1:50 000



QUATERNARY

HOLOCENE

MARINE AND GLACIOMARINE SEDIMENTS: gravel, sand, silt, and clay; 1 to 10 m thick; deposited in deltaic and beach environments during regression of the postglacial sea.

Mr — **Beach sediments:** gravel and sand; 1 to 5 m thick; forming ridges and swales.

Mv — **Marine veneer:** silt, clay silt, and fine sand with dropstones; 1 to 2 m thick; deposited in deep-water proglacial environments.

Mb — **Marine blanket:** silt, clay silt, and fine sand with dropstones and minor gravel; 2 to 10 m thick; deposited in deep-water proglacial environments.

GLACIOLACUSTRINE SEDIMENTS: clay, silt, sand, and gravel; deposited in glacier-dammed lakes in deep-water, beach, and deltaic environments.

GLv — **Glaciolacustrine veneer:** silt, clay silt, and fine sand with dropstones; 1 to 2 m thick; deposited in deep-water proglacial environments.

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

GFp — **Outwash plain sediments:** gravel and sand; 1 to 10 m thick; proglacial outwash forming braided floodplains.

EARLY HOLOCENE AND WISCONSINAN

TILL: nonsorted stony muds; 0.5 to 60 m thick; deposited in subglacial and ice-marginal environments; lithic composition generally reflects underlying bedrock.

Tm — **End moraines:** diamicton; 5 to 60 m thick; moraine complex 5 to 60 m high, composed of, or mantled by, till; extensively kettled in places; large features mainly cored by debris-rich relict glacier ice.

Tv — **Till veneer:** diamicton; 0.5 to 2 m thick; discontinuous.

Tb — **Till blanket:** diamicton; 2 to 10 m thick; forming an undulating blanket with 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 and with patchy till cover; hilly and hummocky surfaces, ice moulded in places, with lake basins in subglacially scoured regions; smooth surfaces exhibiting little or no sign of glacial erosion in peninsular interiors (Dyke, 1993); cliffs resulting from glacial overdeepening; in places veneered by thin till, commonly bouldery.

Area covered by perennial ice during the Little Ice Age

Geological contact:
- *Defined*
- *Approximate*

Limit of marine submergence, defined

Meltwater channel:
- *Minor, subglacial and proglacial, paleocurrent direction known*
- *Lateral*

Major end moraine

Fluted bedrock, direction known

Recommended citation
Geological Survey of Canada, 2023. Surficial geology, Siuraarjuk, Baffin Island, Nunavut, NTS 47-D/15; Geological Survey of Canada, Canadian Geoscience Map 401 (Surficial Data Model v. 2.3.14 conversion of Open File 1630), scale 1:50 000. https://doi.org/10.4095/314769

Geological Survey of Canada
Canadian Geoscience Maps

Canada

Author: Geological Survey of Canada

Geology by A.S. Dyke, 2002

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

Geological data conversion by D.E. Kerr, 2017 and 2018

Field data provided by De Beers Canada Inc., 2002

Geomatics by C.D. Stevens, K. McNeil, and S.Y. Keskinler

Cartography by M.J. Baldock

Scientific editing by L. Ewert

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CANADIAN GEOSCIENCE MAP 401

SURFICIAL GEOLOGY

SIURAARJUK

Baffin Island, Nunavut

NTS 47-D/15

1:50 000

1 0 1 2 3 4 km

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

Proximity to the North Magnetic Pole causes the magnetic compass to be erratic in this area.
Magnetic declination 2023, 25°01'W, decreasing 41.4' annually

This map is not to be used for navigational purposes.

The Geological Survey of Canada welcomes corrections or additional information from users (gscpublications-cgcpublications@nrcan-rncan.gc.ca).

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/).

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