

References and additional ice-flow data

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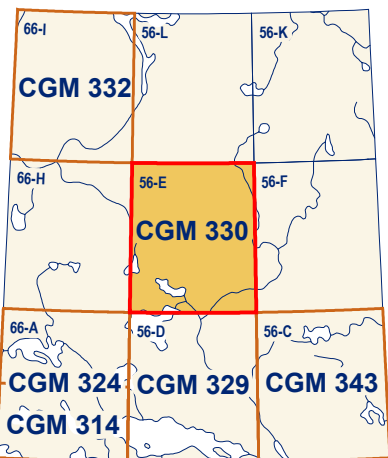
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Abstract

This new surficial geology map product represents the conversion of Map 3-1981 (Thomas and Dyke, 1981) and its legend, using the Geological Survey of Canada's Surficial Data Model (SDM version 2.3) (Deblonde et al., 2017). All geoscience knowledge and information from Map 3-1981 that conformed to the current SDM were maintained during the conversion process. Supplementary, limited legacy information was added to complement the converted geoscience data. This consists of glacial striations from Wright (1967) and additional striations and field data from Utting and MacMartin (2004) and McMartin et al. (2013); these are identified in the accompanying geodatabase. 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 3-1981 (Thomas et Dyke, 1981) 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 (Deblonde et al., 2017). Toutes les connaissances et l'information de nature géoscientifique de la Carte 3-1981 qui sont en conformité avec le modèle de données ont été conservées pendant le processus de conversion. Des données complémentaires ont été ajoutées pour compléter les données géoscientifiques converties. Il s'agit de stries glaciaires tirées de Wright (1967) et des stries et données de terrain de Utting et McMartin (2004) et McMartin et al., (2013). Ces entités sont identifiées dans la géodatabase du présent produit cartographique. 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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CANADIAN GEOSCIENCE MAP 330

SURFICIAL GEOLOGY

WOODBURN LAKE

Nunavut

NTS 56-E

1:250 000



QUATERNARY

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 fine gravel; variable thickness; active, seasonally flooded; unvegetated.

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PROGLACIAL AND GLACIAL ENVIRONMENT

GLACIOLACUSTRINE SEDIMENTS: silty fine sand to gravely coarse sand; poorly sorted and stratified; generally 1 to 2 m, but up to 10 m thick; deposited in proglacial lakes.

Beach sediments: sand, with well developed cross-stratification; variable thickness; occurs as beaches and terraces.

Littoral and nearshore sediments: sand, with well developed cross-stratification; commonly less than 1 m thick; occurs as beaches and terraces overlying bedrock.

GLACIOFLUVIAL SEDIMENTS: sand and gravel; massive to stratified; variable thickness; water-sorted sediments deposited as a result of meltwater flow.

Glaciofluvial 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.

Glaciofluvial veneer: sand and gravel; irregular to cross-stratified with poor to moderate sorting; commonly less than 1 m thick; overlying bedrock, occurs as ice-contact deltas, sinuous ridges, isolated hummocks, local blanket deposits, and esker and kame complexes.

Glaciofluvial sediments, undifferentiated: sand and gravel; massive to well stratified and sorted with smooth, flat to inclined surfaces; up to 70 m thick; occurs as deltas, fans, or terraced valley-fill deposits.

GLr
GLn

GLACIAL ENVIRONMENT

Till veneer: silty, gravely sand diamicton; commonly less than 1 m thick; overlies bedrock; when lag deposit overlay is present, the upper metre of till is abnormally sandy due to either removal of fines by wave action or intermixing of marine, glaciolacustrine, or glaciofluvial sand.

Till blanket: silty, gravely sand (diamicton) with less than 10% clay; boulders up to 2 m long common on the surface; nonsorted, nonstratified, compact but un lithified; generally 7 m up to 20 m thick; occurs mainly as blanket on underlying bedrock or as hummocks and ridges (moraines); where reworked sediment 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

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

Reworked sediments, on till veneer

Complex units: two map-unit designators are used in cases where the surficial cover forms a complex area and the map units are too small to be mapped individually, yet constitute a significant areal extent of the total polygon (e.g. Tv/R designates an area of till veneer with numerous small outcrops). In such instances a dot (.) is used to separate the map-unit designator.

Stratigraphic relationship: a stratigraphic relationship is shown with two map-unit designators separated by a slash (/) (e.g. GFv/R designates glaciofluvial veneer overlying bedrock).

Kettle

Geological contact, defined

Minor meltwater channel:

Paleocurrent direction unknown

Paleocurrent direction known

Moraine ridge:

Minor

Major

Esker, paleocurrent direction known

Drumlinoid, length not mapped to scale

Crag-and-tail, length not mapped to scale

Striation:

Ice flow poorly defined, direction known

Ice flow well defined, direction unknown

Ice flow well defined, direction known

Crossed (1 = older, 2 = younger)

Station location:

Remote observation

Ground observation

Till sample location

Recommended citation
Geological Survey of Canada, 2018. Surficial geology, Woodburn Lake, Nunavut, NTS 56-E; Geological Survey of Canada, Canadian Geoscience Map 330 (Surficial Data Model v. 2.3 conversion of Map 3-1981), scale 1:250 000. <https://doi.org/10.4095/305983>

CANADIAN GEOSCIENCE MAP 330

SURFICIAL GEOLOGY
WOODBURN LAKE

Nunavut

NTS 56-E

1:250 000

Author: Geological Survey of Canada

Geology by R.D. Thomas (east half) and A.S. Dyke (west half), 1976, 1977

Geological compilation by R.D. Thomas, 1981

Geology conforms to Surficial Data Model v. 2.3 (Deblonde et al., 2017).

Data conversion by D.E. Kerr, 2012, 2016

Geology has been spatially adjusted to fit the updated base.

Geomatics by QSP Geographics Inc. and C. Lai

Cartography by D. Viner

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

Mean magnetic declination 2018, 5°21'W, decreasing 2.1' annually
Readings vary from 3°28'W in the SW corner to 7°19'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/>).

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