Natural Resources Canada | Ressources naturelles Canada

2nd Edition

CANADIAN GEOSCIENCE MAP 36

SURFICIAL GEOLOGY

CONN LAKE (SOUTHWEST)

Baffin Island, Nunavut
NTS 37-E/3, NTS 37-E/4, NTS 37-E/5, and
NTS 37-E/6

Map Information Document

Preliminary

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ABSTRACT

The southwest part of the Conn Lake map sheet lies within the Baffin Uplands Physiographic Region, where bedrock is extensively covered by thick glacial deposits. Some areas exhibiting scour were eroded by active, warm-based ice for longer periods of time than regions of cold-based ice. A northeastward early Holocene flow is associated with ice in Foxe Basin to the northeast. Four phases of ice flow were recognized. The Last Glacial maximum relates to phase 1, northeastward, when the region was covered by actively eroding warm-based ice. The second is a north-northeastward flow during the early stages of the Barnes Ice Cap. The next two phases (a later readvance, phase 3, and continued deglaciation, phase 4) are thought to relate to the proto-Barnes Ice Cap.

RÉSUMÉ

La partie sud-ouest du feuillet cartographique de Conn Lake se situe dans la région physiographique des hautes terres de Baffin, où le socle rocheux est largement recouvert d'épais dépôts glaciaires. Quelques secteurs montrant un affouillement glaciaire rendent compte d'une érosion par un glacier actif à base chaude sur de plus longues périodes que des régions occupées par un glacier à base froide. Un écoulement vers le nord-est à l'Holocène inférieur est associé à la glace présente dans le bassin Foxe au nord-est. Quatre phases d'écoulement glaciaire ont été distinguées. Le dernier pléniglaciaire se rapporte à la phase 1, où l'écoulement s'effectuait vers le nord-est, quand la région a été recouverte d'un glacier à base chaude à action érosive. La seconde phase correspond à un écoulement dirigé vers le nord–nord-est lors des premiers stades de formation de la calotte glaciaire de Barnes. Les deux phases suivantes (une réavancée ultérieure, phase 3, et la poursuite de la déglaciation, phase 4) seraient reliées à la protocalotte glaciaire de Barnes.

ABOUT THE MAP

General Information

Authors: D.J. Utting, E.C. Little and D.E. Kerr

Geology based on aerial photograph interpretation and fieldwork by D.J. Utting and E.C. Little in 2005, with additional air photo interpretation by D.E. Kerr in 2011.

Geology conforms to Surficial Data Model v. 2.0

Data conversion by D.E. Kerr, 2015

Geomatics and cartography by G.S. Hanna

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

Map projection Universal Transverse Mercator, zone 18. North American Datum 1983

Base map at the scale of 1:50 000 from Natural Resources Canada, with modifications. Elevations above mean sea level are expressed in metres (NTS 37-E/5 and NTS 37-E/4) and feet (NTS 37-E/6 and NTS 37-E/3)

Proximity to the North Magnetic Pole causes the magnetic compass to be erratic in this area.

Mean magnetic declination 2015, 35°18'W, decreasing 39.1' annually. Readings vary from 34°26'W in the SW corner to 36°06'W in the NE corner of the map
This map is not to be used for navigational purposes.

Title photograph: Glaciofluvial outwash sediments dissected by Meltwater channels, adjacent to Barnes Ice Cap, Baffin Island, Nunavut.
Photograph by D.J. Utting. 2012-004

The Geological Survey of Canada welcomes corrections or additional information from users

Data may include additional observations not portrayed on this map.
See documentation accompanying the data.

This publication is available for free download through
GEOSCAN (http://geoscan.nrcan.gc.ca/)

Preliminary publications in this series have not been scientifically edited.

Map Viewing Files

The published map is distributed as a Portable Document File (PDF), and may contain a subset of the overall geological data for legibility reasons at the publication scale.

About the Geology

Author Contact

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Coordinate System

Projection: Universal Transverse Mercator
Units: metres
Zone: 18
Horizontal Datum: NAD83
Vertical Datum: mean sea level

Bounding Coordinates

Western longitude: 76°00’00”W
Eastern longitude: 74°00’00”W
Northern latitude 70°30’00”N
Southern latitude: 70°00’00”N

Data Model Information

Surficial

The Geological Survey of Canada (GSC) through the Geomapping for Energy and Minerals Program (GEM) has undertaken the Geological Map Flow to develop protocols for the collection, management (compilation, interpretation), and dissemination of surficial and bedrock geology data and map information. To this end, a data model has been created.

The Surficial Data Model (SDM) was designed using ESRI geodatabase architecture. The XML workspace document provided can be imported into a geodatabase, and the geodatabase will then be populated with the feature datasets, feature classes, tables, relationship classes, subtypes and domains.

Shapefile and table (.dbf) versions of the data are included within the data. Column names have been simplified and the text values have been maintained within the shapefile attributes. The direction columns are numerical, to display rotation for points, and the symbol fields will hold the correct values to be matched to the appropriate style file.

For a more in depth description of the data model please refer to the official publication:

Deblonde, C., Plouffe, A., Eagles, S., Everett, D., Huntley, D.H., Inglis, E., Kerr, D.E., Moore, A., Parent, M., Robertson, L., Smith, I.R., St-Onge, D.A., and Weatherston, A., 2014. Science language for an integrated Geological Survey of Canada data model for surficial geology maps, version 2.0; Geological Survey of Canada, Open File 7631, 464 p. doi:10.4095/294225

LICENCE AGREEMENT

ACCORD DE LICENCE