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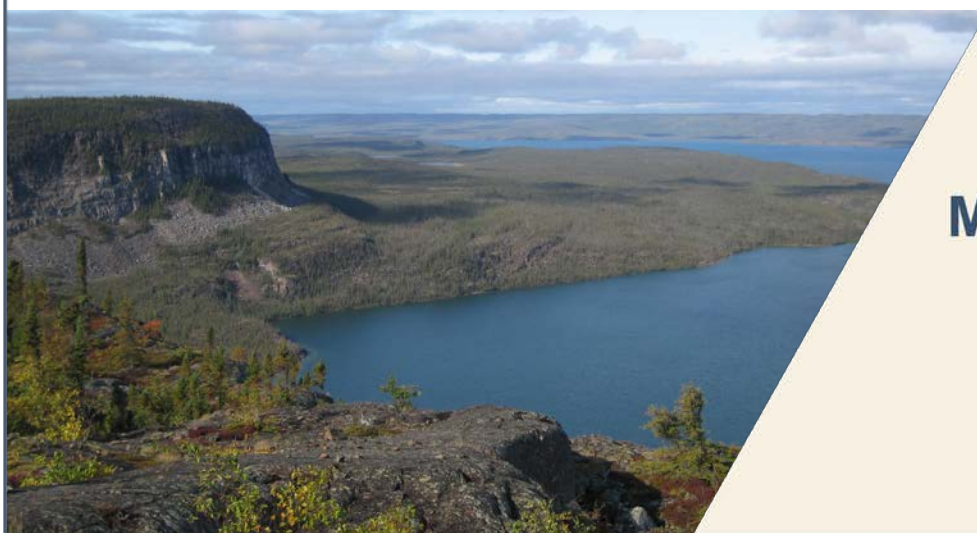
2nd  
EDITION

# CANADIAN GEOSCIENCE MAP 137

## SURFICIAL GEOLOGY

# SNOWDRIFT

Northwest Territories, NTS 75-L



Map Information  
Document

Preliminary



Canadian  
Geoscience Maps

2014

Canada

## **PUBLICATION**

### **Map Number**

Natural Resources Canada, Geological Survey of Canada  
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### **Title**

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### **Scale**

1:125 000

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### **Cover Illustration**

Bedrock escarpment, McLeod Bay, Great Slave Lake. Photograph by R.D. Knight. 2013-206

## **ABSTRACT**

The Snowdrift map area is characterized by predominantly glaciated, scoured and washed bedrock terrain. The more elevated areas north and south of the East Arm have isolated deposits of till veneer and blanket. Within the East Arm, some low lying depressions between bedrock ridges are infilled by glaciolacustrine sediments, with various colluvial deposits covering the steepest slopes. Glaciofluvial complexes consisting of eskers, ice-contact sediments and outwash, trend southwestward in the north and westward in the southern map areas. The Snowdrift River valley and its tributaries are predominantly infilled by terraced and floodplain alluvial sediments, and ridged and outwash glaciofluvial sediments, some with active dunes. The last ice flow recorded by glacial striae, fluted bedrock and crag-and-tails, was generally southwestward to westward, in the extreme southeast region of the map area. At various elevations, evidence of glacial Lake McConnell is found: isolated glaciolacustrine deltas at 350 m, 335 m, 320 m, 275 m, 260 m; washing limits at 335 m

and 320 m; and raised beaches and wave-cut terraces at 335 m, 320 m, 305 m, 285 m, 228 m, 213 m, 200 m, 183 m and 168 m a.s.l.

## **RÉSUMÉ**

La région de la carte Snowdrift est caractérisée par un terrain rocheux glaciaire découpé et affouillé. Dans les zones plus élevées au nord et au sud du Bras Est, se trouvent des dépôts isolés sous forme de placages et de nappes de till. Dans le Bras Est, quelques dépressions de faible altitude entre des crêtes rocheuses sont remplies de sédiments glaciolacustres, tandis que divers dépôts colluviaux couvrent les pentes les plus abruptes. Des complexes fluvioglaciaires comprenant des eskers, des sédiments de contact glaciaire et des dépôts d'épandage fluvioglaciaire ont une orientation vers le sud-ouest dans la partie nord de la région de la carte, et vers l'ouest, dans la partie sud. La vallée de la rivière Snowdrift et ses vallées affluentes sont surtout occupées par des sédiments alluviaux de plaines d'inondation et en terrasses, ainsi que par des crêtes de sédiments et des sédiments d'épandage fluvioglaciaire, certains comportant des dunes vives. Le dernier écoulement glaciaire, dont témoignent les stries glaciaires, la roche cannelée et les têtards, avait une orientation sud-ouest à ouest dans la partie à l'extrême sud-est de la région de la carte. À diverses altitudes se trouvent des indices de la présence du lac glaciaire McConnell: deltas glaciolacustres isolés à 350 m, 335 m, 320 m, 275 m, 260 m; limites de l'affouillement à 335 m et 320 m; plages soulevées et plateformes littorales d'érosion à 335 m, 320 m, 305 m, 285 m, 228 m, 213 m, 200 m, 183 m et 168 m au-dessus du niveau de la mer.

## **ABOUT THE MAP**

### **General Information**

Authors: D.E. Kerr, R.D. Knight, D.R. Sharpe, D.I. Cummings, and B.A. Kjarsgaard

Geology based on aerial photograph interpretation by D.E. Kerr, 2008, 2009, 2012, and 2013 with field work by D.E. Kerr, R.D. Knight, D.R. Sharpe, D.I. Cummings and B.A. Kjarsgaard, 2008; D.E. Kerr and R.D. Knight, 2009. Geology of the northwest and southwest map sheet based on aerial photograph interpretation only. Related geological data can be found in Wright et al., (ed.), 2013.

Geology conforms to Surficial Data Model v. 1.2

Geomatics by L. Robertson

Cartography by L. Robertson and R. Chan

Initiative of the Geological Survey of Canada, conducted under the auspices of the Mineral and Energy Resources Assessment (MERA) for the Proposed East Arm National Park and the Tri Territorial Surficial Database Project as part of the Natural Resources Canada's Geo-mapping for Energy and Minerals (GEM) Program.

Map projection Universal Transverse Mercator, zone 12.  
North American Datum 1983

Base map at the scale of 1:50 000 from Natural Resources Canada, with modifications.  
Elevations in feet above mean sea level

Mean magnetic declination 2014, 15°12'E, decreasing 25' annually. Readings vary from 16°03'E in the NW corner to 14°20'E in the SE corner of the map.

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/>).

This map is not to be used for navigational purposes.

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**

### **References**

Wright, D.F., Ambrose, E.J., Lemkow, D., and Bonham-Carter, G.F. (ed.), 2013. Mineral and energy resource assessment of the proposed Thaidene Nene National Park Reserve in the area of the East Arm of Great Slave Lake, Northwest Territories; Geological Survey of Canada, Open File 7196. doi:10.4095/292447

### **Author Contact**

Questions, suggestions, and comments regarding the geological information contained in the data sets should be addressed to:

D.E. Kerr  
Geological Survey of Canada  
601 Booth Street  
Ottawa ON  
K1A 0E8

Daniel.Kerr@NRCan-RNCan.gc.ca

## Coordinate System

Projection: Universal Transverse Mercator

Units: metres

Zone: 12

Horizontal Datum: NAD83

Vertical Datum: mean sea level

## Bounding Coordinates

Western longitude: 112°00'00" W

Eastern longitude: 110°00'00" W

Northern latitude: 63°00'00" N

Southern latitude: 62°00'00" N

## Data Model Information

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:

Science language for an integrated Geological Survey of Canada data model for surficial geology maps, version 1.2; Deblonde, C; Plouffe, A; Boisvert, É; Buller, G; Davenport, P; Everett, D; Huntley, E; Inglis, E; Kerr, D; Moore, A; Paradis, S J; Parent, M; Smith, I R; St. Onge, D; Weatherston, A. Geological Survey of Canada, Open File 7003, (ed. 1.2), 2012, ; 238 pages (1 sheet), doi:10.4095/290144

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