



Natural Resources
Canada

Ressources naturelles
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CANADIAN GEOSCIENCE MAP 316

SURFICIAL GEOLOGY

LAC MISTINIBI

Quebec
NTS 23-P northeast



Map Information
Document

Preliminary



Geological Survey of Canada
Canadian Geoscience Maps

2017

Canada



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SCALE

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ABSTRACT

The Lac Mistinibi area is of moderate relief characterized by extensive till blankets and at higher elevations, till veneers and bedrock outcrops. The region was glaciated by the Laurentide Ice Sheet throughout Wisconsin time, east of the Quebec-Labrador ice centre. Two general phases of glacial landform development have occurred in the map-area, with northeast-trending large crag-and-tail landforms and streamlined eastward-trending landforms. These two orientations represent two phases of radial ice flow that have affected the region. Large eskers and related glaciofluvial deposits also transect the map sheet along west to east direction, indicative of the westward deglaciation of the region. Abundant, small meltwater channels in the upland areas of the region are evidence of late-phase ice ablation during final deglaciation. Below 488 m elevation, the region was inundated by glacial Lake Naskaupi, which occupied the George River basin and its tributaries and winnowed till surfaces.

RÉSUMÉ

La région cartographique de Lac Mistinibi est une région au relief modéré, caractérisée par des nappes de till étendues et, aux altitudes plus élevées, par des placages de till et des affleurements du substratum rocheux. La région a été couverte par les glaces de l'Inlandsis laurentidien au cours du Wisconsinien, à l'est du centre glaciaire Québec-Labrador. Deux phases générales de formation de reliefs glaciaires ont eu lieu dans la région cartographique, produisant de vastes structures en crag-and-tail de direction nord est et des reliefs profilés de direction est. Ces deux directions rendent compte de deux phases d'écoulement glaciaire radial ayant touché la région. De grands eskers et des dépôts fluvioglaciaires connexes s'étirent aussi de l'ouest vers l'est dans la région cartographique, ce qui témoigne d'une progression vers l'ouest de la déglaciation de la région. De petits chenaux d'eau de fonte en abondance dans les secteurs élevés de la région sont des preuves d'une ablation glaciaire de phase tardive lors de la déglaciation finale. En deçà d'une altitude de 488 m, la région a été inondée par le Lac glaciaire Naskaupi, qui occupait le bassin de la rivière George et ses affluents et qui a vanné les surfaces de till.

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SHEET 1 OF 1, SURFICIAL GEOLOGY

GENERAL INFORMATION

Authors: J.M. Rice, R.C. Paulen, and M. Ross

Geology based on air photo interpretation and fieldwork by J.M. Rice, R.C. Paulen, and M. Ross, 2014–2016

Geological compilation by J.M. Rice and R.C. Paulen, 2014–2016

Geology conforms to Surficial Data Model v. 2.2

Geomatics by L. Robertson

Cartography by E. Everett

Initiative of the Geological Survey of Canada, conducted under the auspices of the GEM-2 Hudson-Ungava Core Zone Project as part of Natural Resources Canada's Geo-mapping for Energy and Minerals (GEM) program.

Logistical support provided by the Polar Continental Shelf Program as part of its mandate to promote scientific research in the Canadian north. PCSP 05915 (2015) and 06016 (2016)

Map projection Universal Transverse Mercator, zone 20.
North American Datum 1983

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

Mean magnetic declination 2017, 22°08'W, decreasing 14.4' annually. Readings vary from 21°54'W in the SW corner to 22°21'W in the NE corner of the map.

This map is not to be used for navigational purposes.

Title photograph: Photo of perched erratics that sit atop glacially scoured bedrock, looking to the southwest, a distant esker emerges out of Lac aux Goélands, NTS 23-P/09 (55°57'28"N / 65°28'09"W), Quebec. Photograph by J.M. Rice. 2017-039

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/>).

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.

ACKNOWLEDGMENTS

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Veillette, J.J., Dyke, A.S., and Roy, M., 1999. Ice-flow evolution of the Labrador Sector of the Laurentide Ice Sheet: a review, with new evidence from northern Quebec; Quaternary Science Reviews, 18, p. 993–1019.

ADDITIONAL INFORMATION

The Additional Information folder of this product's digital download contains figures and tables that appear in the map surround as well as additional geological information not depicted on the map, nor this document, nor the geodatabase.

-PDF of table that appears in the CGM surround.

AUTHOR CONTACT

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COORDINATE SYSTEM

Projection: Universal Transverse Mercator

Units: metres

Zone: 20

Horizontal Datum: NAD83

Vertical Datum: mean sea level

BOUNDING COORDINATES

Western longitude: 65°00'00"W

Eastern longitude: 64°00'00"W

Northern latitude: 56°00'00"N

Southern latitude: 55°30'00"N

SOFTWARE VERSION

Data has been originally compiled and formatted for use with ArcGIS™ desktop version 10.2.2 developed by ESRI®.

DATA MODEL INFORMATION

Surficial

The Geological Survey of Canada (GSC) through the Geo-mapping 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:

Cocking, R.B., Deblonde, C., Kerr, D.E., Campbell, J.E., Eagles, S., Everett, D., Huntley, D.H., Inglis, E., Laviolette, A., Parent, M., Plouffe, A., Robertson, L., Smith, I.R., and Weatherston, A., 2016. Surficial Data Model, version 2.2.0: Revisions to the science language of the integrated Geological Survey of Canada data model for surficial geology maps; Geological Survey of Canada, Open File 8041, 45 p.
doi:10.4095/298767