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CANADIAN GEOSCIENCE MAP 354

RECONNAISSANCE SURFICIAL GEOLOGY

KOIGNUK RIVER

Nunavut
NTS 76-O south



Map Information Document

Geological Survey of Canada Canadian Geoscience Maps

2018

Canada 



MAP NUMBER

Natural Resources Canada, Geological Survey of Canada
Canadian Geoscience Map 354

TITLE

Reconnaissance surficial geology, Koignuk River, Nunavut, NTS 76-O south

SCALE

1:125 000

CATALOGUE INFORMATION

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ABSTRACT

The south Koignuk River area is characterized by extensive bedrock outcrops, and isolated marine veneer and blanket units in some coastal lowlands. Discontinuous till veneer and till blanket units, as well as glaciofluvial esker complexes and associated

meltwater channels generally trending northwest, are more common in the eastern regions. The area underwent erosion and deposition associated with Laurentide Ice during the late Wisconsin. The main phase of northwestward ice flow is parallel to other ice-flow landforms at a regional scale. In the coastal areas, rare westward-trending ice-flow landforms result from late-phase ablation of the ice sheet during deglaciation. Significant regions of bedrock experienced little or no till deposition whereas in other areas, deposited till units were clearly eroded by meltwater during deglaciation. Below about 200–210 m elevation, much of the region was inundated by the postglacial sea. Marine sediments consist of limited littoral beach and offshore sediments, winnowed till surfaces, and isolated marine and glaciomarine deltas.

RÉSUMÉ

La région cartographique de Koignuk River Sud est caractérisée par de grands affleurements du substratum rocheux, ainsi que par des unités isolées de dépôts marins en placages ou en nappes dans des basses terres côtières. Des unités discontinues de till en placages ou en nappes, ainsi que des complexes fluvioglaciaires d'eskers et les chenaux d'eau de fonte associés, généralement de direction nord-ouest, sont plus répandus dans les régions de l'est. Au Wisconsinien supérieur, l'Inlandsis laurentidien a produit de l'érosion et laissé des dépôts dans la région. La direction nord-ouest de la principale phase d'écoulement glaciaire est parallèle à celle définie par les reliefs formés par l'écoulement de la glace à l'échelle régionale. Dans les régions côtières, de rares reliefs de direction ouest ont été formés par l'écoulement de la glace dans les stades tardifs d'ablation de l'inlandsis lors de la déglaciation. Des étendues importantes du substratum rocheux n'ont été que peu ou pas couvertes par le dépôt de till, alors que d'autres ont vu clairement leur couverture de till être érodée par l'eau de fonte lors de la déglaciation. La majeure partie de la région au-dessous d'une altitude d'environ 200 à 210 m a été inondée par la mer postglaciaire. Les sédiments marins se rapportent à des plages littorales d'étendue limitée et des sédiments extracôtiers, à des surfaces de till vanné et à des deltas marins ou glaciomarins isolés.

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SHEET 1 OF 1, RECONNAISSANCE SURFICIAL GEOLOGY

GENERAL INFORMATION

Author: D.E. Kerr

Geology by D.E. Kerr, 2017, based on airphoto interpretation of 1:60 000 scale photos taken in 1954; limited field investigations by D.E. Kerr, 1989; striations from W. Blake (unpub. field manuscript map, 1962)

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

Geomatics by L. Robertson

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 Climate Change Geoscience Program

Map projection Universal Transverse Mercator, zone 13
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

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

Mean magnetic declination 2018, 9°53'E, decreasing 21.2' annually. Readings vary from 8°35'E in the NE corner to 11°05'E in the SW corner of the map.

This map is not to be used for navigational purposes.

Title photograph: Alluvial floodplain and terraced sediments along the Hiuqqitaaq river, Nunavut. NAPL airphoto A15771-161

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/>).

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.

REFERENCES

Deblonde, C., Cocking, R.B., Kerr, D.E., Campbell, J.E., Eagles, S., Everett, D., Huntley, D.H., Inglis, E., Parent, M., Plouffe, A., Robertson, L., Smith, I.R., and Weatherston, A., 2017. Surficial Data Model, version 2.3.0: revisions to the science language of the integrated Geological Survey of Canada data model for surficial geology maps; Geological Survey of Canada, Open File 8236, 1 .zip file.
<https://doi.org/10.4095/302717>

Kerr, D.E., 1994. Late Quaternary stratigraphy and depositional history of the Parry Peninsula-Perry River area, District of Mackenzie, Northwest Territories; Geological Survey of Canada, Bulletin 465, 39 pages. <https://doi.org/10.4095/194069>

Kerr, D.E., 1996. Late Quaternary sea level history in the Paulatuk to Bathurst Inlet area, Northwest Territories; Canadian Journal of Earth Sciences, v. 33, no. 3, p. 389–403. <https://doi.org/10.1139/e96-029>

AUTHOR CONTACT

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COORDINATE SYSTEM

Projection: Universal Transverse Mercator
Units: metres
Zone: 13
Horizontal Datum: NAD83
Vertical Datum: mean sea level

BOUNDING COORDINATES

Western longitude: 108°00'00"W
Eastern longitude: 106°00'00"W
Northern latitude: 67°30'00"N
Southern latitude: 67°00'00"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:

Deblonde, C., Cocking, R.B., Kerr, D.E., Campbell, J.E., Eagles, S., Everett, D., Huntley, D.H., Inglis, E., Parent, M., Plouffe, A., Robertson, L., Smith, I.R., and Weatherston, A., 2017. Surficial Data Model, version 2.3.0: revisions to the science language of the integrated Geological Survey of Canada data model for surficial geology maps; Geological Survey of Canada, Open File 8236, 1 .zip file.
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