References

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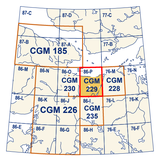
Dredge, L.A., Ward, B.C., and Kerr, D.E., 1998. Surficial geology, Kikerk Lake, District of Mackenzie, Northwest Territories; Geological Survey of Canada, Map 1909A, scale 1:125 000. https://doi.org/10.4095/209690

Abstract

This new surficial geology map product represents the conversion of Map 1909A and its legend, using the Geological Survey of Canada's Surficial Data Model (SDM version 2.1) which can be found in Open File 7741. All geoscience knowledge and information from Map 1909A that conformed to the current SDM were maintained during the conversion process. 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 geologic map information in a structured and consistent manner. This provides an effective knowledge management tool designed around a geo-database which can expand following the type of information to appear on new surficial geology maps.

Résumé

Ce nouveau produit dérivé de la carte de formations superficielles 1909A a été produit avec le Modèle de données des formations superficielles (MDFS version 2.1) de la Commission géologique du Canada qui a été publié sous forme de dossier public 7741. La connaissance et toutes les données de la carte 1909A se retrouvant dans le MDFS ont été maintenues pendant le processus de conversion. Le but de convertir les cartes publiées antérieurement en langage scientifique commun et en légende commune est de permettre et faciliter la compilation, l'interprétation, la gestion et la diffusion numériques efficace d'information de cartes géologiques de façon structurée et cohérente. Cette base de données géospatiales est un outil de gestion 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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Natural Resources Canada | Ressources naturelles Canada

CANADIAN GEOSCIENCE MAP 229

SURFICIAL GEOLOGY

KIKERK LAKE

Nunavut

NTS 86-P

1:125 000

QUATERNARY

HOLOCENE

NONGLACIAL ENVIRONMENT

O — **Organic deposits, undifferentiated:** peat and muck; up to 2 m thick but commonly less than 1 m thick; formed predominantly by the accumulation of vegetative material in bogs; occurs in depressions, along valley bottoms and on marine silt and clay; frozen ground is commonly present at depths greater than 30 cm; may contain ice-wedge polygons and thermokarst collapse structure; small unmapped organic deposits occur in most terrain units.

A — **Alluvial sediments, undifferentiated:** gravel to silt; generally stratified and moderately sorted; 1 to 5 m thick; deposited by modern streams and rivers; occurs as floodplains and alluvial fans, in places covered by icings.

MARINE SEDIMENTS: clay, silt, and gravel; massive to well laminated silt and clay, and massive to cross-stratified and planar bedded sands; 1 to 20 m thick; deposited during marine regression resulting in a coarsening-upward sequence; may include fine grained glaciomarine sediments exposed at the base of stratigraphic sections; unit may contain segregated and disseminated ground ice; rounded pebbles and cobble gravel form raised beaches and deltas indicated by symbols.

Mn — **Littoral sediments:** medium to coarse grained sand with pebbles, may also consist of small cobbles and shingles; 1 to 3 m thick; blanket deposits with flat to gently undulating surface which in places overlie fine grained sediments; may contain beach ridges and ice-wedge polygons indicated by symbols.

Mv — **Marine veneer:** undifferentiated sand, silt, and clay, but predominantly silt and clay; less than 2 m thick; occurs as sediments infilling depressions between bedrock outcrops and as a lag on washed bedrock and till surfaces below marine limit.

Mb — **Marine blanket:** undifferentiated silt and clay with minor sand; from 2 to 30 m thick; commonly occurs as coarsening-upward sequence with flat to gently undulating surface; may contain segregated ice; may be extensively gullied and exhibit retrogressive thaw slumps; some pebble to cobble lag on surface.

PLEISTOCENE (WISCONSIN GLACIATION)

GLACIAL AND NONGLACIAL ENVIRONMENT

GMd — **Glaciomarine and marine deltaic sediments:** sand, gravel, and cobbles; massive to cross-stratified; 5 to 20 m thick; exhibits channelled surfaces, ice-wedge polygons, and more rarely, kettle lakes; commonly associated with the distal end of glaciofluvial complexes terminating at, or directly below, marine limit.

GLACIAL ENVIRONMENT

GL — **Glaciolacustrine sediments, undifferentiated:** mainly sand; crossbedded to planar bedded; 1 to 8 m thick; deposited into temporary glacier-dammed lakes or dyke-dammed lakes and ponds associated with high-level phases of water bodies southeast of Kikerk Lake and in Tree River valley.

GLACIOFLUVIAL SEDIMENTS: sand, gravel, and minor silt; sorting ranges from good to poor; stratification from massive or cross-stratified to planar bedded; more than 1 m thick; deposited by water flowing from, or in contact with, glacier ice; zones of washed bedrock (meltwater scours), isolated kame deposits, and boulder lags shown by symbols.

GFp — **Outwash plain sediments:** rounded gravel and sand; massive to cross-stratified; 2 to 20 m thick; deposited at or beyond the ice margin; occurs as braided fans and outwash plains with ice-wedge polygons.

GFr — **Esker sediments:** sand, silt, and gravel; in planar, cross-stratified, and massive beds; 1 to 20 m thick; forms ridges with both sharp-crested and flat-topped segments, mounds, and flanking aprons; formed subglacially or in subaerially exposed ice-walled channels.

GLACIAL SEDIMENTS (TILL): unsorted glacial debris (diamicton), consisting of a silty sand matrix containing pebbles, cobbles, and boulders; deposited beneath, or along the margin of, glaciers as lodgement till, meltout till, and gravity flow deposits.

Th — **Hummocky till:** diamicton; 5 to 30 m thick; forms irregular to rolling terrain with relief up to 10 m; some areas have abundant small meltwater channels and lag concentrations of boulders in depressions; small kames and transverse ridges associated with this unit are shown by symbols.

Tv — **Till veneer:** diamicton; less than 2 m thick; rock structure is generally visible on airphotos; unit includes patches of bedrock, till blanket, and marine sediments below marine limit.

Tb — **Till blanket:** diamicton; from 2 to 10 m thick; occurs as till plains mimicking bedrock topography or as drumlinoids; small rock outcrops in this unit are shown by symbols.

PRE-QUATERNARY

BEDROCK: Archean granitic, gneissic, metasedimentary, and metavolcanic rocks, Proterozoic sedimentary rocks, mafic dykes, and sills; may include patches of till and marine veneer; areas of shattered and frost-heaved rock are shown by symbols.

R1 — Sedimentary bedrock.

R2 — Igneous bedrock.

R3 — Metamorphic bedrock.

Felsenmeer, frost-heaved and shattered rock

Area of meltwater scour (washed scoured lag)

Geological contact, defined

Beach crest

210 — Limit of submergence, marine (approximate elevation of postglacial sea level in metres)

Meltwater channel:

Minor, subglacial or proglacial, direction unknown

Minor, subglacial or proglacial, direction known

Minor moraine ridge

Esker:

Direction unknown

Direction known

Drumlinoid

Crag-and-tail

Fluted bedrock, roche moutonnée or whaleback, direction known

Bedrock scarp

Retrogressive thaw flow slide

Thermokarst depression

Patterned ground, ice wedge polygon

Solifluction lobe

Delta, paleocurrent unknown

Kame

Striation, ice flow direction known

Gossan observation

Small outcrop

Fossil observation

Dated sample location (*see* Table 1)

Sample location

Map ID	Sample ID	Latitude	Longitude	Elevation (m a.s.l.)	Material	Radiocarbon Age
1	GSC-6080	67.660222	113.631896	150	shells	10100 ± 100 BP
2	GSC-5968	67.660222	113.631896	150	shells	10500 ± 120 BP
3	GSC-6017	67.648015	113.313728	134	shells	9580 ± 50 BP
4	GSC-6023	67.669120	113.302950	35	shells	7520 ± 90 BP
5	GSC-16	67.659818	113.303783	150	shells	9100 ± 180 BP
6	GSC-6005	67.713966	113.047113	0	shells	modern
7	GSC-6016	67.634456	112.182898	150	shells	9620 ± 100 BP
8	GSC-17	67.505124	112.026441	86	shells	1025 ± 220 BP
9	GSC-6031	67.426901	112.173063	130	shells	9830 ± 100 BP

Table 1. Radiocarbon age.

Recommended citation

Geological Survey of Canada, 2017. Surficial geology, Kikerk Lake, Nunavut, NTS 86-P; Geological Survey of Canada, Canadian Geoscience Map 229 (preliminary, Surficial Data Model v. 2.1 conversion of Map 1909A), scale 1:125 000. https://doi.org/10.4095/299206

Celebrating 175 yrs

Geological Survey of Canada
Canadian Geoscience Maps

Canada

Author: Geological Survey of Canada

Geology based on airphoto interpretation and field observations by L.A. Dredge, B.C. Ward, and D.E. Kerr, 1995, with assistance from R. Roberts, P. Wilson, and S.A. Wolfe.

Geology conforms to Surficial Data Model v. 2.1

Data conversion by D.E. Kerr, 2015

Geology has been spatially adjusted to fit the updated base.

Geomatics by S. Eagles

Cartography by D. Viner

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 12. North American Datum 1983

CANADIAN GEOSCIENCE MAP 229

SURFICIAL GEOLOGY

KIKERK LAKE

Nunavut

NTS 86-P

1:125 000

2 0 2 4 6 8 10 km

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 2017, 16°10'E, decreasing 29' annually. Readings vary from 15°16'E in the NE corner to 16°56'E in the SW 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/).

This publication has been scientifically reviewed, but it has not undergone a formal edit.

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