

QUATERNARY HOLOCENE	
NONGLACIAL ENVIRONMENT	
O	Organic deposits, undifferentiated: peat and muck up to 2 m thick; formed predominantly by the accumulation of vegetative material in bogs; occurs in depressions, poorly drained areas and along valley.
E	Estuarine sediments, undifferentiated: fine to medium sand, undifferentiated to well-sorted, 1 to at least 4 m thick; may contain active and stabilized dunes and boulders; deposited predominantly from westerly and north westerly winds.
C	Cultural deposits, undifferentiated: angular pebbles, cobbles to boulders, minor clastic; massive to stratified; up to 15 m thick; apron and talus scree deposits, formed predominantly from westerly and north westerly winds; of bedrock along escarpments; may include colluvial glaciofluvial sediments and are capped by.
N	Alluvial fan sediments: sand and gravel; variable thickness; deposited in fan shape.
Av	Alluvial floodplain sediments: silt to gravel; massive to stratified; 1 m to at least 3 m thick; occurs as floodplains deposited by modern streams and rivers.
Al	Alluvial terraced sediments: sand and gravel; variable thickness; surface commonly gulched and channelled; occurs above the floodplain as a result of down cutting by the river.
A	Alluvial sediments, undifferentiated: silt to gravel; massive to stratified; 1 m to at least 3 m thick; deposited by modern streams and rivers; may include floodplains and alluvial fans in braided and meandering rivers.
LAST GLACIATION (WEICONGIAN)	
PROGLACIAL AND GLACIAL ENVIRONMENT	
GL	Glaciofluvial beach sediments: sand and gravel; ridged, terraced, variable thickness; formed along the margins of a glacial lake and during postglacial uplift.
GLD	Glaciofluvial deltaic sediments: sand, gravel, and cobbles; massive to cross-stratified; up to 5 m or more thick; associated with glacial lakes near maximum elevations; may exhibit kettle lakes, braided paleochannels, ice-wedge polygons, and beach ridges; may contain recessed ground ice.
GL	Glaciofluvial sediments, undifferentiated: fine grained sediments, cross-stratified; 3 m to at least 20 m thick; generally fan-shaped; occur as plains; may include subaqueous fans.
GFD	Glaciofluvial outwash plain sediments: sand and gravel; massive to cross-stratified; 3 m to at least 20 m thick; occur as terraces deposited by glacial meltwater.
GFI	Glaciofluvial terraced sediments: sand and gravel; massive to cross-stratified; 3 m to at least 10 m thick; fan-shaped to irregular hummocky topography with subtle ridges; may include small eskers deposited in contact with retreating glaciers or melting ice.
GFC	Glaciofluvial non-contact sediments: sand and gravel; massive to cross-stratified; 3 m to at least 10 m thick; fan-shaped to irregular hummocky topography with subtle ridges; may include small eskers deposited in contact with retreating glaciers or melting ice.
GFI	Glaciofluvial esker sediments: sand, gravel, cobbles and small boulders; in cross-stratified, 3 m to at least 10 m thick; fan-shaped to irregular hummocky topography with subtle ridges; may include small eskers deposited in contact with retreating glaciers or melting ice.
GF	Glaciofluvial sediments, undifferentiated: sand and gravel; variable thickness; may include subaqueous fans, ice-wedge polygons, and beach ridges.
GLACIAL ENVIRONMENT	
Tv	Till veneer: diamictic; low compaction; less than 1 to 2 m thick; occurs as a thin, cross-stratified, and massive body; 1 to at least 10 m thick; forms ridges with both sharp-crowned and flat-topped segments up to 20 m long, and 10 to 20 m wide with rounded and beveled spurs; deposited at or below the ice margin; formed subglacially or in subglacially exposed ice-walled channels; may be associated with zones of exposed rock and till veneer; boulder lags, isolated sand deposits, and small transverse gravel ridges.
Tb	Till blanket: diamictic; moderately compact; from 2 to 5 m thick; occurs as till plains mimicking bedrock topography and as extensive drumlinoid fields with various streamlined landforms shown by symbols; may contain small areas of veneer.
PRE-QUATERNARY	
R	Bedrock, undifferentiated: sedimentary, volcanic, plutonic and metamorphic rocks; the topography and range of weathering, from well-preserved to low features to surfaces which have undergone granitification and thermal disintegration of 2 m or more; may include patterns of till veneer and glaciofluvial sediments; areas of enhanced frost heaved rock and meltwater scour are shown by symbols.

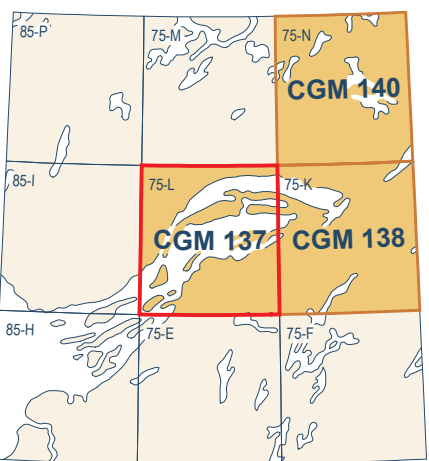
	Felsenmeer
	Washed scoured lag
	Geological contact, defined
	Geological contact, approximate
	Terrace scarp
	Terrace scarp, fluvial
	Terrace scarp, glaciofluvial
	Beach crest
	Limit of glaciofluvial submergence, approximate
	Minor meltwater channel, sense known
	Minor moraine ridge, other specified
	Esker, sense unknown
	Esker, sense known
	Drumlinoid
	Drumlin
	Crag and tail
	Fluted bedrock, sense unknown
	Fluted bedrock (roche moutonnée), sense known
	Thermalized depression
	Patterned ground (ice-wedge polygons)
	Kame
	Stratification, sense known, poorly defined
	Stratification, sense known
	Ice-flow measurement - crossed strike
	Small outcrop
	Sample location

Abstract

The Snowdrift map area is characterized by predominantly glacialized, 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 filled by glaciofluvial sediments, with vertical, cultural deposits covering the steepest slopes. Glaciofluvial complexes consisting of various, co-located sediments and outwash, trend southward in the north and westward in the southern map area. The Snowdrift River valley and its tributaries are predominantly filled by terraced and floodplain alluvial sediments, and rapid and outwash glaciofluvial sediments, some with active dunes. The last ice flow recorded by glacial striae, fluted bedrock and crag-and-tails, was generally southward to westward, in the extreme southeast region of the map area. At various elevations, evidence of glacial Lake McConnell is found: isolated glaciofluvial ridges at 320 to 335 m, 320 m, 275 m, 265 m, and 255 m, and isolated dunes and terrace remnants at 335 m, 320 m, 305 m, 285 m, 228 m, 213 m, 205 m, 183 m and 169 m a.s.l.

Résumé

La région de la carte Snowdrift est caractérisée par un terrain rocheux glaciaire érodé et lavé. Dans les zones plus élevées au nord et au sud du bras Est, se trouvent des dépôts isolés sous forme de chapeaux et de nappes de till. Dans le bras Est, quelques dépressions de faible altitude, entre des reliefs rocheux sont remplies de sédiments glaciofluviaux, tandis que d'autres dépôts culturels couvrent les pentes les plus abruptes. Des complexes fluvio-glaciaires comprenant des eskers, des sédiments de contact glaciaire et des dépôts d'outwash fluvio-glaciaire 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 côtes de sédiments et des sédiments d'épandage fluvio-glaciaire, certains comprenant des dunes vivantes. Des preuves documentées de la glace, dont l'écoulement des rivières glaciaires, la roche érodée et les dépôts, sont une indication évidente d'un lac dans la partie la plus élevée au nord de la région de la carte. A diverses altitudes se trouvent des indices de la présence du lac glaciaire McConnell: reliefs glaciofluviaux isolés à 320 m, 325 m, 320 m, 275 m, 265 m, limites de l'affleurement à 335 m et 320 m, dunes isolées et plateaux rocheux d'érosion à 335 m, 320 m, 305 m, 285 m, 228 m, 213 m, 205 m, 183 m et 169 m au-dessus du niveau de la mer.



National Topographic System reference and index to adjoining published Geological Survey of Canada maps

Cover Illustration
Bedrock escarpment, Mt. Lord Bay, Great Slave Lake. Photograph by R.D. Knight, 2013-2016

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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 outwash map sheet based on aerial photograph interpretation only. Bedrock geologic 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

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SURFICIAL GEOLOGY

SNOWDRIFT

Northwest Territories
NTS 75-L
1:125 000

2 0 2 4 6 8 10 km

Map projection: Universal Transverse Mercator, zone 12

Canada, with modifications

Base map at the scale of 1:50 000 from Natural Resources Canada, with modifications

Elevations in feet above mean sea level

Magnetic declination: 2014, 10° 21' E, decreasing 20' annually. Reading: vary from 10° 01' in the NW corner to 14° 02' 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 contained on this map.

See documentation accompanying the data.

This publication is available for free download through GEOCAN (http://geocan.nrc.ca/geocan/).

This map is not to be used for navigational purposes.

Preliminary publications in this series have not been scientifically edited.

CANADIAN GEOSCIENCE MAP 137

SURFICIAL GEOLOGY

SNOWDRIFT
Northwest Territories
NTS 75-L