

Holocene

Organic deposits

- fo FENLAND: woody sedge peat, 1-2 m thick
- po PEATLAND: sphagnum peat generally underlain by woody sedge peat; 0.5-2 m thick
- po-k PEATLAND: contains thermokarst depressions
- pfO PEATLAND (> 50%) AND FENLAND
- pfO-k PEATLAND (> 50%) AND FENLAND: contains thermokarst depressions
- fpO FENLAND (> 50%) AND PEATLAND

Alluvial deposits

- Ap ALLUVIAL PLAIN: coarse sand and gravel with silt, fine sand and some organic detritus, occurring as channel and overbank floodplain sediments or in-channel bars; 3-5 m thick
- Af ALLUVIAL FAN: mainly sand and silt with minor gravel and discontinuous layers of peat occurring as fan deposits
- Ax ALLUVIAL COMPLEX: floodplain and fan deposits; may contain small areas of colluvium

Colluvial and landslide deposits

- Cx COLLUVIAL COMPLEX: slope complex consisting of diamicton and rubble; may include minor landslides (Cz) and/or alluvial fan (Af) units; > 2 m thick
- Cz LANDSLIDE: bedrock, rubble and/or diamicton occurring as stepped or tongue-shaped deposits; formed by rotational slumping, retrogressive thaw flow, debris flows, rock topple and translational slides in surficial sediments and/or bedrock; they are prominent along former meltwater channels

Late Pleistocene

Eolian deposits

- Ev EOLIAN VENEER: discontinuous cover of mainly fine sand and silt over other surficial units and bedrock; < 1 m thick
- Evb EOLIAN VENEER TO BLANKET: discontinuous cover (vener dominant) of mainly fine sand and silt over surficial materials, most commonly silt, lacustrine and/or glaciofluvial deposits; < 1-10 m thick
- Ebv EOLIAN BLANKET TO VENEER: discontinuous cover (blanket dominant) of mainly fine sand and silt over surficial materials, most commonly silt, lacustrine and/or glaciofluvial deposits; < 1-10 m thick
- Er PARABOLIC DUNES: sand; < 15 m thick
- Ex EOLIAN COMPLEX: veneer to blanket deposited over other surficial materials particularly lacustrine and till plains; includes parabolic dunes

Glacio-lacustrine deposits

- Lp LACUSTRINE PLAIN: flat to gently sloping cover; locally overlain by eolian sand; 1-10 m thick
- Lp-k LACUSTRINE PLAIN WITH THERMOKARST DEPRESSIONS: flat to gently sloping cover; locally overlain by eolian sand; 1-10 m thick
- Lb LACUSTRINE BLANKET: deposit conforms to local topography up to 8 m of relief; locally overlain by eolian sand; 2-10 m thick
- Lv LACUSTRINE VENEER: discontinuous deposits, conforming to local topography; commonly associated with small lakes following ice retreat; locally overlain by eolian sand; < 2 m thick
- Ls SHORELINE DEPOSITS: low, ridged beach deposits of sand and gravel; < 5 m thick
- Lx LACUSTRINE COMPLEX: deltaic sediments transitional between glaciofluvial and glacio-lacustrine deposits with upper 0.5 m consisting of sand; locally overlain by eolian sand; < 20 m thick

Glaciofluvial deposits, outwash

- Gp GLACIOFLUVAL PLAIN: flat to gently sloping; 2-20 m thick
- Gpt GLACIOFLUVAL PLAIN TO TERRACE: glaciofluvial plain dominant; flat to gently sloping, with no visible boundaries between them; these units occur only along major rivers or interbedded with other drift types; < 10 m thick
- Gt GLACIOFLUVAL TERRACE: 10-50 m thick
- Gv GLACIOFLUVAL VENEER: with slopes conforming to underlying topography; < 2 m thick
- Gd GLACIOFLUVAL DELTA: gently sloping, abrupt scarp, showing sudden change in lake level; deposited in a glacial lake; 5-15 m thick
- Gf GLACIOFLUVAL FAN: mainly coarse gravel with minor sand, locally with mudflow deposits; commonly deposited in a meltwater channel or lake; 5-7 m thick

Glaciofluvial deposits, ice contact

- Gx GLACIOFLUVAL COMPLEX: includes eskers, kames and plains, commonly with thermokarst ponds in places; 2-30 m thick
- Gx-c GLACIOFLUVAL COMPLEX, CHANNELLED: containing ridges, hummocks and kettled plains, affected by glaciofluvial channelling, common along Blackwater River; 2-50 m thick

Glacial deposits

- Tp TILL PLAIN: flat to gently sloping; 3-5 m thick
- Tp-c TILL PLAIN, CHANNELLED
- Tb TILL BLANKET: gently to moderately sloping plain conforming to underlying topography; 2-8 m thick
- Tbv TILL BLANKET TO VENEER: conforming to underlying topography; 2-8 m thick
- Tv TILL VENEER: with slopes conforming to underlying topography; < 2 m thick
- Td TILL DRUMMLIND: hilly till plain with individual drumlins or extensive flutes; 3-15 m thick
- Tx TILL COMPLEX: largely hummocky, ridged, and/or hilly with patches of gravel; in some places Tx forms veneer over bedrock
- Te TILL, ERODED: gently to moderately sloping till plain, highly modified by landsliding

Paleozoic to Mesozoic Bedrock

- R primarily prominent ridges, escarpments and hills associated with Devonian rocks
- R Cretaceous shale (various colours) and limestone mostly in plains areas. Paleozoic limestone, dolomite, shale (various colours), siltstone, mudstone and sandstone mostly in mountainous areas

Organic Deposits

- This pattern is used when organic deposits appear as a second or third component in a polygon
- Fenland constituting 10 - 50% of the map unit
- Peatland constituting 10 - 50% of the map unit
- Peatlands and fenlands undivided constituting 10 - 50% of the map unit

Eolian Deposits

- This pattern is used when eolian sand veneer appears as a second or third component in a polygon, eg. Tp.Gx.Ev
- Discontinuous veneer (<1m) mainly fine sand and silt covering other surficial units and bedrock

Colluvial Deposits

- This pattern is used when colluvial veneer and sheathwash deposits appear as a second or third component in a polygon, eg. Tv.Cx, Tv.Lx.Cx
- Discontinuous veneer (<1m) mainly diamicton and rubble that conforms to local topography

Geological boundary (defined)

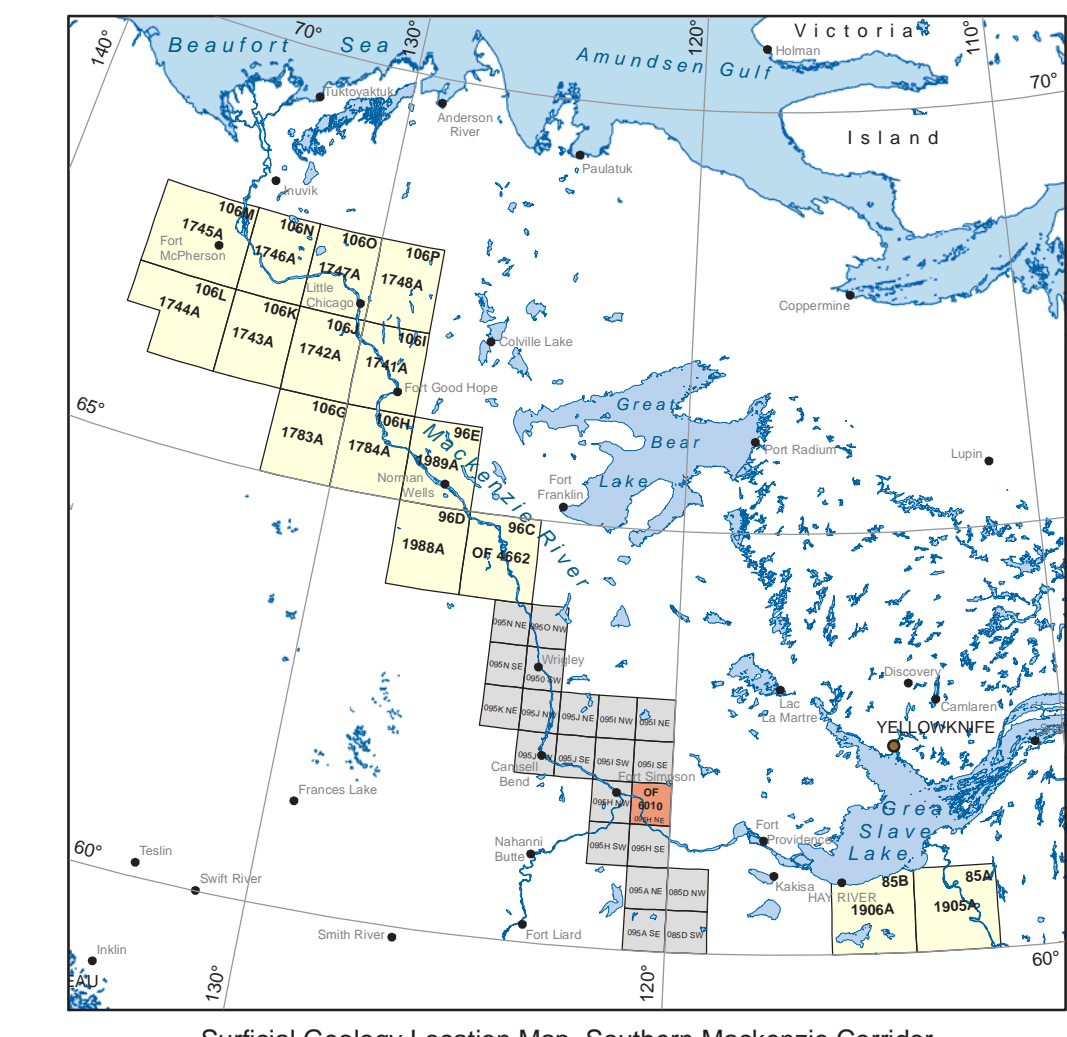
- Paleo-drainage scar
- Moraine ridge: unconsolidated sediments (fill, sand and gravel) deposited in ridges at terminal, recessional, lateral and medial positions with respect to ice margins
- Meltwater channel (major): erosion and channel formation by meltwater flow along, beneath or in front of a glacier or ice sheet; range from broad, shallow channels to deeply incised, steep-sided, flat-bottomed valleys; channels may run across or along slope contours; may be presently dry, poorly drained or contains an underfit stream or small lakes
- Meltwater channel (minor): erosion and channel formation by meltwater flow along, beneath or in front of a glacier or ice sheet; range from broad, shallow channels to deeply incised, steep-sided channels, may run across or along slope contours; may be presently dry
- Paraglacial channel
- Esker (direction certain): sinuous, low ridge composed of sand and gravel; formed by deposition from meltwater running through a channel beneath or within glacier ice
- Shoreline of former lake: low, ridged beach deposits of sand and gravel
- Shoreline of former lake common to two lakes: low, ridged beach deposits of sand and gravel
- Dune ridge
- Deflation hollow
- Beaver dam
- Landslide
- Debris flow
- Ground Station

UNDERSTANDING THE LEGEND

The generic category of surficial material is indicated by the first upper case letter, e.g. G (glaciofluvial). The morphologic category is indicated in lower case following the generic category, e.g. Gp (glaciofluvial plain). The modifying processes are indicated in lower case separated from the morphologic category by a () e.g. Gp-k (glaciofluvial plain with thermokarst processes).

Combined units are used where, for reasons of scale, the units cannot be separated. The main unit, covering over 50% of the geologic polygon, is separated by a () from the secondary unit, e.g. Gp-k.Lp. In cases where the polygon has a third unit it is represented by a patterned symbol, e.g., eolian sand cover, peatlands or fenlands.

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Geology by A. Duk-Rodkin, 2007
Digital cartography by B. Firman and D.A. Lemay
Any revisions or additional geological information known to the user would be welcomed by the Geological Survey of Canada
Digital base from Geomatics Canada, modified by the Geological Survey of Canada
Mean magnetic declination 2011, 21° 0' E, decreasing 25.3" annually
Readings vary from 21° 25' E in the NW corner to 20° 55' E in the SE corner of the map
Elevations in metres above mean sea level



This publication is available from the Geological Survey of Canada Bookstore (958-959-9595) or on the Internet at <http://www.geogov.gc.ca/>



OPEN FILE 6010
SURFICIAL GEOLOGY
FORT SIMPSON (95H/NE)
NORTHWEST TERRITORIES
Scale 1:100 000/Échelle 1/100 000

kilometres 2 0 2 4 6 8 kilometres

Universal Transverse Mercator Projection
North American Datum 1983
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Projection transvers universelle de Mercator
Système de référence géodésique nord-américain, 1983
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09H/5W	09H/5E	09L/5W
09H/4W	09H/4E	09L/4W
09F/11	09F/10	09L/1
09H/3W	09H/3E	09L/3W
09F/09	09F/05	09L/5

OPEN FILE DOSSIER PUBLIC 6010
GEOLOGICAL SURVEY OF CANADA / COMMISSION GÉOLOGIQUE DU CANADA
2011

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