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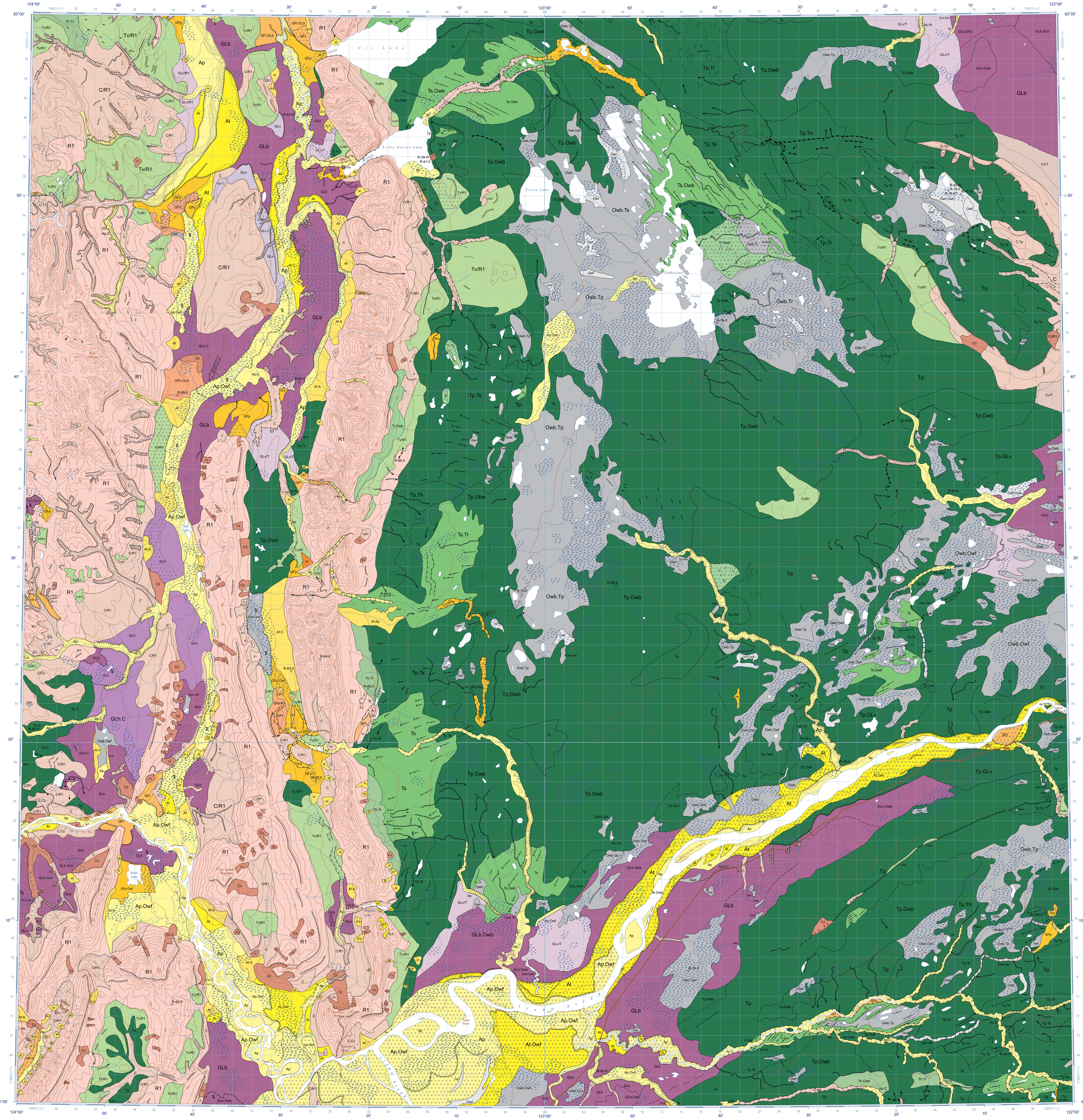
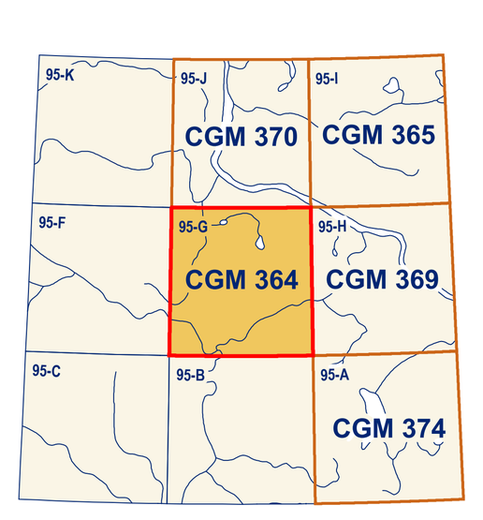


Abstract

This new surficial geology map product represents the conversion of Preliminary Map 10-1979 (Rutter and Boydell,1981) and its legend, using the Geological Survey of Canada's Surficial Data Model (SDM version 2.3.14) (Deblonde et al., 2018). All geoscience knowledge and information from Preliminary Map 10-1979 that conformed to the current SDM were maintained during the conversion process. Additional material on the original map, consisting of an extended legend, is not included here. Supplementary, limited legacy information was added to complement the converted geoscience data. This consists of drillhole and stratigraphic data from Rutter et al. (1973). It is identified in the accompanying geodatabase. 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 geological map information in a structured and consistent manner. This provides an effective knowledge-management tool designed around a geodatabase that can expand, following the type of information to appear on new surficial geology maps.

Résumé

Ce nouveau produit cartographique de la géologie des formations superficielles correspond à la conversion de la Carte préliminaire 10-1979 (Rutter et Boydell, 1981) et de sa légende, en se servant du Modèle de données pour les formations superficielles (MDFS version 2.3.14) de la Commission géologique du Canada (Deblonde et al., 2018). Toutes les connaissances et l'information de nature géoscientifique de la Carte préliminaire 10-1979 qui sont en conformité avec le modèle de données ont été conservées pendant le processus de conversion. De l'information supplémentaire contenue dans la légende détaillée de la carte originale n'est pas incluse ici. Une quantité limitée de données existantes a été ajoutée en complément aux données géoscientifiques converties. Il s'agit de données de sondages et de données stratigraphiques tirées de Rutter et al. (1973). Ces données sont identifiées dans la géodatabase du présent produit cartographique. Le but de la conversion de cartes publiées antérieurement suivant un langage scientifique commun et une légende commune est de permettre et de faciliter la compilation, l'interprétation, la gestion et la diffusion efficaces de l'information géologique cartographique en mode numérique de façon structurée et cohérente. Cette façon de faire offre un outil efficace de gestion des connaissances élaboré à l'aide d'une géodatabase qui pourra évoluer suivant le type d'information à paraître sur les nouvelles cartes de la géologie 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 364

RECONNAISSANCE SURFICIAL GEOLOGY

SIBBESTON LAKE

Northwest Territories

NTS 95-G

1:125 000

QUATERNARY

NONGLACIAL ENVIRONMENT

Owf — **Fen deposits:** dominantly moderately decomposed fen peat derived from sedge, tamarack, and mosses; 2–3 m thick; flat to very gently sloping; may include minor bog deposits; water at surface through summer months; unfrozen to at least 3 m.

Owb — **Bog deposits:** dominantly moderately decomposed forest and/or undecomposed *Sphagnum* peat derived from black spruce, *Cladonia*, feather-mosses, ericaceous, and/or *Sphagnum* vegetation; 1.5–7 m thick; flat to gently sloping areas with scattered mounds, with 1–6 m relief; may include minor fen deposits; frozen at 0.3–0.5 m; contains segregated ice in peat and in underlying mineral soil.

Cz — **Landslide deposits:** silt and sand to rubble and diamicton, derived mainly from glaciolacustrine silts and clays, till and shale bedrock; variable thickness; unspecified landslide deposits; fine-grained material may contain segregated ice.

Cv — **Colluvial veneer:** variable material, silt, sand, derived from underlying surficial sediments; less than 1.5 m thick; gently to steeply sloping surfaces, less than 5 to 20 degrees.

C — **Colluvial deposits, undifferentiated:** material derived from underlying surficial sediments or bedrock; 1–6 m thick; forming complexes with gently to steeply sloping surfaces, less than 5 to 20 degrees; silty clay colluvium may contain segregated ice.

Ap — **Alluvial floodplain sediments:** silt, sand, and gravel; 1–8 m thick; floodplain and low bordering terraces; floodplains within mountain regions commonly scarred by braided channels; floodplains within plains regions commonly with meander scars; permafrost and segregated ice may be present in areas where overlying bog is more than 1.5 m thick.

Af — **Alluvial fan sediments:** mostly gravel, some sand; 3–25 m thick; gently to moderately sloping fans and coalescent fans; may include one or more shifting streams.

At — **Alluvial terraced sediments:** silt, sand, and gravel; 1–30 m thick; may be overlain by Owb; may be channelled; terraces may be associated with Ap, GFp, and GFt; level to slightly sloping surfaces.

A — **Alluvial sediments, undifferentiated:** silt, sand, and gravel; 1–30 m thick; complex which may include terrace, fan, and floodplain sediments; appears only as secondary unit in complex polygons.

PROGLACIAL AND GLACIAL ENVIRONMENT

GLr — **Glaciolacustrine beach sediments:** mainly gravel with minor sand, locally includes silt; 1.5–2 m thick; may form parallel to subparallel beach ridges arranged in belts; appears only as secondary unit in complex polygons.

GLn — **Glaciolacustrine terraced sediments:** silt; variable thickness; forms terraces.

GLh — **Glaciolacustrine hummocky sediments:** sand and silt; 2–5 m thick; low hummocks up to 2 m; individual hummocks up to 5 m relief; failure common along scarps.

GLv — **Glaciolacustrine veneer:** silt and sand; 0.5–1.5 m thick; may contain ground ice where overlain by organic deposits; may be underlain by till.

GLb — **Glaciolacustrine blanket:** silt and sand, may include minor gravel; 1.5–50 m thick; flat to gently sloping plain; may be overlain by organic deposits with ground ice and thermokarst.

GFp — **Glaciofluvial outwash-plain sediments:** silt, sand, and gravel; 1–30 m or more thick; flat to gently sloping plain; may include other minor glaciofluvial units and minor organic deposits; surface may be channelled; if overlain by organic deposits greater than 1.5 m thick, permafrost may be present.

GFt — **Glaciofluvial terraced sediments:** silt, sand, and gravel; 1–30 m or more thick; flat to gently sloping terrace; surface may be channelled; if overlain by organic deposits greater than 1.5 m thick, permafrost may be present.

GFf — **Glaciofluvial fan sediments:** mainly gravel with sand; 1–10 m or more thick; forming fans.

GFh — **Glaciofluvial hummocky sediments:** mainly gravel with sand; 1–10 m thick; hummocks with local relief up to 10 m; may include minor esker ridges.

GFr — **Glaciofluvial esker sediments:** mainly gravel with sand; 1–30 m thick; long sinuous esker ridges and esker complexes, up to 30 m high.

GFv — **Glaciofluvial veneer:** mainly gravel and sand; 0.5–1.5 m thick; reflects topography of underlying material.

GLACIAL ENVIRONMENT

Th — **Hummocky till:** sand, gravel, and diamicton; 1–20 m thick; individual to coalescent glacial hummocks, with slopes up to 20 degrees, locally subdued and rolling; hummocky moraine may include minor ridges; moderately to strongly calcareous.

Tr — **Ridged till:** sand, gravel, and diamicton; 1–10 m thick; crevasse fillings or ridge moraine consisting of individual, parallel to subparallel, straight to sinuous ridges within a moraine plain, 0.5–5 m relief, slopes of 5–30 degrees; may include minor Th; moderately to strongly calcareous.

Ts — **Streamlined till:** clay, silt, sand, pebbles, and boulders, may include sand or gravel lenses; 2–30 m thick; consists largely of drumlins and drumlinoids, flutings; may be channelled; moderately to strongly calcareous.

Tp — **Till plain:** typically clay, silt, minor sand, pebbles, and boulders; 1.5–50 m thick; flat to uniformly sloping morainal plain, from 2–15 degrees; may be channelled; may include other minor till units and organic deposits; moderately to strongly calcareous.

Tv — **Till veneer:** sand, gravel, and diamicton; less than 1.5 m thick; reflects topography of underlying bedrock.

T — **Till, undifferentiated:** sand, gravel, and diamicton; 1–10 m or more thick; includes other minor till units; appears only as secondary unit in stratigraphic relationships within polygons.

PRE-QUATERNARY

R1 — **Sedimentary bedrock:** low hills developed on sandstone, limestone, shale, or siltstone; rounded summits; may be covered by discontinuous patches of colluvium and rubble, poorly sorted sediment or reworked till with bare rock on slopes of summits.

Complex units: two map-unit designators separated by a dot (.) are used where the surficial cover forms a complex area and the units are too small to be mapped individually (e.g. At.C designates an area of alluvial terraced sediments with colluvial deposits).

Stratigraphic relationship: two map-unit designators separated by a slash (/) are used where a stratigraphic relationship is observed or confidently inferred (e.g. C/R1 indicates colluvial deposits overlying bedrock).

Thermokarst area

Extensive gullied, channelled, or eroded terrain

Geological contact:
- *Defined*
- *Approximate*

Landslide escarpment:
- *Potential slumping*
- *Active*

Terrace scarp, escarpment

Beach crest, depositional

Meltwater channel:
- *Minor, paleocurrent direction unknown*
- *Minor, paleocurrent direction known*
- *Major meltwater channel, paleocurrent direction known*

Moraine ridge:
- *Minor*
- *Major end or lateral*

Esker:
- *Paleocurrent direction unknown*
- *Paleocurrent direction known*

Drumlinoid

Drumlin

Small outcrop

R-39-III — Station location, ground observation, with number (*see* Map Information Document)

Recommended citation
Geological Survey of Canada, 2018. Reconnaissance surficial geology, Sibbeston Lake, Northwest Territories, NTS 95-G; Geological Survey of Canada, Canadian Geoscience Map 364 (Surficial Data Model v. 2.3.14 conversion of Map 10-1979), scale 1:125 000. https://doi.org/10.4095/308365

CANADIAN GEOSCIENCE MAP 364

Geological Survey of Canada
Canadian Geoscience Maps

Author: Geological Survey of Canada

Geology by N.W. Rutter and A.N. Boydell, 1972

Geological compilation by R.J. Hawes, 1975

Geology conforms to Surficial Data Model v. 2.3.14 (Deblonde et al., 2018).

Data conversion by D.E. Kerr, 2016, 2017

Geology has been spatially adjusted to fit the updated base.

Geomatics by S. Eagles, J. Kingsley, and C.D. Stevens

Cartography by E. Everett

Scientific editing by A. Weatherston

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 10
North American Datum 1983

RECONNAISSANCE SURFICIAL GEOLOGY
SIBBESTON LAKE
Northwest Territories
NTS 95-G
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 2018, 19°16'E, decreasing 20.7' annually
Readings vary from 19°35'E in the NW corner to 18°55'E in the SE 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 (https://geoscan.nrcan.gc.ca/).

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