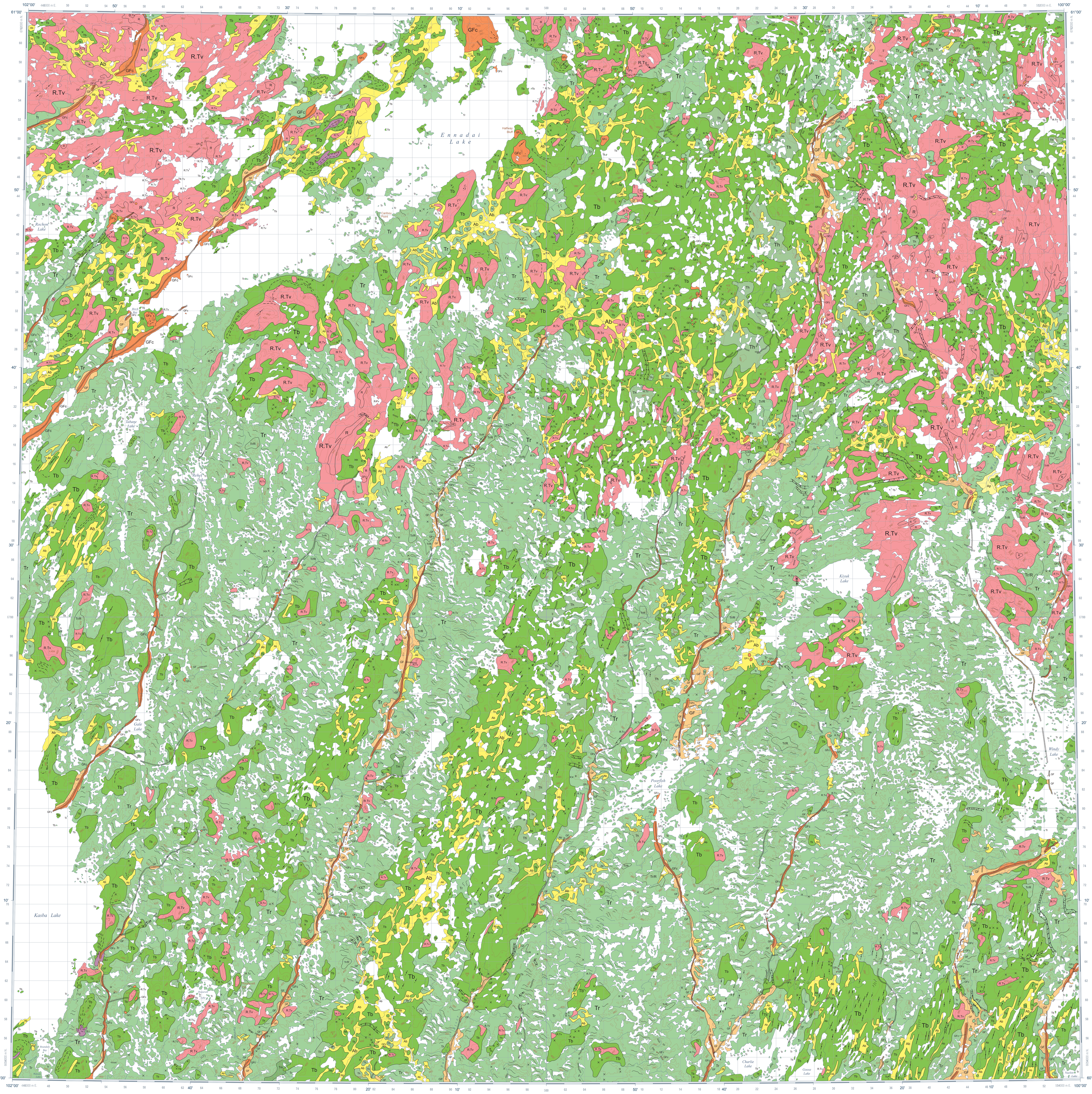

QUATERNARY

ALLUVIAL SEDIMENTS: stream deposited material within modern active drainage systems; modern is defined as the period since retreat of proglacial lakes or glacial ice.

Ap — **Floodplain sediments:** silt, sand, and gravel; variable thickness; deposited in channels and on floodplains; may include alluvial sediments in terraces which formed as streams cut to present level in glacial sedimentary fill.

Ab — **Alluvial blanket:** alluvium and outwash gravel, undifferentiated; variable thickness; occurs as flat areas in stream valleys or abandoned channels; surface generally covered by 40 cm to more than 1 m of fibrous peat on which mosses, sedges, and grasses grow; surface characterized by frost polygons and thaw ponds related to vertical ice wedges extending to a depth of 2 to 3 m.

GLACIOLACUSTRINE SEDIMENTS: deposited in glacial lakes ponded on the western side of the Keewatin Ice Divide and glacial deposits modified by lacustrine processes.

GLr — **Beach sediments:** sand, gravel, cobbles, or boulders; generally well sorted; variable thickness; deposited as nearshore beaches, bars, spits, and ice-pushed ridges; surface characterized by sparse vegetation and orthogonal frost cracks (ice wedge polygons).

GLACIOFLUVIAL SEDIMENTS: water-sorted sediments deposited in, or around, or near a glacier, largely as a result of meltwater flow.

GFc — **Ice-contact sediments:** sand and gravel; stratified; variable thickness; deposited near ice margins in, over, or around ice or in ice tunnels, commonly as eskers but includes isolated hummocky deposits of uncertain origin; many eskers are beaded or interrupted at irregular intervals by major bulges marking positions where deltaic or subaqueous fan deposition occurred during periods of slowed ice retreat.

GF — **Glaciofluvial sediments, undifferentiated:** sand, gravel; variable thickness; with terraced, hummocky, and kettled surfaces; deposited by subaerial meltwater streams in areas above local level of proglacial lakes; includes 1) sediment deposited between the esker ridge and valley sides, commonly over stagnant ice that forms temporary floor, 2) outwash fans, 3) outwash plains, and 4) materials on the floor or at the mouth of meltwater channels; sparsely vegetated.

GLACIAL SEDIMENTS (TILL): poorly sorted till with distinctive forms deposited directly by glacial ice.

Tv — **Till veneer:** sandy, silty diamicton; poorly sorted; less than 1 m thick.

Tb — **Till blanket:** generally sandy, silty diamicton with less than 25% clay sized particles; noncalcareous; grey; variable thickness; may include areas of clay-rich red till; may include mudboils, and prominent striped pattern on airphotos.

Th — **Hummocky till:** diamicton; variable thickness; without significant boulder cover; occurring as low, rounded hummocks; includes ridges of till that are minor end moraines or erosion remnants between subparallel meltwater channels; extensive areas are present in the region of the Keewatin Ice Divide and in some places adjacent to areas of ribbed moraines (Tr); exact origin unknown; may have formed in association with stagnant ice and in some places from erosion of till surfaces by streams in anastomosing meltwater channels; vegetation and periglacial features similar to those on till plain (Tb).

Tm — **Moraine complex:** diamicton, sand, and gravel; variable thickness; undifferentiated disintegration moraine; occurs as short ridges or hummocks; probably deposited in holes and crevasses in stagnant ice; ridge orientation may form a reticulate pattern; sparsely vegetated; periglacial features vary from mudboils in till to frost cracks in sorted sediments.

Tr — **Ridged moraine:** generally bouldery diamicton, in places sand and gravel; variable thickness; ribbed (Rogen) moraine; forming hummocks and straight to sinuous ridges; generally less than 1 km long and 2 to 10 m high; ridges generally oriented at right angles and form trains parallel to direction of ice flow; individual ribs may be asymmetric in cross-section with steep side facing down-ice; trains of ribs pass laterally into drumlin fields and may be drumlinized in the transition zone; surfaces have sparse vegetation and generally a heavy cover of large boulders and mudboils where composed of till; marked by frost cracks (ice wedge polygons) where composed of gravel.

PRE-QUATERNARY

R — **Bedrock, undifferentiated:** May include Precambrian intrusive igneous and metamorphic rocks, red volcanic rocks, and unmetamorphosed sediments; surface comprises more than 80% outcrop; vegetation sparse; surface may be glacially rounded or covered by felsenmeer; 20 to 80% of bedrock is mantled with less than 1 m of the surficial sediment indicated in complex polygons.

Complex relationship: Where the surficial cover forms a complex pattern and the map units are too small to be mapped individually, yet constitutes a significant aerial extent of the total polygon, a dot (".") separates the first dominant map unit designator from the less abundant secondary unit (e.g. R.Tv designates an area of bedrock with numerous small deposits of till veneer).

Stratigraphic relationship: A stratigraphic relationship is shown with a maximum of two map unit designators separated by a slash ("/") (e.g. Tr/R designates ridged till overlying bedrock).

- Geological contact, defined
- Geological contact, approximate
- Beach crest, bar, and/or ice-shoved ridge
- Major meltwater channel, sense unknown
- Ribbed or minor moraine ridge
- Esker, sense known
- Buried drumlinoid ridge, may be obscured by solifuction processes, water-laid sediments, or wave reworking
- Drumlinoid, fluting
- Drumlin
- × Small bedrock outcrop

Abstract

This new surficial geology map product represents the conversion of Map 5-1985 and its legend, using the Geological Survey of Canada's Surficial Data Model (SDM version 2.0) which can be found in Open File 7631. All geoscience knowledge and information from Map 5-1985 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 géologie de surface 5-1985 a été produit avec le Modèle de données des formations superficielles (MDFS version 2.0) de la Commission géologique du Canada qui a été publié sous forme de dossier public 7631. La connaissance et toutes les données de la carte 5-1985 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

(65-E, 65-F, 65-G, 65-D, 65-C, 65-B, 64-M, 64-N, 64-O; CGM 202, CGM 201)

Catalogue No. M183-1/201-2014E-PDF
ISBN 978-1-100-24853-0
doi:10.4095/295544

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Natural Resources Canada / Ressources naturelles du Canada

CANADIAN GEOSCIENCE MAP 201
RECONNAISSANCE SURFICIAL GEOLOGY
ENNADAI LAKE
Nunavut
NTS 65-C
1:125 000

REFERENCES

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Recommended citation
Geological Survey of Canada, 2014. Reconnaissance surficial geology, Ennadai Lake, Nunavut, NTS 65-C; Geological Survey of Canada, Canadian Geoscience Map 201 (preliminary, Surficial Data Model v. 2.0 conversion of Map 5-1985), scale 1:125 000. doi:10.4095/295544

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Canadian Geoscience Maps

Author: Geological Survey of Canada

Geology based on airphoto interpretation by J.M. Aylsworth, 1983

Geology conforms to Surficial Data Model v. 2.0

Data conversion by D.E. Kerr, 2014

Geomatics and cartography by G.S. Hanna

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 14. North American Datum 1983

RECONNAISSANCE SURFICIAL GEOLOGY
ENNADAI LAKE
Nunavut
NTS 65-C
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 2014, 5°21'E, decreasing 14' annually. Readings vary from 4°01'E in the NE corner to 6°35'E in the SW corner of the map.

The Geological Survey of Canada welcomes corrections or additional information from users.

Data may include additional observations not portrayed on this map.
See documentation accompanying the data.

This publication is available for free download through GEOSCAN (http://geoscan.nrcan.gc.ca/).

Preliminary publications in this series have not been scientifically edited.

CANADIAN GEOSCIENCE MAP 201
RECONNAISSANCE SURFICIAL GEOLOGY
ENNADAI LAKE
Nunavut
NTS 65-C

Canada