References

Deblonde, C., Cocking, R.B., Kerr, D.E., Campbell, J.E., Eagles, S., Everett, D., Huntley, D.H., Inglis, E., Parent, M., Plouffe, A., Robertson, L., Smith, I.R., and Weatherston, A., 2017. Surficial Data Model, version 2.3.0: revisions to the science language of the integrated Geological Survey of Canada data model for surficial geology maps; Geological Survey of Canada, Open File 8236, 1 .zip file. https://doi.org/10.4095/302717

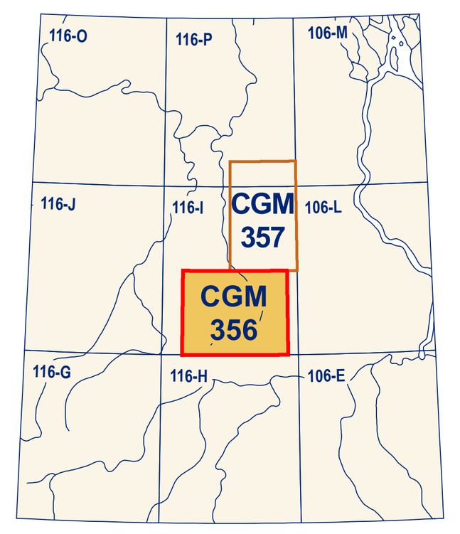
Thomas, R.D. and Rampton, V.N., 1982. Surficial geology and geomorphology, Moose Lake, Yukon Territory; Geological Survey of Canada, Map 10-1982, scale 1:100 000. https://doi.org/10.4095/119383

Abstract

This new surficial geology map product represents the conversion of Map 10-1982 (Thomas and Rampton, 1982) and its legend, using the Geological Survey of Canada's Surficial Data Model (SDM version 2.3) (Deblonde et al., 2017). All geoscience knowledge and information from Map 10-1982 that conformed to the current SDM were maintained during the conversion process. Additional material on the original map, consisting of marginal notes and one figure, is not included here. 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 10-1982 (Thomas et Rampton, 1982) et de sa légende, en se servant du Modèle de données pour les formations superficielles (MDFS version 2.3) de la Commission géologique du Canada (Deblonde et al., 2017). Toutes les connaissances et l'information de nature géoscientifique de la Carte 10-1982 qui sont en conformité avec le modèle de données ont été conservées pendant le processus de conversion. Des éléments additionnels présents sur la carte originale, constitués de notes marginales et d'une figure, ne sont pas inclus ici. 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 des formations superficielles.



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

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CANADIAN GEOSCIENCE MAP 356

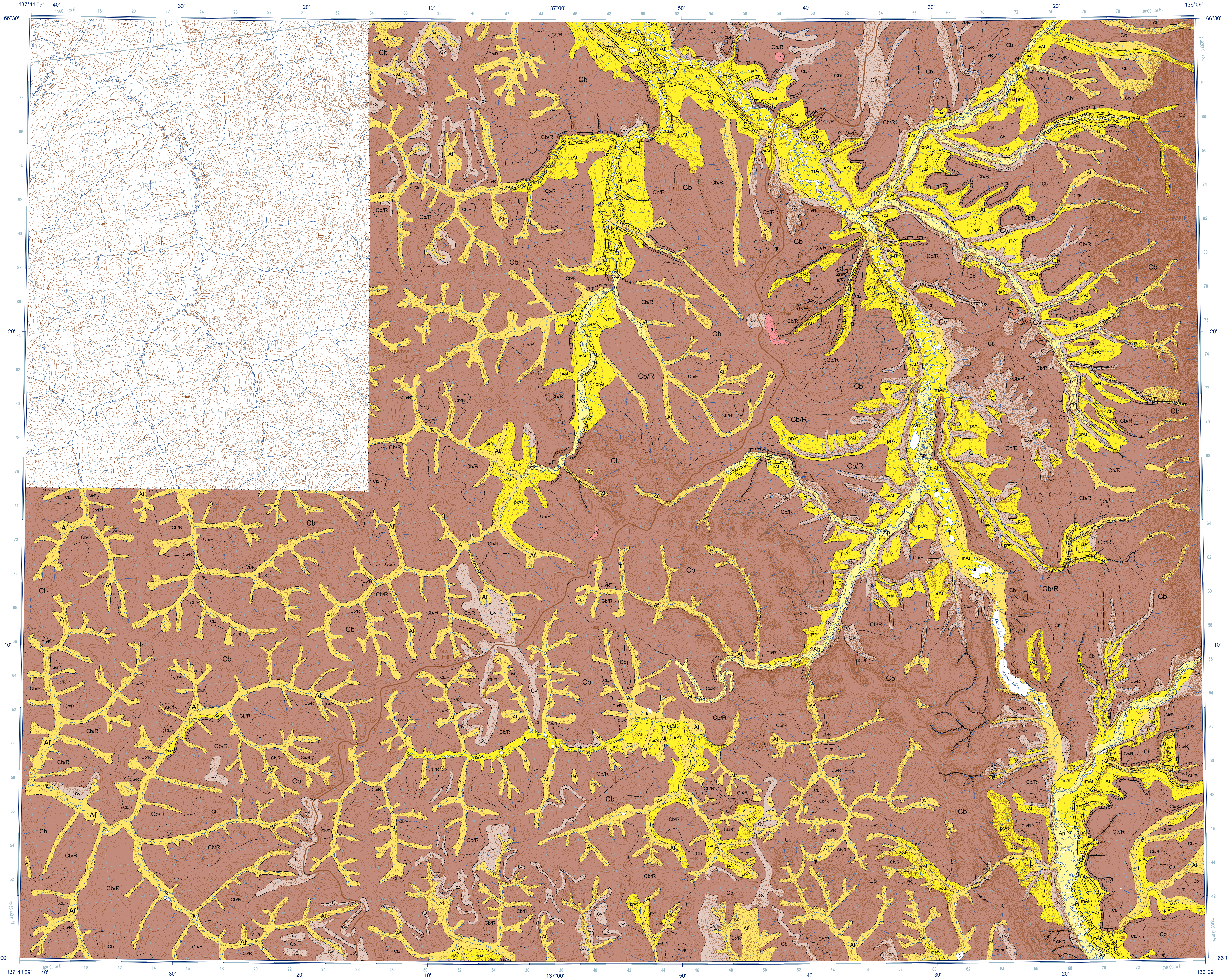
SURFICIAL GEOLOGY

MOOSE LAKE

Yukon

part of NTS 116-I

1:100 000



QUATERNARY

HOLOCENE (MODERN)

Cz — **Landslide deposits:** large blocks of shattered bedrock and coarse-grained diamicton, unsorted, extremely variable textures, clasts generally angular to subangular; variable thickness to 30 m; may include small retrogressive thaw-flow slides and active-layer detachment slides particularly associated with shale bedrock; includes larger rotational slumps; generally overlies bedrock but may encroach on drift in the lower parts; irregular surface topography; may be ice rich; older slides seem to have been reactivated as rock glaciers; undifferentiated age.

Cv — **Colluvial veneer:** poorly sorted diamicton; silty clay with angular granules to small pebbles develop on shale, and silty sand with cobbles or blocks develop on sandstone, limestone, or other coarse grained bedrock; surface organic material generally less than 5 cm thick but up to 30 cm; generally less than 50 cm thick though locally may be thicker than 1 m; in unglaciated areas, the contact with the underlying weathered bedrock is gradational; common on steep slopes, ridge crests, and glacially scoured rock; commonly includes unmapped areas or bedrock, and more rarely areas of drift; may contain ice wedges which have melted out locally; undifferentiated age.

Cb — **Colluvial blanket:** variable composition from silty clay with fine sand capped by 10–40 cm of organic material, to poorly sorted cobble diamicton to bouldery diamicton, matrix is commonly silty sand, coarse-grained material is angular, may contain significant proportion of organic material and lenses of stratified gravel or sand, particularly in valley bottoms; generally less than 3 m thick except in valley bottoms where it may be thicker; common on slopes underlain by bedrock in unglaciated terrain; commonly overlies bedrock or more rarely terrace deposits and drift; may contain small unmapped areas of drift and alluvium; the contact between colluvium and weathered bedrock is gradational, particularly in unglaciated areas; in places up to 1 m of gravel may occur between colluvium and bedrock; may contain ground ice and may exhibit solifluction, subsidence, thermokarst lakes, active-layer detachment slides, and retrogressive thaw flows due to thawing of permafrost where disturbed; undifferentiated age.

Ap — **Alluvial floodplain sediments:** cobble to pebble gravel, rounded to well rounded, with very coarse to coarse sand matrix; in places capped by up to 1 m of sand and silt, and up to 50 cm of organic material; in places contains organic material 3–10 m thick; alluvial sediments are 1–5 m or more thick; generally flat; may include annually flooded or abandoned channels; may be bounded by low terraces and stream-cut scarps; may contain shallow thermokarst depressions; may be underlain by colluvium, drift or bedrock.

Af — **Alluvial fan sediments:** fine sand with pebble gravel; pebble to cobble gravel and boulders up to 2 m diameter; composition and grain size are dependent on the local source; poorly to well sorted and poorly to well stratified; aprons generally 2–5 m thick; average thickness of fans is 5 m but more than 10 m in places; apron tops are commonly capped by 30–100 cm of organic material; occurs at the base of of valley walls in glaciated areas and covers most low parts of valleys in unglaciated areas; aprons commonly overlie bedrock in unglaciated areas and drift or bedrock in glaciated areas; fans commonly overlie alluvial terraced sediments and may impinge on present floodplains; may contain thermokarst depressions and ground ice; vulnerable to thermokarst subsidence if disturbed.

LATE WISCONSINAN (McCONNELL GLACIATION)

mAt — **Alluvial terraced sediments:** typically less than 20 cm of organic material (mainly peat) overlying silty sand, 10–100 cm thick, overlying 10–200 cm of cobble to pebble gravel; well stratified and sorted; well rounded to subrounded; may contain disseminated or interbedded organic material throughout; rarely up to 4 m thick or more over bedrock; comprise the first major terrace level above the present floodplain; occurs discontinuously along all major rivers and streams and many of their tributaries; commonly overlies a bedrock bench but may overlie colluvium or drift; the silty sand near the top of the deposit may be eolian in origin; in narrow valleys, fans, or aprons may encroach onto the flat top of the terrace and may cover it; may be ice-rich in places; may exhibit slumping due to thaw of permafrost.

EARLY WISCONSINAN OR ILLINOIAN (REID GLACIATION)

reAt — **Alluvial terraced sediments:** typically composed of peat, commonly up to 1 m or more thick; in most places peat overlies a sequence of alluvial gravels with some interbeds of sand or silty sand, but locally areas mapped as this unit consist of peat overlying a bedrock bench or drift or colluvium; materials are well rounded to subrounded and well stratified with moderate sorting; variable thickness; occurs mainly along major rivers and creeks as discontinuous deposits between the present floodplain or the lowest terrace deposits and the valley wall or more rarely the highest terrace deposits; does not occur with the limit of Reid Glaciation; in narrow valleys, fans or aprons may encroach onto the flat top of the terrace and may cover it; contains ground ice and may exhibit subsidence due to thaw of permafrost where disturbed.

ILLINOIAN OR PRE-ILLINOIAN (PRE-REID GLACIATION)

prAt — **Alluvial terraced sediments:** typically composed of peat, 20–50 cm thick, overlying alluvial gravels, well rounded and poorly stratified; 5 m thick; the gravels may be capped by 10–20 cm of silty clay of possible eolian origin; occurs discontinuously along all major rivers and streams and along some minor streams; does not occur within the glaciated region; lies between the lower valley terraces and the colluvial deposits on the valley sides; may be overlain in part by colluvial deposits, and rarely by alluvial fans and aprons; contains ground ice and may exhibit subsidence due to thaw of permafrost where disturbed.

PRE-QUATERNARY

R — **Bedrock, undifferentiated:** varied bedrock types; bedrock pediment, outcrops, cliff ridge crests; may contain vein ice in fractures; evidence of frost shattering is common.

Stratigraphic relationship: a stratigraphic relationship is shown with two map-unit designators separated by a slash (/) (e.g. Af/At indicates alluvial fan sediments overlying alluvial terraced sediments).

Thermokarst depression

Extensive gullied terrain, rilled

Geological contact:
- *Defined*
- *Approximate*
- *Inferred*

Limit of mapping

Landslide escarpment, active

Terrace scarp, escarpment, may include bedrock at base

Minor meltwater channel or stream-cut ravine and canyon, paleocurrent direction unspecified

Recommended citation
Geological Survey of Canada, 2018. Surficial geology, Moose Lake, Yukon, part of NTS 116-I; Geological Survey of Canada, Canadian Geoscience Map 356 (Surficial Data Model v. 2.3 conversion of Map 10-1982), scale 1:100 000. https://doi.org/10.4095/10.4095/308187

CANADIAN GEOSCIENCE MAP 356

Geological Survey of Canada
Canadian Geoscience Maps

Author: Geological Survey of Canada

Geology by R.D. Thomas and V.N. Rampton, 1980

Geology conforms to Surficial Data Model v. 2.3 (Deblonde et al., 2017).

Data conversion by D.E. Kerr, 2015, 2017

Geology has been spatially adjusted to fit the updated base.

Geomatics by S. Eagles

Cartography by M.J. Baldock

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 8
North American Datum 1983

SURFICIAL GEOLOGY
MOOSE LAKE
Yukon
part of NTS 116-I
1:100 000

2 0 2 4 6 8 km

Base map at the scale of 1:50 000 from Natural Resources Canada, with modifications
Elevations in metres above mean sea level

Mean magnetic declination 2018, 20°32'E, decreasing 28.7' annually
Readings vary from 20°21'E in the SW corner to 20°43'E in the NE 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/).

CANADIAN GEOSCIENCE MAP 356
SURFICIAL GEOLOGY
MOOSE LAKE
Yukon
part of NTS 116-I

Canada