

QUATERNARY

HOLOCENE

ORGANIC DEPOSITS : peat and woody material; occurring as a flat to gently sloping plain; overlie lacustrine, till, or poorly drained glaciofluvial and alluvial deposits but rarely form a dominant geologic unit. Most common on the glaciolacustrine deposits in the alpine valleys of this map area. Permafrost is commonly present within 1 m of the surface. Localized peat development occurs in more poorly drained organic deposits.

ALLUVIAL DEPOSITS : sand, silt and pebbles cobbles and minor boulders deposited in modern drainages. May intermix with alluvial fan sediments in areas of higher relief. Common in Blind Creek and its major tributaries.

Ap - alluvial plain : silt, sand and pebbles with reworked cobbles and boulders occurring as bars or overbank floodplain deposits; 0 - 10 m thick; floodplain subject to periodic floods.
At - alluvial terrace : silt, sand and pebbles with reworked cobbles and boulders occurring as low terrace deposits; 0 - 10 m thick.
Af - alluvial fan : coarse sand, pebbles, cobbles and mudflow deposits, up to or > 10 m thick. Appear as vegetated, often peat covered, landforms developed during post-glacial sedimentation.
Ax - complexes of Ap and At undivided. Common when a stream is unconfined and also in narrow valleys where side-entry alluvial fans cannot be differentiated from an alluvial plain.

PLEISTOCENE AND HOLOCENE (UNDIVIDED)

COLLUVIAL DEPOSITS : clast-rich, gravel, shattered bedrock, and lenses of sand and silt derived from bedrock and surficial sediments by physical and chemical weathering processes. Transport of dislodged debris occurs as surface creep or by mass wasting processes. Permafrost and seasonal freeze-thaw processes often initiate and enhance colluviation. Common in all areas of high relief in the map area.

Cv - colluvium veneer : conforms to bedrock topography, < 1 m thick.
Cf - colluvial fan : colluvial sediment deposited as a fan at the break in a high angle slope, > 1 m thick.
Ca - colluvium apron : coalescing colluvial fans at the base of a slope, > 1 m thick.
Cz - mass wasting : includes slumping, debris slides and rockfalls. Slumping and rockfalls are common on Mt. Mye.

LATE PLEISTOCENE (WISCONSINAN) - MCCONNELL GLACIATION

GLACIOLACUSTRINE DEPOSITS : well-stratified sand, silt and minor clay deposited in lakes impounded by glacial ice; may have a smooth or knotted surface pattern due to melting of buried glacial ice. Sediments form poorly drained areas with peaty blankets. Thermokarsting is common. Glaciolacustrine deposits are common in alpine valleys of the central part of the map area.

Lb - glaciolacustrine blanket : 1 - 40 m thick.

GLACIOFLUVIAL DEPOSITS : stratified to massive; poorly to well sorted; gravel and sand with minor silt and cobbles; deposited by meltwater originating from glacial ice. Common in drainages flowing east and west from the Mt. Mye upland and locally in two alpine valleys.

Gp - glaciofluvial plain : 3 - 10 m thick.
Gf - glaciofluvial terrace : < 10 m thick.
Gt - glaciofluvial fan : deposited as kame glaciofluvial fans in this map area, 1 - 10 m thick.
Gd - glaciofluvial delta : gently sloping braided surface formed in contact with a former glacial lake, 1 - 20 m thick.
Gx - glaciofluvial complex : composed of deposits of outwash, glaciolacustrine and minor till deposited in an ice contact environment. Hummocky topography is associated with this depositional setting, 1 - 40 m thick.

GLACIAL DEPOSITS (Bf) : unsorted clay, silt, sand, pebbles and cobbles with minor boulders; deposited by or from glacial ice and occurs as subglacial veneer and blanket deposits. Till is common in the valley bottoms north of the Mt. Mye upland. Colluviated till veneers fringe the north slope of the upland and extend into alpine valleys.

Tv - till veneer : conforms to underlying topography, < 1 m thick.
Tb - till blanket : gently to moderately sloping plain controlled by bedrock or underlying surficial deposits, > 1 m thick.
Tx - till complex : till blanket or veneer composed of meltout till and minor ice contact glaciofluvial deposits.

LOWER CAMBRIAN TO CRETACEOUS

BEDROCK : The map area is underlain by rocks of North American affinity, and the Anvil Plutonic Suite. North American rocks underlie the north part of the map area and consist of Lower Cambrian Mt. Mye formation, the Cambrian to Lower Ordovician Vandyke formation, and the Lower Ordovician to Silurian Menzies Creek formation. Late- and post-metamorphic Cretaceous intrusions of the Anvil Plutonic Suite cut the metamorphic stratigraphy and form the core of the Mt. Mye uplands in the southern part of the map area (Jennings and Jilson, 1986).

R - bedrock : common on plateau summits and ridges of Anvil Range.

COMBINED MAP UNITS

The surficial geology unit(s) are shown first followed by the terrain modifiers. Combined surficial geology units are used where, for reasons of scale, two or more deposits cannot be delineated individually. The dominant unit (> 50 % of polygon coverage) is shown first and the subordinate units (< 50 % of polygon coverage) are shown second and third. A dot separates the surficial units and a dash separates the terrain modifier from the surficial geology.

TERRAIN MODIFIERS

SUB-ARCTIC, ALPINE AND PERIGLACIAL PROCESSES

PF - permafrost : within 1 m of surface
K - thermokarst
S - solifluction

FLUVIAL PROCESSES

Active - recently active part of floodplain

EROSIONAL PROCESSES

G - gullying : areas of rapid erosion

SYMBOLS

Geological boundary (defined, assumed).....
Glacial meltwater channel.....
Moraine ridge.....
Cirque.....
Mass movement failure - slow to moderate (i.e., creeps or slumps).....
Mass movement failure - moderate to fast (i.e., slides or avalanches).....
Aligned landform.....
Till geochemistry sample (ppm).....
Sample Number
Cu 21
Pb

REFERENCES

JENNINGS, D.S. and JILSON, G.A., 1986. Geology and sulphide deposits of Anvil Range, Yukon. In: Mineral Deposits of Northern Cordillera, Proceedings of the Mineral Deposits of Northern Cordillera Symposium, MORIN, J.A. (Ed.), Canadian Institute of Mining and Metallurgy, Special Volume 37, p. 319-361.

RECOMMENDED CITATION

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Digital cartography and drafting by P.S. Lipovsky, Yukon Geology Program.

Any revisions or additional geological information known to the user would be welcomed by the Yukon Geology Program.

Copies of this map may be purchased from Geoscience Information and Sales, c/o the Whitehorse Mining Recorder, Indian and Northern Affairs Canada, Room 102-300 Main St., Whitehorse, Yukon, Y1A 2B5, Ph 867-667-3266 Fax 867-667-3267.

Keep this map stored in a dark area to prevent map colours from fading.

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Indian and Northern Affairs Canada
Exploration and Geological Services Division
Yukon Region

Open File 1999-9

SURFICIAL GEOLOGY MAP AND TILL GEOCHEMISTRY
OF MOUNT MYE (105K/6 E), CENTRAL YUKON

by

P.S. Lipovsky and J.D. Bond
Yukon Geology Program
Geoscience Office

SURFICIAL GEOLOGY AND TILL GEOCHEMISTRY OF MOUNT MYE
(105K/6 E), CENTRAL YUKON

SCALE 1:25 000

CONTOUR INTERVAL 100 FEET
Elevations in Feet above Mean Sea Level
North American Datum 1983
Transverse Mercator Projection

Topographic base produced by
SURVEY AND MAPPING BRANCH,
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AND RESOURCES
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ONE THOUSAND METRE
Universal Transverse Mercator Grid
ZONE 8

Use diagram only to obtain numerical values
APPROXIMATE MEAN DECLINATION 1972
FOR CENTRE OF 20000 MAP
Annual change decreasing 4.1"

1000 0 1000 2000 3000 4000 Metres

