



SUB-ARCTIC, ALPINE AND PERI Pf - permafrost within 1 m of su K - thermokarst S - solifluction EROSIONAL PROCESSES G - gullying ; areas of rapid eros Geological boundary (defined, a Glacial meltwater channel...... Mass Till ge nt failu nt failure - slow to - mo

 OUATERNARY

 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. Permafrost is commonly present within 1 m of the surface. Localized palsa development occurs in more poorly drained organic genosisting of woody sedge peat, variable thickness. White River ash accumulations are commonly associated with poorly drained peaty areas.

 ALLUVIAL DEPOSITS: sand, silt and pebbles with minor cobbles deposited in modern drainages. Common in all drainages in the map area and may intermix with alluvial fan sediments in areas of higher relief.

LEGEND

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## Open File 1999-16 SURFICIAL GEOLOGY MAP AND TILL GEOCHEMISTRY OF ROSE MOUNTAIN (105K/5 NE), CENTRAL YUKON by

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

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, J.A. Morin (ed.), Canadian Institute of Mining and Metallurgy, Special Volume 37, p. 319-361. REFERENCES SYMBOLS Sample Number

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. Small valley alluvial plains may not be mapped at this scale.
At - alluvial terrace ; silt, sand and pebbles with reworked cobbles and boulders occurring as low terrace deposits, 0 - 10 m thick.
Af Ax
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 Af 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: diamicton, gravel, shattered bedrock, and lenses of sand an bedrock and surficial sediments by physical and chemical weathering processes. Train debris occurs as surface creep or by mass wasting processes. Permafrost and seaso processes often initiate and enhance colluviation. Common on slopes and plateau su CV - colluvium veneer ; conforms to bedrock topography, <1 m thick. Ca - colluvium apron ; coalescing colluvial fans at the base of a slope, bedrock, and lenses of sand and silt derived from ical weathering processes. Transport of dislodged cesses. Permafrost and seasonal freeze-thaw mon on slopes and plateau summits.

Cv - colluvium veneer ; conforms to bedrock topography, <1 m thick. Ca - colluvium apron ; coalescing colluvial fans at the base of a slope, >1 m thick.

Cz - mass wasting 👙 includes slumping, common in terraces along Anvil Creek.

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 kettled surface pattern due to melting of buried glacial ice. Sediments form poorly drained areas with peaty blankets. Thermokarsting is common. Glaciolacustrine deposits are found in an unnamed tributary to Anvil Creek, in the northwest corner of the map. LV - glaciolacustrine veneer ; <5 m thick.

Lv - glac

### Lb - gl et 🔅 1 - 40 m t

OFLUVAL DEPOSITS: stratified to massive; poorly to well sorted: gravel and sand with minor silt and sas; deposited by meltwater originating from glacial ice. Common in Rose and Anvil Creek valleys.
Gp - glaciofluvial plain ; 3-10 m thick.
Gt - glaciofluvial terrace ; <10 m thick.</li>
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.
AL DEPOSITS (till): unsorted clay, silt, sand, pebbles and cobbles with minor boulders; deposited by n glacial ice and occurs as subdued veneer and blanket deposits. Till is common as a veneer over of the map area and grades into blanket deposits on more gentle slopes and valley bottoms.

Tv - till veneer ; conforms to underlying topography, <1 m thick.</li>
Tb - till blanket ; gently to moderately sloping plain controlled by surficial deposits, >1 m thick.
Tx - till complex ; till blanket or veneer composed of meltout till ar 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 southern half and uppermost northeast part of the map area and consist of the Lower Cambrian Mt. Mye formation, the Cambrian to Lower Ordovician Vangorda formation, and the Lower Ordovician to Silurian Menzie Creek formation. Late- and post-metamorphic Cretaceous intrusions of the Anvil plutonic suite cut the metamorphic stratigraphy and form the core of the Anvil Range (Jennings and Jilson, 1986). R - bedrock ; common on plateau summits and ridges of the Anvil Range.

COMBINED MAP UNITS

The sufficial geology unit(s) are shown first followed by the terrain modifiers. Combined sufficial 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) 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