

LEGEND FOR SURFICIAL GEOLOGY MAPS

TAKHINI (105 D11-14), TAGISH (105 D7-10), DELAYEE LAKE (105 C2-7), SWIFT RIVER (105 C1, 105 B 3-4, 104 013-14, 105 N16, MEISTER RIVER (105 B 1-2), RANCHERIA RIVER (105 A 3-6)

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	MATERIAL	LANDFORM OR LANDSCAPE		ASSUMED THICKNESS (range in meters)	GENERAL COMMENTS
		ORIGIN	TOPOGRAPHY		
O	peat and muck	organic	flat areas of bog and fen that generally lack distinctive organic landforms	1 to 2	organic terrain is of fairly limited occurrence in the map area, most widespread in the flat terrain of the Liard Plain, although most local patches are not extensive enough to map separately
Cm	blocks of local bedrock and glacial debris	rockslide and landslide	irregular surfaces along the lower part of fairly steep slopes	variable	rarely seen in the area mapped; where present they are of very limited extent and terminate near the foot of steep slopes
Cb	loose mixture of angular rocks and/or reworked glacial deposits	colluvial veneer and a variety of minor features resulting from mass-wasting processes	bedrock topography of ridges and valleys mostly in alpine areas	0 to 5	colluvium is widespread over most of the map area in the zone between the thick glacial deposits in lower parts of large mountain valleys and the bedrock surfaces of mountain tops, ridges and valleys; it commonly is associated with a till veneer (Mv/Cb)
Lp	clay, silt and sand	glacial lake	gently irregular to nearly flat surfaces except where thermokarst has formed numerous steep-sided depressions, typically 1 to 3 m. deep and 25 to 100 m. wide; sand dunes up to 3 m. high occur on sandy parts	10 to 60	the most extensive and thickest lake deposits occur in the broad valleys of the Yukon and Takhini Rivers where they are gradational into deeply pitted lake deposits and outwash (Gh) surface drainage varies from the well-drained parts near channels to extensive poorly drained swampy areas or local bogs between sand dunes
Af	gravel, sand and silt; generally poorly sorted	alluvial fan	gentle to moderately steep slopes at the confluence of small tributary valleys and trunk valleys; surfaces are commonly marked by small distributary channels	variable	these features are fairly numerous along the sides of mountain valleys, although only larger ones are mapped; certain similar features are mapped as deltas (Ad) which appear to be composite features that initially formed as deltas in glacial lakes and later were extended as alluvial fans when the lakes were drained; good source of aggregate although poor sorting may limit variety of uses
Ap	gravel, sand and silt; silt typically occurs as a veneer over sand and gravel	alluvial plain	gently irregular to nearly flat surfaces that include mostly the floodplains of large streams although small features such as stream terraces and alluvial fans may be included; abandoned channels and point bars are the most prominent features on these surfaces	10 to 100	alluvial plains are extensive along the Yukon, Takhini, Liard Rivers and the lower parts of their tributaries, discontinuous units occur along parts of other streams although commonly they are mapped as complexes; good source of coarse aggregate on the inside of broad meander bends
Ad	gravel, sand and silt	alluvial delta	distinctive landforms with irregular to flat surfaces; may have steep or gentle slopes, toward the opposite valley wall	20 to 60	parts of some of the features mapped as alluvial deltas include alluvial fans (see Af comments); gravel, sand and silt occur in distinctive, well-sorted beds and are a good source of medium to fine aggregate
At	gravel, sand and silt	alluvial terrace	nearly flat to gently irregular surfaces of low terraces bordering alluvial plains of modern terraces	5 to 20	these are mostly recent terraces related to downcutting of modern streams; they are distinguished from glacio-fluvial and glaciolacustrine terraces (Gt) on the basis of the absence of kettle holes or, by their greater heights above the modern valley floor
Gp	gravel, sand and some silt	glaciofluvial (outwash) plain	surfaces may vary from nearly flat to irregular terrain marked by abandoned channels; sharply irregular kettled terrain may occur locally	5 to 20	extensive belts of outwash occur at the confluence of the Liard and Meister Rivers in the Rancheria map sheet; numerous local patches are mapped elsewhere; good source of coarse to fine aggregate
Gt	silt, sand and some gravel	glaciofluvial and glaciolacustrine terraces	surfaces may be gradational from nearly flat to sharply irregular kettled ones	20 to 60	the most prominent terraces are cut in glaciofluvial and glaciolacustrine silt veneered with sand and gravel, form steep, light-colored bluffs that contrast with adjacent parts of the walls and bottoms of certain large valleys; in smaller valleys the features formed as kame terraces and are underlain mainly by sand and gravel
Gh	silt, sand and gravel	ice-contact glaciofluvial and glaciolacustrine valley fills and blankets	strongly irregular pitted or hummocky terrain with local relief up to 30 m. or more	20 to 60	sediments of mixed glaciofluvial and glaciolacustrine origin reflect deposition on stagnant ice that lay beneath outwash trains or deltas in proglacial lakes; on the Liard Plain this type of terrain is mostly glaciofluvial origin and gravel and sand predominate; predominance of silt in mountain valleys makes this material poor aggregate source although locally and in the Liard Plain coarse aggregate may be common
Gm	gravel, sand and silt	ice-contact glaciofluvial (kames and eskers) complexes	braided ridges and hills predominate, with local relief up to 30 m. or more	5 to 30	isolated occurrence of esker ridges are shown by symbol; where complexes are mapped individual ridges are not shown
Gx	gravel, sand and silt	ice-contact glaciofluvial (kame and esker) complexes, small outwash plains and numerous meltwater channels	irregular areas of braided ridges and hills along with gently irregular areas of outwash and numerous abandoned channels; local relief ranges from less than 5 m. to more than 30 m.	5 to 30	these complexes are mapped in valleys where meltwater erosion was significant in shaping local features; coarse aggregate is common
Mp	till; generally siltier with fewer stones than most other tills	lodgement till plain	nearly flat to gently irregular constructional morainic topography, with 1 to 3 m. local relief	5 to 30	drumlinized till plains form much of the terrain north of the Liard River across the Liard Plain where till and interfill sediments form a thick cover over sedimentary bedrock
Mm	till; generally sandy and fairly stony	lodgement and ablation till plain	rolling morainic topography with 1 to 5 m. local relief; generally reflects only the broad aspects of the underlying bedrock topography	5 to 30	morainic terrain of this type is most extensive at the confluence of mountain valleys and in the foothills bordering the southern part of the Liard Plain
Mb	till; generally sandy and stony	lodgement and ablation till blanket	low hills and ridges with local relief that reflects the underlying bedrock topography	5 to 30	morainic blankets occur mostly at the confluence of mountain valleys, and along the sides of the larger ones
Mv	till; generally sandy and stony with numerous boulders	lodgement and ablation till veneer	bedrock topography of ridges and valleys mostly in alpine areas	0 to 5	morainic veneer is typically associated with colluvial debris on alpine slopes; rubble covered or bare bedrock outcrops are common in this type of alpine terrain
A+Mx	gravel, sand, silt and till	valley bottom complex including alluvial plains, fans, terraces and a variety of glacial features	variable topography ranging from nearly flat valley floors to local clusters of kames and eskers with relief of 30 m. or more	variable	valley floor complexes are mapped within mountain valleys where various types of materials and features are not distinctive, or where they could not be separated at the scale of mapping
R	bedrock and bedrock rubble		topography varies from mountainous terrain to low hills and ridges bordering the floors of broad mountain valleys		bedrock rubble veneers much of the bedrock terrain in alpine areas, particularly along valley sides and mountain slopes.

Explanation of Letter Notation

A combination of letters is used to designate a map unit, e.g. Mv, or a component of a compound map unit, e.g. Mv/Cb. The upper case letter indicates the broad compositional-genetic class. The lower case indicates the morphology.

Occurrence of numerous erosional or mass-wasting features within a map unit is indicated by the addition of a dash and upper case letter, e.g. Mv-C, to the above letter designation.

Compound map units are used for areas of more than one component that could not be separated at the scale of mapping. The first component is the dominant one.

Compositional-genetic category

- O - organic, peat, marl
- C - colluvium, mass-wasting debris
- A - alluvium
- L - glaciolacustrine
- G - glaciofluvial
- M - morainal; till
- R - bedrock

Morphologic category

- p - plain
- m - rolling
- h - hummocky
- t - terraced
- f - fan
- d - delta
- v - veneer
- b - blanket
- n - drumlinoid
- k - thermokarst
- x - complex

Erosional modifier

- S - soliflucted
- C - channeled

Specific Symbols

- Geologic boundary
- Drumlinoids (direction assumed, determined)
- Moraine ridges
- Esker ridge
- Cirques and aretes
- Glacial lake strandline
- Sand dune area
- Landslide scar