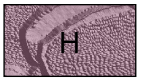
Legend Entries

Note: Where surficial geology map units consist of multiple materials, a compound map unit designator is used. These compound designators note areally more extensive and less extensive surficial materials joined with a '.' (e.g., Cv.R where Cv is more extensive than R). A stratigraphic relationship between two material types is noted with a '/' (e.g., GFv/Tu where GFv overlies Tu). We used the surficial geology data model of Deblonde et al. (2019) and definitions for surficial materials and expressions in Howes and Kenk (1997).

QUATERNARY SURFICIAL DEPOSITS

ANTHROPOGENIC DEPOSITS

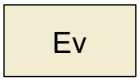


Anthropogenic deposits: geologic materials modified by human activity; typically < 10 m thick (locally > 50 m); predominantly mine site infrastructure including mine tailings and waste rock at the Red Chris porphyry Cu-Au mine.

HOLOCENE

NONGLACIAL ENVIRONMENTS

Organic deposits: accumulations of plant material >0.3 m thick; typically in relatively flat, poorly drained areas with standing water; widespread in valley bottoms, sporadic on alpine plateaus; thin (<0.3 m) ubiquitous organic layers are omitted from the map.

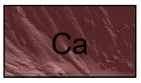


Eolian veneer: very well sorted fine sand and silt; generally <1 m thick; infill depressions; rare isolated dunes.

Colluvial and mass wasting deposits

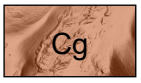
Sourced from bedrock and/or sediment; appearance and geotechnical properties dependent on source materials.

Colluvial fan: poorly sorted sand and gravel and diamicton; predominantly subangular clasts but range from subrounded to angular, oxidized; typically 1-10 m thick, but may be >10 m thick at the base of large slopes; slope gradients between 5° and 20°; typically where steep creeks enter valleys.

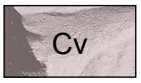


Colluvial apron and talus slope: diamicton and rubble; typically 1-10 m thick (locally >10 m near the base of tall slopes); typically a series of colluvial cones that have merged into a relatively homogeneous slope with gradients between 20° and 40°; sourced from steep upslope bedrock exposures.

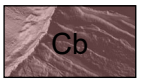
Landslide deposits: diamicton, rubble, and blocks; hummocky and ridged topography; large deposits may be >100 m thick; includes material from slope failure at the edge of plateaus and the flanks of river valleys; slide scarps, tension cracks, and drop blocks; includes inactive and active landslides.



Rock glacier: rubble and blocks with an ice matrix or that blanket glacial ice; hummocky and ridged topography; variable thickness; lobed surface expression indicates flow; common in higher elevation cirques.

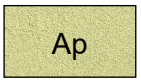


Colluvial veneer: sand and rubble, rare diamicton discontinuously overlying till or bedrock; <2 m thick; surface expression mimics underlying topography; common bedrock outcrops; on steep slopes with subjacent bedrock.



Colluvial blanket: sand and rubble, rare diamicton; >2 m thick; topography predominantly controlled by the underlying material but masking minor irregularities; typically overlies till or bedrock; downslope of colluvial veneers.

Alluvial deposits: generally well sorted, typically stratified; deposited by modern streams and rivers.



Alluvial floodplain: sand and gravel with minor silt; common rounded cobbles; >2 m thick; local and discontinuous organic veneers; form low-relief planar surfaces near modern rivers; prone to flooding.

Alluvial fan: gravel and sand to gravel; >2 m thick; stratified with rare interbeds containing organic materials; slope gradient between 1° and 6°; typically include colluvial material near the apex; potential aggregate source.

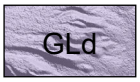
Alluvial terrace: well-sorted sand and gravel, minor silt; common rounded cobbles; >2 m thick; terraces above modern floodplains; potential aggregate source.

LATE WISCONSINAN

PROGLACIAL AND GLACIAL ENVIRONMENTS

Glaciolacustrine deposits: generally well sorted; commonly bedded to laminated, rarely massive; in ice-dammed lakes along the margins of retreating glaciers; distribution affected by outlet elevations.

Glaciolacustrine plain: silt and clay; >2 m thick; massive to laminated; rare isolated pebbles; smooth horizontal surface independent of underlying topography; formed in deep water away from margins of glacial lakes.



Deltaic glaciolacustrine: sand and gravel, minor silt; >2 m thick (up to 10s of m); bedded; smooth low-angle surface with steeper margins; spatially associated with shoreline deposits and local ice contact features; commonly dissected by modern stream channels and fans; formed at the point where sediment-laden inflow entered a glacial lake.

Nearshore glaciolacustrine: medium- to fine-sand and silt, trace clay; >2 m thick; massive to laminated; well sorted; rare isolated pebbles; planar to undulating surface independent of underlying topography; formed in shallow water near the margins of glacial lakes.

Hummocky glaciolacustrine: silt and clay; variable thickness; massive to laminated; rare isolated pebbles; hillocks and hollows with moderate to steep slopes; kettles, local ridges and channels; formed on top of melting ice.

Glaciolacustrine veneer: well sorted sand, silt, and clay; <2 m thick; surface expression mimics underlying topography.

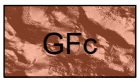
Glaciolacustrine blanket: well-sorted sand, silt, and clay; >2 m thick; topography mainly controlled by the underlying material but masking minor irregularities.

Glaciofluvial deposits: generally moderately sorted; deposited by meltwater sourced from glacial ice; represent a potential aggregate source.

Glaciofluvial outwash plain: moderately sorted gravel to well-sorted coarse sand; >2 m thick; massive to bedded; low-relief planar surfaces; outwash typically deposited in valley bottoms in front of retreating ice.

Glaciofluvial terrace: gravel and sand; >2 m thick; above modern floodplains or alluvial deposits.

Glaciofluvial outwash fan: moderately sorted gravel; weekly stratified; generally <5 m thick; formed on valley walls as paraglacial fans immediately following deglaciation.



Glaciofluvial ice-contact: poorly sorted sand and gravel; >2 m thick; hummocky ridged and kettled surface expressions; locally with discontinuous glaciolacustrine sediments in areas that were ponded; a product of ice stagnation, typically in low-relief areas of valley bottoms.

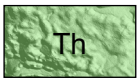
Kame terrace: poorly sorted gravel interstratified with diamicton and, rarely, glaciolacustrine sediments; >2 m thick; formed at the lateral margins of a retreating glacier; on valley walls above modern valley floor.

Esker: poorly sorted gravel; 5-20 m thick; massive to weekly bedded; sinuous ridges with peaked or flat tops; in valley bottoms.

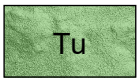
Glaciofluvial veneer: moderately sorted sand and gravel; <2 m thick; surface expression mimics underlying topography; occurs discontinuously overlying till.

Glaciofluvial blanket: moderately sorted sand and gravel; >2 m thick; topography mainly controlled by the underlying material but masking minor irregularities.

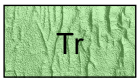
Till Deposits: generally diamicton; range from very dense, unsorted with a silty clay matrix to poorly sorted, oxidized, gravel rich diamicton with a sandy silty matrix; in alpine and subalpine environments, modified by modern periglacial processes as evidenced by patterned ground; on steep slopes primary features may be modified by creep.



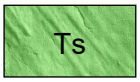
Hummocky till: sand and gravel rich diamicton; >2 m thick; hillocks and hollows with moderate to steep slopes and local relief of 1-2 m; local glaciolacustrine and glaciofluvial sediments between hummocks; on cirque floors, saddles, and valleys; a product of ice stagnation.



Undulating till: diamicton; >2 m thick; irregular surface with gently sloping mounds and depressions; in areas of low elevation and relief.

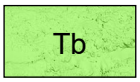


Ridged till: diamicton; >2 m thick; includes discontinuous elongate ridges interpreted as moraines or crevasse fills; local relief of 1-2 m.



Streamlined till: diamicton; >2 m thick; landforms oriented parallel to ice flow direction; local relief is 1-10 m; individual landforms are typically ~0.5 km long (up to ~1 km); includes drumlins, flutes, and crag-and-tails; typically in valley bottoms or on gentle slopes between valley bottoms and plateau surfaces.

Till veneer: diamicton; <2 m thick; surface expression mimics underlying topography; abundant bedrock outcrops; on moderately steep slopes and at high elevations; commonly with colluvium; may be modified by creep processes.



Till blanket: diamicton; >2 m thick; topography mainly controlled by the underlying material but masking minor irregularities; rare bedrock outcrops; typically on moderate slopes and at low- to moderate-elevations.

PRE-QUATERNARY

Bedrock: Stikine terrane (Nelson et al., 2013); in the north includes igneous and volcanosedimentary rocks (Triassic and Jurassic) and allied plutonic complexes (Triassic), in the south, Bowser basin (Cretaceous) sedimentary rocks (Evenchick et al., 2009; Nelson, 2019).

Bedrock: bedrock outcrop; locally includes areas of colluvium and till; extensively frost shattered at higher elevations; commonly exposed on steep slopes and at elevation in alpine environments.

SYMBOLS

Source data boundary[1]	
Mine tailings	
Open pit mine	
Gravel pit	
Quarry	
Landslide	
Landslide toe	
Small scar	
Landslide escarpment	
Tension crack	
Rock glacier	
Ground ice	
Terrace scarp	
Sediments partly reworked by meltwater channels	
Kettle	
Beach crest	
Lake outlet central axis	
Delta	
Meltwater channel:	
Minor (flow direction known)	
Minor (flow direction unknown)	

Minor lateral (tick indicates uphill side)	
Major	
Moraine ridge	
Kame	
Esker ridge	
Crevasse-fill ridge	
Fluted bedrock or drift (direction unknown)	
Paleo ice-flow direction unknown	
Paleo ice-flow direction known	
Crag-and-tail ridge; paleo ice-flow direction indicated	
Erratic	
Glacial striations:	
Paleo ice-flow direction unknown	
Paleo ice-flow direction known	
Cirque headwall	
Road	
Small bedrock outcrop in thick drift	
Station (Ground observation)	
Geological contact, defined	
Mineral occurrence (see Table 1; numbers indicate Map ID)	
Producer	12
Developed Prospect	12
Prospect	12
Showing	12

[1]Boundary indicates the area where mapping was completed using digital stereo air photo images. The remainder of the mapping was completed using digital pseudo-stereo imagery derived from lidar data and orthoimagery.