



STRATIGRAPHIC LEGEND

Note: Not all stratigraphic units from the legend are present on stratigraphic logs

HOLOCENE (< 0.010 Ma)	LATE PLEISTOCENE TO EARLY PLEISTOCENE (0.7 - 0.780 Ma)
Modern soil	Paleosol developed in late Pleistocene to early Pleistocene glaciofluvial and non-glacial sediments
Stratified sand and gravel; alluvial sediments	Stratified sand and gravel; glaciofluvial sediments deposited during early pre-Ried glaciations
LATE PLEISTOCENE (< 0.125 Ma)	PLEISTOCENE pre-glacial, ~2.7 - 5 Ma
Silt (organic rich), peat, and organic detritus, and extensive reworked and segregated facies; cohesively colored trunks	Basal and basal terrace
Massive to stratified detritus; colluvial sediments (may locally show Middle Pleistocene)	Stratified to massive gravel and sand; White Channel Gravel and equivalent clasts (with possible younger glaciation)
Massive to stratified silt and fine sand; eolian sediments	Stratified to massive sand and gravel; non-glaciofluvial sediments; may be graded to pre-Ried outwash
Stratified silt and sand; reworked eolian sediments locally interstratified with alluvial fan sediments	PRE-PLEISTOCENE (> 5 Ma)
Stratified sand and gravel; alluvial sediments	Mesozoic and Paleozoic bedrock
MIDDLE PLEISTOCENE (0.125 - 0.780 Ma)	SYMBOL
Paleosol developed in Ried and younger pre-Ried glaciofluvial sediments	Topography, identification and age, if known, described on stratigraphic log
Stratified sand and gravel; glaciofluvial sediments deposited during Ried glaciation	Ice wedge pseudomorph or sand wedge
Stratified sand and gravel; glaciofluvial sediments deposited during younger pre-Ried glaciations	
Massive to stratified silt and the sand; primary and reworked eolian sediments	

LEGEND

Note: Map units listed below occur within one metre of the surface. Where organic or eolian sediments < 1 m thick overlie these, a pattern is overlaid upon the map unit. Along some valleys, colluvial or alluvial sediments < 1 m thick overlie older alluvial gravels that could contain placer gold. In order to accommodate these potentially explainable deposits, a compound map unit is presented, e.g., CxAlT. The mass that colluvial complex sediments overlie alluvial terrace sediments thought to be late Tertiary in age. The legend is part of a larger regional study base colored units indicate units that appear on this map. In addition, not all symbols in the legend are represented on this map.

CENOZOIC

QUATERNARY HOLOCENE

Modern Land: placer mines, roads, and airstrip

ORGANIC DEPOSITS: peat and organic silt formed predominantly by the accumulation of vegetative material in bogs. Aims and patterns established on valley bottoms; permafrost is commonly encountered within 1 m of the surface. Thermokarst collapse is common.

ORGANIC BLANKET: undivided; thickness < 1 m to 5 m

ORGANIC VEENER: blanket bog generally < 1 m thick

ALLUVIAL DEPOSITS: gravel to silt size sediments, well stratified, deposited by streams

Floodplain Sediments: gravel, cobble to pebbles; massive to well stratified, capped by sand and silt; flat lying, includes lacustrine and organic deposits in abandoned channels and backswamp areas; subject to periodic inundation and reworking by floods; thickness 1 to 5 m

Alluvial Fan Sediments: gravel, sand, silt, and detritus, massive to well stratified; sediments form fan-shaped landforms or complexes of coalesced fan-shape landform at the confluence of tributary channels; may be subject to flooding accompanied by sudden stream migration and inundation; thickness up to 10 m

Alluvial Sediments Complex: sediments forming floodplains, fans, and terraces as above that cannot be subdivided at this map scale

HOLOCENE AND PLEISTOCENE (UNDIVIDED)

COLLUVIAL DEPOSITS: stony detritus resulting from the physical and chemical breakdown of bedrock and subsequent reworking and transportation by creep, solifluction, and incision; colluvial deposits may contain reworked glaciofluvial and moraine sediments within the limits of pre-Ried ice cover and reworked eolian sediments; colluvial deposits are products of formation and reworking over a significant part of the Pleistocene and Holocene epochs

Colluvial Blanket and Veener Sediments: detritus, stony with a sandy matrix; massive to poorly stratified; colluvial blankets generally conform to underlying bedrock and exceed 1 m in thickness; veneers are < 1 m in thickness and are commonly discontinuous over bedrock

Colluvial Apron Sediments: bouldery detritus and bouldery sandy gravel, poorly sorted, massive, sediments form a wedge-like slope-ice complex of small steep debris flow and solifluction deposits; thickness < 1 m in the upper and lower slope area up to 5 m or more in the thickest part of the apron

Landslide Sediments: silt to boulders, poorly sorted to unsorted; massive; clasts are subangular to angular and are locally derived; thickness varies greatly

Colluvial Complex Sediments: areas of intergrading colluvial and alluvial sediments which are too complex to subdivide at the scale of mapping; unit may include colluvial and alluvial facies; colluvial facies includes detritus and contains reworked glaciofluvial and moraine sediments within the limits of glaciation; the unit commonly occurs along the lower slopes of valley margins

Colluvial Eolian Apron (muck): primary deposits of eolian fine sand and silt reworked and interstratified with organic silt, and detritus, alluvial fan gravel and sand and variable amounts of stony colluvial detritus; forms aprons along valley bottoms through reaccumulation of eolian sediments from valley sides to valley floor; commonly preserved on north-facing slopes; thickness 1 to 20 m; commonly contains segregated bodies of ice and buried ice wedges

MIDDLE TO LATE PLEISTOCENE (UNDIVIDED)

ALLUVIAL DEPOSITS: gravel and sand deposited by streams that were not fed by glacial meltwater; sediments may have experienced several cycles of inundation and erosion, but are now inactive due to burial or fluvial incision; basal gravels within these sediments commonly contain placer gold

Alluvial Terrace Sediments: gravel, cobble to pebbles with a sandy matrix, massive to well stratified, capped by sand and silt; sediments are of flood plain origin now isolated from flooding by stream incision; thickness 1 m to 10 m

Alluvial Fan Sediments: single fans or aprons of coalesced fans formed from gravel and sand, poorly to moderately sorted, now isolated from water and debris floods due to fluvial incision; sediments disturbed by cryoturbation; thickness up to 10 m

Alluvial Complex Sediments: silt, sand and gravel, poorly to moderately sorted; thin to thick bedded, interstratified with colluvial detritus; sediments underlie the floors and margins of narrow upland valleys and grade laterally up slope into colluvial blankets; sediments may represent several depositional cycles; thickness may exceed 10 m in mid-valley locations

EOLIAN DEPOSITS: well sorted medium sand to silt initially transported and deposited by wind action during glaciations and commonly reworked through fluvial and colluvial processes; deposits of very fine sand and coarse silt, < 1 m thick are distributed discontinuously throughout low lying areas

Eolian Blanket: fine sand and silt, well sorted, massive; may form crescent-shaped and linear dunes and features or gently undulating inter-dune eolian plains; thickness 1 to 5 m

Eolian Veener: thin deposits of very fine sand and coarse silt distributed discontinuously throughout low lying areas; thickness < 1 m

LATE PLEISTOCENE - MCGOWEN GLACIATION

GLACIOFLUVIAL DEPOSITS: gravel and sand deposited by streams flowing away from glacial ice; deposits display poor soil development with rare cryoturbation

GLACIOFLUVIAL TERRACE SEDIMENTS: gravel and sand, unweathered, forming one or more terraces

MIDDLE PLEISTOCENE - RIED GLACIATION

GLACIOFLUVIAL DEPOSITS: gravel and sand deposited by streams flowing away from glacial ice; deposits display moderate soil development with signs of cryoturbation; soil thickness < 0.5 m

GLACIOFLUVIAL TERRACE SEDIMENTS: gravel and sand, moderately weathered, forming one or more terraces

GLACIOFLUVIAL DEPOSITS: well stratified sand, silt, clay, deposited in lakes ponded by glacial ice

GLACIOFLUVIAL DEPOSITS: gravel and sand deposited by streams flowing away from glacial ice in meltwater channels and outwash plains; massive to well stratified; surface soils may extend to 2 m depth with well developed clay skins on clasts; frequent signs of cryoturbation (ice wedge pseudomorph and sand wedges), and strong chemical weathering

GLACIOFLUVIAL TERRACE SEDIMENTS: gravel and sand, deeply weathered; incised into flights of terraces; thickness 1 to > 5 m

MORAINAL DEPOSITS (TILL): glacial detritus, mainly silt, generally consisting of a matrix ranging from sand to clay that supports clasts ranging from boulders to pebbles in size; deposited either directly from glacial ice or by gravity flow from glacial ice; surface soils may extend to 2 m depth with well developed clay skins on clasts; frequent signs of cryoturbation (ice wedge pseudomorph and sand wedges), and strong chemical weathering

Till Blanket: detritus, stony, silt/sand matrix, massive, conforms to underlying topography; thickness > 1 m; extensively colluviated on slopes

Till Veener: detritus, stony, silt/sand matrix, massive, discontinuous and may contain extensive areas of thin (< 1 m) colluvium

ALLUVIAL DEPOSITS: Gravel and sand deposited by streams that were not fed by glacial meltwater; sediments may have experienced several cycles of inundation and erosion, but are now inactive due to burial or fluvial incision; basal gravels within these sediments commonly contain placer gold

ALLUVIAL TERRACE SEDIMENTS: sandy pebbles and cobble gravel deposited by streams having a fluvial source but graded to the margin of pre-Ried glaciation or glacial drainage; thickness 1 to 5 m

UNDIFFERENTIATED DRIFT: detritus, gravel, sand, silt and clay deposited from glacial ice, glacial streams, and glacially detritus; extensive weathering, poor exposure and permafrost make differentiation of component glacial sediments difficult; thickness commonly exceed 10 m and mask underlying bedrock topography; commonly colluviated and intergraded with colluvium; surface soils may extend to 2 m depth with well developed clay skins on clasts; frequent signs of cryoturbation (ice wedge pseudomorph and sand wedges), and strong chemical weathering

DRIFT: silt to pebbly stopping

DRIFT MODIFIED BY LANDSLIDING: drift transected along failure plane into irregular steps and sub-parallel scaps

FLUVIALLY INDUCED DRIFT: formerly extensive areas of drift incised by closely spaced stream valleys

LATE PLEISTOCENE

Basalt: columnar alkali olivine basalt and flow dikes; erosional remnants of formerly valley filling flows underlying terraces along lower Rosebud Creek; thickness 10 m

PLEISTOCENE AND LATE PLEISTOCENE

ALLUVIAL DEPOSITS: proglacial gravel and sand; highly dissected and deeply weathered

Pediment and Bajada Sediments: inclined fluvial surfaces which are found at a mid-slope position in unglaciated drainage systems; usually thicker than 5 m, formed as a result of limited aggradation of stream; composed of fine to coarse grained sediment; poorly sorted gravel that contains both locally derived subangular stream gravel and angular bedrock fragments

High Level Terrace Sediments (includes White Channel Gravel and equivalent sediments): weathered pebbles to cobble gravel > 1 m thick; surface soils may extend to 2 m depth with well developed clay skins on clasts; frequent signs of cryoturbation (ice wedge pseudomorph and sand wedges), and strong chemical weathering; terraces above the 500 m contour may be remnant features from the southward flowing pre-Ried glacial drainage system

PRE-LATE TERRESTRIAL

Bedrock: schist, gneiss, ultramafics, granodiorite, monzonite, marble, and basalt; includes areas of thin colluvial cover, blockfields, and sorted stone polygons in alpine areas

SYMBOLS

Geologic contact: defined, approximate, inferred

Open system pingo, collapsed open system pingo

Thermokarst collapse activity

Landslide movement direction in bedrock and colluvium

Scars created by widespread landslide movement in drift

Terrace scarp (icks on sloped side)

Degraded Cirque: active during pre-Ried Glaciations

Degraded Arête: active during pre-Ried Glaciations

Meltwater channel: flow direction, unknown flow direction

Meltwater channel: large

All time (pre-Ried) glacial limit, defined, inferred

Cryoturbation terrace

Terrace

Landform streamlined by glacial ice

Vertebrate fossil locality

Stratigraphic section

Radiocarbon date in years (lab no.)

Au-Au radiometric age on basalt

Fault trace

Lineaments (fault, fracture, joint system) defined by linear drainage courses, aligned pingo or ridges, or aligned breaks in bedrock outcrops

Abandoned valley; paleoflow defined

Abandoned valley; paleoflow undefined

Paleoflow; suspected buried valley

