



British Columbia Geological Survey
OPEN FILE 2010-08
SURFICIAL GEOLOGY OF THE KOMIE CREEK AREA

Geological Survey of Canada
OPEN FILE 6568

NTS 94P/05
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Scale 1:50 000



Field survey carried out 2003 to 2007

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SURFICIAL GEOLOGY
HOLOCENE SEDIMENTS

ORGANIC DEPOSITS: peat and muck; 1 to 3 m thick on average; formed by the accumulation of plant material in various stages of decomposition; generally occurs as flat, wet terrain (swamps and bogs) over poorly drained substrates.

- O1** Bog peat: sphagnum or forest peat formed in an ombrotrophic environment; wet terrain; may be treed or treeless; O1h, hummocky mounds and plateaus; area may be underlain by ground ice or shallow permafrost conditions; O1k, thermokarst terrain related to melting ground ice.
- O2** Fen peat: peat derived from sedges and partially decayed shrubs in a eutrophic environment; forms relatively open peatlands with a mineral-rich water table that persists seasonally near the surface; generally covered with low shrubs and occasional sparse layer of trees.
- O** Undifferentiated bog and fen deposits: O_h, undifferentiated hummocky bog and fen deposits; area may be underlain by ground ice or shallow permafrost conditions; O_k, undifferentiated bog and fen deposits with thermokarst terrain related to melting of ground ice; O_c, undifferentiated bog and fen deposits cut by numerous subparallel channels on gentle slopes.

COLLUVIAL DEPOSITS: mass wasting debris; poorly sorted, massive to stratified debris deposited by direct, gravity-induced movement; composition dependent on source material.

- Ch** Landslide and slump debris: active and inactive landslides; hummocky topography; diamictic, generally 1 to 10 m thick, but may exceed 10 m near the toe of large landslides.
- Cv** Colluvial veneer: thin and discontinuous cover of slumped and/or sluffed material <1 m thick; overlies bedrock or till.

ALLUVIAL DEPOSITS: sorted gravel, sand, minor silt and organic detritus deposited by streams; commonly stratified.

- Ap** Floodplain deposits: sorted gravel, sand, silt and organic detritus >1 m thick; forming active floodplains close to river level with meander channels and scroll marks.

LACUSTRINE DEPOSITS: sand, silt and minor clay deposited in a former lake.

- L1** Lacustrine deposits: >1 m thick; generally overlain by organic deposits; exposed by recent fluctuations in lake levels.

LATE PLEISTOCENE SEDIMENTS

GLACIOLACUSTRINE DEPOSITS: fine sand, silt, and clay, with minor debris-flow diamictic, deposited in glacier-dammed lakes in valleys and along the margin of the retreating Laurentide Ice Sheet; usually overlain by organic deposits in lowlands.

- Lb** Glaciolacustrine blanket: >1 m thick.

GLACIOFLUVIAL DEPOSITS: well to poorly stratified sand and gravel; minor diamictic; deposited behind, at or in front of the ice margin by glacial meltwater; represents a potential aggregate source.

- Gl** Ice-contact stratified drift: poorly-sorted sand and gravel with minor diamictics; deposited in contact with the retreating glacier; 1 to >20 m thick; Gir, esker ridges; Gid, ice-contact glaciofluvial delta deposits; 1 to >30 m thick, surface marked by kettles.

MORAINAL DEPOSITS (TILL): diamictic deposited directly by the Laurentide Ice Sheet; sandy to clayey matrix with striated clasts of various lithologies, including many Canadian Shield, carbonate and sandstone erratics; clast content is typically low (<10 %).

- Tb** Till blanket: >1 m thick, continuous till cover forming undulating topography that locally obscures underlying units.
- Ts** Streamlined and fluted till: >1 m thick, till surface marked by streamlined landforms including flutes and drumlins.
- Tr** Ridged till deposits: >1 m thick, moraines forming a ridged topography.

PRE-QUATERNARY BEDROCK
(bedrock units are present only in combination with other units)

- R** Sedimentary bedrock: Cretaceous Fort St. John Group shales and Dunvegan Formation sandstone.

NOTE: In areas where the surficial cover forms a complex pattern, the area is coloured according to the dominant unit and labelled in descending order of cover (e.g., O-T_h). Where buried aggregate deposits (sand and gravel) - commonly associated with Gl or Gd surficial units) are known, or suspected, areas are coloured according to the overlying unit and labelled in the following manner: L₁/G_d. Where bedrock is thought to be shallowly covered by another unit it is in the following manner: T_b/R.



Transverse Mercator Projection (Grid Zone 10)
North American Datum 1983
Magnetic declination 2009, 21°14' E, decreasing 2°3' annually
Digital base map provided by Natural Resources Canada, National Topographic System (1:50 000 scale)
Digital elevation model
Illumination: azimuth 045°, altitude 45°, vertical exaggeration 10x

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