



LEGEND

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. C-Tv). Where buried aggregate deposits (sand and gravel - commonly associated with Gt or Gs surficial units) are known, or suspected, areas are coloured according to the overlying unit and labelled in the following manner: L¹Gt.

QUATERNARY SURFICIAL DEPOSITS

- POST LAST GLACIATION**
- NONGLACIAL ENVIRONMENTS**
- O** **ORGANIC DEPOSITS:** Fen peat; 1 to 3 m thick on average; peat derived from sedges and partially decayed shrubs in a subhumid environment; the plant material is in various stages of decomposition; generally occurs as flat, wet terrain (swamps) over poorly drained substrates; forms relatively open peatlands.
 - Ch** **LANDSLIDES AND SLUMP DEBRIS:** diamicton and rubble; poorly sorted, massive to stratified debris deposited by direct, gravity-induced movement; composition dependent on source material.
 - Cv** **COLLUVIAL VEENER:** thin and discontinuous cover of slumped and/or soliflucted material <1 m thick; overlies bedrock or till.
 - Ca** **TALUS (SCREE):** accumulation of angular boulders below cliffs; generally 1 to 10 m thick or greater; usually forming fans or aprons.
 - 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.
 - At** **FLUVIAL TERRACE DEPOSITS:** >2 m thick; forming inactive terraces above modern floodplains; represent a potential aggregate source.
 - Al** **ALLUVIAL FAN DEPOSITS:** poorly sorted gravel, sand, and diamicton >1 m thick; occur where a stream issues from a narrow valley onto a plain or valley floor.
 - A** **UNDIFFERENTIATED FLUVIAL DEPOSITS:** undivided floodplain, fluvial terrace, and alluvial fan deposits.
 - L¹** **LACUSTRINE DEPOSITS:** sand, silt, and minor clay deposited in a former lake; >1 m thick; occasionally overlain by organic deposits; exposed by recent fluctuations in lake levels.

- NONGLACIAL AND PROGLACIAL ENVIRONMENTS**
- E_r** **ERIAN DEPOSITS:** medium to fine sand, wind-deposited; derived from detrital or glaciolacustrine deposits; in some areas eolian sediments are thin or absent between dunes. Dunes are stabilized by vegetation.
 - Er** **RIDGED EOLIAN DEPOSITS:** generally >2m thick; forming dunes.

POSTGLACIAL OR LATE WISCONSINAN

- PROGLACIAL AND GLACIAL ENVIRONMENTS**
- Lb** **GLACIOLACUSTRINE BLANKET:** >1 m thick; obscures topography of underlying units.
 - Lv** **GLACIOLACUSTRINE VEENER:** <1 m thick; thin and discontinuous.
 - Gp** **PROGLACIAL OUTWASH DEPOSITS:** generally 1 to 5 m thick; forming planar surfaces; generally mantle valley floors and surfaces adjacent to glacial meltwater channel margins.
 - Gt** **OUTWASH TERRACE DEPOSITS:** 1 to 10 m thick; generally associated with meltwater channels and canyons; generally forming flat paired terraces perched above alluvial deposits.
 - Gd** **GLACIOFLUVIAL DELTA DEPOSITS:** 1 to >30 m thick; deposited at the mouth of streams entering former glacial lakes.
 - Gih** **ICE-CONTACT STRATIFIED DEPOSITS:** poorly sorted sand and gravel with minor diamictons; 1 to >20 m thick; deposited in contact with retreating glacier ice; forming hummocky topography related to melting of underlying ice.
 - Gir** **ESKER DEPOSITS:** moderately sorted sand and gravel, 1 to >20 m thick; forming ridges. Formed by meltwater flow within tunnels or channels in glacier ice.
 - Git** **KAME TERRACE DEPOSITS:** 1 to 10 m thick; generally forming flat unpaired terraces on valley slopes.
 - TILL:** diamicton deposited directly by Cordilleran glacier; sandy to clayey matrix with striated clasts of various lithologies.
 - 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 flutings and drumlins.
 - Th** **HUMMOCKY TILL:** >1 m thick; hummocky to rolling till surface including discontinuous pockets of gravel.
 - Tr** **RIDGED TILL DEPOSITS:** >1 m thick; moraine or crevasse fillings forming a ridged topography.
 - Tv** **TILL VEENER:** <1 m thick; discontinuous till cover; underlying bedrock topography is discernible.

PRE-QUATERNARY

- R** **BEDROCK OUTCROP:** continuous bedrock outcrop; can include pockets of till or colluvium rarely exceeding 2 m thickness.

- Geological boundary (defined)
- Major landslide
- Paleocurrent direction (coincide with some station sites)
- Meltwater channel or underflow channel, small (paleoflow direction known)
- Meltwater channel, large (paleoflow direction known, unknown)
- Esker (direction known)
- End moraine
- Minor moraine or crevasse filling
- Drumlin (ice flow direction known, unknown)
- Crag-and-tail
- Fluting
- Striation (direction known, unknown)(coincide with some station sites)

- Crossed striations (numbers indicate relative age, 1 being the oldest)
- Bedrock lineation
- Outcrop
- Gravel pit
- Field observation site (with and without samples)



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 Geology by A. Plouffe, 2007
 Geological compilation by A. Plouffe, 2008
 Digital cartography by M.J. Coulthart, Data Dissemination Division (DDD)
 This map was produced from processes that conform to the Scientific and Technical Publishing Services Subdivision (DDD) Quality Management System, registered to the ISO 9001: 2000 standard

OPEN FILE 6193
SURFICIAL GEOLOGY
LAC LA HACHE
BRITISH COLUMBIA
 Scale 1:50 000/Échelle 1/50 000
 Kilometres 1 2 3 4 Kilometres
 Universal Transverse Mercator Projection
 North American Datum 1983
 Projection transversale universelle de Mercator
 Système de référence géodésique nord-américain, 1983
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Any revisions or additional geological information known to the user would be welcomed by the Geological Survey of Canada
 Digital base map provided by the BC Watershed Atlas (1:50 000, TRIM base)
 Shaded relief image prepared by DDD, derived from the digital elevation model supplied by L. Robertson, based on the TRIM topographic data
 Illumination: azimuth 315°, altitude 45°, vertical factor 6x
 Magnetic declination 2009, 19°11' E, decreasing 14.4" annually
 Elevations in metres above mean sea level

93 A4	93 A3	93 A2
92 P13	92 P14 OF6193	92 P15 OF6179
92 P12	92 P11 OF6173	92 P10

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6193
 GEOLOGICAL SURVEY OF CANADA
 COMMISSION GÉOLOGIQUE DU CANADA
 2009
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Recommended citation:
 Plouffe, A.
 2009. Surficial geology, Lac la Hache, British Columbia. Geological Survey of Canada, Open File 6193, scale 1:50 000.