



MAP 1908A
GEOLOGY
DEASE LAKE
BRITISH COLUMBIA

Scale 1:250 000 - Échelle 1/250 000

Transverse Mercator Projection
M.C. 131°00', Scale Factor 0.9996
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Projection transverse de Mercator
M.C. 131°00', facteur d'échelle 0.9996
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104 K 104 J 104 I
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104 F 104 G 104 H

NATIONAL TOPOGRAPHIC SYSTEM REFERENCE AND INDEX TO KNOWING GEOLOGICAL SURVEY OF CANADA MAPS

- OVERLAP ASSEMBLAGES**
- PLEISTOCENE AND RECENT**
 - Qs Glacial and glaciofluvial deposits, stream deposits, felsenmeer, talus, soil
 - PLEISTOCENE**
 - Pv Olivine basalt
 - MIOCENE TO PLEISTOCENE**
 - MPT TUYA FORMATION: alkali olivine basalt, tuff, agglomerate, minor trachyte and rhyolite; PPT, may include areas of underlying Mesozoic and Paleozoic rocks
 - Eocene**
 - ETC TANZILLA CANYON FORMATION: basal breccia, conglomerate, shale, freshwater limestone, coal; Ea, conglomerate, sandstone, shale
 - EARLY EOCENE**
 - EM MEEHAUS PLUTON: biotite-augite granodiorite
 - CRETACEOUS(?) AND TERTIARY**
 - UPPER CRETACEOUS(?) TO EOCENE
 - KTS SLOKO GROUP: rhyolite, dacite and trachyte flows, dykes, breccia; KTS1, biotite-quartz latite porphyry; age uncertain
 - CRETACEOUS**
 - LOWER AND (?)UPPER CRETACEOUS
 - KTC TANGO CREEK FORMATION OF SUSTUT GROUP: conglomerate, sandstone, siltstone, shale
 - LATE CRETACEOUS**
 - LKSPG SNOW PEAK GRANITE: biotite-hornblende granite, fine to medium grained
 - EARLY CRETACEOUS**
 - CASSIAR PLUTONIC SUITE (EKg, EKBr)
 - EKBR BEADY RANGE PLUTON: biotite granite, medium to coarse grained
 - EKg Biotite-hornblende granite, age uncertain
 - JURASSIC**
 - MIDDLE TO LATE JURASSIC
 - MLJGL GRANITE LAKE PLUTON: biotite and biotite-hornblende granodiorite
 - MLJgd Biotite and biotite-hornblende granodiorite
 - MJTL TACHILTA LAKES PLUTON: biotite and biotite-hornblende granodiorite, monzonite
 - JURASSIC**
 - EARLY TO MIDDLE JURASSIC
 - MJTsp THREE SISTERS PLUTON: potassic marginal phase: biotite-hornblende quartz monzonite, granite, syenite;
 - JPC PALLAN CREEK PLUTON and related plutons: biotite-hornblende quartz monzonite and quartz monzonite, minor granodiorite
 - JT TANZILLA PLUTON: biotite-hornblende granodiorite
 - Jgd Granodiorite; Jd, diorite; Js, syenite; age uncertain
 - LOWER JURASSIC**
 - TAKWAHONI FORMATION (LTJw-LTJ)
 - LTJ Undivided greywacke, shale siltstone, conglomerate, tuff, sandy limestone, arkosic, calcareous sandstone, basal conglomerate
 - LTJw Greywacke, shale, minor conglomerate; mainly Plensbachian; LTJgm, hornfelsed equivalents of LTJw including abundant silt and dykes of quartz-feldspar porphyry and granodiorite
 - EARLY JURASSIC**
 - EJT TAHLTAN PLUTON: zoned ultramafic body; pyroxenite, pyroxene syenite, syenite, rich in apatite and magnetite
 - TRIASSIC**
 - UPPER TRIASSIC
 - uTST STUJINI GROUP, upper part: massive and pillowed porphyritic augite basalt and coarse bedded feldspar porphyry, aphanitic basalt; local basal granitic-cobble conglomerate; uTSTs, tuffaceous argillite, greywacke, minor meta-andesite and augite porphyry
 - LATE TRIASSIC
 - LTCh CAKE HILL PLUTON: hornblende quartz monzonite, granodiorite, weakly to moderately foliated monzonite (and metamorphosed equivalents); rare hornblende diorite
 - LTLC LATHAM CREEK PLUTON: hornblende quartz diorite, monzonite, strongly foliated
 - LTcM CARIBOO MEADOWS PLUTON: augite metagabbro, hornblende
 - LTk KAKETSA PLUTON and related intrusions: biotite-hornblende diorite, hornblende diorite; minor biotite-citroxene diorite
 - LTmC MANSFIELD CREEK PLUTON: diorite and gabbro, strongly kaolinitized
 - LTga Augite metagabbro
 - LTgb Hornblende
 - LTgdm Undivided biotite-hornblende quartz diorite, granodiorite, quartz monzonite, diorite; LTgd, strongly foliated diorite, quartz diorite, and minor granodiorite; age uncertain

- LEGEND**
- STIKINIA (continued)**
- MIDDLE TRIASSIC**
 - STUJINI GROUP, lower part (ImTstV, ImTstT, mTst)
 - mTst Augite porphyry, meta-andesite, metabasalt, volcanic breccia, and tuff; may include uTST
 - LOWER AND MIDDLE TRIASSIC**
 - ImTst Argillite, siliceous argillite, greywacke, phyllite; minor chert and limestone; ImTstV, includes augite porphyry, breccia and tuff
 - PERMIAN**
 - Pc Massive limestone; may locally include phyllite and ribbon chert; Pc, may be, in part, older than Permian
 - Pp Phyllite, ribbon chert; Pp, may be, in part older than Permian
 - Pv Phyllite greenstone, phyllite, minor chert and limestone, rusty weathering; Pv, may be, in part, older than Permian
 - CACHE CREEK TERRANE**
 - JURASSIC
 - LOWER JURASSIC (may be in part, Middle Jurassic)
 - Jl INKILN FORMATION: penetratively cleaved, phyllitic slate, greywacke, pebble and cobble conglomerate; Jld, diamictite, possibly Kutcho Formation in part
 - TRIASSIC
 - UPPER TRIASSIC
 - uTs SINWA FORMATION: limestone, commonly argillaceous and feld
 - LOWER TRIASSIC
 - TKt KUTCHO FORMATION: basaltic to rhyolitic schist (flows, breccia, crystal tuff); fine grained volcanic sediments, basic schist, conglomerate (may be basal tuffin Formation, in part); TLK, undivided Kutcho, Inkiln, and possibly Cache Creek rocks
 - MISSISSIPPIAN TO TRIASSIC
 - Cache Creek Complex (MPu - MTK)
 - MTK KEDANDA FORMATION: chert, cherty argillite; minor argillite, siltstone and volcanic sandstone; minor volcanic rocks and metamorphosed equivalents; MTKw, sediments and volcanics, undivided; MTKgw, greywacke, slate, chert, may be entirely of Late Triassic age
 - PERMIAN
 - PT TESLIN FORMATION: massive limestone, minor mafic volcanics
 - PFR FRENCH RANGE FORMATION: undivided; basalt, tuff, agglomerate; minor chert, argillite
 - UPPER MISSISSIPPIAN TO PERMIAN
 - MPH HORSEFEED FORMATION: limestone, dolomitic limestone
 - MPc Limestone, age unknown
 - MPv Mafic volcanics, greenstone, age unknown
 - MPga Coarse grained to pegmatitic gabbro, diorite
 - MPu Peridotite, dunite, pyroxenite, generally serpentinized; locally includes pods of nephrite jade and small bodies of listwanite, rodolite, and talc
 - QUESNELLIA**
 - LOWER JURASSIC
 - LN Nazcha Formation: greywacke, conglomerate, shale, slate, siltstone; Sinemurian and possibly younger
 - TRIASSIC
 - LATE TRIASSIC
 - LTCL COW LAKES PLUTON: hornblende granodiorite, hornblende diorite; commonly foliated; may be in part of Early Jurassic age
 - LTgd Foliated hornblende granodiorite, age uncertain
 - UPPER TRIASSIC
 - uTc Limestone
 - uTsh SHONETAW FORMATION: augite porphyry, feldspar porphyry, tuff, agglomerate, pyroxenite; minor shale, siltstone, and greywacke; may include some LTgd, TJSJH, undivided Shonetaw and Nazcha formations
 - ANCESTRAL NORTH AMERICA**
 - CAMBRIAN AND YOUNGER(?)
 - CMm Undivided pyritic, hornfelsic slate, argillite, siltstone, quartzite, micaceous quartzite, schist, limestone; variably metamorphosed; mainly Cambrian to Mississippian(?)

Geology by H. Gabrielse, J.W.H. Monger, S.L. Leaming, R.G. Anderson, and H.W. Tipper on "Operation Dease", 1977 to 1983; H. Gabrielse, 1991 and 1997; J.G. Southern, 1981; J.W.H. Monger, 1986; H. Gabrielse, J.G. Southern, and E.F. Flores on "Operation Stikina", 1986 and 1988. Includes information from Hotahluh Range by B.W. Downing and C.H. Leitch, Falconbridge Nickel Mines Ltd., from the Grand Canyon of the Stikine River by P.B. Rowat, from the Level Mountain Range area by T.S. Hamilton, on contacts north of Egret Creek by R.T. Bell; contacts of the Kaketsa Pluton by the British Columbia Geological Survey; and on the distribution of several plutons by G.W. Manard, T. Lisle, and E. Ostenson

Geological compilation by H. Gabrielse, 1990

Digital cartography by S.J. Froberg, Geoscience Information Division

Any revisions or additional geological information known to the user would be welcomed by the Geological Survey of Canada

Digital base map from data compiled by Geomatics Canada, modified by the Geoscience Information Division

Copies of the topographic map for this area may be obtained from the Canada Map Office, Natural Resources Canada, Ottawa, Ontario, K1A 0E9

Mean magnetic declination 1998, 26°15'E, decreasing 10.8' annually. Readings vary from 25°51' E in the SW corner to 26°40' E in the NE corner of the map

Elevations in feet above mean sea level

- Geological boundary (defined, approximate, assumed)**
- Boundary of surficial deposits
 - Bedding, top known (inclined, vertical)
 - Bedding, top unknown (inclined)
 - Foliation (inclined, vertical)
 - Fault, unknown sense of displacement (defined, approximate)
 - Fault, extension (solid circle on downthrown side; defined, approximate)
 - Fault, extension (assumed projection under younger deposits)
 - Fault, contraction (teeth on upthrust side; defined, approximate or assumed)
 - Fault, contraction (assumed projection under younger deposits)
 - Fault, strike-slip (arrows indicate direction of relative movement; defined, approximate)
 - Fault, strike-slip (assumed projection under younger deposits)
 - Dextral strike-slip fault, on cross-sections only (displacement into section, out of section)
 - Anticline (defined, overturned)
 - Syncline (defined)
 - Lineation (plunging)
 - Radiometric date method, mineral, age (in millions of years) KAr41±7*
- Method: Potassium argon, K; rubidium strontium, R; uranium-lead, U
Mineral: biotite, b; hornblende, h; muscovite, m; whole rock, w; zircon, z
Fossil locality
- Cross-section line A-B
Mineral occurrence C-X

