GEOLOGICAL SURVEY OF CANADA COMMISSION GÉOLOGIQUE DU CANADA Natural Resources Ressources naturelles Canada 130°00′ 130°00′ 128°00′ **129°**00′ Copies of this map may be obtained from the Geological Survey of Canada: 601 Booth Street, Ottawa, Ontario K1A 0E8 3303-33rd Street, N.W., Calgary, Alberta T2L 2A7 101-605 Robson Street, British Columbia V6B 5J3 MAP 1907A GEOLOGY **CRY LAKE BRITISH COLUMBIA** Scale 1:250 000 - Échelle 1/250 000

Transverse Mercator Projection CM 129°00', Scale Factor 0.9996

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M.C. 129°00', facteur d'échelle 0,9996

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OVERLAP ASSEMBLAGES

TUYA FORMATION: alkali olivine basalt, tuff, agglomerate, minor trachyte and

Qs Glacial and glaciofluvial deposits, stream deposits, felsenmeer, talus, soil

MPvab Feldspar-quartz porphyry dykes and basaltic dykes, age uncertain

MAJOR HART PLUTON: granite, miarolitic in part

uKES SIFTON FORMATION: conglomerate, sandstone, shale

CASSIAR PLUTONIC SUITE (EKg-EKC)

Biotite-hornblende granite, age uncertain

MIDDLE TO LATE JURASSIC

MIDDLE JURASSIC (BAJOCIAN, in part)

EARLY TO MIDDLE JURASSIC

LKLE LITTLE EAGLE PLUTON: biotite-hornblende granite, miarolitic in part

EKBR BEADY RANGE PLUTON: biotite granite, medium to coarse grained

MLJSC SNOWDRIFT CREEK PLUTON: biotite-hornblende granodiorite

Biotite and biotite-hornblende granodiorite

Hornblende monzonite, syenite, diorite

quartz diorite, diorite, and quartz monzodiorite

EJMR McBRIDE RIVER PLUTON: hornblende-biotite granodiorite

TAKWAHONI FORMATION (IJTcg-IJT)

Conglomerate, shale, tuff; Toarcian

flows; age uncertain

TRIASSIC AND (?)JURASSIC

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

calcareous sandstone, basal conglomerate

IJTgw Greywacke, shale, minor conglomerate; mainly Pliensbachian

TUHINI GROUP, upper part: massive and p

LTGL GNAT LAKES ULTRAMAFITE: hornblende clinopyroxenite, hornblendite

IJTV Grey to green andesitic breccia and tuff; age uncertain, may be Bajocian

Dark grey and black shale, siltstone, tuff, minor greywacke; Sinemurian

Coarse, polymictic conglomerate; Sinemurian; may be partly Toarcian

Maroon and green epiclastic sandstone, pyroclastic volcanic rocks, agglomerate,

Grey and maroon plagioclase porphyry, andesite, volcanic conglomerate, tuffaceous

mudstone, breccia, rhyolite; minor siltstone, shale; TJvr , rhyolite, breccia, welded tuff

Hornblende granodiorite, diorite

CASSIAR BATHOLITH: biotite-hornblende and biotite-muscovite granite, locally

URNAGAIN PLUTON: strongly jointed, locally miarolitic and pegmatitic, biotite

BOWSER LAKE GROUP, undivided: conglomerate, siltstone, shale, and esite flows,

mJBLs , dominantly sedimentary; may be, in part, younger than Middle Jusassic

THREE SISTERS PLUTON: MJTSp, potassic marginal phase: biotite-hornblende

monzodiorite, quartz monzonite; MJTSm, mafic phase: biotite-hornblende quartz

diorite, diorite, gabbro; MJTSf, fine grained phase: clinopyroxene-biotite-hornblende

Undivided greywacke, shale, siltstone, conglomerate, tuff, sandy limestone, arkosic,

MJTS quartz monzonite, granite, syenite; MJTSc, central phase: biotite-hornblende quartz

mJBL tuff, breccia, agglomerate; marine and nonmarine; mJBLv, dominantly volcanic;

coarsely megacrystic; quartz monzonite, granodiorite; stippled areas indicate abundant lit-par-lit gneiss and screens and pendants of metamorphic rocks

Kaolinized feldspar-quartz porphyry

UPPER CRETACEOUS(?) TO EOCENE

CRETACEOUS(?) AND TERTIARY

LATE CRETACEOUS

Ev Rhyolite, chalcedonic rhyolite breccia, tuff; Eahp, augite hornblende porphyry

PLEISTOCENE AND RECENT

	LEGEND
STIKINIA (continued)	
LTCH	CAKE HILL PLUTON: hornblende quartz monzodiorite, granodiorite, weakly to moderately foliated monzodiorite (and metamorphosed equivalents); rare hornblende diorite
LTLC	LATHAM CREEK PLUTON: hornblende quartz diorite, monzodiorite, strongly foliated
LТga	Augite metagabbro
MIDDLE TRIASSIC STUHINI GROUP, lower part (ITSTv, ImTST, 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; ITSTv, includes augite porphyry breccia and tuff
PERMIAN	

Massive limestone; may locally include phyllite and ribbon chert; Pc, may be, in part, Phyllite, ribbon chert; Pp, may be, in part older than Permian

Phyllitic greenstone, phyllite, minor chert and limestone, rusty weathering; **P**v, may be, in part, older than Permian CACHE CREEK TERRANE

LOWER JURASSIC (may be in part, Middle Jurassic) INKLIN FORMATION: penetratively cleaved, phyllitic slate, greywacke, pebble and

uTS SINWA FORMATION: limestone, commonly argillaceous and fetid UTCHO FORMATION: basaltic to rhyolitic schist (flows, breccia, crystal tuff); fine grained volcanic sediments, basic schist, conglomerate (may be basal Inklin Formation, in part); ITKI, undivided Kutcho, Inklin, and possibly Cache Creek rocks; ETKt, trondhjemite; ETKg , gabbro

MISSISSIPPIAN TO TRIASSIC CACHE CREEK COMPLEX (MPu - MTK) KEDAHDA FORMATION: chert, cherty argillite; minor argillite, siltstone and volcanic MTK sandstone; minor volcanic rocks and metamorphosed equivalents; MTksv, sediments and volcanics, undivided

ESLIN FORMATION: massive limestone, minor mafic volcanics FRENCH RANGE FORMATION: undivided; basalt, tuff, agglomerate; minor chert,

UPPER MISSISSIPPIAN TO PERMIAN imestone, age unknown

MIDDLE JURASSIC(?)

UPPER TRIASSIC

Mafic volcanics, greenstone, age unknown

Coarse grained to pegmatitic gabbro, diorite; MPgv, fine grained, foliated gabbro, eenstone; may include small serpentinite bodies

Peridotite, dunite, pyroxenite, generally serpentinized; locally includes pods of nephrite jade and small bodies of listwanite, rodingite, and talc

Pink-weathering biotite-hornblende quartz monzonite, granodiorite, granite; age EARLY JURASSIC

EAGLEHEAD PLUTON: biotite-hornblende quartz monzonite, granodiorite, quartz

Biotite-hornblende quartz monzonite, granodiorite, quartz diorite; age uncertain

COW LAKES PLUTON: hornblende granodiorite, hornblende diorite; commonly foliated; may be in part of Early Jurassic age Foliated hornblende granodiorite, age uncertain

Hornblende granodiorite, hornblende diorite; commonly foliated, includes irregular bodies of EKg and MJgd

Peridotite, dunite, serpentinite (Alaskan-type ultramafic body); LTb, basalt sill SHONEKTAW FORMATION: augite porphyry, feldspar porphyry, tuff, agglomerate,

UPPER PALEOZOIC(?) AND/OR TRIASSIC(?) Mafic to felsic volcanics, tuff, chert, phyllite, argillite, quartz-sericite schist, crystalline nestone; terrane assignment uncertain

SLIDE MOUNTAIN TERRANE DEVONIAN TO PERMIAN

pyroxenite; minor shale, siltstone, and greywacke; may include some LTgd

UPPER DEVONIAN(?) TO UPPER PERMIAN SYLVESTER COMPLEX (DMch - DPs) divided sedimentary and mafic volcanic rocks, may include minor diorite and

Massive limestone; minor calcareous shale; very minor greywacke and siltstone Dominantly chert, argillite, slate, chert and quartz arenite, feldspathic arenite coarse-bladed feldspar porphyry, aphanitic basalt; local basal granitic-cobble Chert, limestone, coarse quartz arenite conglomerate; uTSTv, volcanic breccia with granitoid clasts

BEGGERLAY CREEK PLUTON: biotite-hornblende diorite, gabbro, monzodiorite, DPSp Black argillite, chert arenite SLIDE MOUNTAIN TERRANE (continued)

Dominantly tholeiitic basalt, locally pillowed, fine grained

Hornblende diorite, rusty weathering, in part

Gabbro, diorite, amphibolite

rpentinite, serpentinized dunite, peridotite, pyroxenite Amphibolite, foliated and gneissic

EPMC MEEK CREEK PLUTON: granite, coarse grained, megacrystic, biotite-bearing

EPt Tonalite, rectangular phenocrysts of plagioclase feldspar, unfoliated

NIZI CREEK PLUTON: diorite and gabbro, hornblende-bearing, foliated

PENNSYLVANIAN OR PERMIAN BASHKIRIAN TO ASSELIAN

PENNSYLVANIAN MOSCOVIAN

Limestone, cherty; includes thin (1-2 m), green chert members

MISSISSIPPIAN

VISÉAN TO NAMURIAN NIZI FORMATION: limestone, cherty limestone, greywacke, minor conglomerate, maroon shale and siltstone

TOURNAISIAN TO VISÉAN Black argillite and siltstone DEVONIAN AND MISSISSIPPIAN

DMch Black banded chert

**KOOTENAY TERRANE(?)** DEVONIAN AND MISSISSIPPIAN DMgd Granodiorite, foliated; gabbro, agmatite; age uncertain

Tectonite, siliceous and locally calcareous; gneissic, in part mylonitic, thinly banded, DMst strongly foliated, locally micaceous; includes metasedimentary, ultramafic, and meta-igneous rocks; DMc , limestone, age uncertain

ANCESTRAL NORTH AMERICA DEVONIAN AND MISSISSIPPIAN UPPER DEVONIAN TO MISSISSIPPIAN (FRASNIAN TO VISÉAN) DME EARN GROUP: shale, black, grey, and blue-grey, locally pyritic; argillite; light green,

tuffaceous(?) shale; porcellanite; may locally include older rocks MIDDLE TO UPPER DEVONIAN (GIVETIAN TO FRASNIAN) McDAME FORMATION: upper member, limestone, platy, light grey; local karst DM breccia; lower member, dolostone, dark grey, fetid; limestone, carbonate breccia;

DMm, dark grey, fetid, dolomitic limestone and marble LOWER DEVONIAN(?) RAMHORN FORMATION: upper member, laminated dolostone; lower member, DR dolomitic sandstone, sandy dolostone, dolostone, and sandstone, commonly

SILURIAN AND DEVONIAN Undivided dolostone, dolomitic sandstone, limestone, shaly dolostone; minor calcareous siltstone and shale of Sandpile, Ramhorn, and McDame formations

SILURIAN LOWER SILURIAN ANDPILE FORMATION: dolostone, cherty dolostone, dolostone breccia ORDOVICIAN AND SILURIAN

LOWER ORDOVICIAN TO LOWER SILURIAN (ARENIG TO WENLOCK)

ROAD RIVER FORMATION: upper unit, graptolitic, platy siltstone, Silurian; lower

€OK wavy, banded, silty limestone; €OS, undivided Kechika Group and Road River

unit, black, pyritic, graptolitic shale, Ordovician; OSRRI , undivided black, calcareous shale, slate, phyllitic slate, minor limestone, siltstone, and pebble conglomerate, Ordovician to Devono-Mississippian and possibly younger CAMBRIAN AND ORDOVICIAN UPPER CAMBRIAN TO LOWER ORDOVICIAN KECHIKA GROUP: argillaceous limestone, calcareous shale, limestone, shale; €OKc,

Formation; EOSv, greenstone, age uncertain

LOWER CAMBRIAN ATAN GROUP (€Mmg-€R) ROSELLA FORMATION: limestone, dolostone, calcareous shale; brown, grey, and

> BOYA FORMATION: quartzitic sandstone, siltstone, slate, phyllite; CAm, micaceous quartzite, mica schist, minor crystalline limestone; may include some Stelkuz ormation; EMm, undivided pyritic, hornfelsic slate, argillite, siltstone, quartzite, micaceous quartzite, schist, limestone; variably metamorphosed; mainly Cambrian to Mississippian(?); & Mmc, mainly carbonate; & Mmg, greenstone

INGENIKA GROUP (uPm-uPs) STELKUZ FORMATION: interbedded chloritic sandstone, shale, limestone, phyllite; includes distinctive green- and maroon-weathering members; may locally include some Boya Formation; EuPBS, undivided Stelkuz and Boya formations uPE ESPEE FORMATION: crystalline limestone, sandy limestone, dolostone

SWANNELL AND TSAYDIZ FORMATIONS, undivided: upper part, mainly sericite and chlorite phyllite, schist, calcareous phyllite and phyllitic limestone, siltstone; lower part, mainly micaceous quartzite, mica schist, and quartz pebble conglomerate par-lit gneiss; garnet, staurolite, sillimanite, and andalusite schist; abundant granitic sills; amphibolite; probably mainly metamorphosed Swannell Formation

Geological boundary (defined, approximate, assumed) Boundary of surficial deposits Bedding, top known (inclined, vertical, overturned) Bedding, top unknown (inclined, vertical) 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, 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 (arrow indicates plunge; defined, overturned) Syncline (arrow indicates plunge; defined, overturned) Anticline and syncline (long arrow points in direction of dip of axial surface) Lineation (plunging) Radiometric date; method, mineral, age (in millions of years)... Method: potassium argon, K; rubidium strontium, R; uranium-lead, U Mineral: biotite, b; hornblende, h; muscovite, m; whole rock, w; zircon, z Jade (boulder) ..... J<sub>b</sub> Nickel ...... Ni

Geology by Officers of the Geological Survey of Canada, "Operation Stikine", 1956 and 1958; B.S. Norford, 1957 and 1958; H. Gabrielse, 1961 and 1967; H. Gabrielse, R.G. Anderson, S.F. Leaming, J.L. Mansy, J.W.H. Monger, L. Thorstad, and H.W. Tripper, 1977-1983; T.A. Harms, 1983, 1984,1985, and 1986; H. Gabrielse, 1988, 1989, and 1991. Incorporates data from Kutcho Creek area by A. Panteleyev and D.E. Pearson, British Columbia Ministry of Mines and Petroleum Resources Geological compilation by H. Gabrielse, 1990

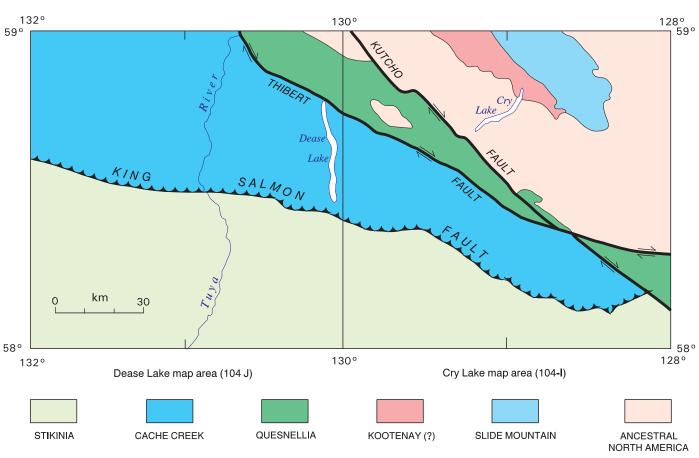
Digital cartography by P. Corrigan, Geoscience Information Division Any revisions or additional geological information known to the user would be welcomed by the Geological Survey of Canada Digital base map from data compiled by Geomatics Canada, modified by

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°21'E, decreasing 11.1' annually. Readings vary from 25°58'E in the SW corner to 26°44'E in the NE corner of the map

Elevations in metres above mean sea level

LOCATION OF TERRANE MAP IN RELATION TO TECTONIC BELTS



DISTRIBUTION OF TERRANES IN DEASE LAKE AND CRY LAKE MAP AREAS