PARSNIP RIVER LEGEND

SEDIMENTARY AND VOLCANIC ROCKS

QUATERNARY

Q_{vb} : basalt flows, breccia, and cinder cones
Q_t : till, gravel, sand, silt, alluvium

TERTIARY AND QUATERNARY

Pliocene and Pleistocene

TQ_{vb} : olivine basalt, cinder cones, basaltic breccia

TERTIARY

Miocene and Pliocene

$_{mpl}T_{vb}$: olivine basalt flows with minor breccia and tuff
$_{mpl}T_s$: sandstone, shale, conglomerate, diatomite, lignite

Oligocene and Miocene

$_{om}TEK$: ENDAKO AND KAMLOOPS GROUPS - andesite, basalt, dacite
$_{om}T_{vd}$: andesite, dacite, related tuff and breccia

Paleocene, Eocene, Oligocene

$_{eo}T_s$: conglomerate, sandstone, shale; minor tuff and breccia
$_{pe}T_s$: conglomerate, sandstone, mudstone, lignite

CRETACEOUS AND/OR TERTIARY

Upper Cretaceous, Paleocene, Eocene

T_{vr} : rhyolite, tuff, breccia
KTOL : OOTSA LAKE GROUP - rhyolite, dacite, trachyte; minor sediments

Upper Cretaceous and Paleocene

KT_{sv} : andesite, agglomerate, greywacke, slate, conglomerate
KTS : SUSTUT GROUP - conglomerate, shale, greywacke, tuff
KT_s : conglomerate, breccia, sandstone, shale coal

CRETACEOUS

Upper Cretaceous

$_uK_W$: WAPITI GROUP - sandstone, shale, conglomerate, coal
$_uK_S$: SMOKY GROUP - shale, sandstone
$_uK_D$: DUNVEGAN GROUP - sandstone, conglomerate

Lower and Upper Cretaceous

K_{BB} : BRIAN BORU FORMATION - andesitic to rhyolitic tuff, breccia and flows
K_{sv} : andesite, basalt, tuff, breccia, argillite, arkose, shale, conglomerate
K_F : UPPER FORT ST. JOHN GROUP - shale, sandstone

Lower Cretaceous

K_B : BLAIRMORE GROUP = CADOMIN, GETHING, MOOSE BAR AND COMMOTION FORMATIONS - sandstone, conglomerate, shale, coal
K_{RR} : RED ROSE FORMATION - shale, greywacke, siltstone, mudstone, conglomerate
K_s : conglomerate, greywacke, argillite; minor volcanics
K_U : USLIKA FORMATION - conglomerate, sandstone, shale
$_lK_{sv}$: conglomerate, sandstone, shale, andesitic tuff and flows
$_lK_{vd}$: andesite, basalt, related tuff and breccia

JURASSIC AND CRETACEOUS

Upper Jurassic and Lower Cretaceous

JK_s : greywacke, siltstone, mudstone, conglomerate

JURASSIC

Lower Jurassic to Lower Cretaceous

JK_{FM} : FERNIE - MINNES GROUP - shale, sandstone, siltstone, conglomerate

Middle Jurassic

$_mJ_v$: HAZELTON GROUP (in part) - basaltic and andesitic flows, tuffs, and breccias; minor greywacke, siltstone, mudstone, conglomerate
$_mJ_s$: HAZELTON GROUP (in part) - greywacke, argillite, conglomerate, minor tuff, breccia, and andesite

Lower and Middle Jurassic

J_s : HAZELTON GROUP (in part) - shale, greywacke, conglomerate
J_{sv} : HAZELTON GROUP (in part) - andesite, dacite, basalt, related pyroclastic rocks; argillite, greywacke, conglomerate
J_p : slate, argillite, conglomerate

Lower Jurassic

$_lJ_{vd}$: HAZELTON GROUP (in part) - andesitic to rhyolitic tuff, breccia, and flows; minor sediments
$_lJ_s$: HAZELTON GROUP (in part) - shale, conglomerate, greywacke

TRIASSIC AND JURASSIC

Upper Triassic and Lower Jurassic

TRJ_T : TAKLA GROUP - andesitic and basaltic flows, tuff and breccia; conglomerate, shale, greywacke, limestone
TRJ_V : andesite, basalt, related tuff and breccia; minor sediments; metamorphosed equivalents

TRIASSIC

Upper Triassic

TR_C : limestone
TR_P : black phyllite, argillite, siltstone; minor limestone, quartzite
TR_N : NICOLA GROUP - andesitic agglomerate, breccia, and flows; minor conglomerate, sandstone, argillite, limestone

Lower to Upper Triassic

TR_S : SPRAY RIVER GROUP (SULPHUR MT. AND WHITEHORSE FMS.) - siltstone, sandstone, dolomite, limestone

PENNSYLVANIAN AND PERMIAN

PP_C : CACHE CREEK GROUP (in part) - limestone; minor chert, argillite, greenstone
PP_{Cv} : CACHE CREEK GROUP (in part) - ribbon chert, black argillite, limestone, greenstone
PP_v : CACHE CREEK GROUP (in part) - basic volcanic rocks, limestone; minor argillite and chert

MISSISSIPPIAN AND (?) YOUNGER

MS : SLIDE MOUNTAIN GROUP (ANTLER AND GUYET FORMATIONS) - basalt, breccia, tuff, chert, argillite, sandstone, limestone, conglomerate
MG : GUYET FORMATION - conglomerate, argillite, sandstone; minor basalt

PLUTONIC AND METAMORPHIC ROCKS

TERTIARY

Late Tertiary

$_lT_y$: syenite, granite; minor quartz monzonite

Early Tertiary (Mainly)

$_eT_g$: quartz monzonite, granodiorite, quartz diorite; porphyritic and aphanitic equivalents
$_eT_b$: gabbro
$_eT_y$: syenite, granite, monzonite
T_g : granodiorite, quartz diorite, quartz monzonite

CRETACEOUS AND/OR TERTIARY

KT_g : QUANCHUS INTRUSIONS - granodiorite, quartz diorite, diorite, granite
KT_b : gabbro

Late Cretaceous and/or Early Tertiary

KT_{gd} : granodiorite, diorite, quartz diorite
KT_{qm} : quartz monzonite, quartz diorite, granodiorite

CRETACEOUS

Late Cretaceous

$_lK_g$: quartz monzonite, granodiorite, quartz diorite; porphyritic and aphanitic equivalents

JURASSIC AND/OR CRETACEOUS

Early Cretaceous (in whole or in part)

$_eK_g$: NAVER INTRUSIONS - quartz monzonite, monzonite, syenite, granodiorite, diorite
$_eK_{gd}$: granodiorite, quartz diorite, minor granite, syenite, gabbro, pyroxenite
JK_{gd} : granodiorite, quartz diorite, minor granite

Late Jurassic (in whole or in part)

$_lJ_g$: granite, granodiorite, diorite

JURASSIC

Middle Jurassic and (?) younger

$_mJ_g$: quartz monzonite, granodiorite, diorite
$_{mJ}$qab : quartz-biotite gneiss, diorite, gneissic granodiorite, amphibolite, migmatite, chlorite schist

Middle Jurassic and/or older

$_{mJ}$din : gneissic diorite with inclusions of metamorphic and sedimentary rocks
$_{mJ}$gdn : gneissic granodiorite, minor metamorphic rocks
$_{mJ}$qdn : well-foliated quartz diorite, minor granodiorite, diorite, greenstone

Early Jurassic

$_eJ_g$: TOPLEY INTRUSIONS - quartz monzonite, granodiorite

TRIASSIC AND/OR JURASSIC

Late Triassic and/or Early Jurassic

TRJ_y : DUCKLING CREEK SYENITE COMPLEX - syenite, diorite, monzonite, pyroxenite
TRJ_g : HOGEM BATHOLITH - granodiorite, quartz, monzonite

TRIASSIC

Late Triassic

$_lTR_g$: TAKOMKANE BATHOLITH and bodies of similar age and lithology - granodiorite, quartz diorite, quartz monzonite, hornblende syenite and monzonite

PERMIAN AND/OR TRAISSIC

Permian to Middle Triassic

PTR_{ub} : TREMBLEUR INTRUSIONS and similar bodies - peridotite, dunite, pyroxenite, serpentinite

MISSISSIPPIAN TO PERMIAN

MP_s : BANFF FM. - RUNDLE - ISHBEL GP. - limestone, dolomite, shale, chert, sandstone

UPPER PALEOZOIC AND (?) YOUNGER OR OLDER

$_uP_{sv}$: andesitic volcanics, greenstone, argillite, shale, limestone
$_uP_{sb}$: metasediments, schist

DEVONIAN

Upper Devonian

$_uD_F$: FAIRHOLME GROUP - ALEXO - PALLISER FORMATIONS - limestone, dolomite, shale, sandstone, siltstone
$_uD_B$: BESA RIVER, PERDRIX FORMATION - shale, siltstone

Middle Devonian

$_mD_c$: FLUME, MUNCHO - McCONNELL, STONE, PINE POINT FORMATIONS - dolomite, limestone, shale

Lower Devonian

$_lD_B$: BLACK STUART FORMATION - siliceous argillite, quartzite, limestone, chert, breccia

SILURIAN (?) AND DEVONIAN

SD_s : limestone, dolomite, sandy dolomite, quartzite, shale

SILURIAN

Middle Silurian

$_mS_N$: NONDA FORMATION - dolomite, quartzite
S_s : limestone, dolomite, quartzite, shale, greenstone sills and flows

ORDOVICIAN

Lower and Middle Ordovician

O_s : CHUSHINA, MONKMAN, BEAVERFOOT FORMATIONS - limestone sandstone, dolomite, shale, quartzite

CAMBRIAN AND ORDOVICIAN

ϵO_p : shaly facies of HOTAH-ADOLPHUS, TATEI-CHETANG, TITKANA, ARCTOMYS, WATERFOWL, LYNX, CHUSHINA, SKOKI FORMATIONS
ϵO_s : limestone, shale, quartzite

CAMBRIAN

Middle and Upper Cambrian

$_u\epsilon_L$: LYNX FORMATION - limestone, dolomite
$_m\epsilon_s$: DOME CREEK (in part), equivalents of HOTAH-ADOLPHUS AND TATEI-CHETANG FORMATIONS; TITKANA, ARCTOMYS, WATERFOWL AND LYNX FORMATIONS - limestone, shale, dolomite, sandstone, siltstone
$_m\epsilon_c$: HOTAH-ADOLPHUS, TATEI-CHETANG, TITKANA, ARCTOMYS, AND WATERFOWL FORMATIONS - limestone, shale, sandstone, dolomite, siltstone

Lower Cambrian

$_l\epsilon$: quartzite, limestone
$_l\epsilon_s$: MURAL, MAHTO, AND DOME CREEK (in part) FORMATIONS - limestone, dolomite, shale, siltstone, phyllite, argillite, sandstone,
$_l\epsilon_M$: MURAL FORMATION - limestone, dolomite, shale, siltstone, phyllite, sandstone
ϵ_{YM} : YANKS PEAK AND MIDAS FORMATIONS - quartzite, siltstone, shale, phyllite
ϵ_M : MCNAUGHTON FORMATION - quartzite, siltstone, shale, phyllite, conglomerate

HADRYNIAN TO LOWER DEVONIAN

HD_s : undivided sedimentary and metasedimentary rocks near Barkerville

HADRYNIAN

HI_s : INGENIKA GROUP - phyllite, schist, grit, limestone
HI_c : PART OF INGENIKA GROUP - limestone
HI_p : PART OF INGENIKA GROUP - phyllite, schist, grit
HC_Y : CUNNINGHAM AND YANKEE BELLE FORMATIONS - limestone, dolomite, shale, quartzite, argillite, phyllite
H_I : ISAAC FORMATION - phyllite, argillite, schist, sandstone, conglomerate, limestone
H_{MU} : MIETTE GROUP (upper) - phyllite, argillite, sandstone, limestone, conglomerate
H_B : BYNG FORMATION - limestone, dolomite
H_K : KAZA GROUP - sandstone, conglomerate, grit, phyllite, schist, amphibolite, marble, gneiss
H_{Mm} : MIETTE GROUP (middle) - sandstone, conglomerate, diamictite, grit, phyllite, schist
H_{Ml} : MIETTE GROUP (lower) - argillite, phyllite, sandstone, limestone
H_M : MIETTE GROUP (undivided) - argillite, phyllite, sandstone, limestone, grit

HELIKIAN OR HADRYNIAN

HH_c : PURCELL AND/OR WINDERMERE GROUP - limestone, dolomite

LATE PALEOZOIC AND (?) YOUNGER

P_h : gneiss, gneissic quartz diorite, granodiorite, amphibolite

SILURIAN (?)

S_y : alkaline syenite

IGNEOUS AND METAMORPHIC ROCKS OF UNDETERMINED AGE

Omineca Geanticline

$_{ns}i$: SHUSWAP METAMORPHIC COMPLEX - sillimanite gneiss and schist, granitoid gneiss, pegmatite, amphibolite, marble
ng : WOLVERINE METAMORPHIC COMPLEX - granitoid gneiss, pegmatite, schist, amphibolite, quartzite
gn : augen granite, gneissic biotite granodiorite, calc-silicate gneiss

Coast Geanticline

ggn : granodiorite, quartz diorite, diorite, granite
gd : biotite-hornblende granodiorite
qdn : foliated biotite-hornblende quartz diorite
di : diorite
din : foliated to gneissic diorite; amphibolite, minor metasediment
b : gabbro, diorite, norite

SYMBOLS

Lithologic contacts:
Faults: defined, approximate (displacement not indicated):
thrust; defined, approximate:
Folds; anticline, syncline:
Isograds; garnet, staurolite/kyanite, sillimanite:
Radiometric age determinations; sample location and rock type; acidic to intermediate plutonic:
basic plutonic:
metamorphic; schist, gneiss, marble, amphibolite:
median value of several determinations presented:
minerals analysed; biotite, amphibole, muscovite: b, a, m
age in millions of years: 52
laboratory designation; University of British Columbia: b
Geological Survey of Canada: no letter used.

Project coordinator: H. W. Tipper
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Geology compiled from published and unpublished maps and data of the Geological Survey of Canada and the British Columbia Department of Mines and Petroleum Resources.

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March 1975
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OTTAWA

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