

References

Bevier, Mary Lou (1983): Regional stratigraphy and age of Chilcotin Group basalts, south-central British Columbia; *Canadian Journal of Earth Sciences*, Volume 20, p. 515-524.

Diakow, L.J., Webster, I.C.L., Richards, T.A. and Tipper, H.W. (1997): Geology of the Fawnie and Nechako ranges, southern Nechako Plateau, Central British Columbia (92F, 3, 6, 7); *in*: Interior Plateau Geoscience Project: Summary of geological, geochemical and geophysical studies, Larry Diakow and John Newell, eds, *British Columbia Ministry of Employment and Investment, Paper 1997-2*, p. 7-30.

Dostal, J., Robichaud, D.A., Church, B.N., and Reynolds, P.H. (1998): Eocene Challis-Kamloops volcanism in central British Columbia: an example from the Buck Creek basin; *Canadian Journal of Earth Sciences*, Volume 35, p. 951-963.

Duffell, S. and McTaggart, K.C. (1952): Ashcroft map area, British Columbia; *Geological Survey of Canada, Memoir 262*, 122 pages.

Friedman, R. M. and Armstrong, Richard Lee (1988): Tatla Lake metamorphic complex; an Eocene metamorphic core complex on the southwestern edge of the Intermontane belt of British Columbia; *Tectonics*, Volume 7, Number 6, p. 1141-1166.

Garver, J.I. (1992): Provenance of Albian Cenomanian rocks of the Methow and Tyaughton basins, southern British Columbia: a mid-Cretaceous link between North America and the Insular terrane; *Canadian Journal of Earth Sciences*, Volume 29, Number 6, p. 1274-1295.

Grainger, Nancy C., Villeneuve, Michael E., Hearman, Larry M., and Anderson, Robert (2001): New U-Pb and Ar/Ar isotopic age constraints on the timing of Eocene magmatism, Fort Fraser and Nechako River map areas, central British Columbia; *Canadian Journal of Earth Sciences*, volume 38, p. 679-696.

Hunt, J.A. and Bustin, R.M. (1997): Thermal maturation and source rock potential of Cretaceous strata in the Chilcotin-Nechako region, south-central British Columbia; *Geological Note in Bulletin of Canadian Petroleum Geology*, Volume 45, Number 2, p. 239-248.

Kleinspehn, Karen L. (1985): Cretaceous sedimentation and tectonics, Tyaughton Methow Basin, southwestern British Columbia; *Canadian Journal of Earth Sciences*, Volume 22, p. 154-174.

Mahoney, J. Brian (1993): Facies reconstructions in the Lower to Middle Jurassic Ladner Group, southern British Columbia; *in*: Current Research, Part A; *Geological Survey of Canada, Paper 93-1A*, p. 173-192.

Mathews, W.H. (1989): Neogene Chilcotin basalts in south-central British Columbia: geology, ages, and geomorphic history; *Canadian Journal of Earth Sciences*, Volume 26, p. 969-982.

Mathews, W.H. and Rouse, G.E. (1984): The Gang Ranch Big Bar area, south-central British Columbia: stratigraphy, geochronology, and paleogeography of the Tertiary beds and their relationship to the Fraser Fault; *Canadian Journal of Earth Sciences*, Volume 21, p. 1132-1144.

Maxson, Julie Anne (1996): A Sedimentary record of Late Cretaceous tectonic restructuring of the North American cordillera: The Tyaughton-Methow basin, southwest British Columbia, unpublished PhD thesis, University of Minnesota, Minneapolis, MN, 246 pages.

Metcalfe, P., Richards, T.A., Villeneuve, M.E., White, J.M. and Hickson, C.J.: (1997): Physical and chemical volcanology of the Eocene Mount Clisbako volcano, central British Columbia,); *in*: Interior Plateau Geoscience Project: Summary of geological, geochemical and geophysical studies. Larry Diakow and John Newell, eds, *British Columbia Ministry of Employment and Investment, Paper 1997-2*, p. 31-61.

Mustard, Peter S. and van der Heyden, Peter (1997): Geology of the Tatla Lake (92I15) and the east half of the Bussel Lake (92I14) map areas; *in*: Interior Plateau Geoscience Project: Summary of geological, geochemical and geophysical studies, Larry Diakow and John Newell, eds, *British Columbia Ministry of Employment and Investment, Paper 1997-2*, p. 103-118.

Rouse, G.E., Mathews, W.H., and Lesack, K.A. (1990): A palynological and geochronological investigation of Mesozoic and Cenozoic rocks in the Chilcotin-Nechako region of central British Columbia; *in*: Current Research, *Geological Survey of Canada, Paper 1-F*, p. 129-133.

Schiarizza, P., Gaba, R.G., Glover, J.K., Garver, J.I. and Umhoefer, P.J. (1997): Geology and mineral occurrences of the Taseko-Bridge River area; *British Columbia Ministry of Employment and Investment, Bulletin 100*, 292 pages.

Schiarizza, Paul and Riddell, Janet (1997): Geology of the Talayoko Lake Beece Creek area (92N/8, 92O/5, 6, 12); *in*: Interior Plateau Geoscience Project: Summary of geological, geochemical and geophysical studies, Larry Diakow and John Newell, eds, *British Columbia Ministry of Employment and Investment, Paper 1997-2*, p. 63-101.

Thorkelson, D.J. and Rouse, Glenn E. (1989): Revised stratigraphic nomenclature and age determinations for mid-Cretaceous volcanic rocks in southwestern British Columbia; *Canadian Journal of Earth Sciences*, Volume 26, p. 2016-2031.

Tipper, H.W. and Richards, T.A. (1976): Jurassic stratigraphy and history of north-central British Columbia; *Geological Survey of Canada, Bulletin 270*, 73 pages.

Umhoefer, Paul J. (1990): Stratigraphy and tectonic setting of the upper part of the Cadwallader terrane, southwestern British Columbia; *Canadian Journal of Earth Sciences*, Volume 27, p. 702-711.

Umhoefer, P.J. and Tipper, H.W. (1998): Stratigraphy, depositional environment, and tectonic setting of the upper Triassic and middle Jurassic rocks of the Chilcotin Ranges, southwestern British Columbia; *Geological Survey of Canada Bulletin 519*, 58 pages.

Ultramafic Rocks

?? to Triassic

Pzms: **P**ermanian to **M**esozoic; serpentinite, listwanite, serpentinitized ultramafite. **Pzum**: **P**ermanian to **T**riassic; peridotite, serpentinite, pyroxenite, harzburgite, lherzolitite, dunite, talc, gabbro, silica-carbonate altered ultramafite, minor greenstone, gabbro, conglomerate and greywacke. **CTrus**: **C**arboniferous to **T**riassic; serpentinite, serpentinite-carbonate-talc schist, serpentinitized harzburgite, melange containing knockers of greenstone, diabase, amphibolite, chert, limestone; minor listwanite, dunite, rodingite, and nephrite. **Pum**: **P**ermanian; harzburgite, with lesser amounts of dunite and orthopyroxenite. **Pus**: **P**ermanian; serpentinite, harzburgite, dunite, wehrliite. **Cpus**: **C**arboniferous to **P**ermanian; serpentinite, harzburgite, peridotite, **Us**: serpentinite of unknown age

Intrusive and High-grade Metamorphic Rocks

Paleogene to Pliocene

Ltgd: granodiorite

ETfp: hornblende and quartz-plagioclase porphyry plugs and dikes; **ETg**: undivided felsic intrusive rocks; **ETgb**: gabbro, diabase; **ETgd**: equigranular, coarse-grained, hornblende-biotite-feldspar porphyritic granodiorite; **ETgr**: biotite +/- hornblende-feldspar porphyritic granite; **ETmi**: biotite granodiorite, granite and minor diorite; **ETqd**: quartz diorite; **ETqm**: biotite-quartz monzonite; **ETqp**: aphanitic felsic intrusions, rusty, rhyolitic feldspar-quartz porphyry dikes; **ETto**: foliated to mylonitic biotite tonalite

Cretaceous to Paleocene

KTdr: diorite, minor gabbro; **KTfp**: andesitic and dacitic hornblende-biotite-plagioclase porphyry, biotite-feldspar porphyry, feldspar porphyry and felsite; **KTg**: undivided plugs, sill and dikes, equigranular (biotite-) hornblende diorite, granodiorite and granite; **KTgd**: granodiorite, tonalite, quartz diorite; **KTmi**: migmatitic gneiss; **KTqd**: quartz diorite, granodiorite, tonalite; **KTqp**: quartz-eye felsite, quartz-feldspar to quartz-hornblende-feldspar porphyry; **KTto**: tonalite, "One Eye Tonalite" - weakly foliated

Cretaceous

Late Cretaceous: **LKdr**: diorite, biotite-hornblende diorite; **LKfp**: andesitic hornblende-plagioclase porphyry; **LKg**: granite and quartz monzonite; **LKgd**: granodiorite, aplite; **LKog**: tonalitic orthogneiss; **LKqm**: quartz diorite, minor granodiorite, diorite and greenstone; **LKqm**: homogeneous to inclusion-bearing biotite quartz monzonite; **LKto**: tonalite

Cretaceous: **Kg**: quartz monzonite, granodiorite, granite, quartz diorite; minor aplite, pegmatite, monzonite, syenite; may include Jurassic and/or Tertiary plutons; **Kgr**: granite, muscovite granite; **Kmi**: migmatitic gneiss, **Kog**: hornblende-biotite granoblastic gneiss, fine-grained granoblastic gneiss

Middle Cretaceous: **mKgb**: gabbro and diorite; **mKgd**: granodiorite, minor quartz diorite; **mKgr**: biotite granite, potassium-feldspar megacrystic biotite granite, aplite, pegmatite; **mKqd**: quartz diorite; **mKto**: tonalite

Early Cretaceous: **EKdr**: chloritized (hornblende-)biotite-quartz diorite, granodiorite and diorite; **EKgd**: biotite +/- hornblende +/- feldspar granodiorite, **EKim**: tectonically interleaved slices of Cretaceous and Triassic rocks and orthogneiss; **EKto**: hornblende leucotonalite, granodiorite; **EKog**: granitoid gneiss

Jurassic to Cretaceous

Jkdr: chloritized hornblende diorite and quartz diorite, **JKkg**: granodiorite, diorite and quartz diorite, quartz monzonite and tonalite; **JKgd**: granodiorite; **JKmi**: felsic to mafic metavolcanic schist and gneiss; **Jkqg**: granodiorite augen gneiss; **JKqd**: quartz diorite, lesser granodiorite, **JKqm**: quartz monzonite; **JKqp**: quartz porphyry, quartz porphyry microgranite; **JKto**: tonalite

Jurassic

Late Jurassic: **LJgd**: equigranular (hornblende-) biotite granodiorite to granite; **LJgr**: porphyritic granodiorite **LJqd**: quartz diorite; **LJqm**: quartz monzonite; **LJto**: tonalite to quartz diorite

Middle Jurassic: **MJdr**: (biotite-) hornblende diorite to quartz diorite; **MJfp**: plagioclase-augite porphyry plugs; **MJg**: quartz monzonite, granodiorite and granite; **MJqd**: biotite-hornblende quartz diorite to granodiorite; **MJqm**: potassium-feldspar megacrystic hornblende quartz monzonite

Early Middle Jurassic: **EMJdr**: hornblende +/- biotite diorite, tonalite

Jurassic: **Jgd**: granodiorite, diorite; **Jgs**: pelitic schist, quartzofeldspathic schist; **Jmi**: hornblende-quartz-oligoclase schist; **Jmy**: mylonitic sedimentary rocks; **Jqd**: quartz diorite

Middle Lower Jurassic: **MLJdr**: quartz diorite, leucocratic quartz diorite; **MLJgb**: quartz diorite; **MLJgd**: granite to granodiorite; **MLJqd**: quartz diorite and diorite, minor granodiorite

Early Jurassic: **EJdr**: diorite; **EJqd**: quartz diorite, leucocratic quartz diorite; **EJsy**: syenite

Triassic to Jurassic

TrJdr: diorite, hornblende diorite, monzodiorite, monzonite, amphibolite, lesser monzonite and syenite; **Trqd**: quartz diorite to tonalite with mafic dikes; **Trto**: hornblende tonalite

Permian to Jurassic

PJmi: biotite quartzofeldspathic gneiss and schist; **PJog**: granodioritic orthogneiss

Paleozoic to Mesozoic

PzMzm: undivided metamorphosed sedimentary rocks and volcanics; **PzMzog**: felsic to mafic orthogneiss; **PzMzpg**: paragneiss, amphibolite, schist

Permian

Pdr: chloritized quartz metadiorite; **Pgb**: gabbro, diorite, quartz diorite, minor greenstone and serpentinite; **Pqm**: quartz monzonite

Age Unknown

?dr: diorite and quartz diorite; **?g**: granite; **?gr**: granodiorite; **?hfs**: hornfelsed sandstone and siltstone; **?m**: monzonite; **?ml**: felsic to mafic metavolcanic schist and gneiss; **?og**: orthogneiss; **?pg**: paragneiss; **?qd**: quartz diorite; **?qm**: quartz monzonite, **?to**: tonalite

Stratified Rocks

Neogene

Qal: **Q**uaternary cover; unconsolidated fill, glaciofluvial deposits, glaciolacustrine deposits, colluvium, alluvium

Qv: **Q**uaternary volcanics; basalt and basalt breccia, basalt cinder cones and related flows

LTQAn: **A**nahim volcanics (**7.9-9.9 Ma**); vesicular basalt, basalt breccia and ash beds, basalt cinder cones, trachyte and rhyolite; **LTQGb**: **G**aribaldi volcanics (**0.1 - 10 Ma**); dacite, rhyolite porphyry, vesicular basalt, and andesite flows

LTQCh: **C**hilcotin Group volcanics, (**2-10 Ma**); vesicular to amygdaloidal, columnar olivine basalt with clinopyroxene, olivine, and plagioclase phenocrysts and megacrysts and ultramafic xenoliths of dunite and leucogneiss and crustal nodules; massive to scoriaceous, aphanitic, clinopyroxene-, plagioclase- magnetite- and rarely olivine-phyric, subalkaline basalt flow; minor andesite, rhyolite ash, tuff, breccia, conglomerate, sandstone, siltstone, shale and diatomaceous earth, rare hyaloclastite basalt. **OIPiFr**: **F**raser Bend/**A**ustralian Creek **F**ormation; poorly consolidated to unconsolidated conglomerate, sandstone and mudstone, minor diatomite, lignite and basalt; **Miv**: **M**iocene volcanics

Paleogene

ETKm: **K**amloops Group (**50 Ma**); andesite, trachyandesite, trachyte and latite flows, breccia and tuff; **ETPr**: **P**rinetown Group (**35-56 Ma**); volcanic pebble to cobble conglomerate, minor sandstone

ETEn: **E**ndako Group (**51-45 Ma**); vesicular and amygdaloidal basaltic to andesitic flows and related tuff, breccia, hyaloclastic breccia, and lahar, minor dacite, conglomerate, siltstone and shale, minor lignite; **ETOo**: **O**otsa Lake Group (**52-49 Ma**); intermediate to felsic volcanic flows, tufts and breccias; conglomerate, sandstone, siltstone, tuffaceous shale and mudstone, rare coal

Cretaceous

uKTa: **T**aseko River strata (informal) (**87.3 to 83 Ma**); Non-marine conglomerate and cross-bedded sandstone, clast composition is dominantly plagioclase and hornblende-phyric andesite, and less than 2% chert; probably forms the top of the Powell Creek Group in this locality

uKKs: **K**asalka Group (**105 to 83 Ma**); plagioclase and hornblende-phyric andesite, dacite and basalt flows, and related lapilli tuff and tuff breccia, minor rhyodacite, sandstone, and conglomerate; **uKPo**: **P**owell **C**reek volcanics (**92-79 Ma**); feldspar and hornblende-phyric andesitic volcanic flows, breccia, lapilli tuff, ash tuff, and lahar; mafic to intermediate volcanic flows, tufts and breccias; volcanic sandstone, siltstone, shale and conglomerate; rare occurrences of welded tuff

KSq: **S**ilverquick Fm (upper Albian to Cenomanian); pebble to cobble conglomerate containing clasts of chert, volcanic rock and sandstone; lesser amounts of sandstone, siltstone and shale; upper part of formation includes intercalations of volcanic breccia and volcanic conglomerate

KJa: **J**ackass Mountain Group: (**H**auterivian to **C**enomanian); arkosic sandstone, lithic sandstone, tuffaceous sandstone, conglomeratic sandstone, granule to pebble conglomerate, polymict pebble to boulder conglomerate; lesser amounts of siltstone, shale and fossiliferous black shale; andesite, minor rhyolite, minor argillite; very minor laminated silty limestone

KTc: **T**aylor Creek Group: (**A**lbian); sandstone, quartzose sandstone, arkose, micaceous quartzofeldspathic sandstone, lithic sandstone, greywacke, argillite, conglomerate, volcanic conglomerate, chert-pebble conglomerate, polymict conglomerate, pebble to cobble conglomerate, conglomeratic sandstone, shale, siltstone; intermediate to felsic volcanic flows and tufts; volcanic breccia and conglomerate +/- intercalations of sandstone, siltstone and shale; **IKSk**: **S**keena Group: (**u**pper **C**retaceous, **m**ainly **A**lbian); fossiliferous sandstone and mudstone; pebble conglomerate; lesser andesite-rhyodacite-rhyolite flows, tuff, flow breccia, submarine flows, and subvolcanic domes

IKSb: **S**pences Bridge Group: (**l**ower **A**lbian to **S**antonian); andesite and dacite flows, breccia, and lapilli tuff; volcanic sandstone, siltstone and conglomerate; minor basalt and rhyolite

IKGa: **G**ambier Group: (**H**auterivian to **A**lbian); rhyolite, dacite, andesite, and basalt flows and related (intercalated) tuff, argillaceous tuff, breccia, and lahar; minor shale, siltstone, greywacke and conglomerate, greenstone, pillowed basalt

Jurassic to Cretaceous

uJKRe: **R**elay Mountain Group: (**m**id **J**urassic to **L**ower **C**retaceous); sandstone, siltstone, calcareous siltstone, shale, siliceous shale, lithic-arkosic sandstone, calcareous sandstone, greywacke, coquina, coquinoid limestone; granule to pebble conglomerate, conglomerate and conglomeratic sandstone containing mainly volcanic and plutonic clasts; minor andesitic breccia and tuff

Lower Middle Jurassic

ImJAh: **A**shcroft formation; siltstone, sandstone, shale, carbonaceous shale, polymict conglomerate, volcanic conglomerate limestone, and andesite

ImJHz: **H**azleton Group (includes **H**otmarko volcanics); marine and subaerial andesite, dacite, and rhyolite flows and related (ash, crystal and lapilli) tuff, breccia, lahar, ignimbrite, and hyaloclastite; clastic and volcanoclastic sandstone, siltstone, and conglomerate (often intercalated with pyroclastics); argillite, tuffaceous argillite, limy siltstone, limestone, recrystallized fossiliferous limestone

Early to Middle Jurassic

ImJLd: **L**adner Creek, includes **L**ast Creek, **H**uckleberry **M**ountain, **N**emaiah formation; (**H**ettangian to **B**ajocian); calcareous sandstone, siltstone, shale and conglomerate; calcareous shale; siliceous argillite and siltstone; silty limestone; lithic-arkosic sandstone intercalated with lesser amounts of granule to small pebble conglomerate, siltstone and shale; thin-bedded siltstone and laminated shale; volcanic breccia; andesitic flows; volcanic conglomerate; minor micritic limestone

Triassic to Jurassic

uTrJNc: **N**icola Group; basalt flows, volcanic breccias, and tufts, tuffaceous argillite and siltstone; conglomerate, sandstone, siltstone, shale, slate, phyllite, limestone and limestone breccia, allochemical limestone; **TrJTk**: **T**akla Group; andesitic to basaltic flows and porphyritic volcanic breccia, lapilli tuff, tuff, trachyte flows and tuff-breccias; epiclastic sediments, tuffaceous argillite, argillite, siltstone, shale, slate, mudstone, greywacke, sandstone, volcanic sandstone, chert and/or limestone conglomerate, polymict conglomerate, limestone +/- fossils, sedimentary breccia

Upper Triassic

uTrTy: **T**yaughton Group; conglomerate, conglomeratic sandstone and sandstone; limestone and limestone conglomerate; siltstone, calcareous sandstone and coquina

uTrCd: **C**adwallader Group; sandstone, calcarenite and siltstone; polymict conglomerate, pebbly mudstone, limestone-greenstone breccia and micritic limestone; locally includes greenstone, mafic volcanic breccia, mafic tuff and tuffaceous sandstone

uTrS: **S**tuhini Group; basaltic to andesitic flows, tufts and breccias intercalated with sandstone, volcanoclastic sandstone, siltstone, and limestone lenses; basaltic to rhyolitic metavolcanic rocks; tuffaceous shale and lapilli tuff; lesser limy shale and tuffaceous shale

Permian to Triassic

PJKu: **K**utcho Group, including **S**itlika assemblage; slate, phyllite, banded siltstone, sandstone and conglomerate, minor limestone, chert, marble and chloritic phyllite, basaltic to rhyolitic schist, monzodiorite, granodiorite

Carboniferous to Jurassic

CJBr: **B**ridge River Group; ribbon chert, argillite, phyllite, quartz phyllite and pillowed to massive greenstone, with lesser amounts of limestone, gabbro, diabase, sandstone, pebble conglomerate, serpentinite and blueschist

Mississippian to Triassic

MTrCc: **C**ache Creek Group; micritic to allochemical limestone, chert to limestone polymict conglomerate, marble, ribbon chert, mudstone, siltstone and shale, sandstone, greywacke, conglomerate, argillite, siliceous argillite, phyllite, siliceous phyllite, slate, schist, lesser bedded limestone; andesitic to basalticflows, volcanic breccia, and tuff, basalt pillows, quartzite and metachert; greenstone, serpentinite, lesser dacite and rhyolite flows and tufts, minor dolostone

Carboniferous to Permian

CPSm: **S**lide Mountain Group; basaltic flows, pillows, breccia, tuff, minor diorite and gabbro, chert, argillite, lithic sandstone, lomestone, dacitic tuff and volcanic breccia, minor serpentinite and listwanite