



LEGEND for Map

Rocks in the hanging wall of the Columbia River Fault

Intrusive rocks

- Kuskanax batholith** - Middle Jurassic ca. 170 Ma (Parrish and Wheeler 1983). Part of the Nelson Intrusive Suite, which includes granite, syenite, diorite.

Metasedimentary and metavolcanic rocks

- Rosland Group** siliciclastic metasedimentary rocks including breccia, tuff, basalt, augite porphyry. (Lower Jurassic)
- Slocan Group** siliciclastic metasedimentary rocks including phyllite, argillite, quartzite and minor volcanoclastic tuffs. (Upper Triassic)
- Generally greenschist to lower amphibolite grade metasedimentary rocks including breccia, tuff, basalt, augite porphyry, siliciclastic and carbonate rocks including phyllite, argillite, quartzite, marble, and minor volcanoclastic tuffs. The hanging wall rocks in the Columbia River Fault (E) and the Beavan Fault (W) include Paleozoic - Lower Jurassic stratified rocks from the Kaslo, Slocan and Rosland Groups as well as Hamilton, Shalshob, Lardou and Millford Groups. Rocks in the footwall of these faults are interpreted as the deformed and metamorphosed equivalents of some of these rocks.

Rocks in the footwall of the Columbia River Fault

Intrusive rocks

- Ladybird Granite Suite** - Late Paleocene to Eocene ca. 62 - 55 Ma (Carr 1992). Biotite granite to quartz monzonite +/- garnet, muscovite, tourmaline. Occurs as dykes, stocks, sills, makes up the South Fosthall Pluton dated at 55 ± 1.5 Ma (Parrish et al. 1988). Occurs as pegmatite, apatite and granite.
- Whatshan batholith** - Late Cretaceous ca. 77 Ma (Carr 1990). Hornblende - potassium feldspar quartz monzonite to diorite.

Metasedimentary and metavolcanic rocks

Proterozoic to Jurassic metasedimentary and metavolcanic rocks of autochthonous and pericratonic affinity (Van Rosyen et al. 2010, Carr 1991, Fritz 1991). Proximal correlated with the Proterozoic Horsehead Creek Group of the Windermere Supergroup (Fawn Lakes), Cambrian Hamilton and Shalshob Groups (Mount Symonds) and the Paleozoic, Lardou and Millford Groups (Arrow Lake schists and Gold Range Composite units) and are as young as Middle Jurassic in the Plant Creek area.

Composite units

- Arrow Lake garnet sillimanite muscovite biotite schist** - Muscovite-biotite schist +/- garnet, sillimanite, local staurolite, kyanite. Includes micaceous quartzite, minor psammite gneiss, marble and amphibolite layers. Local carbonaceous schist and staurolite schist.
- Undivided semipelite - Pelite - Amphibolite** - Pelite - Amphibolite: South of South Fosthall Pluton, includes Saddle Mountain, Veldre Ridge, continuing to Fawn Lakes. Psammite, semi-pelite, pelitic schists and gneisses. Contains sillimanite and garnet, contains lenses and layers of calc-silicate schist or gneiss, marble, amphibolite or quartzite. Extensively intruded by granite and pegmatite of the Ladybird Granite Suite.
- Undivided semipelite - Pelite - Amphibolite** (above with ~50% intrusive rocks) intruded by granite and pegmatite of the Ladybird Granite Suite.
- Ultramafic rocks**, serpentinite occurring as pods or lenses. Interpreted as a marker unit to define the base of the Lardou group, representing obducted ocean crust.
- Calc-silicate - Pelite - Amphibolite - Ultramafic**: Empress marble marker to South Fosthall Pluton. Pelitic and semi-pelitic schists and gneiss, migmatitic g-sil-bt paragneiss, sillimanite and garnet common in schists. Includes diopside hornblende calc-silicate gneiss. Contains lenses and layers of pelitic schist, quartzite, amphibolite (including garnet, plagioclase and biotite amphibolite) and marble. Ultramafic marker occurs as pods and lenses. Extensively intruded by granite and pegmatite of the Ladybird Granite Suite.

Cariboo Alp rocks

- Grey migmatitic hornblende biotite gneiss (+/- sillimanite, garnet) with amphibolite lenses and layers, hornblende diopside calc-silicate gneiss layers.
- Rusty migmatitic g-sil-bt paragneiss with amphibolite boudins, includes quartzite, marble layers.

Thor-Odin dome rocks

- Cover paragneiss**: Heterogeneous psammite and calc-silicate gneiss, pelitic (Ky-Sil) gneiss, calc-silicate gneiss with interlayered marble, amphibolite boudins and layers.
- Pelitic and semi-pelitic schists and gneisses**: Generally rich in aluminosilicate minerals and garnet. May contain lenses of quartzite, calc-silicate and amphibolite.
- Calc-silicate and amphibolite gneiss**.
- Basal Quartzite**.

Basement orthogneiss

- Hornblende-biotite granodiorite orthogneiss: Includes augen orthogneiss, biotite orthogneiss, as well as biotite granite orthogneiss and hornblende leucogranite.
- Leucogranite monzonite, gneissic quartz monzonite and granitic biotite orthogneiss: May contain hornblende and range in composition from granite to granodiorite.
- Granodiorite orthogneiss.

Basement Paragneiss

Predominantly migmatitic paragneiss, includes psammite biotite-feldspar-quartz paragneiss with lenses of pelitic schist, garnet-feldspar-quartz gneiss and amphibolite. Also includes biotite-quartz-feldspar paragneiss containing abundant garnet amphibolite boudins and granitic pegmatite. Cordierite gabbro amphibolite occurs as boudinaged layers within the basement paragneiss, may contain cordierite, kyanite, spinel, olivine, garnet.

Symbols

	Thrust fault		Sil-Ms-melt isograd
	Normal Fault		Sil-mus isograd
	Slate Mountain Shear Zone		retrograde chlorite-sericite
	Cariboo Alp Shear Zone		andalusite
	Normal fault, steep, < Eocene age		st
	Normal fault, steep, unknown age		chl-mus
	Syncline, overturned		gt
	Syncline		biotite
	Anticline		kyanite
	Fold hinge, no generation assigned		cordierite
	Bedding		sillimanite-muscovite
	Lineation, no generation assigned		sillimanite
	Foliation, no generation assigned		K-feldspar-sillimanite
	Contact defined (Kruse et al. 2004 compilation, this study)		K-feldspar-sillimanite-melt
	Contact assumed (Kruse et al. 2004 compilation)		K-feldspar-sillimanite-melt-kyanite
	Contact approximate (Kruse et al. 2004 compilation)		
	Contact interpreted/compiled (Carr 1990, this study)		
	Contact interpreted/compiled (Thompson et al. 2004, this study)		