

B.C. Molybdenum Deposits

The British Columbia Geological Survey's MINFILE database lists 1,381 molybdenum-bearing occurrences, 460 of which list molybdenum as the primary commodity. Mo and Cu-Mo porphyries are the main deposit types. The developed Mo porphyries in B.C. are classified as low-fluorine type, distinct from the high-fluorine climax type known in the western US. Most are low-grade bulk tonnage targets, but some deposits with high-grade cores are potentially amenable to underground mining, such as the MAX (280 Kt @ 1.17% Mo) and Davidson (6.7 Mt @ 0.36% Mo). Porphyry Cu-Mo deposits, in particular Highland Valley Copper, account for a large proportion of B.C. molybdenum production, resources, and reserves as a by-product of copper production.



MoS₂ mineralization at Endako's Denak West Pit

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Endako

- ▶ Open pit molybdenum producer since 1965
- ▶ Owned and operated by Thompson Creek Metals Company Inc. (75%) and Sojitz Corporation (25%)
- ▶ In 2012 the Endako mill expanded from 28,000 to 52,000 tonnes of ore per day capacity. Currently on care and maintenance pending improved molybdenum price
- ▶ 2014 Proven and Probable reserves of 33.4 Mt @ 0.049% Mo plus additional Measured and Indicated resources of 109.2 Mt at 0.047% Mo. (Reserves estimated using a 0.030% Mo cutoff and long term molybdenum price of \$10/pound)



Kitsault

- ▶ Past producer now owned by Alloycorp Mining Inc. (100%)
- ▶ Operated from 1967 to 1972 and from 1981 to 1982 with a total production of 13,600 tonnes of molybdenum
- ▶ 2012 Measured and Indicated resources estimated at 321.8 Mt 0.071% Mo and 4.8 g/t Ag
- ▶ Provincial and federal environmental certification completed

Molybdenum in British Columbia

British Columbia Geological Survey
Information Circular 2015-7



Ministry of
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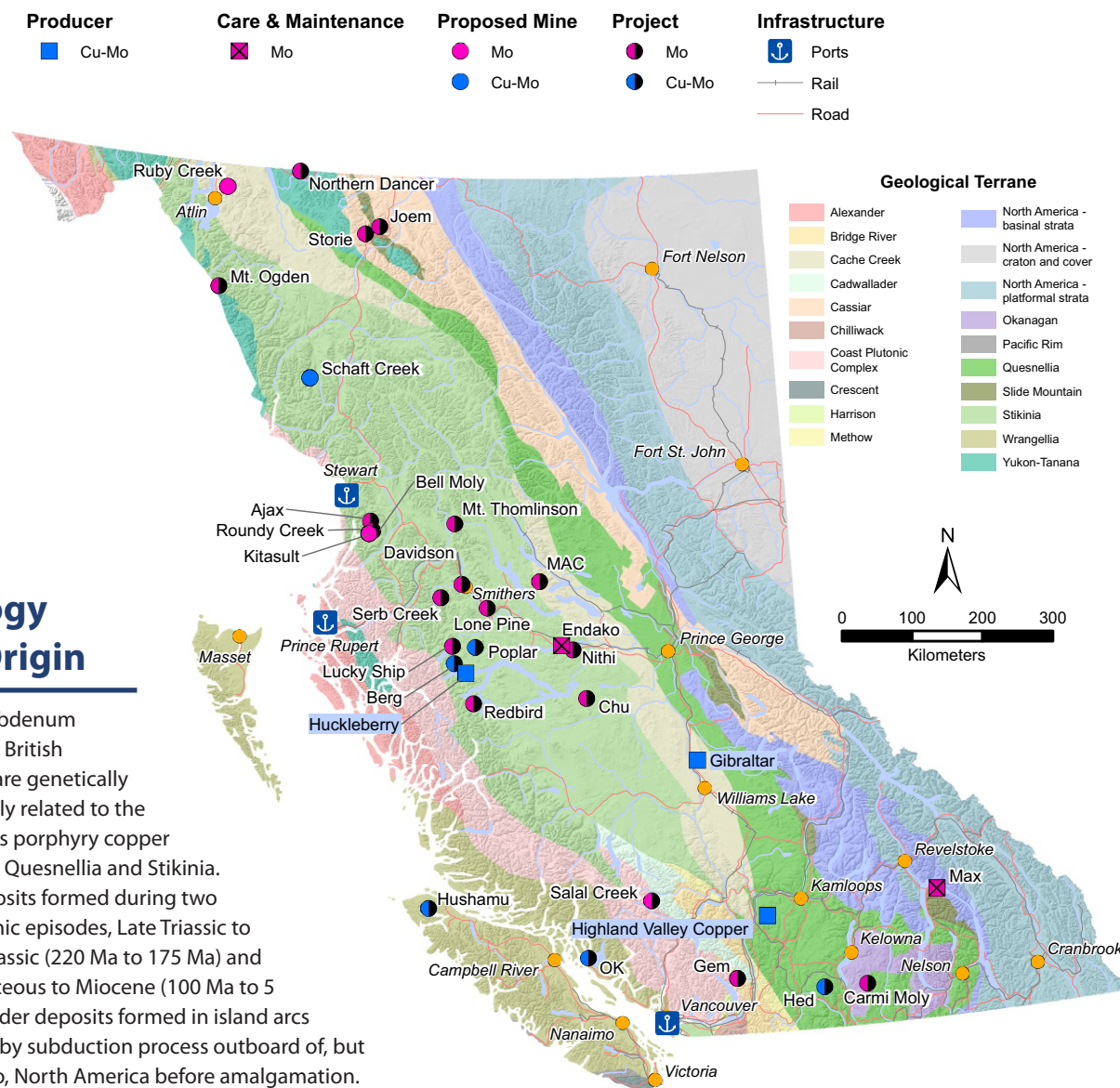
Selected Molybdenum Deposits in British Columbia

Geology and Origin

Most molybdenum deposits in British Columbia are genetically and spatially related to the voluminous porphyry copper deposits in Quesnellia and Stikinia. These deposits formed during two metallogenic episodes, Late Triassic to Middle Jurassic (220 Ma to 175 Ma) and Late Cretaceous to Miocene (100 Ma to 5 Ma). The older deposits formed in island arcs generated by subduction process outboard of, but marginal to, North America before amalgamation. Consistent magmatism and mineralization for 2,000 km along the axis of the Canadian Cordillera have driven exploration strategies since the early 1960s. The younger deposits formed after thrust imbrication of the arc terranes to the western flank of North America in a continental arc setting.



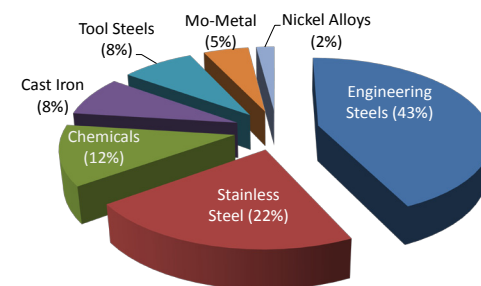
For more information on B.C. mineral deposit profiles, visit:
www.empr.gov.bc.ca/Mining/Geoscience/MineralDepositProfiles



Selected B.C. Molybdenum Resources

Resource	M+I Inclusive of reserves (t)	Grade (%Mo)	Contained Mo (t)	Year
Kitsault	321,800,000	0.071	228,478	2014
Chu	370,000,000	0.059	217,000	2012
Schaft Creek	1,228,554,815	0.017	206,598	2012
Berg	506,000,000	0.037	187,000	2012
Ruby Creek	275,354,000	0.067	185,025	2009
Davidson	77,200,000	0.169	130,000	2012
Lone Pine	110,340,000	0.083	91,505	2009
Storie	117,000,000	0.068	79,560	2013
Red Bird	88,200,000	0.061	54,000	2008
Max	42,900,000	0.120	51,436	2004
Ajax	69,000,000	0.065	44,860	2008
MAC	70,360,000	0.063	44,000	2012
Lucky Ship	65,660,000	0.064	42,000	2008

Molybdenum Uses



Selected B.C. Molybdenum Producers

Mine/Deposit Name	Years of Production	Mo Produced (t)	Other Products
Endako	1965-1982; 1986-2015	253,228	-
Highland Valley Copper	1963-2015	72,306	Cu, Au, Ag
Gibraltar	1972-1998; 2004-2015	13,560	Cu
Huckleberry	1997-2015	3,679	Cu, Au, Ag

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