

Location/Identification

MINFILE Number:	092ISW036	National Mineral Inventory Number:	09216,7 Cu3
Name(s):	HIGHMONT (WEST) WEST PIT, HIGHLAND VALLEY COPPER		
Status:	Past Producer	Mining Division:	Kamloops
Mining Method	Open Pit	Electoral District:	Fraser-Nicola
Regions:		Resource District:	Thompson Rivers Natural Resource District
BCGS Map:	0921045		
NTS Map:	092106E	UTM Zone:	10 (NAD 83)
Latitude:	50 26 13 N	Northing:	5589111
Longitude:	121 00 27 W	Easting:	641493
Elevation:	1553 metres		
Location Accuracy:	Within 500M		
Comments:	Open pit		

Mineral Occurrence

Commodities: Copper, Molybdenum

Minerals	Significant:	Chalcopyrite, Bornite, Molybdenite, Chalcocite
	Associated:	Quartz, Pyrite, Specularite
	Alteration:	Kaolinite, Chlorite, Epidote, Sericite, Albite, Calcite
	Alteration Type:	Potassic, Sericitic, Argillic, Propylitic
	Mineralization Age:	Unknown
Deposit	Character:	Vein, Stockwork, Disseminated
	Classification:	Hydrothermal, Porphyry
	Type:	L04: Porphyry Cu +/- Mo +/- Au

Host Rock

Dominant Host Rock: Plutonic

Stratigraphic Age	Group	Formation	Igneous/Metamorphic/Other
Triassic-Jurassic	-----	-----	Guichon Creek Batholith
Isotopic Age	Dating Method	Material Dated	
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Lithology: Quartz Diorite, Granodiorite, Biotite Quartz Feldspar Porphyry, Quartz Porphyry, Plagioclase Quartz Porphyry Dike, Aplite Dike, Lamprophyre Dike, Andesite Porphyry Dike

Comments: Skeena variety.

Geological Setting

Tectonic Belt:	Intermontane	Physiographic Area:	Thompson Plateau
Terrane:	Quesnel		

Inventory

Ore Zone:	WEST PIT	Year:	1988
Category:	Unclassified	Report On:	Y

Quantity: 800,000 tonnes

NI 43-101: N

Commodity	Grade
Copper	0.1500 per cent
Molybdenum	0.0480 per cent

Comments:

Reference: CIM Special Volume 46, page 175.

Capsule Geology

The Highmont deposits are located in the central core of the Late Triassic to Early Jurassic Guichon Creek batholith and are hosted primarily by Skeena variety quartz diorite to granodiorite. Skeena rocks are intruded by the composite Gnawed Mountain porphyry dyke which trends west-northwest and dips vertically in the central portion of the property. This dyke consists of biotite-quartz- feldspar porphyry derived from the Bethsaida phase leucocratic quartz porphyry and breccia. Small, pre-mineral plagioclase-quartz porphyry and aplite dykes are scattered throughout the property. Tertiary lamprophyre and andesite porphyry dykes also occur. The property is cut by several north striking faults.

Potassic, phyllic, argillic and propylitic alteration on the property is weak compared to that at other deposits in the Highland Valley district. Argillic and propylitic alteration are entirely fracture-related, grading outward from a central vein or fracture through a zone of intense kaolinite alteration into chlorite-epidote-sericite-albite alteration and finally into unaltered rock. Alteration zones vary from several centimetres to 50 metres wide.

The principal economic minerals are chalcopyrite, bornite and molybdenite occurring in veins and fractures. Chalcocite is present in minor amounts. Pyrite and specular hematite are gangue minerals. Minor chalcopyrite disseminations occur within a few centimetres of mineralized veins and shears. Veins of grey, brecciated quartz are up to 1 metre wide and are cut by seams of molybdenite and clay minerals. Mineralized clay gouge also occurs at the edges of veins. These zones consist mainly of quartz, albite, calcite and kaolinite and are usually accompanied by several metres of intensely argillized wallrock.

The West pit was mined first; East pit production began concurrently. See Highmont mine (092ISE013) for production statistics.

Reserves for the East Pit are reported as 800,000 tonnes of 0.15 per cent copper and 0.048 per cent molybdenum (CIM Special Volume 46, page 175).

Bibliography

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Date Coded:	1987/03/27	Coded By:	Allan Wilcox (AFW)	Field Check:	N
Date Revised:	2020/06/09	Revised By:	Karl A. Flower (KAF)	Field Check:	N