

Location/Identification

MINFILE Number:	092ISE002	National Mineral Inventory Number:	09217 Cu1
Name(s):	<u>BETHLEHEM (EAST JERSEY)</u> EAST JERSEY, HIGHLAND VALLEY COPPER		
Status:	Past Producer	Mining Division:	Kamloops
Mining Method	Open Pit	Electoral District:	Yale-Lillooet
Regions:	British Columbia	Resource District:	Kamloops Forest District
BCGS Map:	092I046		
NTS Map:	092I07W	UTM Zone:	10 (NAD 83)
Latitude:	50 29 50 N	Northing:	5595866
Longitude:	120 58 47 W	Easting:	643283
Elevation:	1500 metres		
Location Accuracy:	Within 500M		
Comments:	Open pit		

Mineral Occurrence

Commodities:	Molybdenum, Copper		
Minerals	Significant:	Molybdenite, Bornite, Chalcopyrite	
	Associated:	Quartz, Calcite, Laumontite	
	Alteration:	Biotite, Sericite, Kaolinite, Epidote, Chlorite	
	Alteration Type:	Potassic, Argillic, Propylitic, Oxidation	
	Mineralization Age:	Lower Jurassic	
Isotopic Age:	199 +/- 8 Ma	Dating Method:	Potassium/Argon
		Material Dated:	Biotite
Deposit	Character:	Stockwork, Breccia, Disseminated	
	Classification:	Hydrothermal, Porphyry	
	Type:	L04: Porphyry Cu +/- Mo +/- Au	
	Comments:	Age date sample is a mixture of magmatic and hydrothermal biotite from the Iona ore zone (092ISE006) (Canadian Institute of Mining and Metallurgy Special Volume 15, page 114).	

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:	Granodiorite, Quartz Diorite, Breccia, Dacite Porphyry Dike		

Geological Setting

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

Inventory

Ore Zone:	EAST JERSEY	Year:	1988
Category:	Unclassified	Report On:	Y

Quantity: 20,600,000 tonnes

NI 43-101: N

Commodity	Grade
Copper	0.4000 per cent

Reference: CIM Special Volume 46, page 175.

Capsule Geology

The property lies within the Early Jurassic-Late Triassic Guichon Creek batholith and straddles an intrusive contact where younger Bethlehem phase quartz diorite to granodiorite forms an irregular embayment in older Guichon variety granodiorite. Igneous breccias are believed to have been forcefully emplaced. The granodiorites and breccias are intruded by north trending swarms of dacite porphyry dykes which dip steeply and are up to 60 metres wide.

The Bethlehem (East Jersey) deposit is partly controlled by faults and is localized in breccia bodies and intensely fractured zones. Potassic, phyllic and propylitic alteration are confined to areas of ore concentration. Alteration minerals include biotite, sericite, kaolinite, epidote and chlorite and are typically zoned. Quartz, calcite and zeolite (laumontite) veining and vug-filling is common. The principal ore minerals are molybdenite, bornite and chalcopyrite and occur with numerous supergene copper minerals and copper oxides. An age date from a sample of a mixture of magmatic and hydrothermal biotite from the Iona ore zone (092ISE006) returned 199 Ma +/- 8 Ma (Canadian Institute of Mining and Metallurgy Special Volume 15).

The East Jersey pit was mined from 1962 until 1965, when the pit wall failed. See Bethlehem mine (092ISE001) for production statistics.

Reserves for the East Jersey are 20.6 million tonnes of 0.40 per cent copper (CIM Special Volume 46, page 175).

Bibliography

EMPR AR 1957-26; 1958-21; *1959-29; 1960-26; 1961-30; 1962-47; 1963-46; 1964-86; 1965-146
EMPR ASS RPT 116
EMPR BULL 56
EMPR EXPL 1977-E147; 1979-169; 1989-119-134
EMPR MAP 30; 65 (1989)
EMPR PF (see 092ISE001 for numerous reports, maps, etc.; *Company data and Mike Carr's work on the Bethlehem property, 1960s)
EMR MP CORPFILE (Bethlehem Copper Corp. Ltd.)
GSC MEM 249, p. 117
GSC OF 980; 2167, pp. 99-114
CIM Special Volume *15, pp. 105-119; 46, pp. 161-191
GAC Fieldguide *1, 1985
Field Trip Guidebook (GAC-MAC-CGU Victoria, B.C. May 11-13, 1983), Trip 10, Porphyry Deposits of Southern British Columbia, pp. 85-104
Placer Dome File
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EMPR PFD 9993, 10101, 10102, 10103, 10104, 10106, 10109, 10110, 10111, 10113, 10115, 10117, 10118, 10119, 10120, 10121, 10122, 10127, 10132, 10171, 10776, 10778, 810718, 810752, 752368, 752369, 820314, 820907, 820931, 820932, 820933, 880717, 880718, 880724, 883958, 883959, 883986, 802036, 802050, 802425, 802091, 861758, 861759, 861760, 843006, 843163, 502966, 502987, 502988, 502989, 502990, 502992, 502993, 502995, 502999, 503850, 505980, 505981, 505982, 505983, 896317, 896318, 896327, 896330, 896432

Date Coded:	1985/07/24	Coded By:	BC Geological Survey (BCGS)	Field Check:	N
Date Revised:	1988/03/11	Revised By:	Lori K. Walters (LKW)	Field Check:	N