



Memo To: Graeme McLaren

Date: July 13th, 1992

From: T. Schroeter, R. Pinsent, R. Lane

Subject: Giant Copper Deposit: Skagit River Area: 92H/03E

Note: We have not visited the Giant Copper property but have reviewed the literature and make the following observations:

- The Giant Copper property covers an area of widespread, polymetallic (precious-metal bearing) mineralization that appears to be related to a diorite to granodiorite stock (Invermay pluton) that intruded metamorphosed sedimentary rocks at the intersection of a major northwesterly trending structure, the Hozameen Fault (with greater than 600 km of strike length), and a less prominent northeasterly trending cross structure. Porphyry Cu-Mo-(Au-Ag) prospects along strike to the southeast in Washington are currently being explored.

- The property covers a large hydrothermal system that is probably related to a major porphyry copper system at depth.

- Numerous showings occur in two principal areas (AM and Invermay), neither of which has been adequately explored.

- The AM deposit is an oval-shaped diatreme-breccia ("porphyry") that was subjected to a full feasibility study by Wright Engineers in 1966. It contains a geological reserve of 57.8 million tonnes grading 0.55% Cu, 0.28 g/t Au and 6.9 g/t Ag (Stockwatch, May 11th, 1990). Bethlehem currently perceives a mineable "indicated open pit reserve" of 20.7 million tonnes averaging 0.75% Cu, 0.4 g/t Au, 12 g/t Ag at a 4.5:1 stripping ratio (Stockwatch June 5th, 1992).

- The AM zone also has a small underground mineable reserve of 3.4 million tonnes grading 1.17 % Cu, 0.5 g/t Au and 20 g/t Ag.

- The Anomaly #1 zone, one of many copper showings in the vicinity of the AM breccia, may well be an off-set segment the AM breccia.

- There is considerable potential to add to both open-pit and underground exploitable reserves.

- The **Invermay** deposit (approximately 1.5 km to the north) is a small-scale past producing mine. It does not have current reserves but it has not been explored in modern times. The main showing is an irregular zone of tourmaline and chalcopyrite-bearing "skarn" that is locally transitional into a vein peripheral to the pluton.

- Younger silver, lead and zinc veins cut the AM and Invermay deposits. These locally attain significant thickness and have potential for independent underground development.

- The style of mineralization on the Giant Copper property (diatreme formation, skarnification, presence of tourmaline etc.) is consistent with the release of copper-bearing fluid from a major "porphyry" pluton at depth. It provides an opportunity to locate and mine several varieties of mineralization. These include low tonnage "high-grade" veins and replacement deposits and bulk tonnage "low-grade" porphyry and diatreme matrix replacement deposits. Table 1 provides statistics of proven deposits and/or producing mines of similar character, tonnage and grade.

- The "open-pit" component of the AM deposit, as defined above, is significantly higher in grade than the average producing porphyry copper mine in B.C.

In summary: (1) Giant Copper's mineable reserve would improve with any significant increase in metal price; (2) there is opportunity to locate "high-grade" mineralization amenable to underground exploitation; and (3) the Company could conceivably locate enough reserves in aggregate to justify central milling of ore from both underground "high-grade" and open-pit "low-grade" sources.

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R. H. Pinsent

R.A. Lane

References:

MINFILE occurrences 092HSW 001, 002

Wilton, P. and Pfuetzenreuter, S. (1989) Giant Copper; MEMPR Exploration in B.C., Part B, p. 91-93. Schmidt, Rolf. Nov. 15, 1989; Internal memo to B. McRae; Re: Skagit valley Rec Area-Hope District Chamber of Commerce Luncheon.

Schmidt, Rolf. Nov. 8, 1989: Copy of speech re: Information Luncheon on the Skagit Valley Rec Area.

Kynoch, Brian (V.P. of Engineering, Bethlehem Resources Corporation), Nov. 9, 1989: Letter in response to Schmidt speech re: Information Luncheon on the Skagit Valley Rec Area.

#12,860/kg Au x 400 con Au
 #2.2/kg Cu x 1,000 con Cu

Table 1: COMPARISON WITH KNOWN DEPOSIT TYPES

DEPOSIT NAME	TYPE	MINERAL INVENTORY	IN SITU METAL CONTENT	Strip Ratio	Est. Capital Cost (x10 ⁶)	Milling Rate (TPD)	Est. Work-force	Mine Life (yrs)	In situ # Value (at current metal prices) (x10 ⁶)
AFTON	open pit PORPHYRY	30.84 m tonnes @ 1% Cu; 0.58 g/t Au; 4.19 g/t Ag	14,400 kg Au 225 m kg Cu 129,000 kg Ag	4.2:1		10,000	250	15	680
	u/g	9.5 m tonnes @ 1.5% Cu; 1 g/t Au; 6.9 g/t Ag	9,500 kg Au 142 m kg Cu 65,500 kg Ag						430
AJAX	open pit PORPHYRY	24.7 m tonnes @ 0.46% Cu; 3 g/t Au	9,250 kg Au 114 m kg Cu		11	11,000	200	7	370
CAROLIN	VEIN (Shear/fault)	1.5 m tonnes @ 4.4 g/t Au	1450 kg Au 109 kg Ag	u/g	60	1500			18
GIANT COPPER	open pit PORPHYRY (Breccia/stock)	57.8 m tonnes @ 0.55% Cu; 0.28 g/t Au; 9.6 g/t Ag	16,200 kg Au 318 m kg Cu 555,000 kg Ag	4.5:1					900
	u/g	3.4 m tonnes @ 1.17% Cu; 0.52 g/t Au; 20.6 g/t Ag	1,800 kg Au 40 m kg Cu 70,000 kg Ag						110
HARRISON LK. GOLD	VEIN/porphyry (Breccia)	2.73 m tonnes @ 4.1 g/t Au	10,285 kg Au	u/g	30	1100 u/g	60?	10	120
SIMILCO Copper Mtn. Total	PORPHYRY	32 m tonnes @ 1.05% Cu				15000	150	15	
		150 m tonnes @ 0.5% Cu	600 m kg Cu 27,000 kg Au						1,600
TREASURE Mtn.	VEIN along fault / sp. pb. contact	160,000 tonnes @ 850 g/t Ag; 4% Pb; 5% Zn	13.8 m lbs Pb 17.3 m lbs Zn 150 kg Ag	u/g	4.5	100-200	34	7-10 u/g	15
WILLA	PORPHYRY (breccia)	580,000 tonnes @ 0.86% Cu; 5.83 g/t Au	2,742 kg Au 4.8 m kg Cu	u/g		500	50-60	5+	45

R.V.G.S → Bob (FYI)
→ Giant
Copper

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Many thanks to you both and Bob for your rapid efforts on putting info together on the Giant Copper project. I wasn't aware of the 1966 feasibility study and related grade/tonnage calculation (done before the area was a rec area). Things like that will definitely help.

I will keep you posted on the progress on this.

thanks again, graeme

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URGENT



Please deliver the following message:

TO: Graeme McLaren
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FROM: Tom Schroeter
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COMMENTS: re: Giant Copper Scenario
- very brief comments, as
requested.

Number of pages 1 includes cover sheet.