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Copy to Dave Lofthouse
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B.C. Geological Survey Branch

To: Bill McMillan
From: John Bradford
Date: March 2, 1993
Subject: Golden Bear Project, Month-end Report - February, 1993

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Disappointing news came from North American Metals last month with the announcement of the shut-down of underground operations at Golden Bear. Golden Bear has always been a high cost, marginal operation strongly dependent on excellent gold grades and careful dilution control. According to mine geologist Doug Reddy, ground conditions were unstable due to intersecting vertical and shallowly dipping fault planes in the ore block. Ore stockpiles should be sufficient to supply continuous mill operation through to the spring, when open pit mining can resume. Mining in the open pit this summer will mainly access material above the "hanging-wall roll", where the dip of the main Bear fault flattens out. Last summer, mining at deeper levels in the pit showed that below this fault bend along the vertical portion of the fault, gold grades were concentrated within a narrow zone of fault gouge, resulting in significant dilution. Above the bend, good gold grades occur across a wider mining width in the fault bounded carbonate lens. Therefore, there is reason for some optimism for the immediate future of Golden Bear. For the longer term, the operation appears to be cash-strapped, which could mean little money for exploration. The best target at present lies between the pit and the mill site (Bear South), where another mineralized carbonate lens is present at deeper levels. The unfortunate experience with underground mining this winter does not enhance the profile of this target, which would be too deep for open pit mining.

Work on Golden Bear this month included compiling documentation for a paper on Paleozoic stratigraphy and deformational history. Recent discussions with Jim Oliver indicated that he is interested in co-authoring a comprehensive publication on Golden Bear, combining GSB regional mapping data with his thesis geochronometry, whole rock chemistry, probe data, stable isotope and fluid inclusion research. I indicated that I would take up this suggestion with GSB management.

About half the month was spent on work related to the Stikine project bulletin, including compilation of petrographic data for a metamorphic assemblage map, and interpretation of whole rock data.

CC: Derek Brown