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GOLDEN BEAR

\*Golden Bear Mine (104K079) was visited on Sept 6-7 with Tom Schroeter and Bob Lane. Doug Reddy, Senior Mine Geologist was our host. Exploration geologists Jennifer Smith, Duncan McBain and Kathy Jaworsky reviewed exploration results for us. We were guided through the mill by Mill Manager Bill Muir. Through hard work and adaptation Golden Bear has overcome horrific start-up problems to become a profitable operation. Net income in the second quarter was \$780,000 (vs loss of \$17.9 million same quarter 1991).  
Current Mine Stats:

Tom Schroeter

- milling 414 tpd vs design of 350 tpd.
- mined 135,000 tonnes in 1992 season at 18 gpt Au from open pit.
- stockpile sufficient for more than one year of milling.
- underground development re-initiated at planned rate of 200 tpd, as a result of unexpected drop in pit grades and consequent curtailment of open pit mining.
- \$330 (Cdn) per ounce production cost.
- Reserves appear to be less than 50,000 tonnes. Recalculation of ore reserves was in progress but reserve potential is limited by the dimensions of the limestone lozenge (gold ore is developed where limestone is in fault contact with mafic volcanic rocks along the Ophir Break).
- current development on 1370 level (the pit floor) with no known reserves below that level.
- 90% mill recovery
- annual costs include, \$2.5 million for limestone from Pavillion B.C., \$1-1.5 million for diesel fuel and \$0.3 million to maintain the 155 km private access road.

The Ophir Break is an anastomosing fault system with five slivers in vicinity of the Golden Bear deposit. Gold occurs primarily on the Bear strand where Permian limestone is juxtaposed against Upper Triassic (Stuhini) volcanics. The limestone was isoclinally folded prior to faulting, the ore deposit is associated with a fault-truncated limestone fold nose. Carbonate appears to be important because it provides structural dilation and a reactive wallrock.

Gold in the Golden Bear deposit occurs primarily as auriferous pyrite (the only visible metallic mineral) with lesser arsenopyrite, pyrrhotite and tellurides. Key epithermal features of the deposit are:

- structural control
- metallic minerals are 0.5-5 microns
- geochemical signature (Au, As, Te, Ag, Sb, Hg, Bi with low base metals)
- alteration halo widens upward

Unusual features for an epithermal deposit are:

- absence of well defined veins and associated sequential deposition textures
- absence of clay and sericite, abundance of ankerite and presence of fuchsite(?)

Principal success of 1992 exploration is discovery of a new limestone pod along the Ophir Break named the Bear South Deep Zone, and located 360 meters below the pit at mill elevation. There were two narrow ore grade intercepts in this new zone. Fleece Zones A and B, north of Golden Bear Pit, yielded some encouraging and disappointing drill intersections (no details released). The Totem Zone, north of Fleece produced an interesting IP anomaly well into the footwall of the Ophir Break in an area of strong silicification. I find it difficult to be optimistic about the long term survival of the Golden Bear operation. Total exploration drilling amounted to 18,447 feet in 20

[SEN 1992 PW]