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DEPT. OF MINES AND PETROLEUM RESOURCES
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SMITHERS, B. C.

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Property Visit

PINCHI LAKE MERCURY MINE

May 13, 1975

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INTRODUCTION:

The Pinchi Lake mercury mine, wholly owned by Cominco, Limited, is situated on the east shore of Pinchi Lake, approximately twenty-four miles by road from Fort St. James. The mine operated from 1940 to 1944 when it was shut down due to a lack of adequate markets; production resumed in 1968 at a rate of about 750 tons per day. The mine employed 60 people at the time of the visit; it appeared to be exceptionally well run and efficient. Many of the people employed are long term Cominco employees and the majority live in Fort St. James, which was founded as a fur trading post in 1806 by Simon Fraser.

The economy of Fort St. James, with a population of about 1500, about one-half native, is based on logging, tourism, and mining. It is also the southern terminus of the Ominica road and serves as the principal supply point for exploration and mining concerns in that area.

People contacted at the property were Ed Craft, Manager; George Warning, Superintendent - Geologist; and Harvey Macdonald, Mine Foreman. Accompanying the writer was Tom Schroeter, District Geologist of the Smithers office. The reception was cordial and surface and underground workings were visited with George Warning.

GEOLOGY:

The Pinchi Lake ore bodies are located in a sedimentary series of Permian? age known as the Cache Creek group. In the mine area, limestone dominates, with some schists and quartzites. These strike north-westerly and dip northeast at 65° . The main ore zone occurs as one lens in the nose of a tightly folded anticline which plunges 65° to the northwest. One other mineable ore zone occurs which also appears to be lens like and is on strike with the main zone. Both ore zones are found in dolomitized sections of limestone.

GEOLOGY Cont'd.

Minor faulting is seen everywhere underground. Displacement appears to be a few feet or less on most faults, although one displacement in the order of 50 feet was seen on surface.

Mercury occurs as the mineral cinnabar as disseminations and minor streaks in dolomite. It was stated that on the rare occasion free mercury was seen. Minor stibnite is also found in the ore zone; pyrite occurs in very minor amounts. Mercury is the only metal recovered (to the writer's knowledge).

The main ore zone attains a width of 200 feet in places and probably averages in the order of 125 feet. The strike length of the two ore zones combined is thought to be 1000 feet.

It was stated that the mining grade was six pounds per ton. Distribution of mineralization appeared to be essentially homogenous, with little variation in grade from one part of the ore zone to another.

MINING:

Current method of mining is trackless cut and fill. Deslimed tailings are used as backfill. Two open pits exist on the property, and one over the main zone is mined to its limit. Mining in the earlier days was by conventional track methods.

The ore bodies appear to be well suited to trackless mining because of width, steep dip, and relatively stable ground.

RESERVES AND OUTLOOK:

Reserves were not stated. However, the Financial Post Survey of Mines (1975) lists reserves as of December 31, 1975 at 1,600,000 tons containing 120,000 flasks of mercury. A flask of mercury contains 76 pounds. The ore bodies, however, at approximately 10,000 tons per vertical foot, appear to continue downwards undiminished in grade or size. Depth of mining is thus an economic determinant rather

RESERVES AND OUTLOOK Cont'd.

than a lack of mineralization.

Outlook for the mine is not good. The current price stated was \$161 per flask, or about \$2.12 per pound, which is the lowest in many years. Even though recovery is good at 95%, value per ton mined is only about \$12.

Further problems may occur in the mercury market with the start up of a new mercury mine in Nevada by Placer this year. This mine is expected to produce 20,000 flasks per year, or 30% of the North American Market (E & MJ, March 1975), compared with Pinchi's production of about 12000 flasks per year. Under normal conditions, this would depress the mercury price even further.

Respectfully submitted



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