

012667

Hart River Mines Limited

N.T.S. 116-A

64° 40' N, 137° 00' W - Approximately

In response to your query re. Hart River Mines Limited. The deposit consists mainly of disseminated sulphides across a 3000 ft. high ridge. 28 drill holes were located on the property for a total of 6000 ft. of investigation during 1968. The first 20 holes were drilled down-dip. Widths and grade over a 400 ft. strike length are therefore not properly defined. In all, drilling was carried out over 700 ft. of strike length. The Hart River deposit is of too tabular dimensions and topographic conditions too rugged to permit an open pit operation. Therefore, further development is limited to underground mining.

The discovery zone has a float grade of 1.5% copper, 4% zinc and 1.5 oz/ton silver. Values per ton is calculated at \$25.00 assuming recovery for minor gold, lead and cadmium. No tonnages have been calculated as yet and an underground program is planned for 1969. Attached please find rough longitudinal section.

The hanging wall consists of black Precambrian argillite with up to 60 ft. widths of disseminated sulphides grading .3% copper, 15% zinc and 1 oz/ton silver. It is estimated this rock contains \$5.00 per ton all metal values inclusive. The footwall consists of Mesozoic diorites which are unmineralized.

Peter Sevensma has classified the deposit as a stratabound replacement with pronounced bedding control. Other deposits should be found near argillite diorite contacts in the area. The disseminated zone is approximately 700 ft. long and terminates abruptly due to structural control at each end, i.e. faulting.

WEST

Diorite on both
walls of zone
Argillite on footwall
Argillite on hangingwall

HOLE 20 — Drilled down dip and
was not in zone

HOLES 15 To 19 — Drilled down dip —
two holes were in footwall,
other two cut narrow
sulfide zones which were
not assayed.

HOLES 10 To 14 — Drilled down dip — seemed to
catch limits of zone but width
not definite — grade about 0.4% Cu,
4.0% Zn, 1.5% Ag.

HOLES 5 To 9 — Drilled down dip — width uncertain —
grade about 1.0% Cu, 4.0% Zn,
1.0% Ag.

HOLES 1 To 4 — Drilled down dip — width uncertain —
grade about 1.5% Cu, 6.0% Zn,
2.0% Ag.

HOLES 21 To 25 — Good ring drilling from setup to south —
outlined zone dipping 60° to south with
width decreasing from 65 feet near surface
to 15 feet at a point 300 below surface.
Grade about 1.7% Cu, 2.0% Zn, 0.7% Ag.

HOLES 26 To 28 — Ring drilled but only the most
westerly hole cut a zone and it
was low grade and narrow

SURFACE

SURFACE

LONGITUDINAL SECTION
1968 DRILLING OF DISCOVERY ZONE
HART RIVER MINES LTD.

1" = 100'

4000'

4200'

EAST

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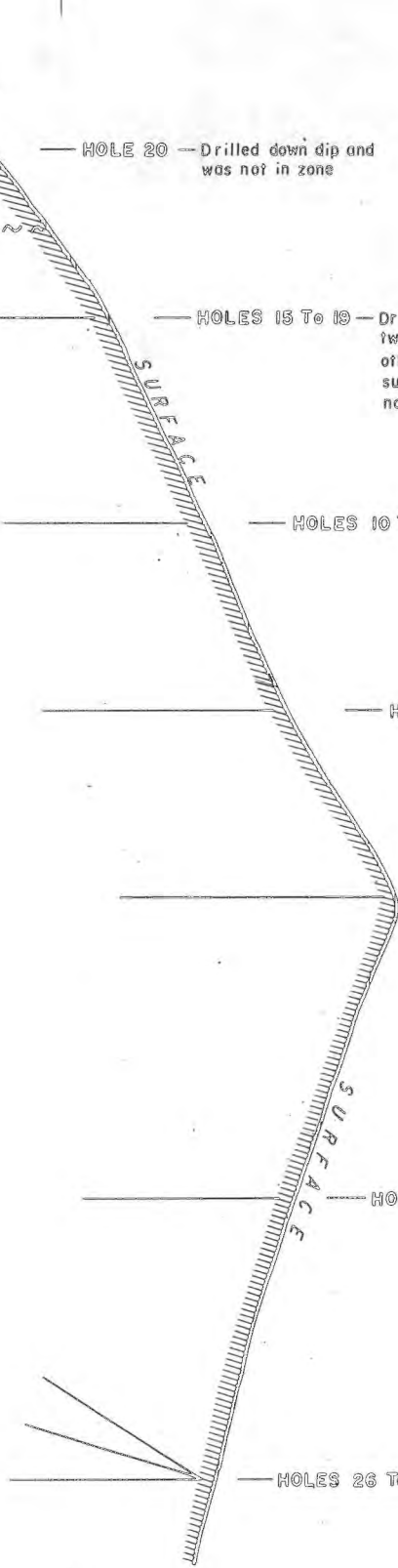
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LONGITUDINAL SECTION
1968 DRILLING OF DISCOVERY ZONE
HART RIVER MINES LTD.

Financial Examiner May 18/68
HART RIVER MINES

Three Vancouver based companies are participating in a Yukon exploration-drilling program.

Crews and equipment were shipped to the property of Hart River Mines Ltd. over the past several weeks and a start of follow-up diamond drilling is expected in the next week or two.

The main showing of copper-lead-zinc and silver is located in the 38 claim Mark Group, located 80 miles north-east of Dawson City, Yukon, according to a report from Hart River Mines.

The original showing was located with basic grass-root prospecting in the summer of 1966. The showing was explored by 12 surface pits, all of which contained some metal values. In 1967, the follow-up program included a soil sampling survey which gave anomalous reading in copper, lead and zinc over a length of 3,700 feet.

An electromagnetic survey over the area indicated a conductive zone some 1,200 feet long and open to extension. Two diamond drill holes were drilled to test the surface showing and indicate the validity of the soil sampling and geophysical survey work.

The first of the holes cut showed 24 feet grading 1.58 per cent copper, 1.58 per cent silver, 2.29 per cent zinc, 0.54 per cent lead and 0.04 oz. gold.

The second hole cut showed 28 feet grading 1.94 per cent copper, 1.61 oz. silver, 1.8 per cent zinc, 0.15 per cent lead and 0.04 oz. gold.

Both the holes were drilled from the same location, the first was a vertical hole and the second was at 60 degrees, and showed regular increase in silver and copper with depth.

There is a second showing within 3,200 feet of the first or main showing. The second showing has been exposed along a volcanic dike where surface sampling returned assays of 19.9 per cent lead, 6.95 per cent zinc, 3.10 oz. silver and 0.02 oz. gold over a width of five feet.

This showing is covered by the extension of the anomalous areas of the main showing. Further work is planned for this showing later in the season, said the report.

Hart River Mines Ltd. is a public B.C. company with an authorized capital of 5,000,000 shares which recently received some \$112,500 as proceeds of financing carried out by Briden, Anfield & Co. Ltd. There are 1,150,000 shares issued following the financing.

Two other companies, Ventures Mining Ltd. and Anglo Western Minerals Ltd., both of which trade in Vancouver, each hold approximately 25 per cent of the issued shares of Hart River Mines Ltd.

SILVER CRISTAL NATURAL GAS & MINERALS LTD.

TEST OF MILK RIVER GAS - At their annual meeting 9Feb70, shareholders of Silver
 STRUCTURE NEAR MEDICINE HAT PLANNED Christal Mines Ltd. approved a change of name to
 Silver Christal Natural Gas & Minerals Ltd. and elected
 as directors the management nominees listed in GCNL 26, 2Feb70.

J. Aubrey Simmons, president, introduced the company's consulting geologist, Jas. Dockery of Calgary, who reviewed the Medicine Hat natural gas field of SE Alberta in general and, in particular, the gas potential of the Milk River structure in which Silver Christal recently acquired drilling rights covering 20 sections as reported in GCNL 26 and 28. He said 5 drill sites have been selected (each on a separate section) and drilling is likely to start in about one week.

Mr. Dockery says the Milk River structure of interbedded shale and sand is about 1100 feet below surface (in the permit area) and about 300 feet thick. The structure extends over some 80 miles and there are several wells in it, but, due to its low porosity, the gas pressure and flow are low.

In recent years, Mr. Dockery has supervised some sand fracturing operations which improved the gas flow from some wells. He recommends this technique be used in all Silver Christal's wells and that the first five be completed "first class all the way" so that full geological data can be obtained. Their cost would be about \$50,000 each. Others could be completed for about \$30,000 each.

About 400 feet below the Milk River structure, lie producing Medicine Hat sands.

In review of Silver Christal's annual report in GCNL 31, 7Feb70, the cancellation of 750,000 escrow shares issued for mining properties was noted.

Concerning the considerations related to acquisition of the interest in the P & NG permits, the Vancouver Stock Exchange advises that Aurora Natural Gas Syndicate received 175,000 escrow shares in consideration of loaning \$70,000 to Silver Christal for bidding on the permits and later converted that loan into a further 233,334 escrow shares. Moreover, pursuant to a shareholders' resolution dated 7Nov69, and, in consideration for negotiating the P & NG permit interest, Silver Christal has issued a further 341,666 escrow shares to Silver Christal directors. Thus, 750,000 escrow shares are now issued plus 400,000 free shares for a total of 1,150,000 shares issued of the 3,000,000 authorized.

HART RIVER MINES LTD.

UNDERGROUND DRILLING RESUMED - Hart River Mines Ltd. has resumed underground drilling and development work at its silver-base metals property 85 miles northeast of Dawson City, Yukon.

The underground drilling program is designed to test for large tonnage, low grade possibilities in an argillite formation beyond the present workings on the 3,880 adit level. The formation has a thickness of 1,600 feet and is known to contain low grade copper-lead-zinc mineralization.

Underground development work is continuing on the 3680 adit level which had been advanced 178 feet when work was halted during freeze-up.

The company has decided to test for large tonnage possibilities as a result of extensive studies on last year's development program that have been undertaken by the company's consultants during the last four months.

The studies show that the argillite formation could change the company's ore reserve picture from a medium tonnage underground mining proposition to a large tonnage, open pit mining operation.

As a result, Hart River has deferred a production decision on the reserves developed last year. Tonnage estimates for 1969 show 577,445 tons proven grading 1.45 oz. silver and 0.041 oz. gold per ton plus 1.45% copper, 0.87% lead and 3.56% zinc. Probable tonnage is placed at 600,000 tons of similar grade.

Hart River has also delayed the completion of a feasibility study being prepared by Kaiser Engineering of Oakland, California. The study is based on current ore reserves and has been delayed pending results of the current drilling.

The first hole in the underground drilling program is a flat hole collared at the face of the 3880 foot elevation adit level. It is planned to drill up and down holes from this collar before drilling similar holes from the East and West crosscuts. Each hole will be between 1,500- 2,000 feet long.

GEORGE CROSS NEWS LETTER LTD.