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REPORT
OF A BRIEF INSPECTION OF THE
HARTNEY GROUP and the MARION & CALIFORNIA CLAIMS
NEW DENVER, B. C.

To
Santiago Mines Ltd.
Vancouver, B. C.

By
Charles C. Starr,
Vancouver, B. C.

September 28, 1945.

Location: The Hartney Group of Mining Claims is situated on the northwest shoulder of Idaho Peak in the Slocan District of British Columbia, and 2½ miles, airline, south-east of New Denver. The Marion and California Claims are 800 to 3000 feet further up the hill to the east-northeast.

PROPERTY: There are three Crown Granted claims in the Hartney Group, - the Hartney L-4864, the August Flower L-4865, and the Hunter L-4888, owned by Mrs. Annie Avison of New Denver.

The Marion claim, L-2287, is owned by J. E. Crepp, Spencer, and Davis.

The California and Clipper claims, L-918 and L-3997, are owned by the Burns Estate.

The Merrimac claim, L-3746, lying between the Hartney and the Marion, is owned by J. H. Corey, New Denver.

GENERAL: A fair road leads from New Denver to the lower Hartney tunnel, whence a rather steep trail leads to the Marion and California.

During the drier seasons of the year near-by water is sufficient for camp use, only.

There is a moderate amount of timber on the claims which is suitable for mine use.

The topography is generally steep and in a few places on the upper claims there are small bluffs; slopes will average upwards of 30 degrees.

Rock outcrops are quite scarce on the Hartney, but increase with altitude, and are fairly plentiful on the California.

Elevation are approximately --

Slocan Lake	1760
Hartney	4100
Marion	5000
California	5400

There is no equipment on any of the claims except a good small cabin and two poor blacksmith shops on the Hartney.

HARTNEY GROUP: (Quotations from Memoir 184 of Canada Geological Survey, by C. E. Cairnes, 1928).

"Total shipments up to the end of 1917 amounted to 264 tons averaging 59 Oz. silver and 32% lead. The ore as mined contained considerable zinc blende".

At one time there was a small mill on the property, but whether the above production includes concentrates is not known to the writer. The tailings dump indicates that the tonnage milled was small.

At present all tunnels are caved at the portal and are inaccessible except tunnel No. 6, the highest, at about 4300 elevation. This tunnel is approximately 100 feet long and follows a vein, or shear, from two to fifteen inches wide striking N 87° W and dipping 70° south.

The vein filling is mostly gouge and crushed argillite with traces of quartz, except at the face where there are several inches of quartz. No lead or zinc minerals were noted.

No. 5 tunnel is caved at the portal. Elevation 4200 approx. At two points a short distance above the portal caving has exposed the tops of stopes where the vein can be seen from a distance of ten or fifteen feet; the upper opening probably represents "A" tunnel. No ore is visible at either point, possibly on account of dirt. The strike is about east and west, and the dip a few degrees either way from vertical.

No. 4 tunnel is caved at the portal. Elevation 4100 approx. No ore was found on the dump.

No. 3 tunnel is caved at the portal. Elevation 3975 approximate. A very little galena and a few pieces of zinc blende were found on the dump.

No. 2 tunnel is caved at the portal. Elevation 3800 approximate. This tunnel is at the mill level and is reported to be some distance short of the downward extension of the ore-shoot worked above.

No. 6 tunnel, and all other tunnels according to the dumps, are in argillites; those in No. 6 tunnel, at least, are rather hard and massive.

From Memoir 184 --- "The vein, in 1906, was developed by five adits, aggregating 1500 feet of drifts and crosscuts, and by 510 feet of raises and winzes. The lowest working is 510 feet below the outcrop. The vein intersected massive argillites and pyritic, carbonaceous, slaty sediments on a nearly east strike and a dip of from 65° north to vertical. It varied in thickness from one inch to two feet, and was widest near the surface, all the levels entering harder rocks in which the vein tightens. The vein as mined consisted of a mixture of galena and zinc blende in a gangue of quartz, calcite and siderite containing fragments of crushed wall rock. A little pyrite was observed coating vugs in the ore. Both zinc blende and galena carried important silver values. The best ore raked with the slope of the hillside and, in places, was mostly galena."

MARION CLAIM: A tunnel at elevation 5100 (approx.) follows a vein for 200 feet, more or less, to a fault striking N 30° W and dipping 45° to 60° north. The fault was followed for some 150 feet northwest. The main drift was continued across the fault and follows a sinuous crack for approximately 275 feet. The vein in the outer part of the tunnel strikes N 75° E and dips 70° south; it consists of an inch or two of gouge with occasional quartz and siderite stringers in which there occur small amounts

of galena and blende. There are two very small stopes where the ore must have been better and wider.

Practically no mineralization was noted in the crack followed beyond the fault and it is doubtful if it is the vein followed on the other side of the fault. At the face of the drift there is a cross-vein a foot wide consisting of about half quartz striking N 30° W and dipping 45° northeast; no lead or zinc were noted.

At about 60 feet lower elevation there is evidence of a former tunnel now covered by the dump.

The lowest tunnel, at elevation 4950 (approx) was not entered. It consists of a short crosscut to the vein and a drift from which a stope has caved to the surface across the trail. Little can be seen of the vein at the cave.

About 100 feet south of the main vein there are two short tunnels and some open cuts on a crack striking N 70° E and dipping 60° north. No metallic minerals were noted.

The wall rocks are rather massive argillites and quartzites with a general northwesterly trend.

From Memoir 184 --- "Records of production are incomplete. The first shipments were made in 1899, when 19 tons carried a content of 106 Oz. silver to the ton and 53% lead. In 1900 over 100 tons were reported sacked at the mine. Shipments to Trail from 1904 to 1909 amounted to 64 tons. No production has been reported since 1909. The underlying rocks are massive argillites, carbonaceous slate, and quartzites of the Slocan series intersected by a small stock of hornblende diorite.

The workings include three adits aggregating about 400 feet of linear work and develop two small fissure veins. The north vein strikes N 78° E, dips 60° to 85° south, and has been opened by two drift adits. On the upper level an oreshoot of high grade galena from six to ten feet long and one inch to two feet thick was encountered.

On No. 2 level mineralization was continuous for 100 feet from the portal and included both clean and mixed ore.

A third and lowest adit intersects a vein by a crosscut 48 feet long. The vein strikes N 80° W and dips south at angles varying from 55° to vertical. Drifting on this vein encountered some galena, and mixed galena and blende".

CALIFORNIA CLAIM: There is a short crosscut tunnel and drift at elevation 5650 (approx). The drift shows a narrow barren vein striking east-northeast and dipping steeply southeast. A second crosscut and drift are at elevation 5725 (approx). This drift is about 70 feet long, on a vein striking N 70° E and dipping 60° to 80° south. The vein consists mostly of crushed rock and gouge a few inches in width, with occasionally a little quartz

and at several points a little galena and blende. There is one quite small stope. On the dump there is about a ton of oxidised material, some of it with a core of galena. It is reported that a little good ore was mined from the surface but none was seen there in place. The rocks are rather massive argillites and quartzites with a north-westerly strike.

From Memoir 184 --- "The property was worked intermittently from 1896 to 1907, during which period shipments of 343 tons were recorded. This ore averaged 88 Oz. silver to the ton and 52% lead.

The workings include two crosscut adits and drifts from them. They give a vertical development of 70 feet on a vein that strikes N 75° E and dips 75° southeast. The vein occupies a fissure cutting silicious argillites and impure quartzites, and varies from a few inches to over a foot in width.

CONCLUSION: All three mines have produced a small tonnage of lead-zinc ore with comparatively high silver content, but the oreshoots appear to have been short and narrow with considerable lengths of barren ground between them.

According to Memoir 184 the veins are pinching in depth where the wall rocks are harder and tighter; the best ore was found near the surface.

Although it seems probable that there would be no special difficulty or great expense incurred in opening the caved tunnels of the Hartney and Marion, so that a thorough examination could be made, it does not appear to me that the presently known facts indicate that the mines can reasonably be expected to become profitable operations. I therefore advise against their purchase or optioning.

Respectfully submitted,

Chas. C. Starr

