

Starr

Property File 001798

R 082FNE041

REPORT
ON THE
BERENGARIA PROSPECT
DEANSHAVEN B.C.

To. Mr. Frank Eichelwerger, Trustee

By Chas. C. Starr
December 1, 1929

LOCATION: The property is situated at Deanshaven on the east shore of Kootenay Lake three miles south of Riondel. The ore-boulder is about two hundred feet from the lake shore. Deanshaven is about twenty miles east of Nelson and is a point of call for the Nelson - Kaslo boat of the Canadian Pacific Railway.

PROPERTY: There are six claims in the group which were located by R. T. Deane and Chas. Sherwin in the summer of 1928. The Richard the First Claim, on which the discovery was made, has been Crown Granted, while the others are held by location. The property is now held under lease and bond in the name of Frank Eichelberger, Trustee.

TIMBER & WATER: There is a fair amount of timber suitable for mine use. A small creek furnishes domestic water, and a second one operates a 10 K. W. generator for electric lights. There is no other water power available.

TRANSPORTATION: The ore showing lies at the edge of Kootenay Lake, and Canadian Pacific barges carrying cars may be loaded direct from the mine bins. Freight charges to the smelter at Trail on low grade ore are approximately \$1.10 per ton. Boats handling passengers and small freight make daily stops if signalled to do so.

HISTORY: Ore was discovered in the summer of 1928 during the sluicing of gravel to make a fill. Some further work was done by Mr. Deane who shipped 113 tons of ore and then leased the property to Messrs. Faulds, Smith, and Hawes who drove a short tunnel through gravel into the boulder and shipped an additional 350 tons. They were required to

pay a 25% royalty, and quit the lease as they could only pay expenses. The average assay of the ore that was shipped was approximately 3 Oz. silver, 8% lead, and 11% zinc. This was obtained by only the crudest sorting, ie. throwing out the large chunks of iron sulphide and barren limestone.

In August of this year a lease and bond was taken on the property by Frank Eichelberger, Trustee, and exploration work is now going on.

EQUIPMENT: The following equipment is installed and in use:-

- 1 220 Cu. Ft. Sullivan portable compressor
- 1 Sullivan drifter
- Drill steel, hoses, etc.
- 1 Ore car and track.
- 1 10 KW electric generator for lights.
- 1 Blacksmith shop with equipment for hand sharpening
- 1 House suitable for about a dozen men.

DEVELOPMENT: The only development on the property is a tunnel running N 75° W which starts in gravel, passes through the boulder of ore, and continues into aplite and schists to a total length (Dec. 1) of 181 feet. Driving in this tunnel is now underway.

GEOLOGY: The formation at the Berengaria consists of mica-hornblende schists, calcareous schists, and limestones belonging to the Lardeau series of late Cambrian age.

These strata strike from north and south to N 15° west and dip from fifteen to thirty five degrees westward under the Lake.

The limestone on the Berengaria is known as the Kirby limestone and lies several hundred feet stratigraphically below the Bluebell limestone, which contains the mine of that name.

From the Kirby mine this limestone has been traced by open cuts at intervals to within about a mile of the Berengaria tunnel and wherever cut by cross-

fractures shows mineralization with iron lead and zinc, sometimes in sufficient quantity to be interesting.

Southward along the Berengaria the limestone is covered up to a point a few hundred yards south of the tunnel; a half mile or more further south the bed passes under the Lake. The limestone is generally white, massive, and averages about 40 feet thick; it weathers easily and there are very few outcrops. The schist and limestone beds have been intruded by large numbers of sills and a few dikes of aplite (pegmatitic granite) varying in thickness from a few inches to forty feet, and probably genetically connected with the Nelson batholith. Typically it consists almost entirely of coarsely crystalline feldspar and quartz, with occasional small amounts of biotite. It is resistant to weathering and forms a large proportion of the outcrops of the district.

ORE OCCURRENCE: The ore at present known is in the form of a boulder more than twenty feet high, more than thirty feet long, and twenty three feet thick. So far as now exposed it is surrounded on all sides except the bottom by sand and gravel. It rests on a pebble filled clay gouge or hardpan the upper part of which contains occasional fragments of ore.

The upper part of the boulder is rounded by erosion, while the bottom edges are sharp, and the bottom itself is comparatively flat though somewhat scratched.

The ore is a replacement of white marbelized limestone with pyrite, pyrrhotite, galena, and sphalerite. The bedding planes in the limestone are visible dipping 33° westward and striking about north and south, -- this is very nearly

the dip and strike of the nearest strata in place. At the top of the boulder there is a thin band of hornblende schist.

The clay under the boulder is about four feet thick and rests on aplite the surface of which has the same dip and strike as the strata, nearly. The tunnel passed through 32 feet of the aplite, 17 feet of aplite with narrow bands of schist striking N 16° W, 21 feet of predominating schist with narrow bands of aplite, 4 feet of aplite in the form of a vertical dike, 45 feet of predominating schist with many narrow bands of aplite, and, at the face, strong aplite showing.

The strike of the bedding and of the sills is N 0° to 15° W and the dip from 20° to 30° west.

SURFACE: No surface survey has been made from which the rock outcrops can be located. The "Surface Plan" on the map accompanying this report is not accurate but may serve to indicate roughly the general relations. Just west of the portal of the tunnel there is an outcrop of schist and aplite which strikes N and S and dips 30° west, and to the north and northeast there is a ridge on which aplite and schist outcrop over perhaps 30% of the surface. Nearly a mile north of the tunnel limestone is known to occur approximately as shown. South of the tunnel a few hundred yards limestone occurs near the lake shore, and also a few hundred feet further east and higher; dips appear flatter on this part of the property and the two exposures may be the same bed but are not sufficiently exposed to make it certain. Eastward from the tunnel the surface is covered with gravel and soil for a long distance.

A little northwest of the most southerly limestone

an old caved cut shows, on the dump, pieces of calcareous schist with considerable galena over an apparent width of about four inches. It is interesting simply as showing the presence of mineral in place.

In general the slope of the hill up from the Lake to the eastward is a little flatter than the dip of the strata. The limestone in the various outcrops appears identical in character with that in the ore-boulder.

DISCUSSION: The origin of the boulder is of paramount importance. Two theories have been advanced (1) that it once was a part of the orebody at the Bluebell mine and was brought to its present position by glaciers, or (2) that it originated somewhere eastward and above its present position and came down by gravity.

There seems to be no evidence to support (1) except that the ore somewhat resembles the Bluebell ore, and that glaciers were known to have been present.

In favor of (2) are the following facts:-

The dip and strike of the bedding of the limestone and the mineralization in the boulder are practically parallel with that of the strata nearest to its present position, and also to that to the eastward and above it.

The upper part of the boulder is water worn, while the lower parts, especially the lower edges, are sharp, and there are some fragments of sharp ore close by in the clay.

There is strong evidence of similar limestone lying to the east and above, and it is known to contain lead and zinc at some points.

There is some evidence from topography and gravel indicating that the boulder is now lying on the southeast bank of an old creek bed.

The logical conclusion therefore appears to be that the boulder slid down the slope, possibly the bank of a creek, from a bed of ore-replaced limestone above, and that the upper part was smoothed by water while in its present position.

The size of the boulder and the grade of the ore indicate

it came from a deposit of considerable size and value, and it is well worth the expenditure of a reasonable sum in searching for it.

The distance that it will be necessary to drive in the tunnel to encounter the limestone cannot be estimated with any accuracy, since the limestone exposures are too far away; it should not, however, be far unless the limestone bed makes a considerable bow to the eastward.

CONCLUSION: The search for the source of the ore in the boulder is, in my opinion, a chance worth taking since a large orebody should be found at a moderate cost, if the hypothesis above is the correct interpretation of the observed facts.

The tunnel now being driven is crossing the strike of the strata at nearly right angles and is designed to cut the limestone on its dip from the surface (covered) above the boulder, and should reach it within a short distance.

Respectfully submitted,

Chas. C. Starr