

Property File

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R E P O R T

ON THE

LAKESHORE MINE.

AINSWORTH, B.C.

F O R

THE PORCUPINE GOLDFIELDS DEVELOPMENT & FINANCE CO. LTD.

F. R. WEEKES,

Manager.

B Y

R. H. MCLOUGHLIN,

March 11th, 1925.

REPORT ON LAKESHORE MINE.

INTRODUCTION:

This examination was made in the early part of March. On account of the mild weather, the ground was practically free from snow for two-thirds of the distance from Ainsworth to the mine. As the road starts gaining in elevation, the snow rapidly increased in depth, till at the mouth of the tunnel it was four feet deep.

LOCATION:

This property consists of eight claims and six^x fractions, whose combined area is about 500 acres. The Group is situated on the west side of Kootenay lake, about 2 miles north of the Town of Ainsworth, B.C. The property extends from the shores of the lake, westwardly up the steep slope of the mountain. The Florence Mine lies immediately north, with the Highland on the south.

TOPOGRAPHY & CLIMATE:

The slopes of the mountains on the west side of Kootenay Lake are very steep and rise abruptly from the water's edge, vertical cliffs 75 ft. high being not uncommon. The only beaches are near the mouths of the creeks. The sides of the canyons cut by the various streams, are also very steep. As you go back from the Lake, the slopes seem to flatten very considerably.

The climate of this District is one of rather mild, open winters. The snow at the edge of Kootenay Lake rarely exceeds two feet at any one time and melts rapidly. As you gain

elevation, the depth of snow increases proportionately. This of course, holds true in any mountainous district. On the whole, the climate here is free extremes of temperature and of moderate annual precipitation.

WOOD, WATER, POWER etc.

There seems to be plenty of standing timber on these claims, sufficient for all mining and domestic purposes.

Water is plentiful, the creeks having a good supply the year round, and the lake would furnish plenty of pumping, in the event of an unusually dry season.

Water power is the only kind that is available at the present time. The Highland Mine generates its own electric power, by means of a water wheel. The City of Nelson has constructed an electric power line as far as Balfour, which is about five miles south of Ainsworth, with the understanding that the Florence Company would finish it on to the Mine.

TRANSPORTATION:

The Lakeshore Mine has a boat landing on its own property. At the present time, however, it can be reached by a good road from Ainsworth. Proctor is the nearest point on the railroad, and is only about 12 miles by the lake Steamer.

OTHER MINES, HISTORY, etc.

The Florence Mine has been the biggest producer of this district. About 4000 tons of concentrates were shipped during 1918 and 1919. During 1920, the mill treated

16,900 tons of ore and shipped 1173 tons of concentrates. These figures were taken from the Report of the Minister of Mines. The Florence Mine is not operating at the present time.

The Highland Mine, to the south of the Lakeshore, is owned and operated by the Consolidated Mining & Smelting Company. There are no figures available on its production.

The Lakeshore Mine worked for about three years, with no record of having shipped any ore.

EQUIPMENT: The equipment consists principally of ore cars, rails, pipe, an Ingersoll Rand Water Leyner type of machine, and hand tools. All of the tools are said to be in first class condition.

DEVELOPMENT:

There is an inclined shaft, 175ft, deep, on the Carey Claim. The open cuts and other surface workings were inaccessible, on account of snow, at the time of this visit. The main adit tunnel is about 750ft. in length. Near the face a drift was started on a fissure. The drift, with short crosscuts, etc., totals 230ft. Two raises connect with a level, 49ft. above the main tunnel. There is about 150ft. of work on the intermediate level.

GEOLOGY:

The general formation consists of a metamorphosed series of sedimentaries, having a dip varying from 35° to 50° to the west, and a north-south strike. These uniformly bedded limestones, schists and quartzites belong to the carboniferous period, according to S.J.Schofield of the Geological Survey. There is a combined thickness of approximately 8000 feet, exposed on this property.

ORE OCCURENCE:

The adit tunnel starts in the Josephine quartzite and crosscuts the general formation. It cuts six fissures on the way in, the distances from the portal being 65, 180, 195, 215, 250 and 715 feet. These fissures show mineralization and their widths vary from a knife blade to several inches. The face of the adit is apparently at the contact with a wide, badly sheared zone.

A drift was started about due west on the last fissure cut, and soon entered the sheared, crushed zone. For 60 ft. the material consisted of a mixture of fine country rock, large fragments of altered limestone, and finely ground galena with occasional large boulders of galena.

Upon entering the hard limestone, the fissure maintains a narrow width, with an East-West strike and a dip of almost 80° to the south. There is a replacement of ore out from this seam, along the bedding planes of the limestone. Galena is the predominant mineral. There is also considerable

chalcopyrite, with a lesser amount of pyrrhotite and sphalerite.

Sample #B-9687, taken across the face of this drift, gave the following results:

<u>Width</u>	<u>Oz Ag</u>	<u>%Pb</u>	<u>%Zn.</u>
5.0'	1.5	8.7	3.8

Sample #B- 9686, was taken at the junction of the drift and crosscut, 55 feet east of the face. It was a vertical cut through the soft, decomposed material and did not include any visible pieces of galena:

<u>Width</u>	<u>Oz. Ag.</u>	<u>%Pb.</u>	<u>%Zn.</u>
5.0'	0.5	2.9	5.7

Sample #B- 9685, was taken from each side of the Intermediate drift, at a point 40ft. west of the raise. The rock was very soft, altered limestone, containing a small amount of powdered galena and sphalerite:

<u>Width</u>	<u>OzAg</u>	<u>%Pb.</u>	<u>%zn.</u>
5.0'	0.4	2.7	3.6

Sample #B- 9682, was taken in the Intermediate level, 20 ft. east of No. B- 9685. The material was similar, with more galena visible:

<u>Width</u>	<u>Oz Ag.</u>	<u>%Pb</u>	<u>%Zn</u>
5.0'	1.2	4.9	4.2

Sample #B- 9688, was a grab sample, from a small pile of sorted ore at the portal of the tunnel, and will give a fair idea as to the value of the ore in the boulders of galens:

<u>Oz. Ag</u>	<u>%Pb</u>	<u>%Zn</u>
8.9	54.3	2.5

There are, at present, 200 sacks of sorted ore ready for shipment, which represent about 14 tons of ore approximately the above grade. This was taken out during the course of the last development work done in the sheared zone.

The inclined shaft on the Carey Claim followed the same fissure, from the surface, that was cut by the adit tunnel, 715 ft. from the portal. At a point about 30ft. above the Intermediate (or 160ft. level) the shaft flattened off considerably and left the main fissure. There is a short drift on the 100 ft. level with a fair showing; also, there was quite a lot of work done on the 160ft. level. The streak in all of this portion of the mine is rather narrow, but the values are very good. None of the development work driven from the shaft went far enough west to reach the sheared zone.

Open cuts and short tunnels on other claims are said to show ore, but they could not be examined on account of snow.

According to Mr. A.G. Langley, who reported on the property for the Minister of Mines in 1923, the sheared zone is the result of post mineral faulting. This seems to be the case, and there was no evidence noted at the time of this visit, of any secondary deposition of galena.

CONCLUSIONS:

There is no definite tonnage of commercial grade ore blocked out in the mine, at the present time. The bulk of the tonnage exposed would be too low in grade to ship,

and would hardly pay to mill right on the property. This, of course, is excluding the boulders of "high grade". There is no way, at the present time, of even guessing as to what proportion of the total tonnage is represented by the large pieces of galena ore. The possibility of developing more and better grade ore "in places" would seem to me to justify further development work. The terms offered by the owners seem so reasonable that work on a small scale at first could almost be made self-supporting, by sorting out the coarse boulders of clean galena.

This property should be examined again when the ground is free from snow, in order to get some idea of the relationship of the surface showings with those underground.

At the time of this visit, the Florence Mine was entirely closed down, so it was not possible to study the occurrence of their ore bodies, or their relationship with those of the Lakeshore.

All of the evidence, so far, would indicate the possibility of the Lakeshore developing into a producer similar to the Florence Mine.

(Signed) R.H. McLoughlin.