

Property File

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R E P O R T

ON THE

S I L V E R G O U P M I N E

FERGUSON, B.C.

F O R

THE PORCUPINE GOLDFIELDS DEVELOPMENT & FINANCE CO. LTD.

B Y

G.C. STARR,

October 2nd. 1925.

REPORT OF PRELIMINARY EXAMINATION OF THE
SILVER CUP MINE.

INTRODUCTION: Two days were spent on the property with Mr. C.W. Woodrow, as guide. There was not time to study the geology sufficiently to make entirely conclusive deductions.

LOCATION: The Mine is situated on the north slope of Silver Cup mountain, at an altitude of 6500 feet and higher. It is approximately six miles in an air line due east ^{from} ~~to~~ Ferguson and in the Trout Lake Mining Division.

ACCESSIBILITY: The Mine is reached from Ferguson up the south fork of Lardeau (or Ferguson) Creek, then three miles by a fair trail to the Mine.

Ore was transported by Aerial tram to the South fork, and supplies taken up to the Mine over the tram also. Near the foot of the tram there was a Transfer Station where ore was shifted to a second tram, leading some five miles down the Creek to the Mill. From Ferguson, twelve miles of a road leads to the Town of Beaton, on the Upper Arrow Lake, where the C. P. Railway operate steamers.

PROPERTY: According to the Minister of Mines, reports, there are nine claims, and fractions, mostly crown granted, amounting to 185 acres.

The property is owned by the Ferguson Mines Company, Limited, of London, England. The principal claims are the Silver Cup and the Sunshine. The property was called to our attention by Dr. W.O. Rose and Dr. Morrison of Nelson, B.C. who hold a lease and Bond on it.

POWER, WATER, TIMBER ETC. At the Mine there is water sufficient for domestic use only. Power may be developed on the south fork of Ferguson Creek, possibly three miles from the Mine; the amount of power which may be developed here is unknown. Formerly steam was used, mostly for power, but a small compressor was located on the Creek, and the air piped to the Mine. Most of the timber close to the Mine has been cut. There is however plenty of good timber lower down on other property. In Winter the snow is deep and there are slides, which run occasionally across the trail.

HISTORY & PRODUCTION: The Mine first shipped in 1896, and worked almost continuously thereafter for fourteen years. It was the largest and steadiest shipper in the Lardeau region.

Figures, as to the total production are not on hand, but many thousands tons of ore were shipped to the Smelters, and in addition considerable tonnage was treated at the mill near Ferguson.

EQUIPMENT: The Company constructed a chlorination Mill some years ago, but this has since burned down; it was not a success with the Silver Cup ores. It was connected with the Mine by about 8 miles of ariel tramway in two sections, which is now practically useless. They had a good camp, shops etc, and a 18 Drill Compressor. Practically all this equipment is now useless.

DEVELOPMENT: According to the maps, which were furnished us development under ground is as follows:-

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	<u>Elev.</u>	<u>Drifts.</u>	<u>X/Cuts.</u>	<u>Shaft</u>
Tunnel # 3	6640 Ft.	760 ft.	520 ft.	
" 6	6407 "	275 "	30 "	
" 7	6312 "	950 "	1900 "	
Sunshine Tunnel #8	6080 "	920 "	50 "	
Main Winze	6320 "			450
#10 Level	6100 "	480 "	200 "	
#11 "		80 "	60 "	
#12 "	5985 "	190 "	90 "	
Totals		<u>3655 "</u>	<u>2640 "</u>	<u>450 -6945</u>

There is no data at hand as to the amount of work done in tunnels Nos. 1, 2, 4 and 5, nor in the shaft levels No. 8 and 9.

All of the work in the shaft is at present under water, and parts of the other tunnels are inaccessible on account of caving.

The Minister of Mines report for 1914 gives the total development to date on the property including winzes and raises as approximately 12,000 feet.

GEOLOGY:

The formation, at the mine is that usual in the Lardeau district, consisting of graphitic schists, slates and impure quartzite with occasional areas of diabase schist.

The strike averages roughly North 45° west and dips steeply to the north east, but there are considerable local variations in both dip and strike.

The principal ore occurrence is in two veins, which conform roughly with the bedding planes of the formation and which are connected by an ore-bearing cross vein. There are several shear-zones, which strike roughly North 50° west and dip steeply north east, which intersect the veins, and appear to be in some way connected with the ore deposition, although ore is not found on or near all intersections. Evidently other fractures besides the intersection of

different veins control the ore deposition.

VEINS: There are four principal veins, which are known as The Main Lead, Blind Lead, Cross Lead, and near the entrance of No. 7 tunnel the Sunshine Vein.

The Main Lead strikes North 35° west and dips steeply north east. The vein filling is more or less lenticular quartz with pyrite and galena lying near low grade vein matter consisting of quartz and crushed and silicified slate. The latter predominating in the leaner parts of the veins. The whole generally contains a very considerable amount of graphite. The walls carry a good gouge, and are generally smooth and stand well.

The Blind Lead does not outcrop on the surface; it strikes north 35° west in the upper levels, swinging to north 15° west on the No. 7 tunnel level. The vein filling is about as in the Main Lead, but the walls are not as good and the vein is less regular. The Cross Lead is erratic in strike and dip, which is generally north and south and steeply to the east. The vein filling is about the same as in the other veins except that the walls are rough, and somewhat indefinite; it possibly contains a greater proportion of quartz, and much less graphite.

The Sunshine vein strikes north and south and dips 30° East. It has been stoped a little.

The Main Lead, the Blind Lead, and the Cross Lead have been extensively stoped and no ore now visible on any of them. The Shearzone, ~~and~~ (ore gone) contain stringers of quartz amounting to perhaps 10%. In places stoping has been carried a short

distance into the shearzone from the intersection with the ore-bearing veins.

In general there appears to have been more quartz and more regular stopes in the upper levels than on the No. 7 tunnel. The best ore is said to have occurred just below the No. 7 tunnel level, and the poorest at about the elevation of the No. 6 tunnel.

In the walls of the ore bodies there are numerous stringers of quartz carrying a small amount of sulphides, and it was possible that they have acted as feeders, and determined the locus of the ore bodies.

SAMPLING: No samples were taken in the Mine, which is practically worked out to the No. 7 level, and presumably to the bottom of the winze level. As it was reported that considerable tonnage of milling ore was on the dumps, the better looking ones were sampled, and the tonnage estimated. It must be remembered that both the sampling and the tonnage estimation was preliminary only, and subject to considerable error. The results are as follows:-

	Tons	Oz Au.	oz. Ag.	% Pb.	% Zn.
At #3 Tunnel, S.W. Part	500	.08	18.8	3.8	1.4
3 " S.E. "	1500	.04	6.3	1.2	1.3
4 " N.E. Half	10,000	.08	19.4	1.9	1.1
4 " S.W. "	13,000	.16	36.9	6.9	2.8
7 " N part	4200 *	.01	5.5	2.4	2.6
7 " S "	7400	Tr.	2.0	2.2	1.9
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Average, omitting #7	(23500	.12	29.0	4.7	2.0
South	(5700	.02	5.5	2.1	2.3
	29200	.10	24.4	4.2	2.1

* " North part" is 63' to 95' from intersection of south east corner of top of dump with soil.

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TREATMENT OF DUMPS: Ore in the dumps at the No. 3 and No. 4 tunnels has been worked in a small, and probably unsuccessful, way by leasers, with hand jigs.

These dumps are fairly well situated to be picked up without difficulty. The dumps at the No. 7 tunnel are somewhat mixed, with each other and with waste, especially in their lower parts; they are scattered over a great length of steep hillside, so that their net values will probably be small. The lead and zinc content of the ore could presumably be recovered by oil flotation, but whether the gold and silver values will be recovered with the sulphides must be determined by test.

CONCLUSION:

So far as any known ore is concerned, the Mine is completely worked out, and was so considered by the operating Company, which seems to have been well managed.

In the limited time spent on the property, during this examination, no particularly favorable place to explore for ore were noted, except on the Sunshine Vein about 175 feet ahead of the present face of the Sunshine tunnel. This would not be sufficiently attractive to cause work to be undertaken on the property as a whole.

It seems probable that a small plant erected on the ground to treat the dumps, would, under the existing conditions and lack of all equipment on the ground about break even on construction and operating costs versus the net value of the bullion and concentrates, but any exact estimate of the cost or of the

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recoverable values would depend on a more thorough sampling and other factors that are at present unknown.

As a whole the property is not attractive.

Respectfully submitted.

Chas. C. Starr
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