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A = Action C = Comment
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INTER-OFFICE CORRESPONDENCE

FROM: R. E. Legg

CITY: Vancouver, B.C. DATE: 11/1/52

TO: Evan Just

SUBJECT: Sunshine Lardeau Mines Ltd.

Having made a brief examination of the property of Sunshine Lardeau Mines Ltd, I want to give you some pertinent facts to show why I still believe that an investment in this company is worth while, provided that it can be arranged on a suitable basis.

Sunshine Lardeau Mines Ltd. is a B.C. company formed in 1947 to exploit several mining prospects in the Lardeau mining division of British Columbia. The authorized capital was 3,000,000 shares of $1.00 par value, of which 1,100,000 were issued for the properties and were pooled. Since that time 1,850,000 shares have been sold to yield the treasury, so I am told, around $600,000. I have not seen an accounting of how this money has been spent, but I believe the great part of it has been spent on the Spider mine which has now been brought into production. I believe I am right in saying that almost all of the money came from Vancouver or other parts of the Province.

The present directors of the company are not men who are well known in the mining industry. Generally speaking they are not experienced business men. This has been a handicap to the company. I think they sold their shares at too cheap a price, with the result that they now find themselves in financial difficulties, in spite of the fact that they have brought their 50-ton mill into production.

These difficulties have been brought about, in my opinion, because the company started to mill a mixture of sulphide and oxidized ore. The resultant recoveries were so poor that they barely made operating expenses, and all during this time they were incurring capital expenditures for which there were no funds. These milling difficulties will be appreciated by a study of the metallurgical balances for the months of July, August and September, which are attached. At the mine I was told that the approximate total of net smelter returns from May to the end of October 1952 will be $175,900. This difficult milling period is now over because the mine is now able to draw on a supply of non-oxidized ore from the No.8 level which became available around October 20th. However, this favourable development has not materially helped the company's financial difficulties. Owing to the drastic decline in metal prices, the fortunes of all British Columbia's base metal mines have likewise declined, including Sunshine Lardeau. While it is not possible to raise new money from the public from the sale of shares so as to meet all the accumulated obligations, yet it has been possible for the company to hold off the creditors and meet the current bills, because they have been able to show that they were now making an operating profit from the ore from the 8th level. The bank is advancing funds on receipt of ore and concentrate shipping documents.

Having outlined briefly the financial position of the company, I will comment briefly on what I saw at the mine during my visit there October 27th - 29th.

Location.

From an operating point of view location is good. The mine lies approximately 8 miles from the village of Beaton on the Arrow Lakes. Elevation of mine is 3950 feet and of mill 2800 feet. There is no danger of snowslides, which are common in the Lardeau district.

Transportation

Ore is brought from mine to mill over 2¼ mile stretch of road. Average grade of road is 10%, but portions of the road are up to 17% grade. These will cause haulage difficulties under icy conditions.

From mill to smelter transportation facilities are good, and permitt continuous operation.

Geology.

The ore bodies occur in a wide sheared zone crossing a wide band of green chloritic schist. The shearing cuts the bedding at from 15 to 40 degrees. The ore occurs as massive and scattered sulphides in a gangue predominately quartz but containing also carbonate material. The principal sulphides are galena, sphalerite and pyrite. As far as is known, the silver occurs with the galena.as argentiferous tetrahedrite. The geology of the surface and upper workings has been described in Memoir 161, Lardeau Map-area, British Columbia, published by the Canadian Geological Survey in 1929. This description does not give any clue as to the origin of the ore bodies, but does state that the mineralizing solutions ascended along cracks and fissures in the chlorite schists. One gets the impression from this description that the mine is a small one, and this still applies today, although considerable development work has been done since 1929.

Mine Workings.

These are not extensive. There are seven surface adits, namely No's. 1, 2, 3, 4, 5, 6 and 8. No's. 1 to 4 were not seen. No's. 5, 6 and 8 were examined. What ore remains lies between No's. 5 and 8, an inclined distance of approximately 400 feet. C. Rutherford, mining engineer of Vancouver, made an ore reserves estimate on October 10,1952 of 37,145 tons averaging 0.11 oz. gold, 32.1 oz. silver, 10.1% lead and 7.1% zinc. I am inclined to believe that this estimate is too high, because I think he has taken average ore widths which are too large. Information is very limited on ore widths. However, since Rutherford visited the property, the ore on No.8 level has been found by a crosscut started several months ago. At October 28,1952 this ore had been opened up for 50 feet in length and looked very promising. A plan of this ore shoot is attached hereto. Now this shoot has every indication of being the downward continuation of the ore on the No.6 level. Between the 6th and 8th levels - roughly half way between them - a diamond drill hole, D.D.H. #23 has cut a true width of ore assaying 0.08 oz. Au., 17.9 oz. Ag., 12.8% Pb. and 15.4% Zn. This is the only information between the 6th and 8th levels which is a slope distance of approximately 300 feet. Thus it does seem certain that the development on the 8th level has resulted in a large increase in probable ore reserves.

Ore Reserves.

The present manager at the mine, P. L. Clark, has stated

to me that he was prepared to sign his name to a statement signifying 60,000 tons of ore reserves. Between blocked out ore, probable ore and possible ore I think his figure is a reasonable one. From a study of all the evidence I believe one could expect an average grade of 0.06 oz. gold, 15.0 oz. silver, 10.0% lead and 8.0% zinc. However, I believe it is necessary to divide the ore reserves into two types, just as Rutherford did, namely shipping ore and milling ore. There is not sufficient informati-on to decide what percentage of the reserves is shipping ore, but it could be from 10 to 20% of the 60,000 ton figure.

Mill.

I was favourably impressed with the mill. Most of the equipment is new. While it now can handle up to 60 tons daily, I believe this could be raised to 85 tons daily with the installation of a secondary crusher to produce a fine ball mill feed. At the present time the ball mill feed is the crushed product which passes through a Denver 9" x 16" jaw crusher. When it was found that the mill would not make efficient recoveries on the oxidized ore, an additional bank of cells was installed for the purpose of sulphadizing the ore, but I gather that this was not particularly effective. The mill can make excellent recoveries treating straight sulphide ore, as the attached milling results for the period October 21 to 26 illustrate.

Camp Accomodation

There is a first class modern combined cookhouse and bunkhouse, where 36 men can sleep and 60 eat. A small old bunkhouse houses 9 men. There are some dozen old houses or cabins in the immediate area, not owned by the company but which are occupied by employees and their families. Four prefabricated houses are under construction for the senior staff.

Power Plant.

The mill is powered by a 315 H.P. Vivian diesel coupled to a 215 KVA generator. A smaller 75 H.P. auxiliary unit with a 50 KVA generator is at the property, but is not set up. The power unit at the mine consists of a 600 cu.ft. Jaeger diesel driven compressor.

General.

The company has its own sawmill capable of cutting 5000 b.m. of rough lumber per day. There is also a modern assay office, a warehouse and a general office. There is a fleet of automotive vehicles for handling ore and men, and contractors are available to handle tonnage in excess of that which can be handled by the company's own equipment.

Profit Possibilities.

In these days of very uncertain metal prices it is a dangerous procedure to calculate profits from lead-zinc ore. However, it is clearly seen from the information herewith given that the Sunshine Lardeau is a relatively high grade mine, and it should be one of the last to survive provided operating costs are kept within reasonable bounds. A guide as to what might be expected in the future is a study of the October production figures, bearing in mind that the mill only operated for two thirds of the month. The reason the mill did not operate for the other third was because the mine crew were all busy on extracting ore of shipping grade from the 5th and 6th levels. The 8th level was not then available for production.

Sunshine Lardeau October 1952 Estimated Net Production.

Lead Concentrates		
Production October 1 - 26 from mill figures	103.4	tons
Estimated production for October 27-31 at the average of October 22-26 period	40.00	
Total	143.4	"
Zinc Concentrates		
Production October 1 - 26 from mill figures	95.7	"
Estimated production for October 27-31 at the average of October 22-26 period	50.00	"
Total	145.7	"
High grade shipping ore October 1 - 31	325.4	"

143.4	tons	of	lead	concentrates	at	net	of	$160	per	ton	$ 22,944
145.7	"	"	zinc	"	"	"	"	$55	"	"	8,013
325.4	"	"	shipping ore	"	"	"	"	$75	"	"	24,405
						Total					$ 55,362

In determining the net figures per ton for the three products the latest smelter settlement sheets were consulted.

October Operating Costs.

The mine has not got their accounting system in order, and it is impossible to tell what their operating costs are. Operating and capital expenditures are not segregated. However, I would say that during October they will make an operating profit of between $15,000 and $20,000. When the present period of confusion is over and when things get on a normal basis, there should be a monthly operating profit of around $25,000, at the very minimum.

Conclusion.

If a satisfactory deal can be concluded with the company, then the first step should be a campaign to increase ore reserves by drilling below the No.8 level. If this should be successful, and there seems to be no reason why it shouldn't, then consideration could be given to an increase in milling capacity to around 80 tons per day. It is very unlikely that Sunshine Lardeau will ever exceed an 80 to 100 ton operation, but nevertheless it could be highly profitable if the present grade of ore can be maintained.

R. E. Legg

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SUNSHINE LARDEAU - METALLURGICAL BALANCES

JULY 1952

PRODUCT	WEIGHT DRY TONS	ASSAYS Ag oz.	Pb %	Zn %	RECOVERY % Ag	Pb	Zn
Lead Concs	70.26	173.0	57.63	9.53	66.19	65.53	9.60
Zinc Concs	98.84	24.15	5.31	49.39	13.00	8.49	69.97
Tailings	1145.7	3.34	1.40	1.24	20.81	25.98	20.43
Mill Heads (calculated)	1314.8	13.97	4.70	5.30	100.00	100.00	100.00
Mill Heads (assayed)		14.14	4.87	5.31			

AUGUST 1952

Lead Concs	51.96	129.3	57.86	12.11	58.85	55.57	15.78
Zinc Concs	66.33	32.4	13.51	44.06	18.83	16.56	73.27
Tailings	421.05	6.04	3.58	1.04	22.31	27.87	10.95
Mill Heads (calculated)	539.34	21.2	10.03	7.40	100.00	100.00	100.00
Mill Heads (assayed)		21.1	10.03	7.40			

SEPTEMBER 1952

		ASSAYS Au	Ag	Pb	Zn	Au	Ag	Pb	Zn
Lead Concs	57.71	0.684	152.05	49.71	10.23	65.34	54.86	48.85	18.27
Zinc Concs	47.34	0.153	44.10	13.25	47.15	11.98	13.05	10.69	69.06
Tailings	441.73	0.031	11.62	5.38	0.93	22.68	32.09	40.46	12.67
Mill Heads	546.78	0.110	29.25	10.74	5.91	100.00	100.00	100.00	100.00

Note poor recoveries

	Sulphide Lead	Non Sulphide Lead	Sulphide Zinc	Non Sulphide Zinc	Total Pb	Total Zn
Mill Feed	5.38%	4.85%	5.63%	0.28%	10.23	5.91
Mill Tailing	1.05	4.33	0.58	0.35	5.38	0.93

Sulphide Lead Recovery	85.6%	Sulphide Zinc Recovery	91.9%
Non Sulphide Lead Recovery	27.8%	Non Sulphide Zinc Recovery	Nil

OCTOBER MILLING RESULTS

Day		Tons Milled	Mill Heads Ag	Mill Heads Pb	Mill Heads Zn	Pb Concs. Tons	Pb Concs. Ag	Pb Concs. Pb	Pb Concs. Zn	Zn Concs. Tons	Zn Concs. Ag	Zn Concs. Pb	Zn Concs. Zn	Mill Tails Ag	Mill Tails Pb	Mill Tails Zn	RECOVERY Ag	RECOVERY Pb	RECOVERY Zn
Oct.	1	14.43	28.2	6.1	9.2	1.37	128.4	42.9	11.5	1.24	8.2	4.4	55.6	9.1	2.0	1.6	63.0	72.7	81.8
	2	55.55	14.4	5.6	7.3	4.95	136.8	47.0	12.1	3.53	22.3	7.4	52.5	1.13	1.1	3.4	93.4	83.3	60.5
	3	-																	
	4	24.49	23.76	6.6	4.9	3.34	191.3	46.8	13.1	0.88	20.4	7.0	48.6	1.0	1.1	2.2	96.4	85.8	61.7
	5	Mill down Shipping high grade																	
	6																		
	7																		
	8																		
	9																		
	10																		
	11																		
	12																		
	13																		
	14	46.65	19.3	8.14	5.0	6.86	114.0	44.3	15.4	1.91	13.3	9.0	48.9	2.5	1.53	0.9	89.5	84.7	85.4
	15	51.0	14.2	6.7	5.1	5.15	114.0	48.6	10.6	2.99	14.5	10.5	47.3	2.24	1.40	1.50	86.7	82.4	75.4
	16	50.6	14.04	6.4	5.7	5.51	106.3	44.3	12.7	3.44	10.5	2.2	54.0	2.06	1.73	0.78	87.6	77.7	88.7
	17	40.37	17.8	7.8	6.6	5.45	111.5	46.3	12.0	3.37	9.6	1.6	54.5	2.4	1.80	0.53	-	-	-
	18	52.23	12.1	5.6	6.4	5.43	108.4	43.4	11.7	4.34	10.2	2.3	56.2	3.5	1.1	0.65	82.5	84.0	91.7
	19	53.6	12.1	5.6	5.2	4.43	133.5	49.5	7.7	4.63	6.5	2.0	46.2	2.4	1.6	0.7	85.4	76.3	88.8
	20	59.11	10.4	6.6	6.9	6.76	116.1	47.0	11.0	5.86	4.4	1.2	51.3	2.1	1.4	0.7	89.3	83.3	92.0
	21	60.02	16.0	9.1	12.1	9.84	100.7	49.8	11.0	11.64	2.4	1.2	50.6	1.6	1.1	0.6	93.9	92.2	96.8
	22	60.3	14.4	5.9	9.2	5.59	109.8	53.7	10.5	9.77	2.3	0.8	48.4	1.2	1.1	0.5	90.7	86.7	96.0
	23	59.06	22.7	13.7	12.5	14.23	89.0	52.8	8.5	10.27	3.0	3.2	57.8	1.2	0.7	0.7	96.8	97.0	96.7
	24	50.38	22.3	13.7	15.1	9.87	88.7	57.3	9.9	12.04	14.4	8.0	52.7	2.7	1.0	1.0	91.2	95.9	96.1
	25	55.16	15.6	11.1	13.9	7.54	85.3	58.2	8.9	12.07	16.2	10.5	53.6	1.9	1.3	1.5	92.6	94.8	93.2
	26	49.36	12.6	8.8	11.1	7.11	81.5	54.2	10.6	7.67	5.3	2.3	57.0	1.1	0.9	1.0	94.4	92.8	93.7
	27		12.84	8.8	8.0		80.12	53.8	11.4		2.76	1.5	57.0		.8	.78			

16 | 782.31

48.8 tpd

Ore from 8th Level reached mill between 21 and 23 Oct.