

duct of high commercial value. By having the present complete and successful concentrating plant installed and paid for, together with the magnetic zinc separating plant, now under construction, you will be in an excellent position to handle all concentrating ore bodies that in depth may possibly replace the former lenses of clean galena, and inasmuch as the zinc blende must necessarily be separated from the galena when the 10 per cent. zinc limit is reached, the feature of concentration, not alone overcome smelter penalties, but improves the silver-lead product, and adds the zinc blende as a valuable by-product.

I can furthermore assure you that the extra cost of concentration—including a legitimate loss of values in milling—is readily offset by the lesser cost of mining, and expensive hand-sorting in the stopes.

All concentrating ore will hereafter be extracted from wall to wall, regardless of high or low values, and no material that pays to concentrate will be permitted to remain in the mine or go to the dumps. Hand-sorting of clean ore will not be done in the mine as heretofore, but in broad daylight at the concentrator, before entering the mill. This constitutes a part of the crusher-man's duties. Prior to sorting, all fine material is screened out through a special trommel while large pieces of ore and waste are sorted out by the crusher-tender, thereby accomplishing a material saving. I am quite convinced that the ensuing year, by the above method of mining and concentrating, together with the introduction of additional machine drills will show a material reduction of all operating expenses.

In presenting my report for the fiscal year 1902-3, I desire to state that it has been my earnest effort to submit an unbiased and thorough representation of existing conditions.

On behalf of the B. C. management I beg to tender my respects to the President and Board of Directors for their ardent support, which under local difficulties always proved a source of rare gratification.

I also wish to extend my thanks to Mr. Sam F. Parrish, E.M., for his professional visits to the mine, and coinciding expressions, as well as my appreciation of the able assistance rendered by Mr. George F. Ransom, accountant; Mr. Joseph J. Streit, mine foreman, and Mr. B. P. Little, mill foreman.

LE ROI NO. 2.

The report of this company, whose property adjoins the well-known Le Roi mine, in the Rossland District of British Columbia, covers the year ending September 30, 1902. The accounts, as stated in sterling from the London office, show receipts from ore £117,188; interest, etc., £706; total, £117,894. Expenses at the mine were £64,347; London office, £3,086; miscellaneous, £5,434; total £72,907, leaving a net balance of £44,987.

Exploration work included 2,904 feet, of which 180 feet were shaft sinking. The total cost of this work was \$80,878. The ore taken out was 63,262 dry tons, the metal contents being as follows:

	Quantity.	Value.	Per ton.
Gold, ozs.	32,435	\$648,698	\$10 25
Silver, ozs.	82,548	44,563	0 70
Copper, lb.	3,001,027	375,055	5 94
Total		\$1,068,916	\$16.89

The average costs per ton of mining and working are given as follows:

Mining labour	\$2.020
Supplies, power, tramming, etc.	1.195
Depreciation of buildings and equipment	0.956
Reserve, accidents, etc.	0.363
General expenses.	0.487

Total cost of mining. \$5.021

Direct smelting charge \$6.000

Indirect charges 1.870

Total cost of smelting \$7.870

Total cost per ton of realization \$12.891

The Directors' report says: "The heavy fall in the price of copper and silver during the last nine months of the financial year decreased by \$121,182 what would otherwise have been the net earnings of the company had the price of the previous year been maintained.

"The smelting charges to which the company was bound for two years by an agreement made by Mr. MacDonald with the Northport smelter, on August 16, 1901, amounted approximately to \$8 per ton. The Directors took counsel's opinion as to the possibility of nullifying this agreement on the ground that it was signed by Mr. MacDonald for both sides, under a very limited power of attorney, but were advised that there were small chances of success.

"The largest profit was shown in the month of April, after which there was a steady decrease in the value of output and a corresponding decrease in profit. On September 21 the manager cabled recommending the reduction of the output to 3,500 tons per month, which, in view of the smelting position, the board thoroughly approved of, expressing at the same time a hope that the grade of ore would be correspondingly increased. During the months of September and October it would appear that the mine was actually being worked at a loss. As soon as the board ascertained this, they prohibited the output of any ore under \$17, as it was evident that the mine was simply being denuded of ore, which, it is believed, under improved methods of treatment, can be made to yield a material profit. According to Mr. MacDonald's statement of high-grade ore in sight, dated June 21, and circulated among the shareholders, there should have been no difficulty in continuing the output of \$17 ore. On October 28 the manager recommended the cessation of shipments till better rates for treatment could be secured, to which the Directors assented. At the expiry of the agreement with Messrs. MacDonald and Thompson, the board handed over the management of the mine to Mr. Alexander Hill, who himself installed his representative, Mr. Couldrey, in office. In taking this step the board feel that they have placed the mine under the most capable control procurable, and have also insured that information received by the board will be in accordance with fact. The new manager will not at present commit himself to any figures as to tonnage and values in sight in the mine, as it is impossible to estimate these with any degree of certainty where ore bodies are so irregular. There is, however, beyond question a very large body of low-grade ore which it is anticipated can be profitably worked by concentration, and, interspersed with it, an appreciable quantity of high-grade ore. It will no doubt be found best to ship ore above a certain grade direct to the smelter, even when the concentration plant is in operation.

"In connection with concentration a number of experiments have been recently made in London as to the suitability of the Elmore oil process to Le Roi No. 2 low-grade ores, and the result has been such as to warrant the Directors in giving instructions for the erection of an experimental plant of two units, capable of dealing with 50 tons a day, in the neighbourhood of the mine. Should this prove successful the intention is to increase the plant to such a capacity as can deal with the entire output of the mine. The effect of the process, roughly speaking, is to concentrate the mineral contents of ores which are of too low a grade to show a profit on smelting charges. Thus on six tons of crude ore producing, say, one ton of concentrates, the smelting charge (according to the present rates) would be \$8 instead of \$48. There is no doubt, however, that better terms than the present can be made for the smelting of concentrates, as these are a desirable acquisition to any smelter. By the new process, too, the cost of mining will be considerably reduced, as the necessity for hand-picking and sorting will no longer exist, all ore going through just as it comes out of the mine.

"A certain amount of high-grade ore is at present being shipped to the Northport smelter, but till, by the new arrangement, the straightforward stoping of all ore (high and low-grade) becomes practicable, much of the high-grade ore in the mine would be too expensive to handle."

LONDON & B. C. GOLDFIELDS.

The report of the London & British Columbia Goldfields,