ZINC ORES OF THE SLOCAN STAR MINE.

Mr. A. G. Larson, mining engineer, of Vancouver and Spokane, recently made an examination of the Slocan Star mine at Sandon, report of which warrants the company in making extensive development with a view to working the large available tonnage of zinc ores.

Explorations have exposed a large sheer zone vein traversing the property in direction of its greatest length and opened extensively to a depth of over 1,000 feet. This vein is so wide, and the ore occurrences so variable within it, that drifting will not alone serve to explore it. It is therefore very necessary that frequent crosscuts be run at right angles to the vein in exploring the ore deposits known to exist above and in the chance of opening up unsuspected ore bodies. The workings consist of 10 main levels with several intermediates, and aggregate in all over 13,000 feet of drifting and over 4,000 feet of upraising and winzes.

The ore occurs in shoots of variable size and attitude. Past production has been confined to the clean lead or zinc ores and to the extensive bodies of lead-silver concentrating ores, to the exclusion of deposits of concentrating ores of zinc nature and value and which hitherto has been considered worthless. The report of Mr. Larson deals especially with this zinc ore and its possibilities.

The ore can be at present mined for $1.50 per ton, treated for 40 cents per ton, and marketed for $1.00 per ton —a total of $2.90 per ton. The mine is very advantageously developed for cheaply and quickly attacking the extensive zinc concentrating ore deposits which are partially exposed in it. By increased efficiency to the power, milling and transportation, the profits will be materially increased.

It is estimated that by efficient milling and handling, 60% of the values may be saved and marketed. The remaining 40% should be stored and re-treated when its accumulation warrants a further plant installation. The method for further treatment is yet to be fully determined. It would require an assay value of over $7.00 per ton to pay under the conditions. The assay value found is about $11.50 per ton on a basis of the average price of silver and lead for the past year, and 5 cent spelter.

There is about 49,000 tons of the zinc concentrating ore developed in the mine and available for extraction, an indicated net value of about $190,000.

There is an aggregate of about 100,000 tons of the zinc concentrating ore partially blocked out and reasonably expected to develop with further exploration, an indicated net value of $400,000.

The average assay of the ore was found to be: 3.0 oz. silver, 1.2% lead and 10.0% zinc per ton. The net value may be increased by facilitating the mining by further development and increasing the power plant, by additions to the concentrator, by installing a tramway from the mill to Sandon to insure continuous shipments of ore and concentrates and to reduce expenditure. Mr. Lawson estimates the capital expenditure at $50,000, as follows: Power plant extension, $18,000; tramway, $4,000; mill improvement, about $10,000; and underground development, $18,000.

The mine fully warrants the expenditure to insure capacity treatment and efficiency.