

ZINC MINING POSSIBILITIES.

Great hopes are entertained respecting the possibilities of turning to profitable account Slocan galena ores carrying an excess of zinc—a circumstance which heretofore has been distinctly detrimental instead of, as now appears likely, desirable. In smelting silver-lead ores, merely with a view to the recovering of those metals, an ore containing an excess of zinc is metallurgically troublesome, and consequently it has been the practice on the part of the smelters to tax all ore containing over and above a certain percentage of refractory material, so much per cent. of excess. So long as British Columbian mine owners had a market for their lead ores in the United States, and were commanding a good price for their product, no attempt was made to market ores carrying a very high percentage of zinc, but since this market has been closed and the basis of dealing has been on London quotations, less unduly heavy freight and other charges, the margin of profit on lead mining operations has been so reduced that none but the very richest mines—and these are not always the most important in this country—could afford to continue working. Thus production since 1900 has fallen off very considerably, and so far as lead mining is concerned there is little likelihood of improvement in the British Columbian situation until the institution of certain tariff reforms and amendments looking towards the establishment of lead manufacturing and paint works in Canada. It has been estimated that there is a market in the Dominion itself for from one-half to two-thirds of the lead annually received in British Columbia, but under present conditions all our lead is exported in the form of ore or matte, while all the manufactured lead consumed in the country is imported. There is meanwhile some talk of building large refinery works at Nelson, experimental tests with an electrolytic process at the small plant at Trail having proved, it is understood, reasonably successful, and pressure is also being brought to bear on the Dominion Government to subsidize the undertaking and also to effect such changes in the tariff as to render the importation of white lead, lead pipe and other manufactured forms of lead practically prohibitive. It is thought that by this measure sufficient encouragement will be afforded local industry and that a local market at better prices will thus be provided for at least the bulk of lead mined in the country. Should these plans be carried out, the effect, of course, will be to greatly stimulate activity in our lead mining centres; but meanwhile the suggested utilization of the zinc by-products is of more immediate interest. Spelter is in great demand in the States

and it is significant that the supply from the chief sources of production is not increasing. The representative of a large Kansas smelting concern, who has been in the Slocan district for some weeks, has, it is said, made mine owners very favourable offers to purchase ores carrying zinc of 60 per cent. and over. Ores having a lower percentage than this are also accepted but for every unit under 60 per cent. a penalty is imposed. The available tonnage of ores in the Slocan carrying fair zinc values is by no means inconsiderable, the Slocan Star mine for example being in a position to ship a large tonnage monthly, while its output could possibly be increased to a thousand tons. Another mine, the Ivanhoe, could send out 10 tons per day, the Payne at least 5 tons, and the Bosun and Mountain Chief both have large available supplies of zinc ores up to 42 per cent. in this metal. In many cases the ore would require to be concentrated in order that the resulting product should not fall below the required percentage, but provided a satisfactory market is arranged, mine owners would hardly hesitate to install the necessary plant. For ore or concentrates carrying 60 per cent. zinc it is understood that the smelter settlement will be between \$30 and \$32 per ton, assuming that the ore does not carry an excess of either lead or iron. From this, of course, the transportation rate of \$11 would be deducted, and if the ore carries silver there will be a further charge of \$2 per ton, as the gathering of these requires some further process. Nevertheless the marketing of the zinc affords a cheap method for the recovery of the silver values, in which much of the zinc ores of the Slocan are very rich, and in the case of large shipping mines like the Slocan Star and Enterprise, the separate treatment of the zinc ores will save the companies a very considerable sum which at present is charged against them by the lead smelters for excess of zinc.

Judging from the superintendent's report, which we publish elsewhere in this issue, the Stenwinder mine, one of the properties of the New Fairview Corporation, has every chance of entering ere long the profit-earning stage. No thanks, however, to the erstwhile management of Messrs. Dier & Davidson. Mr. Russell, under whom operations have since been carried on, appears to have worked intelligently and also at great personal sacrifice in the interests of the shareholders.

It is stated that the Olalla Company has "practically decided" to build a 50-ton smelter, and that the plant will probably be operated by "gas-power."