

40 per cent. lead and over, and that love of the Stars and Stripes, or personal friendship, or anti-Canadianism, or some other motive than dollars and cents draws its ore across the line.

"The *Ledge* tries to convey the impression that the Canadian smelters are unpopular, and that the mines are generally shipping past them to the United States, and I have accordingly made some enquiries, and have ascertained that 58 British Columbia mines shipped about 20,000 tons of carrying over 15 p. c. lead in 1902; and that, of these 55 shipped to the two Canadian smelters their production of about 22,000 tons, and that three shipped to American smelters. Of one of these mines, the Secretary is the ore buyer of an American smelter; another is the American Boy of Spokane, Wash., which was true to its name; and the third was Mr. Cavanaugh's mine, the Slocan Star.

"The *Ledge* quotes Mr. Campbell Johnston regarding smelter rates, and a more misleading use of figures by one who should be qualified to use them properly, it would be hard to find.

"Leaving out of the question the impossibility of making a comparison between such different sets of conditions, rates of wages, etc., and taking the figures given as being the cost per ton of charge, how much has that to do with the rate charged on any particular class of ore? In the first place, the cost per ton of ore will depend on the proportion of ore in the charge. The greater the proportion of flux, the greater will be the cost of smelting apart from the cost of the flux itself.

"To make it clearer: Supposing a charge of self-fluxing ore costs to smelt \$5.00 per ton, and the furnace smelts 100 tons, the cost will be,

100 multiplied by 5, equals \$500.00.

but supposing the charge be made up as follows:—

12 tons limerock,
25 tons iron ore,
18 tons matte (calcined),
45 tons ore.

100 tons @ \$5.00, equals \$500.00.

In this case you have 45 tons of ore to bear the whole cost, making \$11.11 per ton of ore.

"Now, while that shows how the cost per ton of ore would be affected by the proportion of flux in the charge, there is another factor that affects the charge for any particular class of ore, and that is the rate which is being paid on other kinds of ore going to make up the charge. For instance, a few years ago in the United States (and this is still the case to a less extent), there was abundance of high grade dry silver ore which could afford to pay high treatment charges, and high lead ore was required to smelt with it, and the smelters obtained that ore at whatever it was necessary to take it at, and in some cases they smelted it for nothing. In such cases, the dry ore provided the payment for smelting the whole charge.

"Supposing that of the 45 tons of ore in the charge in my illustration, 30 tons was lead ore and 15 tons silicious ore, and the rate charged for the silicious ore was \$15.00 per ton, you would have \$225, leaving \$275, or about \$9.00 per ton, for the lead ore to make

up the smelting cost. Supposing, however, that the silicious ore is so low grade that it can only be mined with a \$5.00 treatment rate, the earning from it would only be \$75, leaving \$425, or over \$14.00 per ton for the lead ore to earn.

"These are not extreme instances, and any one who knows much of the situation, knows that B. C. smelters must be getting very low rates on a good deal of their silicious ore. That is not their fault; it is the fault of conditions.

"I do not want to be forced into a defence of smelter rates because they always seem higher than I want them to be, but it is too bad that false impressions regarding the disabilities under which we labour should go down East and damage our chances of getting relief from the Government, as is undoubtedly being done by such mischievous articles as those in the *Ledge*."

Mr. J. Cronin, manager of the St. Eugene mine, Moyie, writes:—

"Replying to your questions I would wish to state that as far as I know there is no reason now nor has there been at any time to complain of the home smelters.

(1.) I shipped ore first in '98 and '99 to the Trail smelter, selling it at \$20.00 freight and treatment charges and paying the deduction of 1 1-2 c. per lb. duty. I could not do as well with American smelters, at that time. In 1900 when we increased our ore output the Trail smelter or Nelson smelter together could not handle one-third of it, and therefore we were obliged to sell to the American Smelting & Refining Company, London market price less 70 c. per 100 lbs. for lead paid for and \$20.00 for freight and treatment. In 1901 the American Smelting & Refining Co. withdrew from British Columbia, obliging us to seek markets abroad, and through the Trail smelter succeeded in selling our output to German smelters, the ore being shipped to Antwerp. Since July, 1901, we have not sold any ore.

(2.) This is answered in the above.

(3.) Yes. Fully as good rates have been obtained and when trying to sell our ore on a year's contract last March when the London price of lead was reasonably high I received much better bids from the home smelters than I was able to do from any of the American smelters."

A Sandom mine operator, who does not, however, desire his name to appear, sends up the following information:—

"I give herewith the rates charged on Slocan Star ore for freight and treatment from 1894 to date. 1894, \$28.00 per ton; 1895 (first shipments) \$26.50; 1895 (later shipments), \$24.00; 1896, \$24.00; 1897, \$22.50; 1898, \$21.25; 1899, \$18.50; 1900, \$20.00 plus 70 c. per 100 lbs. of lead in the ore; 1901, \$19.00 plus \$1.00 per 100 lbs. of lead of lead in the ore. (Zinc limit for 1901 and previous years, 10 per cent.) 1902, \$15.00 plus \$1.00 per 100 lbs. of lead in the ore. (Zinc limit 8 per cent.) From the beginning of shipments to July 31st, 1897, there was deducted for duty from the New York price 75 c. per 100 lbs. of assay contents of lead. From July 31st, 1897, to January 1st, 1900,