Mining Throughout British Columbia

Receipts at Trail Smelter—Review of Dominion Report on Possibility of Smelting Zinc Ores in Canada—New Bonds.

The following are the ore receipts in gross tons, at the Consolidated Company's Trail smelter and refineries from February 15 to 21, 1917, inclusive:

Mine Location	Week	Year
Aberdeen, Merritt		169
Admiral, Valley, Wn.		39
Alaska, Campbell Riv.		25
Beatrice, Camborne		65
Bell, Slocan	71	110
Bluebell, Ainsworth	63	294
Blue Grouse, Cowichan		37
Burton, Elko		30
California, Nelson		27
Centre Star, Rossland	1421	7,836
Comfort, Ainsworth		51
Day, Republic, Wn.	285	779
Eldon, Eldon, Alta.		40
Electric Point, Boundary	682	4,385
Emerald, Salmo	175	1,048
Emma, Eholt	1072	5,446
Eureka, Nelson	75	503
Galena Farm, Slocan		113
Hercules, Kellogg, Id.	649	1,239
High Grade, Springdale	96	248
Highland, Ainsworth	177	519
Hope, Republic, Wn.		300
Iron Mask, Kamloops	174	1,084
Isaac, E. Kootenay	20	88
Josie (LeRoi 2) Rossland	371	1,293
Knob Hill, Republic, Wn.	206	1,644
Kuhnert, Boundary, Wn.		12
Lanark, Revelstoke	40	40
Lamphere, Gerard		19
Lead Queen, E. Kootenay	42	86
Le Roi, Rossland	2647	14,307
Loon Lake, L. Lake, Wn.	72	358
Lucky Jim, Slocan	72	358
Lucky Thought, Ainsworth		106
Molly Gibson, Ainsworth		42
Mountain Chief, Renata		61
No. 1, Slocan		33
Ottawa, Slocan		44
Paradise, E. Kootenay	30	797
Quantrell, E. Kootenay		61
Queen Bess, Slocan	44	247
Queen Bess, Kamloops		26
Rambler-Cariboo, Slocan		77
Rio Tinto, Nelson	57	57
Ruth, Slocan		37
Silver Hill, Ainsworth		9
Sovereign, Slocan		34
Sil. Standard, Omenica	34	166
Southern Bell, Salmo		3
Spok-Trinket, Ainsworth		16
Standard, Slocan	103	1,287
St. Eugene, E. Kootenay	32	199
Sullivan, E. Kootenay	2919	19,111
Tip Top, Kashabawa, Ont.	101	466
United Copper, Chewelah	157	1,260
Utica, Slocan	49	187
Wakefield, Copeland, Id.		41
Wonderful, Slocan		45
Totals, week and year	11,843	67,041

—Trail News.

The following are the conclusions arrived at by Mr. A. W. G. Wilson, who conducted an investigation on smelting during May, June and July, 1916, and were embodied in his report, which has been published by the Department of Mines, Ottawa.

The report is of particular interest to the residents of British Columbia and is one side of the argument for and against the possibilities of smelting Canadian zinc ores entirely at home.

1. The author considers that so far as the actual operations of a smelter are concerned, the cost of smelting in the Crowsnest Pass area or on the Pacific Coast would not be much greater than in the middle Western rates, where coal is used for fuel, and with co-operation between all the interests concerned, it could be carried on here as cheaply or cheaper than elsewhere. The cost in the natural gas areas of Canada would be greater than in the corresponding areas in the United States, but not at all prohibitive. The author considers that it is not in the public interest to permit natural gas to be used for zinc smelting. The difficulties of obtaining skilled labor and trained supervisors are not insuperable, most of the raw materials, apart from ores, could probably be obtained locally. If suitable ores were available for treatment, spelter could be produced at a cost which would compare favorably with the cost of production by these methods elsewhere.

2. The author is in accord with all previous investigators in concluding that it has not been demonstrated that British Columbia silver-lead-zinc mines are capable of producing high grade zinc ore concentrates to support a smelter operating on the Belgian or any similar process. There is not a sufficient tonnage of high grade ores known to be available without importing foreign ores; the silver-zinc concentrates now produced are of too low a grade to be treated commercially in a smelting plant whose only supply is these ores; the tonnage produced is too small; the output is too irregular; the methods of concentration now in use with two exceptions, are inefficient and wasteful; there is a great lack of co-operation among the various producers.

3. An independent zinc smelting plant would be handicapped for lack of a silver refinery. It would have to consign all lead and silver residues to Trail, or to Helena, Montana, entailing additional freight charges against the ore and curtailing the possible profits of the smelter. The alternative would be to establish its own refinery, which would necessitate entering a limited market on a competitive basis for lead ores. The operation of silver refineries to treat retort residues only has not proven to be a profitable operation for the zinc smelters. Such a plant would probably be unable to secure any revenue from sulphuric acid, made as a by-product at most U. S. plants.

4. It would have been commercially feasible to have established a zinc smelter on the Pacific Coast any time during the first half of the year 1915, to treat British Columbia zinc ores, and ores from Australia. The product from such a plant would have found a ready market for certain classes of munition work, but would not have been suitable for making brass for cartridges and shell cases. Owing to the prevailing high prices of zinc this plant would have easily paid for itself during the first year of operation, the production of zinc ores in British Columbia would have been greatly stimulated, a better knowledge of the possibilities of zinc mining in British Columbia would have been obtained, and the returns to the producers would have been greater than they have been.

5. As an alternative, it would have been commercially feasible to have established a zinc smelter in the Crowsnest Pass area, or to have rehabilitated the old Frank smelter at any time during the first half of the year 1915, to treat zinc ores from the Kootenays. The supply of ore available would not have been adequate for a large plant, but foreign ores could have been imported. The conditions of the zinc market and the preference that would have been given in the home market, would have made such a venture