

Bank of Montreal

Established 1817

Capital Paid Up\$16,000,000.00
 Rest 16,000,000.00
 Undivided Profits 1,232,669.42

BOARD OF DIRECTORS

H. V. Meredith, Esq., President
 R. B. Angus, Esq. C. R. Hosmer, Esq.
 E. B. Greenshields, Esq. A. Baumgarten, Esq.
 Sir William Macdonald C. B. Gordon, Esq.
 Hon. Robt. Mackay H. R. Drummond, Esq.
 Sir T. Shaughnessy, K.C.V.O. D. Forbes Angus, Esq.
 David Morrice, Esq. Wm. McMaster, Esq.

SIR FREDERICK WILLIAMS-TAYLOR, General Manager.
 A. D. BRAITHWAITE, Assistant General Manager

Bankers in Canada and London, England, for Dominion Government.

Branches established throughout Canada and Newfoundland; also in London, England; New York, Chicago, Spokane and Mexico City.

Savings Departments at all Canadian Branches. Deposits of from \$1.00 upwards received, and interest allowed at current rates.

A general banking business transacted.

C. SWEENEY, Supt. of British Columbia Branches Vancouver.
 W. H. HOGG, Manager, Vancouver.

THE Merchants' Bank of Canada

ESTABLISHED 1864

HEAD OFFICE, MONTREAL

Paid-up Capital - - \$7,000,000
 Reserve Fund - - \$7,248,134

President.....Sir H. Montagu Allan
 Vice-President.....K. W. Blackwell
 E. F. Hebden, General Manager
 T. E. Merrett, Superintendent and Chief Inspector

211 Branches in Canada, extending from the Atlantic to the Pacific

Agents in Great Britain: The London Joint Stock Bank, Ltd.; The Royal Bank of Scotland
 New York Agency.....63 and 65 Wall Street

General Banking Business Transacted
Savings Departments at all Branches

Deposits received of One Dollar and upwards, and interest allowed at 3 per cent. per annum.

VANCOUVER, B. C.

Granville and Pender Streets G. S. HARRISON, Mgr.
 Hastings and Carrall Streets FRANK PIKE, Mgr.

For instance, the ore treated had 31 per cent. zinc, 3.5 per cent. lead and 32 ounces of silver per ton. The zinc depleted residue contained 76 ounces silver per ton and 8.7 per cent. lead, and 92 per cent. of the zinc had been taken out, i.e., 2.7 per cent. of the zinc counted on the original ore used was left in the residue. This residue is now ready for smelting or other treatment for the recovery of its lead and silver in the usual way.

To the liquor which has been run down into the second dissolver, a quantity of roasted ore is again added to neutralize the bisulphate of soda. As soon as this has taken place, the liquid settles very rapidly to a clear solution, which is pumped through a clarifying filter press, and is then ready to have its zinc deposited in the electrolytic vats.

One Vat Used.

At the Standard company's plant only one electrolytic vat was used, as the dynamo power at their disposal was limited. Nine anodes were used and eight cathodes of the largest size, each with an area of 8 square feet. What can be done with one vat can be done with any number on a large scale, a reduplication of vats of the same sizes being all that is necessary.

The plant was well designed and erected and the results of running a large quantity of ore gave a remarkably good current consumption. Although 4,000 kilowatt hours were allowed in costing for the deposition of one ton of zinc, only 3,000 kilowatts were actually required, the lowest reading over a period of 40 hours being 2,680 kilowatt hours. On another occasion a 70 hours' run gave 2,860 kilowatt hours.

As the zinc is deposited from solution in the electrolytic vat, the bisulphate of soda with which it was combined is regenerated and is used again in the next dissolving.

The management of the Standard company are naturally very well pleased with the results of their demonstration, and George H. Aylard, the managing director, has already spoken in high terms of praise of the process to several leading Nelson gentlemen and others. W. H. North, the resident manager, has also spoken highly of the success and prospects of the process.

The working costs vary with the ore, but they are now well defined and it is possible to give with some accuracy an idea of the profit which the district will derive from the working of this process near Nelson. The plant is expensive, but very much less than that required for a zinc smelter of the same capacity. To deal with all the ores in this district some millions of dollars would be required for the plant alone.

Ores of almost any grade above 10 per cent. zinc can be treated equally well, but naturally the cost of treatment for ore with a larger zinc content is less. As an example, an ore containing 24 per cent. zinc, 24 per cent. lead and 20 ounces silver per ton may be taken. Almost any of the mines can supply this or a better grade by picking or slight concentration without much loss of values. Taking zinc at 5 cents per pound, the lowest price at which it is possible for an ordinary zinc smelter to work, and allowing freight on metallic zinc as far as Europe or China; lead at £20 per ton (London), and silver at 50 cents per ounce, and deducting ample costs for treatment, depreciation, management and royalty, the miner would receive for his ore about \$18.50 per ton. It is only necessary to deduct cost of mining, picking the ore and freight to determine the net amount per ton the miner would receive for his ore, i.e., in the neighborhood of \$15 per ton. For a supply of 500 tons per day the net benefit to the miners would amount to upward of \$2,500,000 per annum.

May we hope that this is the dawn of the new era of prosperity in store for the mining industry of the Kootenays.—Nelson News.