

HOW SMELTERS ARE RUN.

Many of our readers are no doubt ignorant of the manner in which smelters are run, and many mining stock owners very likely wonder how "leakages" are avoided. One man recently wrote: "I am at a loss to know how these smelters are managed. Is there a Government inspector there, or who is there to look after the interests of each mine having ore on the smelter? Do they depend on the honesty of the management, or has each mine got to have an inspector there while the ore is being treated? Is there not a chance of a big leakage here? The gold, silver and other metals taken from the ore, where are they kept? When are they sold? Are there proper places to keep them until they are sold? How is this managed? I fancy an article on this matter would be thankfully received by readers in this part of Canada, where the people know little of mining."

In answer to this letter the *Rossland Miner* editorially remarked:

Some mines do keep an agent at the smelter, but he is there merely for keeping a check on the quantity of ore delivered. Where the ore is weighed before being shipped there is no need for an agent at the smelter. The smelter agrees to treat ore for a certain charge per ton, and to pay New York prices for the gold, silver, lead and copper contained.

When the ore arrives at the smelter it is weighed the same as wheat or any other commodity. It then goes to the sampling works, where it is sampled automatically. This sample is then reduced in quantity, also automatically, and a portion of it is ground to a pulp. A small part of this pulp is then assayed to find its metallic contents. The rest of the pulp is sealed up for future reference in case of a dispute as to the value of the ore, with the exception of an assay sample, which is sent to the shipper of the ore. He in turn gets his sample assayed, and if it checks out, with the smelter returns there is no room for dispute. If it does not check out another portion of the pulp is sent to a disinterested assayer selected by both parties as umpire. His certificate of the contents settles the question of value. The pulp from which all these assays are obtained is necessarily an absolute average of the whole quantity of ore, whether it is 1 ton or 100 tons.

The product of a copper smelter is a copper matte, and a silver-lead smelter produces base bullion. The value of the matte or bullion depends entirely on the richness of the ore treated and the success with which it was reduced. Copper matte such as is produced at Trail contains anywhere from 20 to 60 per cent. copper, while its value in gold and silver may run from \$100 to \$200 per ton to as many or more thousands of dollars. Bullion from a silver-lead smelter may in the same manner vary in its contents from 40 to 90 per cent. in lead and from a few ounces of silver per ton to a great many thousands, accordingly

as the ore treated was low or high grade.

In both cases the product of the smelter is sent to refineries, where the precious and base metals are separated, the former going to the mints or metal exchanges. After being refined the product is usually given to an express company to transport from one point to another. Prior to refinement it is just high class freight.

Smelters represent large aggregations of capital, and depend entirely for their success upon the confidence of their customers. Any deviation from absolute honesty would immediately prove disastrous and we question if any other line of business in the world is conducted with such care in reference to dealings with the public. In the smelting business honesty is not only the best policy—it is the only policy. A smelter which was thought to be dishonestly conducted could not run a month, and the entire investment of capital would be a loss, as the reputation would stick to it despite any charges that might be made in the management.

CARIBOO AND QUESNELLE.

Cariboo hydraulic shares are reported to have made an upward move from the low point to which the buyers had gone down. Buying orders from Montreal are stated to have resulted in business at \$8, all shares offering having been taken at that figure.

It will probably be news to many to know that the leases of the ground extending about 30 miles along the main Quesnelle river, and adjoining the nine miles held by the Golden Quesnelle, limited, have been offered for sale to, and the offer is under consideration capitalists of Philadelphia and New York. The Golden River Quesnelle, limited, is the company Major C. T. Dupont promoted.

There is nothing new to state respecting the Golden Cache Co., in whose stock little or nothing is just now being done. Messrs. Burnet & Burnet, Dominion and provincial land surveyors of Vancouver and Lilloet, have issued a lithographed sketch plan of the mining locations on Cayoosh creek, showing the position of the Golden Eagle and other claims held by the Golden Cache Co., as well as many other claims in the neighborhood.

Negotiations in connection with the projected purchase by English capitalists of the Nip & Tuck mining property have hitherto been delayed by the refusal of the largest shareholder of the company to consent to a sale at the figure offered. This refusal having now been withdrawn and sanction to the proposal having been given, the purchase is now under consideration in London. Meanwhile, there are buyers of Nip & Tuck shares at \$6, but there are no shares on the market. It is somewhat significant that a Chinese tyhee, who knows the property well, has written inquiring whether the property is for sale and at what price? to which inquiry a reply has been sent

asking him to make an offer for the mine. This is unsolicited testimony to the value of the property, since the Chinese are not likely to put money into a mine unless it gives ample promise of an abundant return.

It was decided at a special general meeting of the shareholders in the Maud Hydraulic Mining company, to accept an offer received from New York to purchase the company's mining property for \$100,000, of which the sum of \$5,000 was to be paid upon the signing of the document, and the balance of \$95,000 within six months thereafter. The secretary of the company has since received a telegram from the agent of the intending purchaser at New York, authorizing the treasurer of the company to draw for \$5,000 at three days' sight, the draft to be accompanied by an option to complete the purchase within six months by payment of the balance, \$95,000. The completion of this transaction would give an amount pro rata distribution of \$21 per share gross, or about \$19 per share net. On the strength of this conditional sale buyers are now offering \$12 (shares are \$5 paid), but shares are firmly held, those holders who are quoting a selling price at all asking \$15.—*Ashcroft, B.C. Journal.*

GOLD AT MAGOG.

The discovery of gold at Danville is interesting, but not especially remarkable, as gold deposits exist in many parts of the Eastern Townships. Near the shore of Lake Memphremagog, on the Brome County side, just opposite this place, there runs a wide vein of gold quartz. The surface assays have shown the quantity of metal contained in the ton to be moderate, but no attempt has been made to sink a shaft in any place. A brook near by has yielded occasionally a small gold nugget. This property, which belongs to Mr. D. A. Bullock, is about two miles from the copper mine owned by Mr. William Smith of Sherbrooke, which has not been worked for five years.

The latter mine was developed by Mr. Smith, and a great deal of money spent in preparing for shipping ore in paying quantities. A considerable amount was sent to New York, but at that time a mine in North Adams, Mass., was opened, and the Memphremagog enterprise was unable to compete with the concern so much nearer the market.

It is singular that the attention of Canadian capitalists is not directed to the immense mineral resources of the Lake Memphremagog region. A deposit of manganese, a sample of which was recently assayed in London, Eng., is of the best quality, and is situated within two rods of the lake, and almost exactly opposite Georgeville. New York capitalists have already purchased several valuable tracts of this territory, but Canadian business men are losing an opportunity in not inspecting these regions.—*Herald.*