

...Dark Days and Darker Nights...
Are Now Upon Us! Why Live in
Darkness?

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...NORTHERN COMMERCIAL COMPANY...

DEVELOPMENT OF QUARTZ

(Continued from Monday's Issue.)

With the mill completed as it stands today the reduction of free milling ore is a very simple matter. The ore is brought to the rear of the building and dumped into a chute, falling in a bin convenient to the crusher. Until the latter arrives the ore will be broken by hand, but with the rock breaker in position it with little effort reduces the quartz to pieces the size of an egg. The hoisting engine previously described elevates the broken ore to the hopper above the stamps from which it is fed automatically to the mortar. Once inside the latter it remains there until it is crushed, ground and pulverized into fine powder by the actions of the stamps. A small stream of water is fed continuously into the top part of the mortar and this mixing with the pulverized rock reduces it to the consistency of liquid pulp. As the ore is crushed to powder the tiny particles of free gold contained therein, many so small as to not be visible to the naked eye, are released and coming in contact with the silver plated lip plates adhere to the plates by reason of the strong affinity gold has for quicksilver. Not all the gold is thus caught, however, the balance in company with the residue contained in the ore being forced out through the meshes of a fine screen contained on three sides of the mortar. After passing through the screens the pulp falls on what is known as the table. It is a shallow box 5x10 feet in size and three inches deep, made water tight and stands at a pitch of 1/4 inches to the foot. The bottom of the box is covered with a copper plate rolled to a thickness of one-eighth of an inch, the upper surface being electro plated with one ounce of silver to the square foot. The pulp is made to slowly pass over these copper plates, a thin stream of water aiding its progress. Such gold as has escaped the lip plates in the mortar adheres to the plates on the table and to make doubly sure that none escapes small quantities of quicksilver are from time to time fed in the mortar. This after passing over the outside plates falls into a V-shaped trough at the lower end of the box and by reason of its excessive weight falls to the bottom, water and worthless rock overflying the trough and passing out into the river through the tail race. After a mill run has been completed the machinery is stopped, the screens in the mortar removed and the lip plates are scraped clean of the gold adhering to them. The same is done to the plates on the table the mass secured in company with that from the V-shaped trough being squeezed through a buckskin sack which has been wet. Much of the quicksilver will pass through the pores of the buckskin. The gold will now be found to be a grayish mass of the consistency of putty. The ball is placed in a mortar and upon the proper degree of heat being applied the quicksilver passes off in vapor leaving the gold bright and yellow in all its pristine loveliness. Many of the ores containing free gold have other values which cannot be saved by the process just described and require additional treatment. Gold, silver and perhaps lead is contained in combination, the treatment to which they will yield depending entirely upon their character. For some the sulphurets, as the concentrated pulp is now called, is treated by chlorination as is the case with the great Treadwell works near Juneau. Others require the cyanide process, while still others have to be smelted. Some ores contain all their value in the free gold, and thus after it is extracted the residue is worthless. Among the other articles of machinery yet to arrive for the company is a concentrator. The primary object of the machine is as the name implies—to concentrate the pulp. Every tiny atom of the ore containing mineral is saved, the worthless portion passing away. Six, eight and sometimes 10 tons of pulp is thus reduced—concentrated into one ton of sulphurets. Within the mill building is also a complete blacksmith shop in the hands of a machinist competent to make any repairs whatsoever that may be needed. Situated on the tract of land owned by the company are over a dozen cabins wherein the employees are housed. Close at hand to the mill building is an assay office 20x20 which will be in charge of a competent assayer. The gentleman is on his way inside now and will arrive before close of navigation. Below the assay office is a large stable containing accommodation for the eight draft horses owned

by the company. A short distance where the mill is a new three-room cabin, the office and living quarters of the management. Still further beyond is the saw mill now being installed. The building is 25x40 and houses a 35-horse power boiler and 25-horse power engine. The site is 75 feet back from the river, a chute being employed through which the logs are dragged from the river. The mill has a capacity of 10,000 feet per day and will be used solely to saw timber for the company's use. They will manufacture their own lumber for timbering the mines, ties and bridge timbers for ore roads it will be necessary to build, etc. As soon as the lumber is available another building will be erected in close proximity to the stamp mill in which a cyanide plant in charge of an expert will be installed. When in working order the company will employ from 20 to 25 men about the plant. At the present day there are between 60 and 70 men engaged in getting out ore and pushing development work on the different properties in which the company is interested. The location of these different properties for obvious reasons is at present a secret, but it may be said that they are 11 in number and all are under bond to the company which is engaged in their development. In addition to these there are eight others in which the company is interested, but which are being prospected independent of the company's assistance. A very great feature which is being introduced into the country by the company, a novel idea, by the way, and one for which the miner can not help but feel grateful, is the method to be employed in assisting the prospector to develop his claim in the quickest and least expensive manner possible. Stored away near their plant ready for future use the company has what Mr. Spencer terms prospecting outfits. There are 13 of

them and each outfit consists of an eight-horse power boiler, a steam list, a centrifugal pump and a Burley steam drill. There is but one Burley on hand at present and it is only by good luck that it has arrived. The big strike in the States has delayed the arrival of some of their machinery. It is all shipped from Chicago, but when it was learned the shipment of Burleys which were ordered subsequent to the mill was liable to be delayed, a duplicate order was wired to San Francisco with the result that one of the lot arrived. The others together with the ore crusher, concentrator and cyanide plant will be hauled over the ice from Whitehorse just as soon as they arrive and the ice is in condition for travel. The drill now on hand is from the Parke & Lacey Co. The drills are of two, four and six feet in length and there are dozens of them together with steam hose and other necessary fittings. Another new idea that is being employed is the use of electric batteries and platinum wires with which to set off charges of powder instead of the old style fuses. One of these batteries goes with each of the prospecting outfits. And how are these outfits to be employed? Simply this. A prospector comes to Mr. Spencer with a sample from his claim. It is assayed for him and if the returns are satisfactory a man makes an examination of the claim. If the indications are favorable and the man is one of the right sort, he will be furnished with an outfit to prospect his claim. It will be hauled out for him by one of the company's teams and set up for him ready to run. If he has no powder the company will furnish it, and if he has no grub the chances are that if he is the right kind of a man he can secure it also from the same source. What they ask in return is the privilege of buying at a fair valuation either the whole or an interest in the claim

should it prove of any value. Surely nothing could be more fair. If a struggling prospector has a few tons of ore out which he wishes tested and has not the means with which to pay the freight on it to the mill, the company will send one of their own teams out after it, make the test and charge for doing so only the actual expense that has been incurred. In fact, any miner who has a prospect worthy of the name can confidently look toward the company for such assistance as he may require. In their dealings with the Dominion government it is gratifying to note that every facility and assistance has been rendered the company that could be asked for. Not that they required any bonus, subsidy or anything else of that sort, for such is far from the case, but in the matter of securing a location and acquiring certain rights which were necessary before such a vast enterprise could be begun, the government has been most liberal, another evidence of the wise policy being followed by those in charge of the ship of state. In speaking of the liberal attitude being taken with the miners, Mr. Spencer said: "My instructions are to render the miner and prospector every possible assistance and at the same time keep an eye open to our own interests. We will gladly help anyone on his feet who can show us a proposition of merit. We are here to do business and I believe the country has a great future in store for it. At present owing to the difficulties and expense of transporting the ore from the mine to the mill we must have ore that will average \$25 to the ton in free gold, before we can make it pay. That is the minimum. The mill was built at its present location for several reasons. We have plenty of room to expand whenever we wish to, we have plenty of pure water, a very necessary article, we are where we can get logs and fuel at the cheapest

rates, and the plant is accessible to every creek contiguous to the country. The time is past when it is considered necessary to build a mill at the mine. Nowadays the mill is built on the best location possible and the ore is hauled to it. We are within reach of not one but a dozen different prospects which may develop into mines and can handle ore from all of them whereas such would not be the case if we were located adjoining any one particular claim. It is a simple matter to build an ore road to any claim when it is sufficiently developed to warrant the expense. That is one purpose for which we have our own saw mill and teams. I am only waiting now for the ground to freeze and a little snow to fall and then we will begin pounding quartz at once. We have a quantity out ready for delivery on several different claims, but with the roads and hills in their present condition it is too much of a task to bring it in, especially as cold weather is so near at hand." Such is the beginning of what promises to be the biggest institution in the history of the Klondike. The little mill now ready to test the worth of the ore fed into its capacious maw, is but the forerunner of many others which within less than a year, or two at the most, will awaken the hills of the Klondike with the reverberations of hundreds of falling stamps. Kodaks \$2.50; fresh films 50c. Goetzman.

Buried here
The remains of Harry O. Mundall who died here last spring and which were held for shipment to his old home in England, were buried here on last Sunday. The funeral was from the undertaking parlors of Brimston & Stewart.

Kodaks \$2.50; fresh films 50c. Goetzman.

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- THEATRE -

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Caribou
Sinclair
vs.
Ed. Kelly

20-Rounds-20
For a Decision

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