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FOUR FURNACES AT NORTHPORT

Big Northport Plant Very Busy—Fourth Furnace Blown in Sunday—Many Improvements Made—Coke Situation

When James J. Hill, president of the Great Northern system, was in Rossland a week or two since he made a statement to the effect that in his opinion Northport afforded the best smelter site in the entire district with a view to railroad accommodation, the assembling of ores to make an economical smelter mixture, and the laying down of fluxes on an economical basis.

At first glance it was probably believed that in Mr. Hill's case the wish was father to the thought by reason of the fact that Northport is exclusively on the Great Northern system, but when the subject is looked into it is seen that with the assistance of the Great Northern road the Northport site might easily be made an important smelting centre. Possibly one of the difficulties to be encountered in this connection would be the natural desire on the part of mines located north of the international boundary line to have their product treated on British soil, but it has been the rule up to the present time that business rather than sentiment governed the mines on both sides of the line in the matter of securing treatment.

The Northport smelter has all the water it can utilize and facilities for enhancing the supply at any time, which is important to the smelting industry, as has been evidenced locally in the lengthy litigation over the matter of water rights at the Trail smelter. The Great Northern, it is desired to stimulate smelting at Northport, could extend such freight rates as would enable the plant to buy ores in Butte, Montana, Idaho and Oregon, as well as in Washington and British Columbia, which are more directly tributary to the smelter under existing circumstances. Incidentally it may be stated that the ores from Republic camp are not wanted by any smelter in the western part of the continent.

Manager Sontag, of the Northport plant, is of the opinion, without having taken up the matter at great length, that the solution to the problem of reducing Republic ores is to roast the product of Republic mines slightly, as is done in Cripple Creek, and then submit them to a cyaniding process. He points out, however, that details must be worked out as the result of lengthy experiments. The glory of the Northport smelter, as it were, is its inexhaustible supply of lime rock of splendid quality. The material is mined in a quarry some four miles from the smelter and delivered at the plant for 51 cents a ton. Manager Sontag states that in his experience in two-thirds of the globe he has yet to find a smelter that lays

down its lime rock at anything like the price he is able to secure. The lime is almost pure, containing only one and a half per cent of silica. To treat ore requiring a heavy flux it is essential to economical reduction that flux should be low priced, and circumstances have placed the Northport plant in a most advantageous position in this respect.

SMELTER ALMOST REBUILT.

In the past six months a series of changes and improvements have been made at the Northport smelter, the net result of which is that the plant has been practically rebuilt. Machinery has been rearranged and replaced, furnaces rebuilt, dust chambers improved and additional plant added on a considerable scale. The latest addition to the machinery is an enormous Gans rock crusher with a capacity of 80 tons per hour. This is now in position and will be in operation within a few days. The No. 1 furnace was blown in on Sunday after having been reconstructed from top to bottom, equipped with modern appliances, so that it is now a brand new feature of the plant. The No. 2 furnace is being similarly rebuilt and re-equipped; it will be ready to blow in about September 1. The No. 6 furnace has also just been rebuilt, and No. 4 is now torn out undergoing a similar process, to be completed and in readiness for operation by September 15. Furnaces 1 and 2 have a capacity of 200 tons each, while Nos. 3, 4, 5 and 6 each have a capacity of 300 tons, making the total capacity of the plant with all six furnaces in operation 1600 tons daily. In the roast yard of the plant a big steam shovel has been introduced with a capacity of 50 tons per hour. With this appliance, all the "roast" for both shifts in all six furnaces could be handled in ten hours. Other automatic apparatus is contemplated, and its acquisition will further increase the labor-saving devices of the institution.

The situation with respect to coke is rapidly clearing up. The bulk of the coke now used at the Northport smelter is being brought in from the east and the quantities available are such that some is now being placed in reserve. A quantity is being brought in from Fairfax, Wash., and supplies will also be imported from the Dunsmuir coalleries. Eventually the total supply for the plant will be brought from Fernie over the Crow's Nest Southern road of the Great Northern system, and when this is realized the plant will secure the cheap coke promised by President Hill and regarded as one of the most important features in connection with the future of the smelter and the Rossland mines under the same management.

New Mine on The Shipping List

Ore shipments for the week are scarcely up to the normal standard, an unavoidable scarcity of cars early in the week being responsible in large measure for the slight shortage in tonnage.

One feature of the week is that the White Bear mine appears on the shipping list. Some weeks since The Miner stated that a quantity of good looking ore had been taken from the workings of the mine and carefully placed away, apparently to be shipped. The company has finally decided to move this ore, and a carload has been shipped to the smelter for trial purposes. It is not expected that shipping on any considerable scale will be inaugurated at the White Bear in view of the statement by J. J. Warren, managing director, on the occasion of his recent visit to Rossland to the effect that no large ore body had been opened up in the property as yet. The fact that ore has been sent out is of considerable interest, however, and is a happy augury of a bright future for the White Bear. The management has evidenced considerable enterprise in carrying the development along so continuously and steadily.

It would seem as though the outlook for a substantially enhanced output from the Rossland camp is closer at hand than has been the case for many months. Report has it on good authority that the Le Roi will increase its output very materially at an early date, and it is recognized that the War Eagle and Centre Star mines will also join the shipping list on a large scale in the very near future. The latter matter has been hanging fire for several weeks, but now seems in the way of being consummated shortly.

THE OUTPUT.

The output of ore for the week ending August 18th and for the year to date is as follows:	
Le Roi.....	4200 145,071
Le Roi No. 2.....	1400 42,277
Centre Star.....	4,490
War Eagle.....	420
Rossland G. W.....	2,400
Giant.....	1,300
Cascade.....	300
Columbia-Kootenay.....	80
Bonanza.....	250
Velvet.....	20
Spitzee.....	20
White Bear.....	20
Totals.....	5,780 196,668

ROBERT R. REMINGTON.

Suicide's Brother Declares That He Was of Sound Mind.

NEWPORT, R. I., Aug. 19.—Edward D. Remington, brother of Robert Remington, who killed himself at the Newport reading room yesterday, arrived from Pittsburg at 7 o'clock to-

night and two hours later left for the former home of the family in Williamsport, Pa., where his brother's body will be buried.

Mr. Remington gave an emphatic expression that his brother was of particularly sound mind before he shot himself. He said he was extremely surprised at what he had read in the papers, ascribing the suicide to mental derangement.

THE WAR EAGLE AND CENTRE STAR MINES

Commence Shipments Today to the Trail Smelter on Larger Scale Than Ever in the History of the Camp.

The War Eagle and Centre Star mines commence shipments today to the Trail smelter on a larger scale than at any time in the history of the mines. The Miner is in a position to make this announcement, and it goes without saying that the news will be received with genuine pleasure in Rossland and Trail.

Today the first trainload of ore will be loaded and shipped to Trail; and thereafter shipments will be regular and continuous. The tonnage will be larger than at any juncture in the previous history of the two mines. Rosslanders will readily appreciate the fact that this statement is significant of unprecedented activity at the War Eagle and Centre Star, and that the benefit naturally accruing to the city generally will be very marked. The resumption of shipping operations at the two mines specified means the turning of the corner in the industrial record of the Golden City.

The mine management states that a large number of miners and muckers will be afforded employment at the War Eagle and Centre Star mines within the next two months as the outcome of the activity thus heralded, and this in itself is an important feature from the standpoint of citizens generally.

The resumption of shipments from the mines specified marks the conclusion of the negotiations under way for some time between the War Eagle and Centre Star mines and the Canadian Smelting Works at Trail, and it is rumored in connection therewith that the smelter has made substantial concessions to the mines in respect to rates. No definite information is obtainable on the point, however, the mine officials declining to discuss the matter on being approached.

The Canadian Pacific railroad has ordered its Shay, marine-gearred locomotive, No. 1901, now running between Phoenix and Grand Forks, to Rossland to haul War Eagle and Centre Star ores from the Golden City to Trail. The Shay has remarkable hauling power, its tonnage on the heavy grade between Smelter Junction and Rossland being just double that of the heaviest consolidated locomotives on the division.

The residents of Trail will learn of the decision arrived at by the mines with keen pleasure, as the resumption of shipments from Rossland means that the smelting plant will give employment to its ordinary crew of four or five hundred men. At present the crew at the smelter is confined to sufficient men to operate the one lead stack in use, while the battery of copper furnaces is completely closed down and has, in fact, been dark since early last fall.

Incidentally it may be stated that the experiments in concentration at the Silica works by the War Eagle and Centre Star mines will be continued. It is understood that crushing will be commenced shortly.

Operations Commencing At the Silica Plant

A small force of men is now at work on repairs to the plant of the Bullion Extraction company at Silica, two miles west of Rossland, preparing the works for the experimental work in the matter of concentration which the War Eagle and Centre Star mining companies are about to begin there.

When the tests are under way a few carloads of ore will be shipped to Silica weekly. Gerald V. Hopkins will be in charge of the works while the experiments are being carried out.

It is the intention of the War Eagle and Centre Star companies to continue these experiments for some time—long enough, in fact, to determine whether the process of concentration they have in view can be successfully applied to Rossland ores. The outcome of the experiment thus inaugurated on a large scale will be awaited with keen interest.

"I believe in the efficiency of oil concentration, and am perfectly satisfied that the Le Roi ore can be treated by a process of concentration involving the use of oil with excellent results." This statement emanates from Oscar Sontag, metallurgist at the Northport smelter, and a well known authority on metallurgy.

The fact is that when the Elmore oil process was brought to Mr. Sontag's attention it came in the guise of an old friend in new clothing, for as far back as 1889, the manager of the Northport smelter was interested in oil concentration, and was part owner in the patent rights of the original process of concentration embodying the use of the Elmore system recently.

While a resident at Baker City, Ore., in 1889, Mr. Sontag met Carrie J. Everson and the late Thomas F. Criley, both of whom had come to Baker City from Denver, Col. Miss Everson was the patentee of a process of concentration which she had evolved in the laboratory at Denver, and the result of the friendship was that Mr. Sontag took a third interest in the rights for the idea. Miss Everson stumbled across the idea quite accidentally, as has been the case frequently in discoveries of prime importance in the industrial world. Some sacks that were impregnated with grease, oil, pulp, and other foreign bodies were used for shipping ore samples.

After the washing operation had been concluded Miss Everson noticed that the grease had come to the surface of the water in the wash tub and had carried with it particles of metal. Being an expert assayer and chemist she perceived something odd about the matter, and instituted a series of experiments which resulted in the patenting of a system of concentration utilizing oil to collect the metal contents of the ores treated. Mr. Sontag endeavored to interest capital in the process, but without success, and he finally lost interest in the matter. While connected with the Everson process Mr. Sontag made a series of more than a hundred tests in his laboratory as to the efficacy of the process, and the results achieved he describes as remarkably successful. In handling the ores of the Eureka-Excelsior property, for instance, it was found that whereas the recognized methods of concentration were unable to secure more than 35 to 40 per cent of the values, the oil process saved no less than 93 per cent. He found that any quality of oil or grease was useful in the process, thus obviating the purchase of high class oils. It was found also that an advantage was frequently had by permitting a small percentage of the oil to remain in the concentrated product, so that if a slight roasting was required after concentration the residue of oil furnished the necessary fuel. Two years ago Charles Butters introduced the Elmore process to Mr. Sontag's attention in San Francisco, and the latter was more than surprised to ascertain that the process involved the identical principle that he had worked out in Baker City several years previously. Mr. Sontag is assured that an oil process will do much toward rendering available for utilization the great deposits of low grade ore which the Rossland camp possesses in addition to its higher grade resources. This is of special interest at this juncture in view of the fact that the concentration process with which the War Eagle and Centre Star mines are experimenting at the Silica Extraction Works involves the use of oil in one stage of treatment.

VELVET MINE RESUMES SHIPMENTS

Three Cars Already Sent to Northport Smelter—Water Concentrating Plant—Significant Move by the C. P. R.

The Velvet mine has resumed shipments. This time the ore is being sent to the Northport smelter, and three cars of the product have already been forwarded. The wagon road from the mine to Velvet siding, on the Red Mountain road, has been in excellent condition, and the transportation has been conducted economically. The ore forwarded to the smelter has been the high grade picked material and is expected to give large net returns. The comparatively low grade ore is being preserved for treatment in the concentrating plant now in course of construction. The system to be utilized in the plant is to be a water process, the exact details of which have yet to be divulged by the management.

The last shipments from the Velvet were sent to the Hall smelter at Nelson, but the copper furnaces at the Nelson plant have been shut down since the last ore from the Silver King mine was treated.

SHAY ENGINE COMING.

A significant fact in connection with the report of shipments at a very early date from the War Eagle and Centre Star mines is that the Canadian Pacific railroad is bringing its Shay engine, No. 1900, formerly 111, from the Phoenix hill to Rossland. The Shay is to run between Rossland and Smelter Junction, as was the case last summer when the War Eagle and Centre Star were shipping to Trail. Those who know that the only use the Canadian Pacific has for the Shay engine on the Rossland hill is when ore is being shipped in considerable quantities, are prone to accept the development as evidence prima facie that the mines will almost immediately commence shipping.

TO INCREASE SHIPMENTS.

The Le Roi is to increase its shipments to the smelter. The exact dimensions of the increase are not stated, but it is known to be between 1200 and 2000 tons weekly, which will substantially

enhance the camp's output. Of the increase about 150 tons will be shipped from the dump, the contractor, Theodore Schweitzer, having returned to the city yesterday for the purpose of superintending operations. The work of loading cars from the dump will be commenced at noon today.

DWINDLING DOWN.

The trial shipment from the White Bear mine has shrunken considerably from the figures given in Sunday's Miner. The Miner was informed that a car of ore had been shipped and naturally supposed that this represented a shipment of 20 tons, at which figure the shipment was placed. It eventuates, however, that the actual amount sent to the Northport smelter was only 1-2 tons.

BUYING MORE PROPERTY.

The Cariboo Development Syndicate of Rossland is reaching out for more property in the Lardner. Negotiations are under way for the purchase of the Mohican group of three claims, located at the head of Gainer creek, and comprising three claims on which some \$4000 has been expended in development. The Mohican is a tunneling proposition, with a strong lead, giving assays of \$30 to \$400 per ton. The group is twelve miles from the smelter at Ferguson, ten miles of which is served by a wagon road and the balance by an excellent trail.

The syndicate has also had staked its name a group of six claims in the Old Gold camp in the same belt as the Marie Marilla company has made strikes of 1000 and 1200 ounce ore within recent weeks. This ground is now being thoroughly prospected in the syndicate's interests.

BACK FROM SILVER HILL.

Henry Roy, manager of the London-Mohican Consolidated Camp, was returned from the Silver Hill mine, where a crew of some twenty men are engaged in stoping ore. Shipments are being made continuously, and this is to be maintained indefinitely.

Clara Belle Gold and Silver Mining Company

The annual meeting of the directors and stockholders of the Clara Belle Gold & Silver Mining Company was held at the office of J. B. Johnson yesterday afternoon. A majority of the stockholders were present. The directors were elected for the ensuing year. The directors subsequently elected T. Russell Morrow president, John Stillwell Clute vice-president, and J. B. Johnson secretary-treasurer. A. L. Tharp was appointed resident manager. The owners expect the Clara Belle to join the shippers one of these days. The surface showing is certainly the most remarkable in this somewhat noted camp.

Free-Milling Mines Have Joined Forces

M. Sergius Logan, of Rossland and New York, was in the city over night en route to the Slovan, where he is interested in mining properties. Mr. Logan has just returned from an extended trip to the east, and will remain in the Kootenays several weeks prior to leaving for New York, where he is to spend most of the winter. He joins with others who have come from the east in testifying to the almost unparalleled condition which is enhanced by the probability of enormous crops.

Mr. Logan is much interested in the developments of late in the free-milling belt to the west and south of Nelson, where he is personally interested. The special feature of interest is the amalgamation of the Athabasca and Venus mines, located on Morning mountain, particularly the Athabasca. Both properties, particularly the Athabasca, are well known and it is felt throughout the district that the consolidation will be a turning point in the history of both properties, as the Athabasca already possesses a fine milling and cyaniding plant, while the Venus has a large tonnage of ore blocked out in readiness for stoping.

A crew of fifteen men is now at work under the direction of Arthur H. Gray, engineer for the consolidated mines, in clearing the right-of-way on which will be constructed the tramway to carry the Venus ore to the Athabasca

GENERAL MANAGER McNICOLL. MONTREAL, Aug. 19.—Vice-President and General Manager McNICOLL, of the Canadian Pacific, reached Montreal tonight from his tour over the system. Mr. McNICOLL speaks in glowing terms of the conditions in the west and estimates the Manitoba crop yield at sixty million bushels.