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MINING REVIEW

VOL. 2.—No. 4.

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The CANADIAN MINING REVIEW is devoted to the opening up of the mineral wealth of the Dominion, and its publishers will be thankful for any encouragement they may receive at the hands of those who are interested in its speedy development.

Visitors from the mining districts as well as others interested in Canadian Mineral Lands are cordially invited to call at our office.

Mining news and reports of new discoveries of mineral deposits are solicited.

All matter for publication in the REVIEW should be received at the office not later than the 5th of the month it is to appear.

Address all correspondence, &c., to the Publishers of the CANADIAN MINING REVIEW, Ottawa.

During the past month mining operations in Canada have, to a certain extent, received a check on account of the breaking up of winter and the consequent inconvenience occasioned by surface water from the melting snow. The snow has now quite disappeared from about the mines, and does not any longer interfere with actual mining, but the roads leading to the mines are not yet in a fit condition for comfortable travelling, and the water routes are still blocked with ice. By the first of the coming month, however, communication by land and water will be open and

mining operations will be engaged in more vigorously than ever before. In Nova Scotia work will be begun on some recently discovered gold locations, and mining will be resumed on properties that for years have been abandoned. According to the annual report of the inspector of mines for the Province of Nova Scotia, the production of minerals during 1883 was in excess of 1882 in every instance with the one exception of manganese ore, which fell off 55 tons, and it is expected that the production for the present year will show a still further increase. Very little information has reached us regarding mining operations in New Brunswick, but in the Province of Quebec mining is rapidly becoming an important industry. As far east as Beauce County gold mining is making rapid strides and the success which has attended the operations of the Gilbert River Gold Mining Company, in St. Francois, and of Messrs. Allan & Humphrey, in St. George's Concession, has attracted much attention, and the result of the "wash up" at these mines is anxiously awaited. In the Eastern Townships of the same Province, asbestos mining will be resumed immediately and development work begun on some locations recently acquired by an American company. Some of the copper mines in the vicinity of Sherbrooke have been continuously worked during the winter, and with satisfactory results. Proceeding westward, the phosphate mines of Ottawa County are giving work to an increased number of miners, and during the winter about 200 teams were

steadily employed in forwarding the mineral to points on the line of the C. P. Railway; up to the present time the output is considerably in excess of what it was at the same date last year, and the mines have greatly improved with development. The phosphate that has been forwarded is of a much higher grade and mining is being conducted on more systematic principles. In Eastern Ontario, in the Perth District, a fair quantity of phosphate is ready for shipment, and a good quality of mica is being shipped from Mr. Allan's mine in North Burgess. The iron mines to the North of Kingston and Belleville have been increased in value during the past year by the construction of the Kingston and Pembroke, and the Ontario Central Railways, and the mines in the last mentioned locality are yielding high grades of hematite and magnetic ores. The Lake Superior Native Copper Company is doing good work at Mamainse, Algoma District, and much is expected from the Rabbit Mountain and Huronian Silver Mines, also in the District of Algoma. It is expected that work will be resumed almost immediately at the gold mines of the Lake of the Woods, and in Manitoba mining operations will be carried on to some extent during the approaching summer. In the North-West Territories and the Rocky Mountain section of British Columbia, much excitement has been occasioned by the discovery of gold, silver, copper and coal in rich deposits, and miners are preparing for active and extensive operations at an early date. Some of the mines in this locality have been worked all winter,

but no authentic reports have reached us during the past month of the value of the output, though there is reason to believe the mines have been worked at a profit. The present year promises to be one of unusual activity in the mining centres throughout the Dominion.

The *Halifax New Era* of April 5th contains a column of "mining matters," relating to the Nova Scotia gold mines, but the editor has omitted to give credit to the CANADIAN MINING REVIEW, from which the articles have been copied. The *New York Mining Record* of April 12th reprints one of the articles, and, owing to the omission referred to, credits *New Era* with its authorship.

CANADA'S PHOSPHATE TRADE.

Much has been said during the past few weeks concerning the outlook for this trade for the coming season of navigation, when the output of the mines will be offered in England and on the continent. Reports have been set afloat that prices had suddenly and seriously declined, and that the foreign markets were overstocked. Such, we are happy to say, is not the case, and we are in a position now to reiterate what was stated in last month's number of the REVIEW, that in England, especially, Canadian apatite is in good demand. Enquiries are also coming from manufacturers of fertilizers in the United States, who are seriously considering the advantages of importing our phosphate to be used in the manufacture of super-phosphate in connection with the American

mineral and other phosphates, and it is not at all unlikely, that within a very short time, a new market will there be opened for the product of Canadian mines. As may be seen by our "quotations," there is no truth whatever in the reported drop in prices, and the number of enquiries that have reached us within the past few weeks from abroad is evidence that there is no falling off in the demand. Producers will be wise to consider well before placing their output at reduced prices with buyers who, though anxious to buy, are endeavouring to bear the market by circulating ridiculous reports that our mineral is becoming unpopular with manufacturers abroad. Nothing could be more incredible to those who are informed on the trans-Atlantic phosphate trade. Our mines are producing a high grade of mineral in large quantity and the output for shipment this year will exceed that of 1883 by several thousand tons. At the present time, as nearly as can be estimated, there has been forwarded to various points of shipment already from the mines in Ottawa County, 12,950 tons of first quality, and 1,300 tons of second quality. It is estimated that about 9,500 tons additional will be forwarded before the close of navigation, which will make a total of 22,450 tons for the year's output of first quality, and 1,300 tons of "seconds," or about 6,000 tons more than last year's shipments amounted to from the same district. From the Perth and Kingston mines, the output will probably reach 2,500 tons.

THE MINES.

Without one exception the phosphate mines of Ottawa county have improved during the past few months and are now capable of yielding a larger output than ever before.

In the Township of Portland West the *High Rock* mine gives employment to about 75 miners and work has been resumed in some of the old pits with astonishing results. In places where it was thought the deposits had given out, a small amount of dead work has exposed other extensive ore beds. The *Union Phosphate Mining and Land Company's* mines, in the same

Township, have steadily increased in value with development. This property is now thoroughly equipped for permanent operations, and, with proper management, it cannot fail to return a handsome annual profit to the company. The deposits are almost innumerable and are of a character indicating that they will become more extensive as work progresses. From 60 to 70 men are employed by this company and the quantity of phosphate that has been forwarded from its mines is of a very high grade and shows that attention has been given to careful dressing.

In Portland East the *Dominion Phosphate Company* is raising a fair quantity of very high grade mineral from its North Star Mine which is developing well and shows signs of becoming very productive. Mining operations are conducted by this company in a workmanlike manner that reflects credit upon the manager, Mr. W. H. Smith. The next mine of importance in this Township is the *Rapids* mine, owned by Mr. Allan, of Ottawa. All the shafts on this property show large bodies of phosphate at the bottom, and, where new ground has been opened, some fine deposits have been exposed. The property adjoining this mine, recently purchased by Mr. Allan, promises to become very valuable with development.

The *Emerald*, in Buckingham Township, the property of the Ottawa Phosphate Mining Company, is acknowledged the most valuable mine yet discovered in the district; the vastness of the deposits on this property cannot be realized but by personal observation. The entire mountain appears to be charged with mineral, and the ore beds are apparently inexhaustible. This mine will contribute largely to the annual production of Canadian phosphate.

In the Township of Templeton, McLaurin & Blackburn, Jackson Rae, Gillespie, Moffatt & Co., and J. H. Post have forwarded a fine lot of phosphate to the front and the mines are all looking and doing well. The Templeton, P.Q., Phosphate Mining Company, an American organization, have purchased property in this township and will begin operations on an extensive scale almost immediately.

In Wakefield, the mines have been yielding liberally. The *Gemmill*, the *Haldane* and the *Moore* have been greatly improved by the past winter's work, and are capable of producing a large quantity of high grade phosphate. Mr. Harris is also mining in Wakefield and has forwarded several hundred tons to Ironsides during the winter.

Phosphate Quotations.

Although the market price for Canadian apatite has not yet been definitely agreed upon, it is reasonable to base quotations on the most recently reported transaction. Three thousand eight hundred tons have been placed

in London during the past month at 1s. 3d. for 80 per cent. with a fifth of a penny rise. Later advices report buyers offering one shilling and two pence three farthings per unit for 80 per cent. There is steady demand in England, and the market is strengthening.

Opening of Navigation.

The ice has moved from the Riviere du Lievre and the steamboats are now plying between the landing at Buckingham Village and the Phosphate Mines adjacent to the river. This is unusually early for the opening of navigation, and will be a great convenience to mine owners and the who have occasion to visit the phosphate mines in the du Lievre section of Ottawa County.

It has been definitely decided by the Chief Engineer of the Department of Public Works to construct the lock at the Little Rapids of stone instead of timber as originally designed. This is a wise decision and will give a structure of an ornamental and permanent character. Work will be started early in the season and hurried on to completion.

BEAUCE GOLD MINES.

Reports recently received from the district go to show that gold mining is not unlikely to become of as great importance in Beauce as it has been at any time in the history of the Californian and Australian diggings.

The Gilbert River Gold Mining Company is doing good work and raising gold in quantity at large profit.

At the Allan and Humphrey Mine, in St. George Concession, the prospects are very bright. The dirt now being raised from the shaft carries gold plainly visible to the naked eye, and as the level is yet some feet above gravel, it is a certainty that when the gravel is reached gold will be found in large quantities. A rumour came to us last month that the miners had already struck rich gravel, but that is incorrect, as they are yet a few feet above it. A large quantity of dirt will be washed in the spring, and its value, which is known to be high, will be established. The present appearance of this mine promises a rich harvest to its owners, and the excitement already created by the prospects threatens to bring a large influx of prospectors and miners to the district during the approaching summer. Messrs. Allan and Humphrey have been fortunate in securing extensive additional areas adjoining their original property and on the same lead. The pluck and perseverance they have displayed in pushing ahead with mining operations under adverse circumstances deserves to be richly rewarded, and there is no doubt now that it will be.

ROCKY MOUNTAIN MINES.

(Special to the CANADIAN MINING REVIEW.)

SILVER CITY, N. W. T.,

April 5th, 1884.

Some of the silver mines are being continuously and vigorously worked. The "Queen of the Hills," the "Home Stake," and the "Henley" work day and night shifts with most satisfactory results, and operations are about to be started at the "Hetherington," which, if report be correct, is likely to develop into a mine of great value. The provisional directors of the company owning this last mentioned property are: Hugh J. Macdonald, President; W. Scott, Vice-President and General Manager; C. G. Ballentyne, Secretary; Hon. C. P. Brown, T. G. Orton, M.P., J. Stewart Tupper, J. F. Field, L. L. Bedson, Wm. Clougher, Wm. Paisley, John Hetherington. The charter will shortly be issued.

A miners' protective union is to be formed here in a few days, with Mr. Bleecker, of Calgary, as its solicitor. The objects of the union will be the discussion of the mining industry of the district, mutual improvement and protection, assisting the Government in matters affecting the interests of miners, and, by co-operating with the agents and other government representatives, establishing mining in the North-West Territories on a practical and equitable basis. Such an organization is invaluable to any mining community, and the people of Silver City are not slow to act in matters which are likely to advance their prosperity.

The latest despatch received from Silver City announces a rich gold discovery quite near the town, and that great excitement prevails in consequence.

BRITISH COLUMBIA.

In the vicinity of Kicking Horse Pass, to the east of the Cascade range, and that portion of the province contiguous to the Valley of the Fraser River, miners and prospectors report the recent discovery of valuable deposits of gold, silver, copper, iron, coal and other economic minerals. The cost of transporting provisions into the interior has prevented rapid development and location of mining camps, but the opening of the railway to the summit of the Rockies on the east, and to the head of Kamloops on the west, will have the effect of stimulating the mining industry to a wonderful degree. Already extensive preparations are being made by miners and prospectors in Victoria to proceed to the mountains so soon as the season is sufficiently advanced to admit of their so doing. The Local Legislature at its recent session amended the mining laws, which

are pronounced by miners to be liberal and to suit the requirements of the country.

The Rocky Mountains of British Columbia are rich in mineral wealth, which would long ago have been developed could facilities have been provided for importing provisions and machinery and exporting the product of the mines. The construction of the Canadian Pacific Railway will remove the difficulty, and an influx of prospectors, miners, and speculators will follow. At Quartz Creek, about forty miles from Kicking Horse, B.C., placer diggings have been discovered which, it is thought, will pay from \$10 to \$20 per day, per man. These diggings were worked many years ago and abandoned on account of their utter inaccessibility.

GEOLOGICAL SURVEY.—The investigations of Mr. A. Rowman in the interior of British Columbia last summer embraced an area of about 30,000 square miles, lying between the 113th and 120th degrees of longitude and the 49th and 52nd degrees of latitude. Through this region the Canadian Pacific Railway will pass, and the geological surveys will, therefore, become increasingly interesting. Preparations are now being made to issue a new map of this region, in which will be shown the results of the labours of Mr. Rowman last year, and the survey

made in 1882. The report of the Minister of the Interior says: "The researches made in the vicinity of the Rocky Mountains prove the existence of large tracts of coal-bearing cretaceous rocks in the very heart of the range, of which the anthracite region of Devil's Head Creek is a special development."

NORTHERN CANADA.

Captain William Kennedy, of St. Andrew's, an Arctic explorer, in a lecture delivered at Winnipeg, drew attention to a region near Lake Athabasca, into which the Peace River flows, where he stated that petroleum springs had overflowed, covering a section of country forty miles in extent, and after having been carried down the river the oil floats on the surface of the lake. At present the Indians, who are its only consumers, boil it down to the consistency of pitch and apply it as a coating to their canoes, etc. Captain Kennedy also stated that in the same region salt is abundantly found, fine and brilliantly white, and that a variety of economic minerals have been met with in large quantities, notably—sulphur, coal, copper and asbestos. He expressed the opinion that the Athabasca district, with its vast mineral wealth, would shortly become a point of attraction for capitalists and settlers.

capitalists found the money to carry on work for the summer to test the value of these deposits, and Mr. Ingall once more took charge of the work.

Shafts were sunk upon the two veins to test their continuity in depth and further explorations of the rest of the location carried on.

One of the veins, a promising lode of rich argentiferous sulphuret of copper, was found not to continue down, but the other, a strong well defined fissure vein, carrying native copper, got richer as depth was attained and retained its definite character. Further evidence was also obtained as to the general mineralization of the district, and other veins were found worthy of further attention.

These favourable results induced the syndicate to put up a further sum to enable work to be continued during the winter of 1881-82, and it was decided to sink another shaft further inland on the course of the vein at such a distance that a drift could be run and the two connected before spring so as to secure good ventilation for continuing the work during the ensuing summer should it be decided to do so. This was done, the two trial shafts having been connected at a depth of sixty feet, although, on account of having cut heavy water, great difficulty was experienced in completing the work in time.

This work was considered to have been attended with such satisfactory results that the company was finally organized on a permanent basis in the spring of 1882, and started with a share capital of £100,000, of which the vendors took £25,000 fully paid shares in payment for the property. The board of directors decided then to at once equip the mine with a full plant of dressing and developing machinery.

This of course entailed an enormous amount of work in order to convert a barren shore, covered with second-growth bush, and with only a couple of shanties on it, into a prosperous and busy little village in one short season between the opening and close of navigation on the lake, which period is also shortened by the stormy weather of the spring and fall, rendering it impossible at those seasons to utilize the lake communications more than about one-third of the time. During the whole summer, large quantities of materials, supplies, tools and machinery were poured in and the force was gradually augmented as housing accommodation increased, until some 150 men of various callings were employed, and by the end of the season, most of the necessary buildings were up and the rest well forward or started. Most of the machinery was also on the ground, the saw-mill, hauling engine, air compressor and mine pump being in place.

The worst part of the surface work having been got over by the fall of 1882, when Mr. Ingall was obliged to resign from ill-health, the actual work of underground development was able to be vigorously prosecuted under the direction of the present manager, Capt. Williams, and with the help of compressed air drills, good progress was made, so that the state of things was as follows to October 1st, 1883:

The two main shafts of the mine, some 450 feet apart, were at the respective depths of 221 feet (No. 1), and 152 feet (No. 3). The first level had communication through between Nos. 1 and 3 shafts, and had been extended a considerable distance N. of No. 1 shaft (*i.e.* out towards the lake), and S. of No. 3 shaft (*i.e.* inland), and work had been done on the outcrop of a vein 3,000 feet inland from No. 3 shaft supposed to be the continuation of this vein.

The second level had been driven from each shaft towards the other, and only wanted some 60 feet to communicate, and was also driven a considerable distance N. of No. 1 and S. of No. 3, whilst the third level was driven some distance N. and S. of No. 1. The total length of these drifts amounted to some 1,800 feet, and they, in conjunction with the shafts, proved the vein for some 800 feet in length by about 200 feet in depth.

The plant at that date consisted of a Reliance air compressor capable of working ten Eclipse power-drills, hauling engine and direct acting Northey steam pump at No. 1 shaft, also a diamond drill, saw-mill, stationary engine, to bring up freight from the dock, etc.

The dressing machinery is housed in a building 160 feet long, whose greatest width is 95 feet and greatest height 45 feet. It consists of one head of Ball's stamps capable of putting through 145 tons of this ore per day, the copper being extracted by four jigs and four round briddles. The ore is raised to the top of this building up an incline from No. 1 shaft, worked by an engine which also works the Blake stone breaker, from which it passes down a long incline to the stamp, from thence through the jigs, etc. The necessary water is delivered to the floors from the lake through a seven-inch main by a direct acting steam pump. There are also a fine boarding house capable of holding 100 men or more, a well built and roomy store, the usual repair shop, smithy and carpenters' shop, and stable for twenty-four horses which are chiefly used to bring in cordwood from the bush. There is also a dock within 100 yards of the mine at which, in settled weather, light draft propellers can unload.

The floors commenced running on the 3rd of October last, and at the close of navigation last fall an instalment of some three barrels of dressed metal, about 85 per cent. fine, was shipped to England. Up to the 1st of April last the Manager estimated the amount of ore opened up at some

The Lake Superior Native Copper Company's Mines.

This company's property is situated at Mamainse on the Canadian shore of Lake Superior, in the District of Algoma, and is some sixty miles from the village of Sault Ste. Marie.

Until quite recently no other means than by water existed of communicating with the outer world, which entailed an immense amount of trouble and delay. When the company started mining operations, everything—coal, provisions, machinery and a large quantity of building material of all descriptions, now to be found on the spot, had to be brought from Batchewana Bay, over a stretch of water which, for a great portion of the season, was dangerous and uncertain. The nearest doctor, the nearest post office and stores, could only be reached by travelling these sixty miles in an open boat, so that communication with civilization during stormy weather was impossible, and rendered tedious under the most favourable circumstances.

In the winter, even, this means of communication was absent, and the mail had to be carried over a round-about snow-shoe trail through the bush. Now, however, the continued operation of the mines has brought about a happier state of things. The company has a steamer which, in summer, plies between Sault Ste. Marie and the mines, and in winter a road lately completed by the Ontario Government serves to keep up communication. Around the mine itself has grown up a busy little village which forms quite a feature in the landscape as seen from the lake. It has also a post office and a Government school, whilst anyone being so unfortunate as to meet with an accident, need not, as formerly, have to wait for fine weather and then take two or three days to get to the doctor, but receives prompt attention from the resident medical man, Dr. Peters.

The location now worked by the Lake Superior Native Copper Company, belonged formerly to the Quebec and Lake Superior Mining Association, who held it for some thirty years and did nothing with it until July, 1880, when they employed Mr. E. D. Ingall to examine the tract and report upon the mineral capabilities. Some seven weeks' exploration of the approachable portion of the ten square miles, composing the property, proved to be widely mineralized and that there were two veins worthy of further work being done on them. During the winter of 1880-81, nothing was done, but in the spring of 1881 some English

17,136 tons, which, he thought, would yield 428 tons of copper, and by the end of August, 1883, he expected to have enough ore in reserve to run the present mill for two years. The Company intends, next year, to double the capacity of their dressing floors.

The most serious difficulty met with in opening up the property was that of the great uncertainty of the means of communication, but the facilities in this respect are increasing rapidly, as evidenced by the opening of a line of telegraph to Sault Ste. Marie lately and the cutting through of a road from there to the mines, and when the long promised railway to that place is completed the chances of carrying on successful mining in the district will be greatly enhanced.

Calumet and Hecla Copper Mining Company.

The mining public has been startled by the announcement that the directors of the Calumet & Hecla Mining Company have decided to pass their May dividend. It is the most successful mining enterprise in America, with a record of dividends of \$21,850,000, the annual payments for a number of years having been \$2,000,000, and therefore it has been a rude shock to the many whose faith in mining has suffered under a long series of collapses. In this case, there is no reason for being frightened. The mine, so far as we can learn, is as good now as it ever was; in fact, the management is credited with adhering to the rule of having five years' work developed. Its production the last month is greater than it ever was—2,620 tons of mineral—and it is likely that the cost of production has, if anything, slightly declined. The main reason given for the passing of the dividend is, that the surplus funds are locked up, practically, in the copper now waiting for the opening of navigation to be carried to the seaboard markets. To provide for contingencies, the Company has brought overland about 2,000,000 pounds of copper; but this method of transportation involves an additional expense of upward of one half of one cent per pound. Navigation is closed from five to six months in the year, and the copper companies enter the new season therefore with a very large proportion of their annual output on their hands. In past years, this has not, apparently, hindered the directors of the Calumet & Hecla Mining Company from paying a dividend a short time before the opening of the new season. That they did not do so this year merely shows that their surplus was not so great as formerly, or that a larger amount is in the form of finished product. We understand that the directors were averse to borrowing money to pay the dividend, pending the arrival and marketing of their copper. The company has invested and is still paying out vast sums of money for the completion of the greatest mining and milling plant, designed by Mr. E. D. Leavitt, jun., that any mine in the world possesses. This may have proved a greater drain on its resources, being provided for out of current earnings, than was expected, and the decline in copper has, undoubtedly, contributed its share. With an annual product of 33,000,000 pounds of ingot, a decline of one per cent. means a fall off of revenues of \$330,000, which is probably a minimum. We have no knowledge of what the cost of production of the Calumet & Hecla is; but by inference from the known returns of a much smaller mine, the Quincy, working poorer rock, which show a cost of 9 cents, it is not rash to state that it must be less than 7 cents. Let that figure be assumed, and let it be assumed, further, that the average price realized in 1881 will not be more than 14 cents, which will be considered conservative, even taking into account that a large percentage of the product has been sold abroad at a price said to be about 13 cents New York, then the profit per pound is 7 cents, or \$2,310,000 per annum. A decline of one cent per pound would still leave an excess of income over expenditures for the production of \$2,000,000. We are, therefore, far from regarding the action of the directors in any serious light, though its wisdom has been questioned by many.

There is one point repeatedly raised during the last few days, against which we must energetically protest. It has been urged that the effect upon the market might be a serious one; that it shows that the lake companies are carrying an unusual load of copper; and that the price cannot be maintained. The fact is, that the stock of lake copper is very little if any greater than it always is at this time, and that the statistical position of the metal is very much better to-day than it was a year ago.—*Engineering and Mining Journal.*

Coxheath Copper Mining Company.

During last summer this company did a great deal of work at its mine near Sydney, Cape Breton. Leads were extended, and a good deal of ore stoped out, from which a few tons were handpicked and sent away for testing. Experiments were made on the low grade ores, and it is stated that preparations are being made for the erection of a large concentration plant this spring. Some of the copper was found to carry eighty ounces of silver to the ton.

CANADA'S IRON INDUSTRY.

ITS DEVELOPMENT IN EASTERN ONTARIO.

In the January number of the Review an article appeared under the heading "The Iron Deposits of Central Canada," and was continued in the February and March numbers. Since then, efforts have been made to complete a railway system through the mineral section of the Midland district with a view to encouraging the development of the iron deposits by providing further facilities for the transportation of ore and fuel. The Central Ontario Railway Company made application to the Dominion Parliament for a charter for an extension of its road north, to intersect the line of the Canadian Pacific Railway, and in discussing the bill before the Railway Committee, Mr. J. S. McCaig, of Picton, thus referred to the importance of granting a charter for the proposed extension:—

The Central Ontario Railway Co. have completed their extension from Benton northward to the Wallaston Mine, a distance of about eighty miles and without government or municipal aid in any form, and in addition have now under contract and in process of construction, at Weller's Bay, in the County of Prince Edward, large and extensive docks for shipping, at a nominal cost, into Lake vessels, the iron ore brought from the mines situated along their railway extension north of Trenton, and intended for export to the iron smelting works of the United States, to supply the demand for mixing with the native ores of that country for smelting purposes. The substantial and extensive dock accommodation in connection with the required dredging at Weller's Bay has already entailed an outlay of over one hundred thousand dollars and is intended to give improved facilities for the shipment of the company's ore and greatly lessen the cost of the transshipment of imported coal, intended as a return cargo. This evidence of the good faith of the proprietors of the Central Ontario Railway, and of their financial ability to carry out the proposed extension from the Wallaston Mine north to intercept the Canadian Pacific Railway, and giving the County of Prince Edward and the Town of Picton, Trenton and the County of Hastings, an all rail route connection with Winnipeg and Manitoba, the Northwest and British Columbia, for passengers and freight, aside from the still more important advantage to the whole Dominion which must result from the development of an extensive iron industry and which must establish beyond controversy the superiority of Canadian ore over even Spanish, Sweden and African ores, and which have been largely, of late years, imported into England and America to mix with the native ores of both countries for smelting purposes, together with the additional fact that already the company have disbursed in construction over two millions of their own money. I say for all those reasons united, I may be permitted to express an earnest hope to the hon. members of the committee, that they will be pleased to pass the charter of the company without amendments and protect it against the imposition of any conditions, save and except those provided for by the General Railway Act and passed in the public interest. Experience in the establishment of smelting works has demonstrated beyond all controversy, that they usually begin their growth at a point or junction where iron ore and coal centre in transportation. And reasonable hopes are entertained that the proprietors of the Central Ontario Railway may, in the prosecution of their enterprise, if clothed with the reasonable powers solicited in their charter and now before the committee be induced, and find it in their interest, to establish smelting works at their mines and also at Weller's Bay. At the risk of intruding on the indulgence of the committee, I beg respectfully to call their attention to the important advantages the establishment of iron smelting secures to any country possessing the ores. I admit it is better for Canada to mine and sell her iron ore than allow it to remain permanently unused and that to that extent the finding of a market for her ores is a legitimate source of satisfaction. And I also contend that it is equally certain that to merely mine and sell our ores is the poorest use we can make of them. Mr. Birkenbine, a gentleman of unquestioned authority, gives the cost-of labour per ton as follows:—

	Days' Labour.
Digging ore.....	1
Making pig at furnace.....	1½
Making charcoal from wood.....	1¼
Cutting wood.....	1
Limestone.....	½
Total.....	5
Charcoal iron, pig, is of the value of say :	
	Per Ton.
In New England.....	\$56
Pennsylvania.....	55
Maryland.....	60
Baltimore.....	65
Lake Superior hot blast.....	52

Canada imported during the years 1870-71 to 1879-80 (10 years), \$125,435,161 worth of iron and manufactures of iron.

Of iron.....	\$33,704,154
Of steel..	5,408,121
Rails and plates, etc., for railways.....	31,357,532
	<hr/>
	\$70,469,807
Machinery, hardware, and iron manufactures generally.....	54,965,358
	<hr/>
	\$125,435,165

A calculation of the number of days' employment Canada has given to foreign countries by the importation in value of \$70,469,807, in the ten years I have named, of iron in its raw state and exclusive of the additional value of \$54,965,358 of machinery, hardware, and iron manufactures generally for the same period, will enable the members of this committee to more intelligently understand and appreciate the necessity—I might say the national and imperative necessity—of encouraging and fostering so valuable an iron industry and in the development of which the proprietors of the Central Ontario, most of whom are American capitalists, ask this committee, not for money aid or subsidy, but for a charter with such powers only as the general railway act of Canada provides for the protection of the public interest. Spain and Norway exported large quantities of ore to England to keep the Bessemer furnaces going. The United States imported for several years past from Spain and Africa from seven hundred thousand to eight hundred thousand tons of iron ore sown. The latter country had invested of capital in the iron industries and manufactures in 1880, \$230,971,884, and wages were paid to her workmen same year, \$55,476,786. The United States produced in 1871, 1,911,608 tons, and consumed 3,190,573 tons; and in 1880 she produced 4,295,414 tons, and consumed 6,407,754 tons. Such facts seem to be lost sight of in Canada nearly altogether; we allow ourselves to be frightened by fear of distance, and come to the slothful man's conclusion with regard to iron making at home, while our more enterprising neighbours take the precious ore, with which we can do nothing, and carry it hundreds of miles to their furnaces, almost as far as we would have to carry the coal to ours. The mineral treasures with which Providence has endowed the Dominion are almost worthless to us, just because we have not the energy to use or the enterprise to develop their wealth. A civil engineer exclaims: Why has Canada, and especially Ontario, its richest and most populous province, hitherto failed to utilize to any large extent those vast stores of God-given wealth? Why have the bounties lavished upon us by Providence been hitherto so little used? Canada has within herself all the requirements to make her one of the largest iron producing countries in the world, and at such a cost as will defy competition. There now exists but one cause requiring removal that retards the development of iron manufacture, and that is the apathy of Canadians, an apathy the most extraordinary, affecting their vital interest, the one which must flourish for Canada to become a great nation, for iron manufacture has been rightfully termed the mother and the mistress of all other manufactures, for what is it but the rendering fit for use the raw material of all our tools and implements and machinery, without whose aid no other industry could ever exist. The Central Ontario Railway Company have purchased and paid for the right of way and they have built a railway extending north from Trenton, a distance of eighty miles to the iron fields or deposits of iron ore in the county of Hastings. They are asking the Dominion Parliament for a charter authorizing them to extend their railway further north to form a junction with the Canadian Pacific Railway. They have already embarked in the enterprise of their own money upwards of two millions of dollars. They have in addition commenced the construction of extensive docks, &c., at Weller's Bay, for the shipment of their ores into lake vessels and for the landing of coal, and having in view the establishment of extensive smelting works at an estimated cost of two hundred and fifty thousand dollars, and on which they have already disbursed over one hundred thousand dollars. In the prosecution of this work, which will be one of great public advantage in many ways, and more particularly in the development of our own mines and the encouragement of the establishment of iron smelting works, they have not received in aid of this vast enterprise from the Dominion Government, or from any of the municipalities benefited locally by its construction, any subsidy in money or in land. And they now ask that the charter now before this committee be allowed to pass without amendment, subject, however to any and all the conditions of the general railway act of the Dominion and passed for the protection of the public interest.

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THE HAYCOCK IRON MINE.

This valuable property has been the subject of several articles in the REVIEW, and at one time, within the past six months, it was generally understood that work at the mine would be resumed by a company composed of English capitalists. Negotiations have, however, not yet been completed, and, in the absence of any satisfactory explanation of the cause of delay, it has created some disquietude to those who are most deeply interested. The reports on the property made by well known experts, after careful examinations, are of a flattering character. Foremost among those experts who have reported upon the Haycock Iron Mine is Professor Chapman of Toronto, and, notwithstanding that Dr. Selwyn, Director of the Geological Survey of Canada, has undertaken to say that Professor Chapman's report is entirely misleading, such men as Mr. Birkenbine, of Philadelphia; Mr. Josiah Robbins, of Ohio; and Mr. Richard Howson, a well known Mining and Furnace Engineer of Middleboro', England, endorse Professor Chapman's opinion that the mine is one of great value. Mr. Howson made a personal examination of the entire property a year ago, and his report, dated Middleboro', 21st May, 1883, is a verification of the most favourable reports of Professor Chapman and Mr. Birkenbine. In concluding his report he states that he had several interviews with these gentlemen, and found them to be men of high character, and that he agrees with them that by prompt and energetic action, combined with good management, the property of the Haycock Iron and Steel Company will prove to be a source of considerable profit.

MINING NOTES.

At Smithville, Colchester County, Nova Scotia, Mr. H. Clarke has proved the existence of a valuable deposit of galena, and has been joined by Mr. D. L. Philips and Mr. D. L. V. Browne, M.E. These gentlemen will co-operate with Mr. Clarke in developing the property without loss of time. It is said that the cre-bed is of some extent, and that some of the ore carries gold and silver to the value of \$100 to the ton.

The Canada Consolidated Gold Mining Company are proceeding with mining operations on their property in Hastings County, Province of Ontario, and it is reported that the vein has much improved with recent development. More attention is now directed to the treating of the ore, and we are informed that with proper management and studied economy this property may yet be profitably worked. We will be obliged for full particulars as work progresses.

Now that the snow has nearly disappeared from the mountains, Mr. Allan is making preparations to begin mining operations at an early date on his mica location in Ottawa County. The specimens of mica brought in last autumn were of very fine quality, perfectly white and clear and of good size. The property will, it is thought, develop into one of great value.

The Huronian Mine, in Algoma District, is being actively worked, and developments have successfully proved its value. The company has a ten stamp mill in operation, and the ore is treated by free milling and concentration of the gold and silver it contains. A large force is employed in forwarding supplies for next summer's operations. The company values this property at an almost fabulous price, and the indications are that it will become a source of large revenue to the stockholders.

The Rabbit Mountain Silver Mine, also in the District of Algoma, has recently been sold to a syndicate of American capitalists, who have already begun active mining operations on an extensive scale. The sum paid for this property by the syndicate is said to have been very large, but we have not yet ascertained what the exact amount was.

LATER.—We are informed that Oliver Danna, who lives at Prince Arthur's Landing, is in St. Paul, and has effected the sale of four mining locations at the Rabbit Mountain Mines, two of them to a syndicate for \$200,000, and the others to Chicago and Milwaukee capitalists for a like sum.

It is estimated that the deposits of anthracite coal in Pennsylvania amounted originally to 6,000,000,000 tons; of this, from the commencement of mining, 62 years ago, 499,010,887 tons have been disposed of as marketable coal, also during that period there has been wasted 998,021, 774 tons in and at the mines.

NOVA SCOTIA.

The Inspector of Mines in his annual report says that the following summary shows, so far as he has been able to learn, the mineral production of the Province of Nova Scotia during the year 1883 as compared with that of the previous year:

	1882.	1883.
Gold, ounces.....	14,107	15,446
Iron, tons.....	42,135	52,410
Manganese Ore, tons.	205	150
Copper Ore, ".....	06
*Coal raised ".....	1,365,811	1,422,553
†Gypsum ".....	133,426	144,668
‡Building Stone, ".....	4,357	181
§Coke made ".....	26,731	44,189
¶Grindstones, &c. ".....	2,450	155
Limestones ".....	16,584	26,477

*Ton of 2,240 lbs.
†Quantities shipped. Returns not completed. Amount used in Nova Scotia not known.

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Forms of Tender and full particulars, relative to the Supplies required can be had by applying to the undersigned, or to the Commissioner of Indian Affairs at Regina, or to the Indian Office, Winnipeg.

Parties may tender for each description of goods separately or for all the goods called for in the Schedules.

Each tender must be accompanied by an accepted Cheque of a Canadian Bank for at least five per cent. of the amount of the tenders for Manitoba, and ten per cent. of the amount of the tenders for the North-West Territories which will be forfeited if the party tendering declines to enter into a contract when called upon to do so, or if he fails to complete the work contracted for. If the tender be not accepted the cheque will be returned.

Tenders are required to make up and attach to their tender the total money value of the goods they offer to supply, or their tender will not be entertained.

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The lowest or any tender not necessarily accepted.

No newspaper to insert without special authority from this Department through the Queen's Printer.

J. VANKOUGHNET,
Deputy of the Superintendent
General of Indian Affairs,
Department of Indian Affairs,
Ottawa, 19th March, 1881.

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FRED. WHITE,
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Ottawa, 17th March, 1881.

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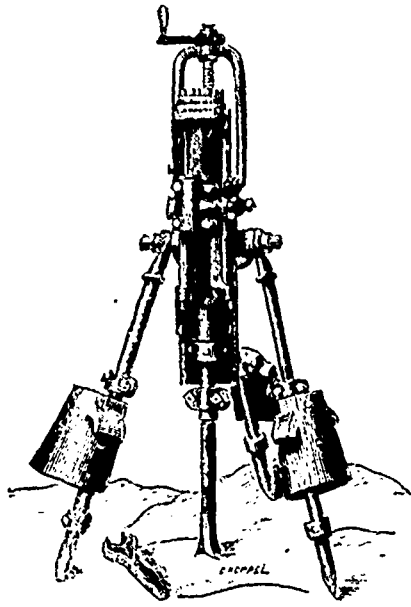
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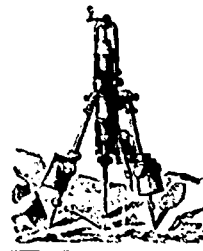
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