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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.

Canada is becoming an important field for miners, and the development of her mineral resources from the Atlantic to the Pacific coasts is revealing the fact that emigration to foreign countries by Canadians who desire to engage in mining pursuits is foolish and unnecessary. If prospectors could be induced to explore the mineral bearing belts of this Dominion as carefully and assiduously as those of other countries have been prospected, they would, without question, meet with equally good success as has rewarded the searcher in any other part of the world, and, further, if capitalists in this country were less pre-

judiced against investing money in mining enterprises at home they would not be so easily persuaded to speculate in wild cat ventures in distant countries, where manipulation and scheming is unblushingly resorted to by operators over whom they can have no control. There appears to be a disinclination on the part of the wealthy men of Canada to foster and encourage the mining industries of their own country, and the consequence is that foreigners, especially Americans, are piece by piece, becoming the owners of our richest mines and mineral deposits, and the profit derived from them finds its way out of the country. For the past quarter of a century mining has been retarded by want of capital to develop the industry, and the numerous valuable deposits, long ago discovered, have been allowed to remain as nature formed them, unnoticed and untouched. When capitalists in England, on the continent of Europe and in the United States were invited to advance money for the development of our mineral resources, they, quite naturally, became skeptical as to the likelihood of such investment proving profitable, knowing, as they very well did, that there were wealthy men in the country who had money to invest in anything that would yield fair returns. These foreigners know us better now than they did some years ago, and have discovered that the cause of our mineral wealth having been so long neglected has been due to lack of enterprise on the part of those who possessed the means of developing it. In Nova Scotia the best

paying gold mines have fallen into the hands of Americans, and a large proportion of her coal area is owned and worked by foreigners. In the Province of Quebec the richest asbestos mines, with one exception, and some of the best gold mining privileges in the Beauce and Chaudiere districts are controlled by Americans, and all of our richer phosphate mines, in the same province, are owned by American and English organizations. In Eastern Ontario the gold and iron mines that are now attracting so much attention have become the properties of our enterprising neighbors, or controlled by them, and are being developed with their capital. Those copper mines on the north shore of Lake Superior that are now being worked are owned by English companies, and Silver Islet, from which millions of dollars in profit were derived, was allowed to fall into the hands of American capitalists, and they are rapidly acquiring the most valuable of the mineral locations and mines in the vicinity of the "Rabbit Mountain" and "Huronian." Further westward, at the Lake of the Woods, and beyond, in the Rocky Mountain district, Canadians have shown rather more enterprise than elsewhere, and yet, even here, they would rather sell than work the mines. In British Columbia the mines are owned and worked by people of various nationalities.

A misfortune which has long been felt in this country is that the enterprising Canadian has not the means to advance and develop our mining industries, and the capitalists have not the enterprise to come to his assist-

ance, consequently we have been, and are now depending on capital coming in from other countries, and, though it is coming freely, we require much more if justice is to be done to our mineral resources.

The lecture delivered by Dr. Dawson, of Montreal, on his Winter's geological work in Egypt and Syria, before a crowded meeting of Victoria Philosophical Institute, held at the Society of Arts House, has been printed. Diagrams of the caves and a collection of flint instruments and bones, the latter classified by Professor Boyd Dawkins, F.R.S., were exhibited. As to the Syrian caves, they afforded a remarkable evidence of being inhabited by men of splendid physique, at a time when the Mediterranean must have been a small sea and one could pass from Syria to Greece on land. Between these and the modern Phœnician inhabitants there was evidently a break.

MINING REGULATIONS FOR THE NORTH-WEST TERRITORIES.

These regulations, published during last session of Parliament by the Dominion Government, have been the subject of much comment and correspondence in the press of the North-West since they came into force. Many of the clauses have been severely criticised and exception has been taken to the terms exacted for the securing of certain mining claims. It must be admitted as an impossibility to frame any rules and regulations that would meet the views of everybody, and it will be necessary to patiently await the result of time and experience, which will, doubtless, bring about modifications and amendments that will be acceptable to the majority at least, if not to all. Notwithstanding the many letters and newspaper articles that have been written on the subject, in not a single instance

have we seen a suggestion offered as to what changes are desired. It would be a wise move on the part of those who are most interested in the section of country most affected by the regulations, and who have practical knowledge of such matters, if they were to meet together and formulate their complaints and forward them in a businesslike and proper manner to the Minister of the Interior, pointing out to him the objectionable clauses and the nature of the modifications wished for. Such a communication would doubtless be carefully considered by the authorities at Ottawa and acted on.

DISTINGUISHED VISITORS.

Vice-Regal Excursion

TO THE

RIVIERE DU LIEVRE PHOSPHATE DISTRICTS.

On Monday morning, the 12th inst., His Excellency the Governor-General and suite, accompanied by Dr. J. A. Grant, left the Union Station, Ottawa, on the 8.30 train for Buckingham, and on arrival there found carriages awaiting them to convey the party to the village. Without loss of time they proceeded to the wharf on the Riviere du Lievre, where the *Rocket* was in readiness to receive the distinguished passengers.

Shortly afterwards the tidy little steam yacht, owned by Mr. W. A. Allan, of Ottawa, and used by him in connection with his phosphate mining, steamed off on her journey up the river.

The weather, fortunately, was all that could be desired for such an auspicious occasion, and all being in the best of spirits the voyage was indeed an enjoyable one. The natural beauties of the winding river, with its bold and wild scenery, gained frequent bursts of admiration from the entire party. Indeed, with every turn or bend in the river, a new vista was opened up, the effect being quite panoramic.

As the little craft sped on up the stream, time seemed to fly, and soon a point was reached where the miners were at work, and here the occasional blasts had a curious meaning, sounding indeed as a royal salute, though we are not prepared to say we actually counted 21 explosions.

Though told that dynamite

was used in this district, it did not appear at all to terrify the guests of the day.

As the yacht cropt up the river still higher the scenery became more imposing, and when High Falls appeared in sight, only those who have been fortunate enough to have seen them, can well imagine how His Excellency and party were impressed.

Here a delay was made in order to allow the tourists ample opportunity of viewing the Falls and admiring the whole scenery, here so grand. The *Rocket* was started on her return trip, and with the current, seemed to fly down the river. In due time Buckingham was reached and the party proceeded to Ottawa by C.P.R. train, arriving at the station at 6.30 p.m.

His Excellency and party thoroughly enjoyed the trip, and were loud in their expressions of gratitude to all those who were instrumental in rendering the whole day such a delightful one, and the object of the trip so successful. We are quite sure it will be long remembered.

Mr. Baker, Superintendent of the C.P.R., kindly placed the President's private car at the disposal of His Excellency for the occasion, and provided a special train from Buckingham.

Mr. McLaren and Mr. Benardin, of Buckingham, very kindly provided the carriages used to convey the party to and from the Buckingham station.

Mr. G. Smith, Manager of Mr. Allan's *Ropids* Mine, acted as skipper of the *Rocket* on the auspicious occasion. His Excellency's only regret was that time did not permit of his landing at some point on the river and witnessing some of the phosphate mines in actual operation. A second trip with such an object in view will be a pleasant anticipation.

Mr. Childers, of the British House of Commons, has computed the gold coinage of England, since 1817, at £300,000,000.

Gold was first discovered in California in 1848, and during the eight years following, that State and the colony of Australia sent \$800,000,000 in gold to Europe.

During the past fiscal year Canada imported coal and coke valued at \$5,389,804 and manufactures of iron and steel to the value of \$13,714,636, the largest items in her imports.

THE ROYAL SOCIETY OF CANADA.

Some Interesting Papers Read at the Recent Meeting.

This Society, founded by the Marquis of Lorne, held its third meeting at Ottawa during the present month. Some of the prominent members who were unable to be present forwarded papers which were read during the meeting, and a large number of contributions came from outside sources.

The Marquis of Lansdowne accepted the position of patron and honorary president, and the officers elected for the ensuing year were as follows:—President, Dr. T. Sterry Hunt; Vice-President, Dr. D. Wilson; Honorary Secretary, John George Bourinot (re-elected); Honorary Treasurer, Dr. J. A. Grant (re-elected).

Dr. T. Sterry Hunt read an interesting paper, "The origin of Crystalline Rocks." He remarked that the problem of the origin of those rocks, both stratified and unstratified, which are made up chiefly of crystalline silicates, is essentially a chemical one, and traced their origin, elements and processes of decay and disintegration.

Professor E. J. Chapman laid two papers on the table, "Contributions to our knowledge of the Iron Ores of Ontario," and "Some deposits of Titaniferous Iron Ores in the Counties of Haliburton and Hastings." Some portions of these papers corroborated many of the statements made in a *continued* article in the *January, February* and *March* numbers of the *REVIEW* entitled "The Iron Deposits of Central Canada."

A paper of Mr. Edwin Gilpin, of Halifax, "The Manganese Ores of Nova Scotia," was read, in which the author, after remarking on the localities yielding the more common variety of manganese ore, takes up the best known of the manganese ores, *prolusite*. He states that Hants, Pictou, Colchester and Cape Breton Counties seem to yield it most abundantly, and minutely describes its occurrence at Tenny Cape. The writer also gives analyses of the ores of these localities as well as of those of the Cape Breton and Magdalen Island deposits.

As the result of his surveys and investigations, Mr. Gilpin gives it as his opinion that the manganese ores of Nova Scotia occur low down in the carboniferous limestone, below the gypsum deposits characterizing that horizon, and that they are

connected with limestones frequently manganeseous and usually so magnesian as to approach dolomites in composition, and submits several analyses of these limestones. The paper forms the first detailed description of the manganese ores of Nova Scotia, which are of unusual purity, and is of practical value to those engaged in mining them, as the writer points out the geological horizon carrying them most abundantly.

NORTH CAROLINA PHOSPHATE.

Much importance is now being attached to the comparatively recent discoveries of phosphate rock in North Carolina, and, notwithstanding the low grade of the mineral itself and the peculiar nature of the beds, as compared with our Canadian apatite deposits, these discoveries are looked upon as of the greatest value to that State. The *New York Engineering and Mining Journal*, quoting from a report of Dr. Charles W. Dabney, Jr., Doctor of the Agricultural Experiment Station at Raleigh, says: "Dr. Dabney states that the phosphatic rock is found in two different relations in this field, the lower country yielding worn nodules imbedded in comminuted shells, forming a conglomerate; while in the upper country it is found in larger nodules, cakes, or slabs imbedded in sand. In the former district, the conglomerate crops out in places, while in other localities it is covered by limestone, the thickness of the phosphatic bed reaching four feet. Analyses of samples of the nodules yielded from 14 to 42 per cent. of phosphate of lime, equivalent to about from 6.25 to 19.25 per cent. of phosphoric acid. It has been suggested that a good plan to treat the conglomerate rock would be to burn it, so as to slack the lime and thus reduce it to powder, while the nodules remain comparatively unaffected, so that they can be screened out. In the up-country, embracing Sampson, Duplin, and Onslow counties, the rock, which occurs in a horizontal bed from 6 to 20 inches thick, is covered by marl and sand sometimes to the depth of 20 feet. This rock yields, according to a number of analyses made, from 32.5 to 50.5 per cent. of phosphate of lime. From a test pit near Warsaw, three-quarters of a mile from the railroad, 46 tons of workable phosphate, running nearly 40

per cent., were taken from 0.11 acre, or at the rate of 418 tons an acre, at a cost of only \$3 a ton on cars, in spite of necessarily crude arrangements. A portion of the rock was experimented with at the works of the Navasse Guano Company, and it was found that 1000 pound charges required only from 600 to 650 pounds of acid, as compared with 900 pounds for South Carolina phosphate, the product containing from 10.78 to 11.63 per cent. of soluble phosphoric acid, from none to 0.67 per cent. of reverted phosphoric acid, and up to 1.35 per cent. of insoluble phosphoric acid. The crude rock treated was not even thoroughly treated. These results are certainly very gratifying, and give promise of the development of an industry very important to North Carolina, and are highly creditable to the vigilance and enterprise of those in charge of the Experiment Station."

When it is considered how vast are the apatite deposits in Canada, and how low is the cost of mining, together with the fact that the mineral will assay 80 to 85 per cent., in cargo lots, if carefully dressed, compared with 32.5 to 50.5 per cent. as above, increased demand for phosphate locations is not to be wondered at.

PHOSPHATE MINING IN OTTAWA COUNTY.

At the mines east of the Gatineau and on the east and west sides of the Riviere du Lievre, operations are going ahead with more than ordinary activity, and mineral is being raised in great quantity. During the past year important improvements have been made on many of the locations in the form of comfortable and substantial buildings, erected for the accommodation of the miners, suitable tables, blacksmith shops, engine houses, and neat cottages, the latter being occupied by the managers of the mines as dwellings and offices. Steam drills, hoists and pumps are now in use where a year ago all work was done by hand power. Tramways have been laid from the mines to the dumping grounds, over which the ore and waste can be speedily removed in cars which now take the place of wheelbarrows that were used a year ago; good summer roads are graded from the mines to the Riviere du Lievre which afford facilities for forwarding the ore during the summer to the river bank, from whence it is carried in scows to Buckingham Village and there transhipped and forwarded to the point of shipment. Formerly it was necessary to allow the ore to accumulate at the mines

until such time as winter transportation should be rendered practicable. All of these changes have taken place during one short year, it may be said, and are due to the introduction of capital, practical ability and an element of enterprise, which have given an impetus to the industry and supplied a want long felt in the district. It is now less expensive to raise the ore, the output is rapidly increasing and the cost of transportation has been materially reduced. In short, the phosphate mining industry of Ottawa County has a most promising future, and was never in such a flourishing condition as it is to-day.

THE MINES.

In the Township of Portland, West, the *High Rock* mine, the property of the Phosphate of Lime Company, and the Union Phosphate Mining and Land Company's *Star Hill* mine are each giving employment to a large force of miners, and phosphate is coming to the surface in large quantity. So much has already been said of these mines in the Review that their value must be well known. They are thoroughly equipped and well managed.

In the Township of Portland East, the *North Star* mine, owned by the Dominion Phosphate Company, has much improved during the past few months and an abundance of high grade ore is daily raised, mining operations are systematically conducted, and the mine is supplied with every facility for carrying on work to advantage. Last year's output from this property is now being shipped to Hamburg, and there is no doubt the whole will return \$4 per cent. The ore has been carefully dressed and is of a high grade.

The *Rapids* mine, owned by Mr. W. A. Allan, has been put in good shape during the past few months by Mr. George Smith, Mr. Allan's manager, and a quantity of very fine ore has been piled up. Actual mining on this property has been retarded by a delay in getting the machinery on the ground. It has been recently delivered, however, and is now in course of erection, and when this has been completed, active operations will be proceeded with.

The *Lansdowne*, adjoining the *Emerald*, now the property of the Dominion Phosphate Company, is being thoroughly prospected under the personal supervision of Mr. W. H. Smith, the company's manager, and many valuable deposits have already been exposed. On the west side of the property, facing the Riviere du Lievre, a large body of ore has been uncovered, and the indications are that it will prove to be of vast extent. The company is to be congratulated on its purchase of this location.

In the Township of Buckingham the *Emerald*, belonging to the Ottawa Phosphate Company, is the pride of the County. The mine itself appears to be in a body of phosphate, the extent of which has not yet been defined, capable of yielding many thousand tons annually for years to come. The mining captain in charge is a man of wide experience, as his work has shown, and Mr. S. P. Franchot, the genial business manager, and one of the directors of the company, has so systematized each department that everything goes ahead apace without hindrance and like clock work.

The force employed at the mines above mentioned and the daily output of each has not varied since our last report.

In the Townships of Templeton and Wakefield the mines are producing a large quantity of mineral, and preparations are being made to open new ground almost immediately.

TRANSPORTATION OF ORE.

From the *High Rock*, the *Star Hill*, and the *Emerald* mines, phosphate is being forwarded daily to the points of shipment, and the large piles which have accumulated at the railway stations and at points on the Ottawa River since the close of navigation last year are being reduced by shipments to Montreal, by rail and barge, respectively; from which port the ore will be forwarded across the Atlantic.

Phosphate Quotations.

The market continues dull and buyers are not offering such liberal prices as producers have been looking for. Nevertheless several sales have been recently reported at prices in lots that will establish a price for this season's shipments at one shilling a unit for 70 per cent. mineral, with one-fifth of a penny rise. For those who ship direct this, with the ruling low rates of freight, is quite equal to 1s. 3d. per unit for 80 per cent. with freight at past years rates.

FREIGHTS.

Owing to the scarcity of outgoing freights this season the phosphate shippers are deriving the benefit of unusually low rates. For some seasons past the rates have ruled at from ten to fifteen shillings, from Montreal to Liverpool. Shipowners are now offering tonnage to Liverpool and London by steamship at from three to six shillings.

At Tunora, New South Wales, a gold nugget was recently found which weighed 183 ounces and was valued at about \$3,300.

APPOINTMENT OF A SUPERINTENDENT OF MINES IN THE NORTH-WEST TERRITORIES.

Owing to the threatened influx of prospectors and miners to the mineral sections of the Rockies, and the probable impetus it will give to mining in that district, the Government has appointed a Superintendent of mines, and we understand that Mr. W. Pearce, Inspector of Dominion Land Agencies, has been selected for that position. The Superintendent of mines, under the new mining regulations, will be vested with authority to adjudicate all disputes that may arise among mine owners and will have a general supervision over all mineral locations.

MICA MINING IN CANADA.

During the past year some important discoveries of this valuable mineral have been made in Eastern Ontario and in Ottawa County, Province of Quebec. In the township of Loughboro' mining has been started on a property that, it is said, will yield fair merchantable mica. Mr. Allan's mine in Burgess has turned out a large amount, some of which has been cut into plates 10x6, and the mine is capable of yielding an almost unlimited quantity. The output of the mine is being regularly shipped to the American market and to dealers in Canada. Mr. Allan has some men engaged in opening up a property in Ottawa county, discovered late last autumn, which promises to develop into a mine of great value. The crystals are large and the quality of the mica is equal to any that has ever been mined in North Carolina or New Hampshire.

Phosphate of lime (apatite) was first discovered in Burgess, Ontario, in 1847. In 1860 the first shipment of the mineral was made, amounting to about 100 tons.

The earliest discovery of apatite in the County of Ottawa, was made in 1829, by Lieut. Ingall of the 15th Regiment, while engaged in certain geological explorations. Mining operations were not engaged in until 1873.

The entire phosphate beds of South Carolina, so far as discovered and defined, have been estimated to cover an area of 240,000 acres; it was not known that the rock possessed any commercial value until the year 1865.

Mineral Wealth North of Lake Superior.

A correspondent of the *Chicago Mining Review* has recently written a letter to that journal under the above heading, and, at the request of some of our subscribers in the West, we take pleasure in re-printing it, as follows:—

PORT ARTHUR, Ont. —The successful working of the Huronian Mining Company's gold and silver mine at Jack Fish Lake; the continuous production of both high and low grade ore at that mine; the satisfactory tests by its own mill, and the elaborate preparations for the continued working of both mine and mill in the future on a large scale, the recent purchase by the Vice-President of that company of the two adjoining localities, one on either side on the same lode, equally promising, for a large sum of money, the very recent developments at the Rabbit Mountain silver mine which showed it wonderfully rich and which produced many large nuggets of silver, some weighing as much as six pounds, the shipment of a car-load of \$645 per ton surface ore taken from the first ten feet of the shaft as it came, without selection, the agreements for the sales of the mines comprising four one hundred and sixty acre locations on that lode to two American syndicates for \$100,000, and of 96 T., another 160 acre location on another vein in the vicinity, for \$60,000, to an American capitalist, and of 97 T., of similar size on still another vein in the neighborhood, for \$60,000 to another American capitalist, the negotiations in progress for the purchase of other properties in that region of country, the arrangements made for active work on the opening of navigation by a strong Canadian company, at the Partridge Lake gold mines, the refusal of \$20,000 offered for the Slate River mine, the arrangements being made for the Laurentian Mining Company to commence explorations on their gold, silver, copper and other mining properties in this district, the organization of a new, strong company to handle the old Thunder Bay Mining Company's extensive properties, the developments made by Mr. Hasting in the silver slates on the north side of the Traministiguia River, the continued large workings of the copper mines at Michipicoten and Mamainse and the explorations being made at various points along the lake coast, are facts among the results of the winter's work which can now be pointed to with satisfaction as bringing into prominence the North Shore of Lake Superior as a desirable and convenient mining field.

And why should this not be so? The above references are practical instances of accomplished facts. Let us examine further. Enough has appeared in the columns of the *Mining Review* of the geology of the country, to show that in this mining field we are surrounded by the mineral bearing rocks so highly prized by the miner and which ought to produce the economic minerals in paying quantities. Enough has also appeared to establish the fact that these rocks are traversed by many dykes and numerous true veins. The instances which have been given of the mineral-bearing qualities of some of these veins are genuine evidences of their value, and they point to the advisability of their further development and to the advisability of further explorations to find and locate others. A very small portion of the country has been explored, and yet some very valuable mines have been discovered. Are there not others just as good? Believing as we do in the old saying that "there are as good fish in the sea as ever were caught," may we not expect by applying the fisherman's doctrine to mines, to hear of other discoveries of equal and perchance of greater value, as the explorers get over the ground? There is a great field for practical explorers, but in this country they require some capital.

The mineral bearing country extends a long distance. The varieties of minerals to be found are numerous. The Indians, who know the country best, could, if they would, point out many valuable mines but they have a superstition on this subject and as a rule they will not divulge what they know. It is a well known fact, however, that the best mines on the main land have been pointed out by Indians. Notable among these are the Huronian, the Rabbit Mountain, the Partridge Lake, and the Zinc mines. The Christian and better civilized Indians can sometimes be prevailed upon for a consideration to show a mine, but they will more often deceive and disappoint an explorer, occasionally in consequence of their greed, but more generally on account of their fear.

The Indians in their time have been badly fooled by the white men. Extravagant promises have been made them which have never been fulfilled, or when promises made have been partly fulfilled their bounty has been purloined from them. Great and often unnatural mining stories frequently come from far off lands, and by some people are believed. It is more difficult for capitalists and every class of men to realize that such treasures as are to be found in this district are so near and convenient to their homes. If the stories were told which could be told of this region of country they would not be believed because they did not come from some fanciful distant El Dorado, and yet probably finer specimens of gold bearing quartz, native silver and silver ore, besides copper and copper ore,

iron ore, galena, zinc blende and baryta, have come from this district than from any other on the American Continent, if we except the native copper specimens of the South Shore. Finer, free gold specimens may be shown from other mining fields, but we challenge comparison with the rich sylvanite ore which the Huronian mine produces. The sylvanite ore of this mine is one of the rarest and most valuable minerals known to miners. The free gold specimens from the Partridge Lake mine taken to the Centennial Exhibition compare favorably with those of any country. The native silver which was taken from Silver Islet cannot be excelled by any mine's production. We doubt if any silver mines ever surpassed in richness the nuggets of the black sulphide of silver which came from the Rabbit Mountain mine and the mines we have referred to in that neighborhood. Our copper ore was thought worthy for the Paris Exposition. Our specular iron ore has not been surpassed to our knowledge, and a man would have to go far to find finer specimens of galena than have been found in this district. We know of no better zinc blende ore on the American Continent than is to be found here, nor have we seen in the manufactories where baryta is used such specimens as can be procured from our veins. These instances are of known deposits. As to the unknown, it is no new story in this district when an Indian speaks of a mountain of iron, or vein of silver from which he can cut silver bullets for his rifle, but it is another thing to get him to show it. Our few mining men are old soldiers in mining discipline and have been "under fire." They do not easily get excited. They have been accustomed to seeing and handling both the precious and base metals, and mineral bearing veins do not unnecessarily excite them. Hence it is that the country is not subjected to a wild and extravagant excitement. That period has passed over this district and it is fortunate that it has, because we are now getting down to solid, practical work, and beginning to compare the size of our veins with those of other countries, to estimate the cost of mining by the ton, and to calculate the value of our yield by large mill tests. We can afford to let the raw recruits of the army of mining speculators go to the Rockies or other distant lands where the first discoveries of the precious metals create undue excitement, and a rush of fortune seekers who know not a true fissure from a gash vein, or the average value of a lode when found, or the proper methods and cost of working the different kinds of ore. This district has had all that excitement. What we now need is more practical mining men and capital to make productive our veins of low grade ore. It has been in the past the misfortune of this district that several promising properties have been held by speculators or land owners who neither know the real value of their holdings, nor would take the necessary steps to ascertain it. But now parties who have been holding properties expecting others to make them valuable by developments in their neighborhood, are awakening to the knowledge of the fact that as every tub must stand on its own bottom, so must every mining venture, and that therefore some development is essential to every mining property having any promise. The time for selling a mine in this district on a pocket specimen has passed away, and men are not now so easily misled by assays. If people are inclined to compare this country with those from whence come stories of new fields of silver ore assaying from ten to fifteen thousand dollars per ton, we can point them to the mines in the Rabbit Mountain district, and to many veins from which assay samples can be had which will far exceed that by having only a rich nugget specimen assayed.

We have seen in the public press statements that new gold discoveries have been made where the ore assays from twenty to thirty thousand dollars per ton. It would be an easy matter to get assay samples from either the Huronian or Partridge Lake mines, which would assay over one hundred thousand dollars per ton. Yet instances like these are no indications of the value of the lodes. The Huronian mine is a reliable, steady producer. It is a large well defined lode with clean cut walls, having the gold evenly disseminated throughout the veinstone. Its average mill work does not yield over \$35 per ton, yet it is considered a most valuable mine. Dr. Selwyn, the Director of the Geological Survey of Canada, visited it last summer and pronounced it, in reporting to his government, the most promising mining venture of the district. It is but fair to say, however, that although at that time he had visited the Rabbit Mountain mine he had no opportunity of expressing his opinion on the more recent developments made at it and on the other veins in that region. The car load of surface ore from the Rabbit Mountain mine recently shipped, averaged to the smelters in Newark, N. J., and realized to the owners, \$645.41 per ton. This speaks volumes for this mine, especially when it is known that ore averaging \$10 per ton from its large vein, if concentrated and treated on the spot would pay handsomely. The 96 T. and 97 T. veins are equally promising, although not quite so large. They have each produced ore assaying over \$250 per ton. The instances given of other veins in former articles which appeared in the *Mining Review* have resulted in enquiries being made about them from various practical and experienced quarters, thus demonstrating that this country is beginning to possess the attractions of a legitimate and profitable mining field. Other instances could be given, but those which have been mentioned are

sufficient to invite curiosity and bring the country into notice. Every mining venture in this district cannot be expected to be a success, but the ones referred to are very likely to be. It is a wonder that a country so conveniently situated to the markets for b'ion and base metals, and possessing such an admirable mining law, where land not already taken up can be purchased from the Government by either a citizen or a foreigner for \$1 per acre, where there are no royalties or other crown dues on the minerals, where labor is so cheap, mining timber and water so abundant, and where the climate is so healthy and invigorating, should have remained so long but partially explored and almost wholly undeveloped."

The "Huronian" Mine, at Jack Fish Lake, is owned chiefly by gentlemen of Ottawa. (Ed. C.M.R.)

CANADA CONSOLIDATED GOLD MINE.

This property is situated in the County of Hastings, Province of Ontario, and has been the subject of frequent enquiry for some time past by people who are more or less inquisitive as to its industrial condition. The opinions which have been expressed by Mineralogists, Mining Engineers and other scientific men would lead to the conclusion that the mine is capable of producing ore in abundance, carrying gold in paying quantities, but, strange to say, although an incredible amount of money has been expended on its development and equipment the property has been a source of heavy loss to its owners. Some months ago the company leased the mine to a syndicate who have ever since been working it at a loss, and who are naturally enough becoming dissatisfied with the results, and it is therefore not unlikely that a change will take place in the near future and work will be proceeded with under some new organization. The true secret of the trouble, up to the present time, has been mismanagement, for, although there is abundance of ore that, as scientific men have invariably pronounced, can be profitably worked, those who have conducted operations have failed to realize any profit. Recently the monthly expenditure has reached \$7,000 and the returns \$4,000, showing a monthly loss of \$3,000, and it is to be supposed that the present lessees are incapable of overcoming the difficulty. During the present month Mr. Eugene Coste, M.E., a graduate of the National School of Mines, Paris, and a gentleman of recognized ability, visited this mine and, on his return to Ottawa, expressed himself very favourably impressed with the property as regards the amount of ore that can be mined. Mr. Coste has given it as his opinion that the mine is a very valuable one, capable of yielding gold in paying quantity, but that up to the present time a proper method for treating the ore has not yet been adopted. He has returned to Hastings to further investigate the mines in the district for the Geological Survey, and while in the neighborhood it is to be hoped he will find an opportunity to visit the Canada Consolidated and offer to those in charge such advice as his scientific knowledge and experience may suggest.

GOLD MINING IN NOVA SCOTIA.

The total yield of gold for the year 1883, according to the official report of the Department of Mines, was 15,416 oz., 9 dwts., 23 grs., being, with the exception of the year 1877, the largest return since the year 1871, when a production of 19,227 oz. was recorded. In the year 1865 there were 24,423 tons of quartz crushed, yielding 25,454 oz., 4 dwts., 8 grs., equivalent to 1 oz., 20 grs. per ton, the average earnings per man amounting to \$2.15 per day; whereas, during the past year, there were 25,954 tons of quartz crushed, which returned 15,416 oz., 9 dwts., 23 grs. of gold, equivalent to but 10 grs., 21 dwts. to the ton, while the average earnings per man amounted to \$2.84 per day, showing that, while the quartz mined in 1865 was one hundred per cent richer in gold than that mined during 1883, the men employed during the past year actually earned more money individually for the owners of the mines. This is, of course, attributable to the increased facilities for mining and treating the quartz advantageously and to the value of experience. The richest returns last year were made by the Gallagher Gold Mining Company, in Stormont, and the Oxford Gold Mining Company at Chezetcook; the former extracted 1,917 ounces from 551 tons of quartz; and the latter 2,494 oz., 5 dwts. from 1,475 tons of quartz, an average yield of 1 oz., 13 dwts., 10 grs.

The result of last year's operations in the gold districts of the Province goes to show that by employing suitable mining plant and machinery best adapted to treating the ore, and by studying economy in the management of mining and milling, the numerous mines of Nova Scotia can be made to yield profitably.

The stock of the Calumet and Hecla Mining Company has declined to \$172 per share.

The first discovery of gold in Hastings County, Ontario, was made by Mr. C. Robb, M.E., in 1864, while engaged in a mineral exploration for the Canada Company. The specimens were assayed by Dr. A. A. Hayes, of Boston, Mass.

NOVA SCOTIA MINING NOTES.

In the matter of the Salmon River Gold Mine entitled on the docket Manley & Fielding vs. Mott et al, Judge Thompson last week gave judgment in favor of the defendants, thus confirming them in possession of this valuable property. It is rumored that the plaintiffs intend taking out an appeal, but the general opinion among mining men is that the matter had better be allowed to rest as it is. There is a feeling that this decision will benefit our mining interests by putting mining claims on a more secure basis than heretofore, and that thus investors from abroad will be more ready to put their money into our mines.

The Salmon River Gold Mining Company of Nova Scotia has just added eight more stamps to its mill, increasing the number now running to forty-three stamps. This company started about three years ago with five stamps, and has been steadily increasing its crushing power as the mine has developed. The main vein is from 2½ to 9 feet in width, and mills from \$10 to \$100 per ton; the cost of mining and milling is \$2.50 per ton. All machinery is driven by water power.

Some five years since a prospector discovered in the Cariboo district, Moose River, a number of boulders that gave indications of coming from some rich lode in the vicinity. He proposed calling the lode, when it should be discovered, the Lake lode. Search has been carried on more or less vigorously, but persistently, during the intervening period but without success, till a few days since when it was found. The surface indications are that it will yield at least two ounces to the ton of ore.

Mr. William Bruce, the lessee of Mr. Torquay's mine at Moose River, Cariboo, came to Halifax on Monday, May 12th, bringing with him a brick of gold from that mine weighing 49 ounces and valued at \$930. It was the result of the work of seven men during April, and was extracted from about 60 tons of ore. —Halifax New Era.

Promising gold discoveries have been recently made in Hants County, N.S. A gentleman was in Ottawa not long since and exhibited some very handsome specimens of quartz which he had brought with him from the district.

A recent examination of the Coxheath ore (copper) by a New York mineral expert has led him to make a most favorable report to the company.

Holt City is said to be the headquarters for the Rocky Mountain prospectors, and parties are daily leaving there for the mineral districts. Others are organizing, and the mining fever is at its height.

GENERAL MINING NOTES.

The main shaft at the "Pine Portage" mine, Lake of the Woods, has reached a depth of about 70 feet, and a six stamp mill is at work. The quartz is yielding gold in paying quantity.

It is reported that in the vicinity of Silver City, N.W.T., there are excellent indications of alluvial gold and that placer mining will, in all probability, be proceeded with vigorously.

From 1858 to the close of 1883 the province of British Columbia produced \$47,935,963 in gold. In 1864 the yield was \$3,735,850, the highest in one year since gold was discovered in the province, while the lowest yield was that of 1883, which only reached \$794,252.

We have not received our monthly report from the Beauce gold mines, but were pleased to learn from a gentleman who was in Ottawa recently and had just come from the district that work was progressing satisfactorily and that the mines in operation were paying handsomely.

Mining operations at the Lake of the Woods are at a standstill. This district is rich in ore, and would compare favorably with some of the best known mineral regions of the United States, but owing to the lack of the necessary capital miners have been unable to work their claims continuously or to advantage.

A telegraph despatch from Winnipeg states that samples of silver ore from the Rabbitt Mountain mine have been received at the C. P. R. Land Commissioner's Office. The largest specimen contains, according to the assay, \$10 worth of silver, and would yield \$4,600 per ton. The silver is mixed with 13 per cent. of sulphur. There are also specimens of silver-bearing rock which would yield \$3,600 per ton.

Sierra Nevada Gold and Silver Mine.

An interesting illustration of how the value of mining stocks in the United States has been affected by manipulation is contained in an article which has appeared in the *New York Mining Record* as follows:—

"In September, 1879, the stock of this company (Sierra Nevada) was sold up to \$270 per share and at prices ranging between \$68 and \$270,

no less than 53,644 shares changed hands. During the following month as many as 28,613 shares were sold at prices descending from \$260 to \$135, while during November, 1879, as many as 161,052 shares were sold in San Francisco at prices ranging between \$200 and \$38. During May the same year the same stock had sold as low as \$2.75, and 49,715 shares had changed owners at prices ranging between that and \$5, while during July, 1879, as many as 157,703 shares had sold for prices ranging between \$5.12 and \$11.12, and during August sales were made as low as at \$10.87. This appreciation of the stock within forty or fifty days of \$259.13 per share was manipulated in a manner and by means and methods the immorality, or rather criminality, of which was greater or more harmful, under every aspect, than the acts of the highwayman or of the burglar; for at bottom, the appreciation of the price of the stock in a few weeks of some \$250 per share which was known to be valueless to those who effected the appreciation was as much a planned robbery of those duped into the purchase as if the same men had conspired to acquire the same money by the robbery of the several banks in which it may have been deposited immediately previous to being withdrawn for payment for Sierra Nevada stock during September, 1879.

Be this as it may, since September 1879, when the stock was thus inflated by carefully contrived false representations, reports of an uncovered bonanza—not as much as \$250,000 have been extracted (during 1880 and 1881) from the mine in gold and silver while no less than \$2,150,000 have been extracted from the pockets of the stockholders upon the pretext of searching for the bonanza which, we repeat, was asserted positively to have been found at least as early as the middle of September, 1879. Under such circumstances we can imagine nothing more fatuous, nothing more unjustifiable, than the further expenditure of one cent of money in the hunt for ore at any such depth as 3,100 feet. No fact can be more unquestionable than this, that at no time since 'labor's thousand arms of sinew and of metal all-conquering' have been wisely exploring the recesses of all parts of the earth for gold and silver, no amount of either metal worthy of note has been taken from below 2,000 feet; and for that matter, the greater part of both as yet won from the earth, have come from a depth above 1,000 feet."

PERSONALS.

Mr. S. P. Franchot, a Director of the Ottawa Phosphate Company, has recently returned from New York, after an absence of nearly three weeks, and is now attending to the Company's interests at their famous *Emerald* mine.

Mr. Pickford, President of the Phosphate of Lime Company, London, England, was in Ottawa during the month, en route to the Company's *High Rock* mine in the Township of Portland West. Great changes have taken place in this phosphate mining district since Mr. Pickford's last visit to Canada.

Mr. W. H. Williams, President of the Union Phosphate Mining and Land Company, was in Ottawa in the early part of May and proceeded to the Company's property in Portland West. Mr. Williams had not long returned from England, having gone there to dispose of last year's output of the mines.

Mr. F. J. Falding, of New York, who has for some time been identified with Canada's phosphate industry, returned to Ottawa during the month, after an extended trip through the phosphate district. He gave it as his opinion that the mines were never looking more promising than at the present time.

PROTECTING IRON ORE

IN THE UNITED STATES

In connection with the effort that has been made by the iron manufacturers of the United States to have foreign ore placed on the free list, in opposition to the wishes of the ore producers, the *N. Y. Mining Record*, in a late issue has the following:—

"Perhaps there is no man in this country more thoroughly conversant with the needs of the iron mining industry than Hon. Geo. H. Ely, of Cleveland, who was invited to make an argument in behalf of that interest before the Ways and Means Committee of the House. His views on the Morrison tariff bill, which proposes putting iron ore on the free list, are given below, as expressed to a correspondent of one of the Cleveland papers:

'I consider that such an abolition of the duty would irreparably injure the very extensive, intimately connected, and interdependent industries now based on the Lake Superior iron ore production. Morrison considers iron ore raw material. So it is, dormant in the mine, but the moment you apply labour and capital to it, it is a product of industry as much entitled to protection as steel rails or woollen goods. The Marquette and Menominee districts alone have \$51,000,000 employed in mining ore, and both districts support 50,000 people, and the capital employed in railroads and steamers for transporting ore to our furnaces and mills amounts to over \$30,000,000 more. American miners receive over two dollars per day; Spanish miners forty-five cents. To place foreign ore on the free list would be to strike a blow at American labour and American industries. The United States contains every variety of iron ore, favourably distributed and in inexhaustible quantities.

American labour and American capital should be protected in the process of utilizing these enormous values, which otherwise would be useless under our soil. Of course it would be supreme folly to depend on any foreign nation in the remotest degree for a product lying at the basis of American iron and steel industries, now so large as to almost control the industrial and financial affairs of our country. The North-West and Cleveland should be alive to the threatened disaster."

Cost of Producing Pig Iron.

The *Iron Trade Review*, of Cleveland, O., quoting from a letter of Mr. J. B. Moorhead to the Ways and Means Committee, of Washington, and from Mr. Joseph D. Weeks' series of articles, which appeared in the *Philadelphia Press*, has drawn some interesting comparisons concerning the cost of producing

pig iron in the Cleveland district of England and in the Lehigh Valley of Pennsylvania, as follows:—

Raw Material.	England	Lehigh Valley.
Ore	\$4 09	\$9 10
Coke and Coal	3 20	5 50
Limestone	45	1 00
Labour, Running Repairs, etc.....	2 25	2 70
Total cost per ton..	\$9 99	\$18 30

And adds that probably the divergence in the above figures would be still greater were the items of renewal of plant and interest on investment added to the totals. It should be remembered, however, that there are other localities in this country more favourably located for iron manufacture than the Lehigh region; nevertheless the fact remains that, because of cheap labour and exceptionally favourable facilities, English manufacturers stand as a constant menace to the iron furnaces east of the Alleghanies.

For the information of those of our readers who have invested in U.S. Mining Stocks we publish the following:

ASSESSMENT DIRECTORY.

(N.Y. Mining Record.)

This table is prepared from the official advertisements published by the organ of the San Francisco Stock Exchange.

[Stocks are sold in New York with assessments paid fifteen days anterior to the date of delinquency at office of the Company, as given in the table below.]

Name of Company.	No.	Amount.	When Levied.	Delinquent in Board.	Delinquent in Office.	Day of Sale.
Sierra L & I Co.....	12	50	April 1...	.....	May 6...	May 26...
Ophir.....	47	1 06	April 3...	May 4...	May 6...	May 26...
Guide Pub. Co.....	15	00	Mar. 31...	.....	May 7...	May 26...
La Grange D. & H.	8	50	Mar. 31...	.....	May 5...	May 26...
Delaware.....	5	05	Mar. 24...	.....	May 6...	May 26...
Murchie.....	8	15	Mar. 31...	.....	May 9...	May 27...
Savage.....	29	50	April 5...	May 6...	May 9...	May 28...
Lady Washington.....	4	10	April 4...	May 5...	May 9...	May 29...
Puget Sound Iron.....	7	1 00	Mar 12...	.....	April 25...	May 29...
El Capitan.....	2	10	April 2...	.....	May 10...	May 31...
W. Vancouver C.....	5	10	April 8...	.....	May 12...	May 31...
Cal. Jute Mill C.....	31	50	Mar. 3...	.....	May 1...	June 2...
Alaska S. P. & F.....	1	10	April 10...	.....	May 17...	June 2...
Andes.....	24	25	April 15...	May 16...	May 19...	June 9...
Tilden.....	3	05	April 15...	.....	May 19...	June 9...
Mexican.....	26	50	April 16...	May 17...	May 20...	June 10...
Salinas Flour Mill.....	8	00	April 11...	.....	May 21...	June 10...
S. F. Fuse Mfg.....	61	00	April 22...	May 22...	May 24...	June 10...
Peerless.....	1	25	April 8...	.....	May 17...	June 11...
Best and Belcher.....	29	50	April 15...	May 16...	May 21...	June 11...
Rainbow.....	10	10	April 15...	.....	May 16...	June 11...
Chol'ar.....	13	50	April 21...	May 19...	May 23...	June 12...
Arganda.....	7	10	April 16...	May 17...	May 20...	June 16...
San M. & La T. Con.....	5	50	April 28...	.....	May 9...	June 16...
Tinite Powder.....	9	1 00	April 18...	.....	May 27...	June 23...
Con. Imperial.....	20	95	April 30...	May 31...	June 5...	June 26...
Eschequer.....	20	20	May 3...	June 3...	June 6...	June 26...
Golden Fleece Gravel.....	32	\$50	May 7...	.....	June 9...	June 26...
Dayton.....	12	12	May 2...	June 2...	June 7...	June 26...
Seg Belcher.....	22	1 00	May 9...	June 9...	June 11...	July 1...
Indian Spring Dr.....	2	03	May 3...	.....	June 5...	July 2...
Sierra Nevada.....	79	1 00	May 10...	June 10...	June 12...	July 2...
Hale & Norcross.....	82	75	May 10...	June 10...	June 12...	July 2...
Champion (Bod).....	12	15	May 7...	June 7...	June 12...	July 7...
Mayflower Gravel.....	24	10	May 9...	June 12...	July 7...
McElroy Gravel.....	17	10	May 7...	June 10...	July 10...

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In all respects.

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Notice to Contractors.

SEALED TENDERS addressed to the un-
dersigned, and endorsed "Tender for
supplying Coal for the Public Buildings,
Ottawa," will be received at this office until
Monday, 9th June, at noon.

Specification can be seen and forms of
tender obtained, on and after Thursday, 23rd
inst., at this office, where all necessary infor-
mation can be had on application.

No tender will be considered unless accom-
panied by an accepted bank cheque of \$250 to
order of Minister of Public Works.
The Department will not be bound to
accept the lowest or any tender.

By order,
F. H. ENNIS,
Secretary.

Department of Public Works,
Ottawa, 20th May, 1884.

NOTICE TO MINERS.

POWDER, DUALIN FUSE, DETONATORS,
STEEL, IRON, CHAIN, ROPE,
WELLS, PICKS, WHEELBARROWS,
And all Miners' Supplies For Sale at

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SEALED TENDERS, addressed to the under-
signed, and endorsed "Tender for a Break-
water, Port Arthur," will be received until
Monday the 30th day of June next, inclusively,
for the construction of a

BREAKWATER
AT
PORT ARTHUR, THUNDER BAY,

according to a plan and specification to be
seen on application to John Niblock, Esq.,
Superintendent, Canadian Pacific Railway,
Port Arthur, and at the Department of
Public Works, Ottawa, where printed forms
of tender can be obtained.

Persons tendering are notified that tenders
will not be considered unless made on the
printed forms supplied, and signed with their
actual signatures.

Each tender must be accompanied by an
accepted bank cheque, made payable to the
Honourable the Minister of Public Works,
equal to five per cent. of the amount of the
tender, which will be forfeited if the party
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.

The Department will not be bound to
accept the lowest or any tender.

By order,
F. H. ENNIS,
Secretary.
Department of Public Works,
Ottawa, 22nd May, 1884.

GRAPHITE.

Wanted, fair average
samples of about 1 lb. each,
with prices, F.O.B. Address
J. S. Merry, Assay Office,
Swansea, Wales.

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- W. H. Williams.

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NOTICE TO CONTRACTORS.

SEALED TENDERS, addressed to the
undersigned, and endorsed "Tender for
dredging River Kaminstiquia," will be re-
ceived until Monday the 16th day of June
next, inclusively, for dredging across the
shoal at the mouth of the River Kaminsti-
quia, Thunder Bay, Lake Superior, according
to a specification to be seen on application
to John Niblock, Esq., Superintendent, Canadian
Pacific Railway, Port Arthur, and at the
Department of Public Works, Ottawa, where
printed forms of tender can be obtained.

Persons tendering are notified that tenders
will not be considered unless made on the
printed forms supplied, the blanks properly
filled in, and signed with their actual signa-
tures.

The Department will not be bound to
accept the lowest or any tender.

By order,
F. H. ENNIS,
Secretary.

Department of Public Works,
Ottawa, 22nd May, 1884.

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TENDERS.
COAL.

Are requested for the undermentioned de-
scription of coal, to be supplied for the use of
Government House, Ottawa,

	Tons
Bituminous or soft coal, per ton of	
2,000 lbs.....	206
Anthracite, hard do.....	180

Samples of each coal, and each size of hard
coal, with the name of the mine, to be sent in
with tender. This coal before acceptance to
be screened, either at the Wharf or Railway
Station, in the city of Ottawa, through a 1
inch screen, at the expense of the contractor.
The screenings and dross will neither be ac-
cepted nor purchased, and must be removed,
if on any Government property, within the
week from date of screening.
The probable quantities will be:

	Tons
Hard coal, size.....	180
Bituminous coal.....	266

The contractor, for any or all of the above
mentioned kinds or descriptions of coal, to
state his price delivered in the coal sheds at
Rideau Hall grounds, or such other premises
within the city of Ottawa, or Village of New
Edinburgh, as may later be pointed out.

The contractor to deliver before 1st August
next the whole quantity of both hard and soft
coal contracted for. Any delay in the deliv-
ery of the same after the above date, will sub-
ject the contractor to a penalty of 10 cents
per ton for each day's delay, which sum will
be deducted from final estimate.

All coal to be free from rubbish or dirt and
to be weighed, at the expense of the con-
tractor, in the presence of Mr. Wm. Hut-
chinson, Clerk of Works, Rideau Hall, on such
scales as will be named at time of delivery.
All coal will also be subject to inspection of
Mr. Hutchinson, and must be approved of by
him before acceptance.

If the quantity and quality is not in accord-
ance with the terms of the contract and qual-
ity is not equal to sample, the Governor-
General's Secretary shall have power to can-
cel and annul the same, and reject or grant
the contract, or any part thereof, to another
party, at the expense of the contractor, and
this without previous notice, protest, adver-
tisement or suit at law; nor shall the con-
tractor be thereby entitled to any compensa-
tion, indemnity or damage whatever, but will
be subject to pay and reimburse the Gover-
nor-General's Secretary any extra sum or
sums paid out over and above contract agreed
on: this to be recovered by usual course of
law, if need be.

Separate tenders will be received for hard
and soft coal.
All tenders will be considered as Customs
duties paid by contractors as no "free entry"
will be entertained.

The name of the party or parties tendering
with their address in full, must be attached
to the tender.

Each tender for coal to be accompanied by
an accepted bank cheque of \$25, payable to
the order of the Governor-General's Secre-
tary, which cheque will be forfeited if party
or parties tendering fail to sign contract in
one week after being notified of acceptance
of tender. (Signed)

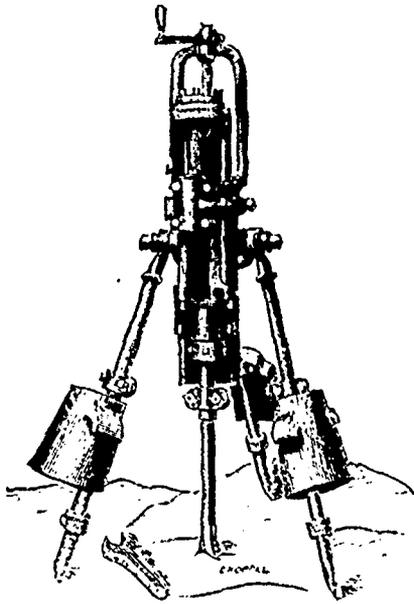
MELGUND,
Governor-General's Secretary.
Government House,
Ottawa, 23rd May, 1884.

"The undersigned hereby agrees to furnish
and deliver the following coal strictly in
accordance with the terms of the annexed
specification, and for the price per ton set
opposite each kind, viz:—

	Rate per ton	Total amount
Anthracite (name of mine)	\$	\$
Tons of 2,000 lbs of "Fur- nace"		
Tons of 2,000 lbs of "stove" bituminous (name of mine)		
Tons of 2,000 lbs of.....		

Name and residence of
party tendering

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Parties offering crystals for sale will please mention the colour, length and diameter—large ones preferred.

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IN THE
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Section.	Town-ship.	Range—West.	Acres.
	3	14 23	640
	17	14 23	640
	15	14 23	640
	19	14 23	640
W $\frac{1}{2}$ and N. E $\frac{1}{2}$	35	14 23	480
N $\frac{1}{2}$ and S. E $\frac{1}{2}$	19	15 23	480
S $\frac{1}{2}$ and N. E $\frac{1}{2}$	15	16 23	480
E $\frac{1}{2}$ of N. W $\frac{1}{2}$	15	16 21	80
S $\frac{1}{2}$	2	17 23	320
N $\frac{1}{2}$	9	15 23	320
S. W $\frac{1}{2}$	31	18 26	160

4,880

Title direct from the Crown.

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In the Township of Portland West,

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Mining Rights on S $\frac{1}{2}$ of Lot No. 16, in the 1st Range.
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