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## MINING REVIEW

VOL. 2.—No. 8.

1884—OTTAWA, AUGUST—1884

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## Canadian Mining Review.

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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.*

Much has been accomplished during the past two years towards developing the mining industries of Canada. From ocean to ocean prospectors have been busy, and they have not laboured in vain. Rich deposits of gold, silver, copper, iron, coal, mica, phosphate and asbestos have been discovered, and mines of all these minerals are now being vigorously and profitably worked. Gold mining in Nova Scotia is now on a paying basis, and it is expected that the mines of British Columbia will return a larger profit during the present year than they have done for some years past. In Beauce, Province of Quebec, gold mining is paying

handsomely, and new ground is being opened that is pronounced very rich. At the Lake of the Woods, gold mines have been opened within the past two years of which most favourable reports have been made as to the richness of the quartz, but unfortunately lack of capital has retarded operations at some of the most valuable locations in this district. Important discoveries of silver have been made by the Silver Islet Company on their property on the north shore of Lake Superior, which will, in all probability, lead to the resumption of active operations by this company at an early date. Further inland, in a north-westerly direction, the developments at the Rabbit Mountain and Huronian mines have proved that region to be rich in silver; and, in fact, it would be difficult to name any silver mine in America that produces ore carrying a larger percentage of precious metal than either of these mines. Mica mining in Eastern Ontario has become a steady industry, and is rapidly increasing in importance, and in Villeneuve Township, County of Ottawa, a mine of this mineral has been opened that promises to become an abundant producer of mica equal in quality to the product of the New Hampshire and North Carolina mines. A large amount of asbestos, of superior quality, is being profitably mined in the Eastern Townships by Canadian and American mine owners. In Central Ontario some of the iron mines have been vigorously worked during the past year, and heavy shipments of the ore are now being made over the Central Ontario Railway to Weller's Bay, on Lake Ontario, from

which point it will be forwarded to Cleveland. At the phosphate mines in Ottawa County there is probably more activity than in any mining district in the Dominion. This industry has become one of great importance in the country, though it may be said to be yet in its infancy, and the annual output of the mines is steadily increasing. The mines are capable of yielding a much larger output, which fact is now being demonstrated by the introduction of steam drills and other machinery. Mining in Canada is making steady progress.

Referring to the discovery at Silver Islet, the Thunder Bay *Sentinel* remarks: "While not wishing to cause any undue excitement in the matter, we can hardly refrain from regarding the discovery of silver at Silver Islet on the mainland as a very important event. The nature of the surface ore taken out at present is of precisely the same character as that originally found upon the Islet, and it is to be hoped that the labours of the men now employed in making further investigations will bring results similar to those which induced the owners of the mine there (now closed) to sink so many thousands of dollars in developing it. Should further investigation justify the company in sinking a shaft and working it, the operations would, of course, be carried on at a much less expense than was the case at the Islet mine. The latter being entirely under water, considerable expense and trouble was always more or less a drawback to the success of the work, and had the vein not been of a

singularly rich nature this fact alone would long since have caused the owners to abandon it."

## British Association.

The programme of the Citizens' Committee for the reception of the members of the British Association for the Advancement of Science visiting Ottawa on Saturday, 30th August, will be as follows:—

Upon the arrival of the visitors there will be an informal reception at the railway station. Carriages will be in readiness to convey the party to the Drill Hall, Cartier Square, where an address will be presented to the visiting members and a reception will be tendered them by the citizens. The party will afterwards be driven to the Russell, where luncheon will be served at one o'clock. After luncheon the visitors will be shown through the Houses of Parliament, the Library of Parliament, the Departmental buildings, the Geological Museum, the National Art Gallery, etc. The party will then be driven through the Major's Hill Park, Government House Grounds, thence to the Waterworks, the Timber Slides, the Chaudiere Falls and the Sawmills. Factories and other places of interest will also be visited if time permits. The visitors will be driven to the railway station in time for the departure of the train.

It is not improbable that a number of the members of the Association will visit the Phosphate mines in the vicinity of Buckingham, but it will be necessary to consult individual members, after their arrival at Ottawa, before any definite arrangements can be made with this object in view. Such an addition to the programme is most desirable and it is to be hoped the committee will succeed in carrying it out.

## CANADA'S PHOSPHATE TRADE.

Phosphate mining in the County of Ottawa assumes larger proportions month by month. The mines, during the past year, have developed so satisfactorily that their owners have been encouraged to introduce machinery

and to thus adopt a new system of mining. The force of miners employed at the present time is greater than at any earlier period since this industry was started, the mines are much more productive, the output is more economically handled, facilities for transporting the ore have been greatly increased, freights to Montreal have been reduced and the importance of shipping the mineral in a high state of purity is now well understood by the mine owners. Since the opening of navigation this year, phosphate shippers have been particularly favoured by low freights to British and European ports, and already a large amount of ore has gone forward. In Montreal, at the various shipping points along the line of the Canadian Pacific Railway, and at the mines, there is a large quantity awaiting transportation, and the amount is being daily added to.

A number of prospectors have been out during the summer exploring the phosphate bearing district, and important discoveries have been made. Many of the recently discovered deposits have been partially opened up for the purpose of testing the properties preparatory to mining operations being engaged in on a permanent basis, and by next season some of these locations will, no doubt, yield abundantly and help to swell the annual output of the county. At the beginning of the year we predicted that about twenty-three thousand tons would probably be the total amount of phosphate to go forward before the close of navigation. The shipments will certainly aggregate 23,000 tons from the Ottawa district alone. This will be in excess of former shipments made in any one year from all the Canadian mines combined, and the quality of this year's output is of a higher grade than any that has ever before been shipped.

### THE MINES.

*High Rock Mine.*—Of the mines in the Rivière du Lièvre district this one has been worked more steadily and has produced more phosphate than any other now in operation. For some years past the annual output has been increasing and this season the owners expect to forward not less than 6,500 tons. The daily yield of this mine has been increased by the introduction of steam power and the adoption of an entirely new system of mining. Steam drills and hoists are now in use where hand power alone had been employed; new

ground has been broken during the summer, which promises to lead to rich deposits; the force employed is greater than ever before, numbering 110 men, and the daily output averages about 30 tons.

*Star Hill Mine.*—Work was first started on this property by the Union Phosphate Mining and Land Company in May of last year, and for some months afterwards the attention of the company was directed chiefly to the erection of buildings and machinery, the opening of roads and in making other necessary preparations for permanent work. All this was thoroughly done, and mining operations have since been conducted on businesslike principles. A very small portion of this company's territory has yet been opened up, and, to judge from the appearance of present developments, it is not likely that it will be found necessary to break new ground for some time to come. The openings that are now being worked are yielding abundantly, and the amount of phosphate that will have been shipped from this mine during the present season will aggregate about 6,000 tons, a portion of which was mined last year but not forwarded. This, in addition to the erection of buildings, the construction of a tramway and other improvements on the property, and taking into consideration the fact that the company broke ground but a little more than a year ago, is certainly a most satisfactory showing and speaks well for the future of *Star Hill*. This mine gives employment to an average force of 80 men.

*North Star Mine.*—The result of the past year's operations at this mine has been most satisfactory to its owners, the Dominion Phosphate Company, who have saved no expense in thoroughly equipping the property and opening the mine in such a manner as to admit of permanent operations being carried on to best advantage. The force employed at present averages forty men, and the daily output varies from 10 to 12 tons. The product of this mine has the reputation of being of a very high grade not excelled by that of any other phosphate mine in the country. This company has 30 men employed at its "Washington" mine, and work is progressing very satisfactorily. The mine is developing into a valuable property.

*Little Rapids Mine.*—During the past two months a steady improvement has been noticeable in the principal shaft, and some new ground has quite recently been opened, exposing an extensive deposit of mineral. In the shaft the body of ore continues to increase in size, and in the drifts the men are working in solid mineral. The phosphate that is being raised from this mine is quite equal to that of the *North Star* if not of a higher grade.

*Emerald Mine.*—From the main body of ore at this mine the output is now being handled at a much reduced cost to formerly. Hoisting has been dispensed with, and both the mineral and raise are now run out on a tramway through a tunnel. Everything connected with the management of the Ottawa Phosphate Company's mining operations is being thoroughly systematized with a view to raising and handling the product of this valuable mine at a minimum of cost. The body of mineral now exposed on the property is enormous and apparently inexhaustible. The average force of men employed does not exceed 65, and during the month of July the output was upwards of 600 tons of high grade phosphate, dressed and deposited in the ore bins. The company proposes extending operations, and is now making preparations for the accommodation of a larger number of miners. A new boarding house is in course of erection capable of sitting one hundred men in the dining room, and additions will be made to the other buildings on the property. The shipments from this mine for this season will aggregate about 5,000 tons.

Numerable less important mines than those mentioned are being worked in the Du Lièvre district, and are contributing largely to the general output. The mineral that has been forwarded from these mines is of a very fair quality and gives evidence of careful cobbling.

*The Lièvre River Phosphate and Land Company*, incorporated on the 4th July of this year, has already begun operations on some of its property, and we understand that good results have been attained. We are not in possession of any particulars of this company's operations to date, but hope to be informed in time for our next issue.

*McLaurin Mine*, in the Township of Templeton, continues to be as productive as at any time since the mine was opened and the mineral at the present level appears to be of a more solid character than it was nearer the surface. The force employed on this property is not so large as at the other important mines to which reference has been made, but the deposit is very productive and the mineral raised is of a very high grade. This year's shipments have amounted to about 2,500 tons, and the number of men employed averages 30 to 35.

*The Gemmill Mine*, in Wakefield Township, has produced more phosphate this season than last, and some new openings that have been made give promise of yielding large quantities of high grade ore, in fact the mineral that has been shipped from this property during the past five or six years has invariably assayed, in cargo lots, above \$2 per cent.

The total amount of Phosphate forwarded from the mines in the Rivière du Lièvre district since the close of navigation of 1883 has amounted to 16,590 tons. About 75 tons are now being forwarded daily to the C.P.R. station at Buckingham and to the shipping point on the Ottawa river.

### Phosphate Quotations.

Latest advices from Liverpool, London and Glasgow report Canadian Phosphate firm at 1s. 1½d. per unit for 75 per cent., with a fifth of a penny rise. Sales have been made at this price during the month of lots consigned early in the season when freights were low and returns have been satisfactory, showing the shipments to have run 82 per cent. and higher.

### FREIGHTS.

Although rates are much higher than at the opening of navigation, a fair amount of tonnage is offering at reasonable rates. To Liverpool, London or Glasgow, sailing vessels are carrying phosphate at 6s. to 7s. 6d., and steamers at 10s. per ton. A quantity has recently gone forward at these figures.

### MICA IN CANADA.

Until within the past two or three years it had been thought that mica, of good quality, did not occur in economic quantity in Canada, but the constantly increasing demand for it has encouraged prospectors to search diligently, and the result has been the discovery, in many localities, of deposits that are capable of producing this mineral not only in large quantities, and in plates, or sheets, of merchantable size, but equal in quality to that found in any part of the world. In the United States it has been found in some of the Western Territories, though not of a high grade in its colour or transparency, and it occurs more or less in some of the Atlantic States. In Maine and New Mexico, a small quantity has been mined, while New Hampshire and the State of North Carolina have been the principal sources of supply for the American and Canadian markets for many years past. The best quality of mica that has yet been produced in America comes from New Hampshire, while a much larger quantity has been mined in North Carolina, and an excellent quality. A great variety of mica is known to occur in various parts of Canada, and for some years past a fair quantity, of a second or third quality, has been mined and sold to stove manufacturers and dealers to be used chiefly in repairing. At Sydenham, to the North of Kingston, a mine is being vigorously worked, and is producing an enormous quantity of amber, or wine coloured, mica which finds a ready sale both in Canada and in the

United States' market. The product of this mine is very large and the deposit is said to be capable of yielding an unlimited output for some time to come. Mr. W. E. Brown, of Ottawa, recently purchased a mica mine in the Township of Palmerston from Mr. Wm. Sheppard, of Aylmer. Specimens that we have seen from this mine are of a very excellent quality, but the work that has been done on the property, up to the present time, has been insufficient to prove the nature of the deposit or its productiveness.

In the Nipissing district, and at Mattawa, mica occurs of a very good quality, and, though no development work has yet been done in either of these localities, we have seen crystals, of many pounds in weight, capable of producing sheets of clear, white mica in sizes varying from  $2\frac{1}{2} \times 5$  to  $3 \times 6$  inches. In the Township of North Burgess, the *Pike Lake* mine has been very productive, having furnished many thousand pounds of white mica of excellent quality, and in sheets of unusually large sizes. There are several openings on this property, the deepest of which is but forty feet, and in each of them large bodies of crystals are exposed. Some of the crystals found in these openings have yielded, individually, upwards of 1,000 pounds of mica, cut and dressed, ready for shipping. On the bleak shores of Labrador, a fine quality of mica occurs, and a deposit is about to be tested at Chateau for the purpose of ascertaining if it can be obtained in sufficiently large crystals to render it of commercial value. The most important discovery yet made in Canada is the *Villeneuve* deposit, in the County of Ottawa. The crystals are well formed and very numerous and the mica is of a quality unexcelled in any part of the world. The micaceous vein extends for upwards of 300 feet in length and has a width of about 80 feet exposed. During the past two months Mr. W. A. Allan, of Ottawa, has had a small force of men at work on the property and, although more attention has been given to erecting buildings than to actual mining, a quantity, several thousand pounds, of magnificent mica has been taken out. The small amount of work that has been done on the surface has exposed upwards of one hundred well formed crystals embedded in quartz and feldspar gangue. A short tunnel has been driven from the base of the hill towards the vein, and the body of mica has been reached at this level, which shows that the crystals improve in size and compactness as depth is attained. From some of the crystals taken from the end of the tunnel, sheets of perfect mica measuring as large as  $6 \times 9$  inches, and in quality equal to any that has been produced from the New Hampshire or North Carolina mines, have been received at this office. This is, without doubt, the most important and the most

valuable discovery of mica in Canada, and the deposit is capable of yielding a large annual output.

## Gold Mining in Beauce.

The latest advices received from the *Allan & Humphrey* mine in St. George Concession are most satisfactory so far as they relate to the working in the shaft, but we regret to learn that, owing to the continuance of dry weather, the water fell so low in Slate Creek that the sluices which had been constructed have had to be extended for a distance of half a mile so as to catch a sufficient supply of water for washing. This has caused some delay and we are not yet, therefore, in a position to give our readers the result of the first wash up, as promised in last month's issue. The ground that is now being raised from the shaft is richer than any that has been met with, both in fine and coarse gold. This property is turning out a genuine *bonanza* and its owners are jubilant over their prospects. Their success will no doubt be the means of attracting a large number of miners and speculators to the district, and the ground along State Creek is likely to prove as rich in gold as that of any other gold producing region in America.

We are indebted to Dr. Reed, who has given much attention to mining in the Eastern Townships, for the following facts relating to gold mining in the County of Beauce: "Gold has been found in the Famine River from its mouth to above the great falls in the Township of Watford. Nuggets, four ounces in weight were found in 1865, and desultory mining in the bed of the river has always yielded good pay. Many large quartz veins traverse the river bed, but there has, as yet, been no practical mining engaged in. Sir William Logan, in the *Geology of Canada, 1863*, refers particularly to the alluvial gold in the Famine. The recent discoveries by the St. Onges, now the *Humphrey & Allan* mine, about thirty arpents from the Famine, on Slate Creek, are the result of practical workings by experienced men, backed by capital, and show conclusively that the reports of the late eminent geologist are correct, and that gold is to be found in the alluvions and banks of the river as well as in the river bed.

The Dominion Government having voted \$3,200 a mile to the Quebec Central Railway, from Beauce Junction to the Province Line, it is expected that the road will be ready for traffic this fall to the Famine River, nine miles from its present terminus in St. Francis. This will give increased facilities to gold mining in the district."

## Central Ontario Mines.

(Special to the Review.)

At the *Coe Hill* iron mine, in Wallaston, work is being pushed vigorously and in a more systematic and mining-like manner than at any time since the mine was opened. Three shafts, with their respective wings, are being sunk and an average depth of 50 feet has already been reached. When this mine gets into thorough working order the owners will ship about 400 tons of ore daily. At present the daily shipments amount to about 300 tons, a portion of which is being taken from the stock pile the balance being the daily output of the shafts. Powerful hoisting machinery is in course of erection on this property, and whilst excavating for the foundation on which the machinery will stand another large vein of iron was uncovered, about one hundred and fifty feet to the north of the main vein and running parallel with it. A theory has been advanced by a local geologist of an anticlinal axis making it but one vein with different dips, the main, or first discovered vein, dipping to the south with this newly discovered vein dipping to the north, but no work has yet been done whereby the correctness of this theory could be proved, and there are people who do not believe in anticlinals in a granite formation. Several new buildings are in course of construction at the *Coe Hill* mine and contracts have been given out for the erection of sixteen dwelling houses for the accommodation of the workmen.

The *Nugent* mine, situated about two miles to the west of *Coe Hill*, is now being thoroughly prospected. A vein of ore has been discovered that runs the full length of the lot. This property is owned by Messrs Brown & Gaujot.

The *Baker* mine, in Limerick, is now being prospected with a Diamond drill.

At the *Arthur* mine, in Chandos, mining operations had been suspended for the purpose of testing the property with a Diamond drill. The tests, it is to be presumed, have resulted satisfactory as the mining has since been let to some American contractors.

The last two mentioned mines are owned by the Central Ontario Railway Company.

In the Madoc district there is no iron mining at present, but the water is now being pumped from the Walbridge Hematite mine and other preparations are being made for the immediate resumption of active mining operations.

At the *Canada Consolidated* gold mine, in Hastings County, a new revolving roasting furnace is nearly completed, and the owners of the mine are sanguine of favourable results. Other gold mines in Madoc, Marmora and Kaladar are now attracting the attention of capitalists, and the old *Richardson* mine is

likely to come to the front again. The chancery suit which has long since hindered mining operations on the last mentioned property has been finally disposed of and the owners, Messrs. Kelso & Brown, are now free to resume work.

## Bessemer Steel.

The production of Bessemer Steel for the year 1883 was divided between the several steel countries as follows: Great Britain, 1,553,380 tons; United States, 1,119,573 tons; Germany, 995,000 tons; France, 440,000 tons; Russia, 340,000; Belgium, 220,000; Austria, 175,000 tons, and Sweden, 50,000 tons, making in all 4,892,956 tons.

## Lake Superior Silver Mines

THE "HURONIAN" YIELDING ABUNDANCE OF RICH ORE.

Satisfactory Work at the "Rabbit Mountain."

Important Developments by the St. Paul Mining Company.

Specimens of rich ore have been received at Port Arthur during the month from a new discovery on location 39 T., owned by the St. Paul Mining Company. The specimens were taken from the shaft, at a depth of 68 feet, where several off-shoots are branching from the main vein. The shaft now shows large quantities of native silver and silver sulphate, and the company looks upon this recently discovered feature as a decided proof of the increasing richness of the mine. There are only twenty men at work at present, but this force is to be much increased as soon as miners can be secured.

The *Rabbit Mountain* mine is developing most satisfactorily, and rich ore is being taken from the new shaft that was started this spring. The ore continues of the same character as at the mouth of the shaft, but appears to carry more silver as lower depth is reached.

The *Huronian* continues to produce abundance of ore, rich in gold and silver, and the pay streak is steadily increasing in width. Systematic mining is carried on by this company, whose property is well equipped with machinery and general mining plant. The mill is kept busily employed, and the ore in the vein continues very rich. Of the actual result of the milling for the past month we are not yet informed. Messrs. C. T. Bate, Hiram Robinson and W. A. Allan, all of Ottawa, with some other shareholders, are now en route to the *Huronian* mine for the purpose of making themselves familiar with a property in which they are personally interested. On their return we hope they will be able to report favourable progress.

## MINING IN THE ROCKIES.

(Special to the Review.)

Silver city, which for some time, especially during the past winter, had been the headquarters of miners and prospectors, is now what might be styled, "a deserted village," some members and officials of the Alberta Mining Company being among the very few inhabitants left.

The *Queen of the Hills* mine, where active work was carried on during last winter, has been abandoned, and those who have been induced to invest money in this quasi bonanza are reticent as to future movements. The popular opinion is that mining will not be resumed.

Some work has been done at the *Alberta* mine, but being isolated from the line of travel, and so difficult of access at present, few people, apart from those directly interested in the property, have visited this mine during the summer. The ore is said to carry about eight dollars in silver to the ton, and a paying percentage of copper. Mr. O. G. Dennis, who resides at Silver city, is watching the interest of the shareholders and managing the company's affairs. A small force of miners is employed and due caution is being observed in performing the preliminary development work.

There are no other mining ventures in progress on the Eastern Slope of the Rockies, and prospectors have all found their way beyond the summit. There exists no doubt in the minds of people out here, who are capable of judging, that the Pacific side of the Rockies is the mineral bearing region of the North-West Territories, and that little attention will be given by mining men to any point lying to the east of the summit.

## Coal in the North-West.

Copies of a pamphlet have been received containing a paper on the geology of the line of the Canadian Pacific Railway read by Dr. Dawson before the Geographical Society, during his recent trip to Europe. Describing a coal-bearing stratum near Medicine Hat, Dr. Dawson stated that about 90 feet from the base of the section is a bed of coal three feet thick, and covered with a shale rock, or parting, of two feet six inches, above which is another stratum of coal, four feet thick, with a shale roof. For about 50 feet above this, the cliff is occupied with shales holding several thin coals, and on this rests another bed of coal 3 feet 10 inches thick, with a roof of shale 3 feet thick, and over this a small coal stratum 16 inches thick. Above this, shales again occur, and, near the top, a bed of ferruginous and pebbly sandstone. The less pure coals in this section are brown coals, composed of leaves and vegetable debris compacted together. The better coals, including

the thicker beds, are apparently composed principally of coniferous wood, having the texture of a bright, hard lignite approaching to the character of true bituminous coal, and affording a valuable fuel. Beds of this character are very extensively distributed over the region. Beds of coal, some of them supposed to overlie those seen at Medicine Hat, occur at Maple Island, Blackfoot Crossing, and elsewhere near the base of the mountains. West of Calgary, as the Cretaceous and Laramie beds enter the Rocky Mountains and approach the junction with the Paleozoic rocks, they become much folded and disturbed, and the coals contained in them become harder and drier in quality, in some places approaching to anthracites.

## A Melancholy Accident.

### Gold Prospectors Drowned in the Kootenay River.

On the 13th inst., James Braeken, Judson Bartlette and Geo. Dean, a party of gold prospectors, were capsized while attempting to run dangerous rapids in the Kootenay River, British Columbia, near where the stream empties into the Columbia.

Braeken and Bartlette were sucked under and drowned. Dean managed to retain hold of the boat, drifted a long distance in an unconscious condition, and was finally thrown on a pile of drift. The bodies of his companions were not recovered.

The party had been prospecting far up in the mountains, and constructed a small skiff to descend to Kootenay Junction. They had successfully shot a hundred dangerous rapids and had nearly reached their destination when the fatal accident occurred.

The party had been, until recently, in the employ of the Columbia & Kootenay Railroad and Transportation Company in the capacity of surveyors.

## A Modern Curiosity.

The *Florence (Arizona) Enterprise* says: "An Indian recently came to a couple of gentlemen there and said he knew where there was a gold mine in a cave, and that he would go and bring them some of the ore if they would outfit him. They did so, and after being gone two weeks he returned, bringing with him a piece of black oxide of copper as large as a tea cup. The rock contains a large cavity lined with water crystals studded with shot gold. The crystals are a beautiful sky-blue, and make a handsome setting for the gold. The specimen is as rare as it is beautiful, and if the Indian does not exaggerate, this cave is the greatest curiosity of modern times."

## Gold Mining as an Investment.

(By Thomas Cornish, M.E., to the London M. Journal.)

Our gold supply in the future, as in the past thirty years, must be dependent on the results of gold mining as a profitable industry, and it may not be uninteresting to draw attention to the question of gold mining as an investment, or the means by which the gold supply can be permanently and profitably maintained. Gold mining must be classed as one of the most important industries of the present day. The industry is based upon such reliable facts, and built on so solid a foundation, that its importance cannot be denied.

The addition to the world's wealth through the enterprise of the gold miners of America and Australasia since the discoveries of gold in those countries in 1849 and 1851 has been nearly £800,000,000 sterling in gold and nearly half that amount in silver, or upwards of £1,110,000,000 sterling in gold and silver. This vast, real and solid wealth has been raised by a comparatively small section of the community, and distributed throughout the channels of finance, trade, commerce and industries, to the benefit of all who came within its widespread influences.

Our gold supply may be termed a true barometer of the prosperity of the countries in which it is being produced or in which it becomes absorbed by the current of trade and commerce. As population increases, trade, commerce and industries expand; so it is necessary, for financial purposes, that a proportionate supply of gold should be produced to meet the increasing demands.

Gold mining as an investment, where the operations are conducted economically under the control of practical men, has in the past and is now at the present time proving itself the most profitable of any. It is not of the visionary or shallow character that many of the people in Great Britain are led to believe it to be, in consequence of the disastrous failures of the many companies lately formed with the ostensible object of gold mining in India and Africa, through mismanagement and want of practical experience in directing the financial and mining operations.

It is not possible to obtain the returns of the profits made in gold mining generally, but they may be approximately estimated at from 25 to 50 per cent. on the output where the operations have been conducted without waste of labour; but the absolute results of some of the mines now in operation in America and Australia may be taken as a fair criterion of what can be and is being accomplished under efficient local management.

The yield of gold in the colony of Victoria has been about £205,000,000 sterling since 1851, and as one-half of the amount was raised during the first ten years, the profits might be fairly taken during that period at nearly half of the amount raised, while during the latter period the profits might be estimated at from one-fourth to one-third the product, or in round figures, say, from £50,000,000 to £60,000,000 may be estimated as profits on labour and capital judiciously invested in gold mining in that colony.

In the year 1882 the yield of gold was given as 889,535 ounces at £4 per ounce, equal to about £3,594,140; dividends from public gold mining companies amounted to nearly £300,000, or about double that of all the dividends from banks, insurance and other public companies in the colony, while a number of mines are held by private owners, where the dividends are not made public, would probably bring the amount of dividends from gold mining in Victoria to nearly £1,000,000 sterling for the year.

As a further proof of profitable gold mining in that colony. I enclose you a list of twenty-one gold mines whose dividends have not been less than £50,000 in any case, which in the aggregate have amounted to about £6,000,000, while a large number of very profitable mines are on the list of dividend-paying mines under the amount of £50,000.

While a list of forty gold and silver mines in America, whose dividends also exceed £50,000, amounts in the aggregate to nearly £10,000,000 sterling.

The following are the yields and dividends from the six principal alluvial gold mines in the Creswick division of the Ballarat district, Victoria, for three months ending June 30, 1883:

Name of Company.	Yield.		Dividends and Royalty.
	ozs.	dwt.	
Ristori .....	5,540	5	£17,022 8s 6d
Madame Betty ..	7,967	18	20,221 10 0
Lone Hand .....	4,357	11	6,484 1 0
Loughlin .....	1,621	3	1,702 17 6
Dyke's Freehold ..	1,360	6	2,222 0 6
New Australasia ..	4,098	15	3,750 0 0
Total .....	23,855	16	£51,402 17 6
	£95,823	4	

The above returns show the profitable nature of gold mining where there is a good supply of wash-dirt, and the water not too heavy, and as two of the companies are only lately in gold, their profit will increase as the ground gets more fully opened out. The first two companies have



been working in wash-dirt for some few years, have their mines well opened up, and may be deemed good examples of practical and profitable mining management of the Ballarat system. The Ristori Company, with an original capital of £12,000 has already paid in dividends and royalty over £100,000, and, as shown by the quarter's returns, June 30, 1883, on a yield of 5,540 ounces 5 dwts. gold, equal to £22,160, paid in dividends and royalty £17,022 8s. 6d., or nearly 75 per cent. on the output of gold has been profit; or showing an annual interest on the original capital at the rate of 700 per cent. per annum. Some of the quartz mining companies have been even more successful, paying dividends to the extent of from £250,000 to £800,000 on small capitals from £12,000 to £37,000, while the list under those sums is a very long and respectable one.

Gold mining is a business that to be made successful, must be managed by practical men who have had opportunities of gaining experience in the various phases of the industry at the mines. The results of the late furore in the so-called attempts at gold mining in India and Africa have resulted in a miserable fiasco, as was only to be expected from the manner in which the business and mining operations were conducted.

I have occasionally drawn attention to the deplorable waste of capital and labour in gold mining through the assumption of knowledge by amateurs who imagine themselves competent to advise on the investment of capital in gold mining or the management of mines. Their excited and fanciful imaginations lead them and their friends who are foolish enough to be guided by their judgment into error and serious losses, for which the mining industry gets blamed instead of the reckless indiscretion of the adviser and advised.

What are termed losses in gold mining are more imaginary than real. Speculation in high-priced or inflated stock above legitimate value of a mine must, as a natural consequence, end in loss. So also with mines under defective management and extravagant expenditure in paying for the privileges of prospecting for gold. They also will surely come to grief.

The value of a gold mining property may be appraised by competent authorities in such a manner as to prevent any great loss on the investment, although no set rule can be laid down to guide men's judgment as to their estimate. It is questionable whether any gold mine should ever be valued at more than from two to five years' purchase, thus taking a mine well developed and paying good average dividends, according to the nature of the matrix operated on; for the mine to be worth a three years' purchase it is necessary that there should not be less than five years' work fairly in sight of a similar quality ore, or the lodes so opened that it affords a fair presumption that such a quantity of matrix can be obtained.

Mines vary so much at times in value and yield that the investor has a right to the chances of improved prospects as may arise, just as he is liable to the reverse by loss. Some of the considerations that should guide the investor in gold mines are, good climate, stable government, liberal laws, accessibility, ample supply of water and wood, and last but not least, the prospects of a fair quantity and quality of matrix to operate on. With these considerations, under careful management, gold mining is at the present, as in the past, proving itself to be the most profitable industry in the world.

The fields for legitimate and profitable investment in gold mining are, practically speaking, inexhaustible and afford ample scope for enterprise, and by judicious investment of capital under experienced direction, there need be little fear of loss, while the profits are likely to be large, as the gold supply can be materially increased by the development of the resources at hand.

**Product of the Mines of New South Wales during 1883.**

According to the official report of the Under-Secretary for Mines of New South Wales for 1883, the result of all the mining operations in the Colony during the year was as follows:—

	1882.	1883.
Gold, ounces.....	140,469	123,806
Silver ".....	38,618	77,066
Coal tons.....	2,109,282	2,521,457
Shale ".....	48,065	49,250
Tin ".....	8,669	9,125
Copper ".....	4,958	8,957
Iron ".....	7,476	3,434
Antimony ".....	1,068	375
Lead ".....	11	30
Asbestos ".....	7	..
Bismuth ".....	2 1/4	3.7

The falling off in the gold production has been great as compared with the yield in former years, as the following table shows:

PRODUCTION OF GOLD.

	Ounces.		Ounces.
1874.....	270,823	1879.....	109,650
1875.....	230,883	1880.....	118,600
1876.....	167,412	1881.....	149,627
1877.....	124,111	1882.....	140,469
1878.....	119,665	1883.....	123,806

On the subject of gold the Under-Secretary states: "It is clear that the continued drought has had the effect of preventing the prosecution of prospecting operations during the year, and has seriously retarded the working of older fields. Whether the falling off in the yield of gold can be accounted for by the absence of sufficient water to carry on the usual crushing and washing operations, or whether the decline is not in some degree due to the gradual exhaustion of such of the deposits in the older gold-fields as are capable of being profitably worked without the aid of steam, hydraulic, or other power, it is difficult to determine with any degree of certainty. It is quite certain that in the absence of new discoveries it is only a question of time, and that comparatively limited, before those deposits which can be worked by the individual miner must be exhausted; but with the breaking up of the drought, we may reasonably expect that prospecting operations will be resumed and new ground opened. Of course, there is an unlimited extent of auriferous country within the older gold-fields of this colony, which, worked with proper appliances on a large scale, would yield satisfactory profits and give steady employment to a large body of miners for many years to come. But until the necessary capital and skill is brought to bear on these deposits, or some new discoveries be made, we cannot hope to see any large increase upon our output."

**THE WORLD'S GOLD PRODUCTION.**

It has been shown by several writers, says *Chamber's Journal*, that up to the year 1848 the world had outgrown its supplies of precious metals, and that commerce was languishing for the want of the wherewithal to adjust the exchanges of communities. Previous to that year, the principal sources of supply were South America, the west coast of Africa, Russia in Europe and Asia, and the island of the Malay Archipelago. According to the calculations of M. Chevalier, the total production of both gold and silver from these sources, between 1492 and 1848, was equal in value to £1,740,000,000. The importation of gold, however, was small; and the total stock of the metal in Christendom in 1848 is estimated to have been only £550,000,000. The production since that time has been very remarkable. Let us look at the figures. In 1848 California gold began to come forward; in 1851 the Australian fields were opened. Between 1849 and 1875 the production of the world is estimated at £616,000,000, so that in twenty-seven years the stock of gold was more than doubled. The average annual supply previous to 1848 was £8,000,000; in 1852 the production was £36,500,000. An Australian authority estimates the yield of the colonies from 1851 to 1881 as £277,000,000; as Mr. Hogarth Paterson gives the total production of the world between 1849 and 1880 as £710,000,000.

The statisticians of the United States mint estimate that the total production of gold in the world during the 400 years ending in 1882 was 10,394 tons, equal in value £1,442,359,572. During the same period the production of silver was 101,731 tons, of the value of £1,716,463,795. On the basis of the last three years, the average annual production of gold in the world is now £21,500,000. Taking 1881 as an illustration, the largest contributors were:

United States.....	£6,940,000
Australasia.....	6,225,000
Russia.....	5,710,000
Mexico.....	197,000
Germany.....	48,200
Chili.....	25,750
Columbia.....	800,000
Austria.....	248,000
Venezuela.....	455,000
Canada.....	310,000

**LAKE SUPERIOR GOLD.**

The *Economist*, N.Y., August 16th, contains the following: "Among the rich mining industries of the Lake Superior peninsula, a new one promises to come in. Three years ago Postmaster Ropes, of Ishpeming, was prospecting in an unused marble quarry about four miles north of the town. Mr. Ropes added to his duties as postmaster the business of assaying, so that he was an expert. While he was putting in his pick here and there he struck gold-bearing quartz. Subsequent examinations revealed the mother vein, and the result was the formation of a company, to which was sold the option, which expires the 1st

of November, of taking the property. The company pays \$6,000 for the privilege of working the mine till November, and it is thought that the results obtained establish the fact that the Marquette district possesses a profitable gold mine. A shaft has been sunk and a fine stamp mill erected for the purpose of experimenting with the ore, which is obtained in sufficient quantities to keep busy a mill five times as large as the present one. The Colorado expert who is superintendent of the mill thinks that the ore can be mined at a cost of \$3 a ton. The ore obtained from the shaft which has been struck yields, on an average, from \$6 to \$9 a ton in gold, and from \$2 to \$3 in silver. Some ore has been taken out which yields as much as \$300 a ton."

## MINING STOCKS.

### New York Mining Stock Markets.

Except for one or two stocks, the activity developed towards the close of the week ending August 16th has not since then been maintained, and while a fair amount of trading has transpired the market cannot in any sense be described as active, still a very steady tone has prevailed, and in several instances a higher range of prices has been established. Beyond these features, however, the dealings have not presented any points of special interest. The outside public still refuses to speculate in mining stocks but regular traders are evidently more inclined to operate and it would seem as though the general improvement gradually developing in railroad securities, as well as in commercial affairs, was in some degree being reflected in the mining stock market and that a more hopeful as well as cheerful feeling was slowly extending its influence. The stocks most actively dealt in upon this market certainly appear to have worked up to a higher plane of values compared with the lowest point touched during the recent depression, and to have maintained the advantage in consequence of a strong undertone that still prevails, and this is by far the most satisfactory as well as substantial kind of advance that could be experienced. No more booms either in mining stocks or any other department of business activity are wanted just at present, business men have had enough of the last picnic to last them for some time to come and do not care to repeat the experience right away, but what is wanted is a healthy spirit of speculative activity and a moderate advance in the price of many good mining stocks that on their merits are now considered abnormally low. It cannot be denied that among the stocks regularly dealt in, both here and in San Francisco, a good deal of chaff exists, but it is likewise true that among this chaff there is more or less sound grain, consisting of mining properties that are being successfully and profitably worked and that are returning handsome dividends to their owners. This week no less than three announcements of this character have been made; Ontario, Homestake, and Father de Smet, each making a return to their shareholders, the first two companies having already paid in dividends the large sum of over eight millions of dollars. These are by no means isolated cases, as our readers are well aware, but at the moment they serve to bear out the truth of the above remarks.

The most prominent features of the market this week have been Consolidated Virginia and one or two of the Tuscorora group. With respect to the first, the dealings have been large at steadily advancing prices, which singularly enough have been kept considerably above the parity of San Francisco. For this reason the firmness of this stock has been a puzzle to many, especially as nothing has transpired at the mine so far as the public are advised, to warrant an advance. Nevertheless, there have been steady buyers and in all about 15,600 shares have been traded in at from 35 which was the lowest point on Saturday last up to 47, the closing figures yesterday being 42. Other Comstocks have not received much attention, but Suro Tunnel has ruled moderately active and firm, about 5,700 shares selling at 17 up to 21. Small sales of Sierra Nevada have transpired at 1.70 to 1.75 and then down to 1.50 in sympathy with a similar drop at San Francisco; and occasional transaction in California at 17 completes the list.

The Tuscorora group have ruled firm, and although but a moderate business has been accomplished prices show quite an advance. Navajo has sold at 4.25 to the extent of 500 shares. The company report a good surplus and bullion shipments that ought soon to yield a dividend. There has been a further advance in Belle Isle, which has sold as high as 1.00, and at the higher range of prices thus established displayed a good deal of strength. The improvement is said to be due to the development of good ore. About 1,100 shares have changed hands at 85 to 1.00, the closing price yesterday being 93.

Silver King has continued to rule firm at 5.12, and Horn Silver quiet but strong at 5.75 to 6.00. Eureka Consolidated has sold at 2.65 to 2.70. Green Mountain a shade easier, at 1.90 to 1.95, and Alice steady at 2.75. The Bodie group has remained quiet and without special feature, the only business comprising a few shares of Bulwer at 60 and of Standard Consolidated at 1.50 to 1.70, the latter showing an advance since last week. Consolidated Pacific steady at 55 to 59.

Colorado stocks have been inactive but steady, transactions including moderate sales of Chrysolite at 75 to 80, Leadville at 35, Little Chief at 30 to 31, Dunkin at 28 and Amie at 9.

The State Lines have displayed some signs of life, Nos. 1 and 4 being traded in to a moderate extent at 3 to 4 and Nos. 2 and 3 at 6 to 7. Oriental Miller has fluctuated between 14 and 16, Rappahannock in some request at 16 to 18, Central Arizona quiet at 22, Castle Creek at 18 and Sonora Consolidated at 3 and Harlem at 3.

The total sales for the week have been 23,800 shares on Saturday, 3,300 do. on Monday, 7,800 do. Tuesday, 16,500 do. Wednesday, 6,575 do. Thursday, 7,400 do. yesterday.—*New York Mining Record, Aug. 23rd.*

### Cape of Good Hope Copper Mines.

Two of the wonderful copper mines of the world are the Speek-takel and the Ookiep, Cape of Good Hope, belonging to the Cape Copper Company. Year after year these mines have turned out large quantities of very high-grade ore, and have paid to their fortunate shareholders, on a capital of £160,000, profits aggregating £1,152,500, or roughly \$5,600,000. Since 1880 they have made annually 5,000 long tons of copper, from one that in 1882 averaged 28.63 per cent. and in 1883 29.5 per cent. of metallic copper. With a reserve in the Ookiep, the principal mine, of 42,113 tons, it does not look as though low prices would in any way cause a reduction in the product. The mining cost was only 3s. 9d. per unit; the profit was 11s. 11d. per unit, the company having its own railroad and its own smelting works in England, where 11,273 tons of ore were treated in 1883, at a profit of £9,150. The decline in values, of course, affected profits, the falling off in the average of prices in 1883 against 1882 being computed at £32,103. Still the company was able to make a net profit in 1883 of £101,131, against £145,464 in 1882 and £131,712 in 1881.



### IMPORTANT TO BOATMEN.

#### GOOD BOATMEN

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**The English Expedition up the Nile.**

*To Steer Boats Through the Rapids and do all Necessary Portaging.*

Engagements to be for six months from September 1st, 1884.

Pay to be at the rate of from \$20 to \$40 per month, according to efficiency of each man.

Each man will be provided with an outfit, free rations, and all expenses paid from and back to place of his engagement. The men to be subject to the authority of their foremen and the officers under whose charge they may be sent out; such officers to have power of punishing insubordination or irregularity by stoppage of pay and, if necessary, by dismissal.

Men to report at Ottawa, 6th September, 1884.

Only thoroughly good and active boatmen will be engaged.

Married men to have the privilege of allowing their family to draw — per cent. per month of their pay.

All information in connection with the above can be had at the office of J. T. Lambert, 110 Wellington Street, Ottawa.

By command, MELGUND,  
Governor-General's Secretary.

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**NOTICE TO CONTRACTORS**

SEALED TENDERS, addressed to the un-  
der-signed, and endorsed "Tender for Post  
Office, etc. Winnipeg, Man.," will be received at  
this office until TUESDAY, the 2nd Sep-  
tember next, inclusively, for the erection and  
completion of

**POST OFFICE, ETC.,**  
-AT-  
Winnipeg, Man.

Plans and specifications can be seen at the  
Department of Public Works, Ottawa, and at  
the Dominion Clerk of Works Office, Winni-  
peg, on and after Monday, the 18th inst.

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  
order of the Honorable 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 fail 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, Aug. 9th, 1884. [26-3]

NEW YORK

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Assays, Analyses of Ores, Mineral  
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**MAIL CONTRACT.**

SEALED TENDERS, addressed to the  
Postmaster-General, will be received at  
Ottawa until noon, on Friday, 29th August,  
1884, for the conveyance of Her Majesty's  
Mails, on a proposed Contract for four years,  
three times per week each way, between  
Dunrobin and South March from the 1st  
October next.

The conveyance to be made on horseback  
or in a suitable vehicle, via the Postoffice at  
Dunrobin when going, and by the direct route  
when returning. The mails leave South  
March every Tuesday, Thursday and Satur-  
day as soon as possible after arrival of mail  
from Ottawa, and to perform the journey to  
March and back within three and three-  
quarter hours.

Printed notices containing further informa-  
tion as to conditions of proposed contract  
may be seen, and blank forms of tender may  
be obtained at the Postoffices of Dunrobin,  
March and South March, or at the office of the  
subscriber.

T. P. FRENCH,  
P. O. Inspector.

Postoffice Inspector's Office,  
Ottawa, July 26th, 1884.



**MAIL CONTRACT.**

SEALED TENDERS, addressed to the Post-  
master General, will be received at Ottawa  
until noon, on FRIDAY, the 29th AUGUST,  
1884, for the conveyance of Her Majesty's  
Mails, on a proposed contract for four years,  
twelve times per week each way, between  
CUMBERLAND and BUCKINGHAM RAIL-  
WAY STATION, from the 1st October next.  
The conveyance to be made on horseback or  
in a suitable vehicle, and in a boat across the  
Ottawa River.

The mails to leave Cumberland Post Office  
twice daily (Sundays excepted) at such hours  
as may be necessary to connect at Bucking-  
ham Railway Station with mail trains pass-  
ing east and west respectively. Exchange  
mails with said trains and return to Cumber-  
land Post Office within 30 minutes.

Printed notices containing further informa-  
tion as to conditions of proposed contract  
may be seen, and blank forms of tender may  
be obtained at the Post Office of Cumberland  
or at the office of the subscriber.

T. P. FRENCH,  
P. O. Inspector.

Post Office Inspector's Office,  
Ottawa, July 26th, 1884.



**MAIL CONTRACT.**

SEALED TENDERS, addressed to the  
Postmaster General, will be received at  
Ottawa until noon, on Friday, 29th August,  
1884, for the conveyance of Her Majesty's  
Mails, on a proposed Contract for four years,  
six times per week each way, between

**ARNPRIOR AND FITZ-  
ROY HARBOUR,**

from the 1st October next.

The conveyance to be made on horseback  
or in a suitable vehicle, via the Post Office at  
Gaietta and Mohr's Corners.

The Mails to leave Fitzroy Harbour daily  
(Sundays excepted) at 7.15 a.m. or in time to  
arrive at Arnprior to have mails despatched  
by morning mail train passing from Pem-  
broke.

To leave Arnprior upon receipt of mail per  
morning "mixed" at about 10.45 a.m. and to  
return to Fitzroy Harbour within three hours  
afterwards.

Printed notices containing further informa-  
tion as to conditions of proposed Contract  
may be seen, and blank forms of Tenders  
may be obtained at the Post Offices of Arn-  
prior, Gaietta, Mohr's Corners and Fitzroy  
Harbour, or at the office of the Subscriber.

T. P. FRENCH,  
P. O. Inspector.

Post Office Inspector's Office,  
Ottawa, July 26th, 1884.

[35-3]



**MAIL CONTRACT.**

SEALED TENDERS, addressed to the  
Postmaster General, will be received at  
Ottawa until noon, on Friday, the 29th August,  
1884, for the conveyance of Her Majesty's  
Mails, on a proposed Contract for four years  
twenty four times per week each way between

**RENFREW POST OFFICE AND  
RENFREW R'Y STATION**

from the 1st October, next.

The conveyance to be made in a suitable  
vehicle.

The Mails to leave Renfrew Post Office or  
Railway Station as often and at such hours as  
may, by the Post Office Department, be re-  
quired, and to perform the trip from the  
Post Office or Railway Station within ten  
minutes.

Printed notices containing further informa-  
tion as to condition of proposed Contract may  
be seen, and blank forms of Tenders may be  
obtained at the Post Office of Renfrew, or at  
the office of the subscriber.

T. P. FRENCH,  
P. O. Inspector.

Post Office Inspector's Office,  
Ottawa, July 26th, 1884.

[35-3]



**GRAVING DOCK.**

BRITISH COLUMBIA.

SEALED TENDERS, addressed to the un-  
der-signed, and endorsed "Tender for  
Graving Dock, B.C.," will be received at this  
office until SATURDAY, the 29th day of Sep-  
tember, 1884, inclusively, for the construction  
and completion of the partly finished

**Graving Dock at Esquimalt Har-  
bor, British Columbia.**

According to plans and specifications to be  
seen on after Monday, the 1st September  
next, at the Department of Public Works,  
Ottawa, and on application to the Hon. J. W.  
Trutch, Victoria, B.C.

Persons tendering are notified that tenders  
will not be considered unless made on the  
printed forms supplied and prices affixed to the  
value of the items stated therein, and  
signed with their actual signatures.

Each tender must be accompanied by an  
accepted bank cheque for the sum of \$7,500,  
made payable to the order of the Honorable  
the Minister of Public Works, which will be  
forfeited if the party decline to enter into a  
contract when called upon to do so, or, if he  
fail to complete the work contracted for. If  
the tender be not accepted the cheque will  
be returned.

The Department will not be bound to ac-  
cept the lowest or any tender.

By order, F. H. ENNIS,  
Secretary.

Department of Public Works,  
Ottawa, 5th Aug., 1884.

[36-3]



**MAIL CONTRACT.**

SEALED TENDERS, addressed to the  
Postmaster General, will be received at  
Ottawa until noon, on Friday, the 29th August,  
1884, for the conveyance of her Majesty's  
Mails, on a proposed Contract for four years,  
six times per week each way, between South  
March and Stittsville Railway station from  
the 1st October next.

The conveyance to be made in a suitable  
vehicle, via Post Office at Carp, March-Hurst  
Huntley, and Stittsville. The Mails to leave  
South March daily (Sundays excepted) at such  
an hour as will enable Courier to reach  
Stittsville Railway Station in time to make  
connection with mail train passing to Ottawa  
at about 1.00 p.m. To leave Stittsville Post  
Office as soon as possible after the arrival of  
said train, and to arrive at South March  
within three hours afterwards.

Printed notices containing further informa-  
tion as to conditions of proposed Contract  
may be seen, and blank forms of Tender may  
be obtained at the Post Office of South March  
Carp, March-Hurst Huntley and Stittsville, or  
at the office of the subscriber.

T. P. FRENCH,  
P. O. Inspector.

Post Office Inspector's Office,  
Ottawa, July 26th, 1884.

**NOTICE TO MINERS.**

POWDER, DUALIN, FUSE, DETONATORS,  
STEEL, IRON, CHAIN, ROPE,  
SHOVELS, PICKS, WHEELBARROWS,

And all Miners' Supplies For Sale at

**THOS. BIRKETT'S,**

Rideau Street. - - - Ottawa, Ont.

**GRAPHITE.**

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

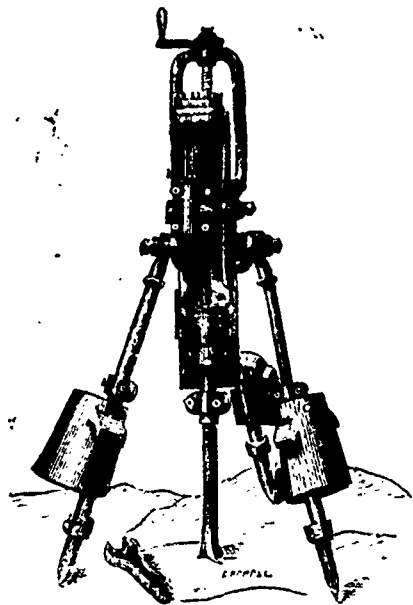
MICA, MINERALS, PRECIOUS STONES.

RICHARD BAKER & Co., General Produce  
Brokers, 9 Mining Lane, London, England.  
Advances made on Consignments.

Reports Gratis on New Products. Bankers: Agra Bank, London.



MILLER BROS. &amp; MITCHELL



Manufacturers of  
 MINING AND CONTRACTORS' PLANT,  
 LATEST IMPROVED STEAM ROCK DRILLS,  
 HOISTING ENGINES,  
 AIR COMPRESSORS,  
 ELECTRIC BLASTING APPARATUS,  
 IMPROVED PATENT STEEL WIRE ROPE,  
 &c., &c., &c.

SEND FOR PAMPHLET—

**Miller Bros. & Mitchell,**  
 Works, 110 to 120 King St. Office, 30 William St.  
 MONTREAL.

ROCK DRILLS, AIR COMPRESSORS,

General Mining Machinery,

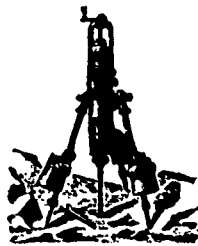
WIRE ROPE and CONTRACTORS' SUPPLIES.

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(LIMITED)

44 FOUNDLING ST., MONTREAL.



PHOSPHATE CRYSTALS.

Farmers, Miners and Prospectors, having unbroken  
 Phosphate Crystals for Sale, can find a cash  
 purchaser by applying at the Office of

**THE CANADIAN MINING REVIEW,**  
 Union Chambers, 14 Metcalfe Street, Ottawa.

Parties offering crystals for sale will please mention the  
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 Gold and Silver Mines, and Marble and Sand-  
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In the Township of Portland West,

**FOR SALE.**

Lots 25, 26, 27 and 28, in the  
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 shows have been uncovered on these  
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 veloping. Price and particulars  
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IN THE TOWNSHIP OF BUCKINGHAM,

On which are extensive surface shows and  
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 Nov. 30, 1880. Late  
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