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# THE CANADIAN MINER

Vol. I. TORONTO, ONT., MARCH 13, 1897. No. 9.

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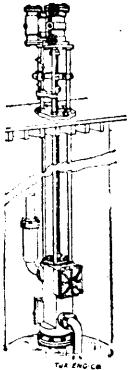
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# The Canadian Miner.

VOL. I.

TORONTO, MARCH 13, 1897.

No. 9.

## NEW GOLD FIELDS.

REGIONS THE GEOLOGICAL SURVEY THINKS WORTH PROSPECTING.

THE summary report of the Geological Survey Department of Canada, recently issued, contains a great deal of valuable and timely information concerning the prospects of mining regions in Canada. After some interesting comment on the geological formations near Rossland, other parts of Canada are spoken of, and attention is drawn to some likely-looking fields in which little prospecting has yet been done.

In describing the geological formation in the Rossland district, Mr. McConnell suggests that the arrangement of the rock formations leads him to believe that anciently there was a volcanic centre near the site of the present town of Rossland, from which lava and ashes deluged the surrounding district. At Rossland there is a large, well-defined area of granite, irregularly shaped, about four miles long and one mile wide, extending from Deer Park Mountain eastward to the western base of Lookout Mountain. Beyond this mass there is a surrounding area of porphyrites, which are supposed to have been forced to the surface from the same molten subterranean mass. It is along the line of junction of these two bodies of rock that nearly all the great ore bodies are located. Commencing at the northwest corner of the area, the line runs through the Cliff, War Eagle and Le Roi claims; then, turning to the west, circles round a spur from the main area, which covers part of Deer Park Mountain, and continues eastward in a sinuous line, passing about a quarter of a mile north of the Crown Point mine to the foot of the west slope of Lookout Mountain. The northern edge runs from the Cliff mine eastward to Monte Cristo Mountain, then bends to the south and skirting the southern base of Kootenay Columbia Mountain continues in a southeasterly direction towards Lookout Mountain. The other three concentric areas do not carry the typical Trail Creek ores, but are traversed by occasional quartz veins that appear to belong to a later date. As to the character of the veins Mr. McConnell says isolated examples may be cited in support of any of the theories of vein formation. The blunt, irregular outlines of some of the ore bodies and their fissurelike regularity in others, the presence in most cases of a single wall, which is often meaningless as a confining wall, and the occasional lack of any wall, the gradual blending of the ore with the country rock, are all characters consistent with the deposition of the ore from ascending heated waters, which have eaten away portions of the country rock and replaced it by the minerals held in solution. The miners of the district generally favor the fissure theory under the impression that they are the only veins which are apt to be of continuous depth, although Mr. McConnell does not agree in this opinion.

### IN THE NORTH-WEST.

Beginning in June Mr. J. B. Tyrrell did a good deal of work to the northward of Lake Winnipeg and slightly to the west. Around

Herb Lake larger masses of eruptive grey and red granite were found, through which run many quartz veins associated with a good deal of iron pyrites. On Reed Lake, near by, the green slaty rock is cut by many stringers of quartz. The same is true about Cranberry Lake, also near by. "This area of Huronian rocks," says Mr. Tyrrell, "extending about 75 miles from east to west and an unknown distance toward the north, presents a good field of exploration for the prospector for gold and other precious metals on account of the number and variety of eruptive masses that break through it, surrounded by zones of highly disturbed and fissured rocks." Generally speaking, the country north of Lake Winnipeg and west of the Nelson River is covered with a deep coating of clay, much the same in character as that of the Red River valley. "The soil is rich and fertile," says Mr. Tyrrell, "and since summer frosts do not seem to be prevalent the country will doubtless produce in abundance, all the hardier roots and cereals grown in Manitoba, and cattle, sheep and horses can be successfully raised. If the country were made accessible by a railway passing through it to Hudson Bay it would certainly support a considerable agricultural population."

### WESTERN ONTARIO.

Mr. W. McInnes describes his tour of investigation in the Rainy River and Lake of the Woods districts. After reviewing all the locations that have been made famous by distinct successes, Mr. McInnes refers to several promising fields for prospecting in which little or nothing has yet been done. One larger band of Keewatin rock extends from the Seine River westward to Sawbill Lake, the Keewatin formation exceeding a mile in width and being likely to show a good deal of quartz in the fissures along the lines of contact with the other rocks. Again, "the regions lying immediately to the south of Eagle and Wabigoon Lakes offer a field which promises well to the prospector. These two districts and that to the south of lower Scotch Lake (just described) have been particularly mentioned only because they are all easily accessible and do not seem to have attracted the notice of prospectors to any great extent, though the character of their rocks is such as to warrant their examination." Promising veins were also found along Lake Minnetakie, north-east of Wabigoon Lake, and above the C. P. R. "Assays of specimens from these veins gave small quantities of gold, enough, at least, to confirm the occurrence of gold in the region."

### EASTERN ONTARIO.

Dr. R. W. Ellis was engaged during the summer in the counties of Renfrew, Addington, Frontenac, Lanark and Carleton. North of the Mississippi River, from Ardreh to Long Lake, there is an area in which silver-lead ore in paying percentages is to be seen. Gold is also found there, and although the appearances indicate pockety quartz, it is thought probable that fissure veins will some day be discovered, as there is every probability of the area of rock being identical with

that found in Madoc and Marmora. This formation has in fact been pretty well traced and is found to end at the juncture of the Bonnechere with the Ottawa River. Having its northern apex lying between this point and the Town of Renfrew, the band has been traced in a generally southeasterly direction through the County of Lanark into Leeds a few miles, Frontenac, Addington and Hastings; the main direction of good prospecting country being through the townships of Marmora, Madoc, Elzevir, Kaladar, Anglesea, Barrie, Clarendon, Palmerston, Lavant, Darling, Pakenham and McNab. The quantities of mineral wealth lying unused in this district must be inferred from one or two casual observations made by the surveyor.

"The graphite deposit near Oliver's Ferry is not now being worked, though the mineral appears to be abundant and of good quality.

"An outcropping of magnetic iron ore was observed near the road from Dacre to Mount St. Patrick, about a fourth of a mile south of the former village, but no attempt has been made to develop the deposit and the quantity is as yet unknown.

"In no case was any distinctly bedded deposit (of iron) observed. In many of the ores small quantities of pyrites were observable, but in some cases this was almost entirely absent and the ore was of excellent quality."

### QUEBEC GOLD MINES.

Mr. R. Chalmers examined the gold regions of Quebec, devoting particular attention to the alluvial deposits in Beauce County. "The present languishing condition of the gold mining industry in Beauce County," he says, "appears to be due to causes other than the scarcity of gold in the alluviums. That gold still exists in a number of these valleys in sufficient quantities to warrant a skillful and economic expenditure of capital in their exploitation is a fact which no one who has examined the district can deny. . . . In much of the Chaudiere district the gold exists in a very thin and scattered condition, and the gravels containing it are capped by such thick beds of boulder clay and quicksands that it is doubtful whether it can be profitably mined. In the old pre-glacial channels the gold has of course, been more or less concentrated, but when it is considered that these often lie below the present water-courses the expenses of exploration would be great, and only deposits of considerable richness would prove remunerative. Notwithstanding the backward condition of gold mining here this district, or at least some portions of it, offers inducements to miners and capitalists equal in some respects at least to those of some other gold regions more favorably regarded." Mr. Chalmers then proceeds to discuss what appears to him the best means of overcoming the main difficulties.

### NOVA SCOTIA.

Prospecting in Nova Scotia was done by Mr. E. R. Faribault. Observations were confined to a belt 25 miles wide near Halifax, in which eight upheaved stratifications were

examined, with varying results, the most satisfactory being the returns from the McGuire mine, which was yielding from \$7,000 to \$10,000 a month, although in another place a layer 50 feet wide and five inches thick was showing seven to twelve ounces to the ton.

### A WOMAN BROKER'S ADVICE.

FAITH FENTON, in the *Canadian Home Journal* for March, says:

During the month of February we have had a woman mining broker in Toronto in the person of Miss Leigh-Spencer.

Miss Spencer has an office in Nanaimo, B.C., and is well known throughout the mining country as an authoritative and successful broker. She came east early in February to dispose of mining stocks, and will visit Montreal and probably Ottawa before her return.

Miss Spencer combines a genial and marked personality with exceptional business ability. She is largely interested in a number of mines, and may be considered an authority upon the subject.

Naturally, she has a number of women among her clientele.

"I usually advise women to invest in developed properties," she says, "a list of which can always be found in the papers. Prospecting companies are a greater risk.

"I do not care to sell women low-priced stocks. One came to me recently and wanted me to invest \$100 in three-cent stocks. Her sole idea was to get as many shares as she could for the money. I told her I hadn't any to sell her, and gave her some advice on the point, but she went away to find three-cent stocks of any kind. But if a woman is silly enough to offer herself for plucking in this manner, she must not be surprised to find herself shorn.

"Although I have hundreds of women come to me desiring to invest, I neither solicit their custom nor in any way urge the investment. They invariably have sought me voluntarily in person or by letter. Men brokers are usually able to say the same thing.

"A clear headed business woman is perfectly capable of going into mining in any department. And it is nothing new that she should handle stocks well.

"I am personally acquainted with an English lady of means who has entire control of a very valuable property in the Slocan district. She intends employing a practical foreman and will develop the property herself, with the financial assistance of two or three other Englishmen. She has also invested profitably in city property in B.C., and is a silent partner in a paying enterprise other than mining in the same province.

"I am also acquainted with another woman who by a fortunate investment of \$120 some time ago in the Kootenay, has now a property worth, \$17,000, from which she draws dividends at regular intervals.

"This of course is an exceptional case. But that women of good business tact can secure valuable mining properties is proved by a recent instance of a woman I know out West. Her husband being incapacitated by ill-health, she turned her attention to mining matters and secured a valuable property, the sale of which is now being negotiated at a large figure in England.

"My advice to a woman investor may be summed up in a few words:—

"Let her make up her mind what she can afford to lose, that is, what she can lose without crippling her resources.

"If she has men friends of good business standing let her consult them.

"Let her look to the standing of her broker and directorate.

"If the advertisements of a company are very flaring and extensive, if the officers are salaried, if expenditure is lavish, women would be wise to remember that these moneys come out of the shareholders' pockets. Companies that are solid and desirous of developing, husband their resources.

"If a woman investor selects a good company and reputable broker, and scatters her money, she is not likely to lose even if she does not make a profit. But if she is really anxious not to lose, it is wise to sell half her stock when it doubles in price and recoup her expense, leaving the remainder invested."

Miss Spencer believes that the mining boom is only beginning. A residence of several years in the mining districts of British Columbia has wrought in her a belief that the mining resources of that country are practically untouched as yet.

It is not a question whether women should invest or not. They are investing more extensively every week. This month a large number of letters have been received by Toronto brokers from women in the United States who desire to invest.

After careful note we are able to assert that brokers of good standing use their best judgment in advising women investors.

### THE COAL OF EASTERN CANADA.

INTERESTING AND SIGNIFICANT FIGURES IN REGARD TO THE MATTER.

CANADA annually consumes more than a ton of coal per head of the population. In round figures our consumption, says the *Industrial Advocate*, of Halifax is 6,000,000 tons, for which the consumer pays at least \$21,000,000. It seems but a few years since Nova Scotia became a province of the new Dominion. But in those few years Canada's consumption of coal has increased from 715,000 to 6,000,000 tons. Of this, one-half is home product and the other half, imported. Of the imported, 1,500,000 tons is anthracite, admitted free of duty, and which has become a very serious competitor with the home product bituminous; and 1,500,000 tons is American bituminous imported into Ontario. Of Canada's product of 4,000,000 tons of bituminous, 3,000,000 tons enter into home consumption and 1,000,000 tons are exported—mostly from British Columbia to San Francisco.

The production of Nova Scotia for the fiscal year 1896 was 2,235,472 tons of 2,240 lbs., or 2,503,729 net tons—an increase of 164,175 net tons over the production in 1895, and makes Nova Scotia's total production since Confederation aggregate 40,500,000 net tons! The figures of production by decades show a most gratifying increase, viz:

Eight years, 1868-75.....	6,294,142
Ten years, 1876-85.....	14,453,476
Ten years, 1886-95.....	19,887,564
One year, 1896.....	2,503,729
Total twenty-nine years....	40,492,841

The mining of the 2,503,729 tons of coal last year furnished employment to over 6,000 men in and about the mines and represented 1,300,000 days labor. But the number of men who earn their livelihood by the coal industry is nearer 7,000 than 6,000—representing a dependent population of 30,000, and indirectly affecting 100,000—one-fifth of our entire population.

Since Confederation the coal industry has

contributed \$2,882,000 to the provincial revenue as royalty. More than one-third of the entire provincial revenue is obtained from the special tax upon coal.

The coal industry of Nova Scotia represents over \$5,000,000 a year. Since Confederation it has sent \$100,000,000 into general circulation. That \$100,000,000 has been dug out of the bowels of the earth and added to the general wealth of the country. Had it not been for the Nova Scotia coal mines, that \$100,000,000 would have been sent away to foreign countries for the benefit of foreign miners, and that much wealth would have been lost to Canada.

How many of us have any adequate conception of what that \$100,000,000 means to this province?

The transportation of coal involves the circulation of almost as much money as the mining of it.

Of our coal product 1,500,000 tons are water borne and 500,000 carried over the railways. An idea of what this traffic means to the railways may be gathered from the fact that during the last 14 years the Intercolonial railway has been paid \$3,300,000 for the transport of coal from the Springhill Mines alone.

The increase of shipping tonnage at the Cape Breton coal ports has kept pace with the output of the Cape Breton collieries. In 1885 its coal production was 518,000 tons; and the shipping tonnage entering its ports was 561,000; in 1895 its coal product increased to 1,040,000 tons and its shipping increased to 907,000 tons, represented by over 4,000 vessels.

Nearly one-third of the entire tonnage of the great port of Montreal is represented by the Dominion Coal Company's fleet of colliers. The operation of this fleet involves the disbursement of \$550,000 a year for running expenses alone—trimming cargo, discharging, handling, ships stores, pilotage, etc., not to include the cargo of the vessels.

During the past twenty years the Nova Scotia coal mines have paid \$900,000 for the item of pilotage in Provincial and St. Lawrence waters.

Labor enters more largely into the production of coal than into that of any other native product. For every \$1,000 worth of coal sold, \$850 goes to labor.

Every 10,000 tons of Canadian coal displaced in the home market will decrease the provincial revenue \$1,250, will take away a month's living for 250 employees of the home mines and their families—and give it to foreign miners; will decrease our railway and water borne freights to that extent, and give it to foreign carriers; will send \$25,000 in gold out of the country which would otherwise circulate entirely in the Dominion and would be seriously felt by the mining companies—but most of all by the working men and their families.

In view of the above facts, the question, "What is to be the future tariff policy of the government as regards coal?" is a vital one to every patriotic Nova Scotian.

Friends of The Canadian Miner would do us a kindness to mention in writing to any of our advertisers that they saw the advertisement in our Journal. There are very many men, who from temperament, occupation or otherwise do not do so. There are advertisers who only measure the value of advertising by what they actually see, and cannot see further. This is not the true way to judge the value of advertising. The quiet mention of an advertising medium may do good to the medium.

## THE MECHANICS OF MINING.\*

By D. W. Robb, Member Can. Soc. C. E., A. S. M. E.

The general public seem to regard mining much in the same light as a search for Captain Kidd's treasure, mysterious, difficult and uncertain, but having discovered the mine, the fortune has only to be picked up. This belief is, perhaps, unfortunate, since it leads to the loss of money and faith, and tends to produce distrust of all mining ventures. Yet this gambling spirit, which seems inherent in humanity—the desire to acquire wealth with little labor, is perhaps not an unmixed evil, because, if all enterprise was limited to absolutely safe investment, very few mines would be discovered. The mining engineer knows only too well that, notwithstanding the comparatively strong light that may be thrown upon, and even into, the bowels of the earth by geological science and prospecting experience, aided by the diamond drill, nature's secrets are so various and intricate that there is still much chance work. The present paper will not deal with the problem of finding a mine, but with the successful operation of it after it has been found.

While a few mining properties have been, and will be, developed which pay handsomely, in spite of bad management and crude mechanical appliances, by far the greater number of mines of all kinds depend for success or failure upon the method of operation, and even in those which will stand a certain amount of waste, there is no reason why they should not be made to pay better by good engineering. While the mining engineer should be qualified to lay out and conduct purely mining operations, such as location and arrangement of pits, shafts, drainage, ventilation, etc., he is not usually an expert mechanic. He may understand the general principles of steam engines, pumps, air compressors, and electric machines, but his calling does not require him to study the details of each of the numerous forms of these machines, and he has not the constant opportunity to become familiar with the peculiar advantages and disadvantages of each, so that he can readily choose the details of his plant, with a clear perception of how they may be combined to give the best results, with the highest economy in fuel, labor and repairs.

The mechanical part of mining consists in providing the best and cheapest methods of drilling and removing rock or ore, transporting, screening, crushing, milling, or otherwise preparing the mineral for further use; pumping, ventilating and other operations, which may be accomplished by the use of machinery. First of all comes the power necessary to drive this machinery; this must, in the present state of the mechanic's art, be obtained either by means of steam or water power. Whether steam or water will be used must be determined by circumstances; where water power is not available, steam must be used, but in other cases there may be a choice. Where both water power and steam are available, care should be exercised in making the choice. To the superficial observer water power may be attractive, because the water is free of cost, whereas fuel costs money, but it should be kept in view that the cost of building and maintaining dams and other incidental expenditures is frequently so large that the interest on capital and cost of maintenance is equal to, or even greater in some cases, than the cost of fuel, and if the stream of water is insufficient or irregular, steam may have to be used

to supplement it, or the interruption of work would entail heavy loss. Having decided upon the kind of power to be employed, the next question is the selection of apparatus. If waterwheels, whether they shall be of the turbine or re-action type; if steam is to be used, whether the boilers are to be water tube or some other type, engines simple or compound. These are questions which should be decided by a competent and experienced mechanical engineer for each individual case, as they are governed by the conditions, *e. g.*, whether the head of water is to be high or low, whether one large engine or a number of small ones must be employed, whether the steam is to be carried a long distance, or used near the boilers, and other circumstances too numerous to mention. In small and medium-sized mining operations, a mistake is often made in using several separate engines for hoisting, pumping, milling, etc., involving five or six cylinders to be cooled and re-heated, causing a great waste of fuel, when, by a proper arrangement of gearing, one large engine, of the best and most economical type, could be made to do all the work. There is frequently an enormous waste of fuel from this cause alone.

The next point to be decided is one which is so closely allied to the previous one that it must be considered with it, *viz.*, that of transmission of power, one of the most important subjects in mining, because power must in every case be used for many purposes, and at many places, both above and under ground. I find a tendency among mining men, and even mechanics, to advocate some one form of transmission as superior to others, while the truth is that each form (direct steam pressure, compressed air, electricity, rope driving, belt driving, shafting, etc.) has some special advantage, and is better suited to some particular case than any other. For instance, if a mine were so situated that only hoisting, pumping and perhaps a small amount of drilling, had to be done a short distance from the boilers, it would be more economical to use steam direct than compressed air or electricity, each of which consumes power in the transformation by compressor or dynamo; if so situated that a Cornish pump may be driven direct from the main engine, or even by a separate engine with early cut off, and reasonable expansion, it would be much more economical than a steam pump, to which steam must be carried a long distance, and used without expansion, as is common with underground pumps.

Compressed air is admirably suited to underground working. It may be transmitted in ordinary pipes having only the average capacity required, and the pressure maintained by means of receivers at almost any distance from the supply. It may be used in ordinary pumps, drills, or other simple apparatus which are easily managed by miners, and in use does not cause any inconvenience from discharge; on the contrary, aiding in ventilating to a small extent. On the other hand, it is attended by considerable loss from the accumulation of heat in compressor, and decrease of pressure by cooling. These losses may be overcome to some extent by compound cylinders, re-heating, etc., all of which adds to the complication of the machinery, and consequent additional expense and care. Electricity is perhaps the most flexible and convenient of all forms of transmission, because by a simple copper wire it may be conveyed long distances and furnish power for pumping, drilling, haulage, etc., or may be converted into light or heat. Since its use for these

purposes is comparatively new, there is much room for improvement in the apparatus, and in the presence of gas in coal mines it may be dangerous from sparking or defective connections, but time will no doubt overcome these objections to a very great extent, and render its use as successful and popular for underground operations as it has become for street car propulsion and other uses above ground.

Although it may be necessary or expedient in some cases to use several forms of transmission for the surface and underground working of the same mine, there would be a great advantage in point of economy of fuel, attendance and repairs in using one source of power, and one form of transmission for all purposes. For instance, if one or more large steam engines of the most economical type could be used to compress air, or generate electricity for distant or underground work, and hoist directly, there would be a great saving of fuel over a number of small engines, pumps, compressors or dynamos. A large mine, to a greater extent than almost any other operation, presents constant opportunities for the mechanic's skill and invention, and since there is always a large amount of material to be moved and operated upon, economy is only to be obtained by performing every possible function by mechanical means. The conditions are so varied that the best mechanical knowledge and original invention is required, and the mechanic, equally with the mining engineer, has the power to make success or failure.

The moral to the investor in mining properties is, make sure of a good mine, under the management of a capable and experienced mining engineer; and to the mining engineer, get good mechanical advice and assistance. I have nothing to say against the advice given gratis by manufacturing concerns, which is frequently honest and valuable, if it is not entirely disinterested, but an independent mechanical engineer, who has had experience in mining operations, and who is employed directly by and for the mine, should be of great assistance, both in selecting and arranging the plant and in operating it.

## CHEAP CHEMICAL EXTRACTION OF GOLD.

SPEAKING of the chemical extraction of gold, and no doubt with the Nova Scotia fields specially in view, the editor of our interesting contemporary, the *Industrial Advocate*, of Halifax, N.S., says:—It would seem that in this lies the future profit that is to be derived from the prosecution of gold mining. Both the cyanide and chlorination methods are well adapted to be extensively used in this province. Not only in the treatment of ores, but in the handling of a large area of tailings scattered all over the province, may success be looked for. If the Richardson mine at Isaac's Harbor can be made to pay at a valuation of \$2.58 worth of gold to the ton, what are we to say of tailings carrying all the way from \$3 to \$9 in free milling gold. The removal of the royalty on gold recovered by any of the chemical processes would be a wise move, and it would involve no element of expense to the government. If such was done, it is very likely that each district would come in for more attention than at present and the results would be seen in the bustle and activity of genuine prosperity.

If you want to make money through gold mines, buy the Canadian Miner. Price 10 cents per number, or \$2 per annum.

\*A paper read before the Canadian Mining Association at Montreal.



# The Canadian Miner.

ISSUED ONCE A WEEK

AND

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## NOTES AND COMMENTS.

WE have produced several geologists whose diligence in exploring a vast and unknown region with comparatively little aid from European or other investigations is worthy of great praise. They had to deal with the great Laurentian system, the occurrence of which in Europe and in the United States is in very limited areas. In fact Canadian geologists have led the world in the study of these rocks which formed a vast reach of narrow continent from Labrador round by the great lakes and north-westward east of the Mackenzie river when neither the Appalachian upheaval of the east, nor the later tremendous upheavals of the Rocky Mountain system had taken place, and when the Mississippi basin and probably the vast basins drained by the Red and Saskatchewan rivers and the Mackenzie river system, constituted an shallow inland sea. Several of our geologists have made a world-wide reputation and stand in the foremost ranks amongst the great men whose patience in building up geology has already done so much for the world. We are proud of them. But, of course, we have geologists and geologists.

In some countries learned societies take up geologists who have shown the eminent virtues of patience and cautious, if bold, inquiry. With their support, many of our great geologists of a generation ago achieved fame. Since that time a certain measure of popular appreciation of geology and its practical outcome has induced governments to organize geological surveys. Under this system it is not always the fittest that survives. We may gain in the greater vigor of the work of exploration, and on the whole, this plan may be the best, especially in new countries. We are inclined to think sometimes that in view of the totally different attainments of the men who have charge of the affairs of state from time to time, a learned society acting in association with the government and largely supported by the government, could manage certain branches of scientific inquiry, such as geology, meteorology, and archaeology with more effective results than under direct government control.

WE have had much criticism of geologists of late amongst our mining men and amongst

Canadians generally. It has been provoked by the faults of a few men, who posed, or seemed to pose, as knowing a great deal when their mental and scientific horizon was not of sufficiently ample breadth to include new occurrences and variations of rocks. Gold and other metals lay under their feet and they did not see them. The prospector was too much the geologist's eye, and the prospector resented the unwilling use made of him when he had proved what the geologists failed to see, or even dream of. "Silver or gold cannot be here; the rock formation, judged by what I have seen, or have read, make it improbable." So the mining industry in several districts has been given severe checks, and the prospector has won the glory of discovering new areas rich in mineral wealth.

BUT it would be a great mistake for our average citizen or for the prospector to underrate the services that our geologists have done the country. Very often they are credited with saying what they never said. They must not say gold is probably here or there in paying quantities unless they have good reason to think so. It is not every one who can stick, as a scientific man, to bare, known facts and yet be bold enough to lead also, as does the great astronomer, Camille Flammarion, into promising fields beyond. The geological survey has done good work; it would do better if government aid were more liberally furnished to it. It mapped out and marked the Huronian areas along the Seine and in the Manitou country and in the Lake of the Woods borders. Along its marks the prospector has found the richest gold fields. The survey could only map what came under its observation. It could not, without more money and more men, find the whole extent of our gold-bearing region.

THERE is very much more extensive and thorough exploration to be done by the geological survey. The Laurentian system has but been examined by lines or observed by croppings on a few streams. There is no reason to think that the metal bearing belts are confined to the districts now known to contain them. Northern Quebec and Labrador, easily accessible, are scarcely touched from the prospector's standpoint; and what of the vast region stretching over twenty degrees of latitude north-west of the Lake of the Woods?

THESE old rocks of eastern and northern Canada are fissured and seamed from end to end. If the process of gold-vein formation be largely that of infiltration from surrounding rock, we have but to compare the length of time the Huronian veins have had to accumulate gold, with the time the newer Rockies and Andes system has had, to suspect the Laurentian region the richer in precious metals.

PEOPLE whose experience has been in Australia, the Rand, Mexico, Colorado, British Columbia or anywhere in the western half of America cannot speak with any authority about the richness or greatness of the Ontario gold fields. Here they strike a condition totally unfamiliar to them. The probability is that the Ontario gold fields are the richest known fields in the world.

AMONG "experts" who deserve not the friendliest of criticism are some of our Mining Engineers. It is true that Civil Engineers whose only graduation in their business was in the service of engineering firms in Great Britain, built railways in France better than those built by graduates of the state-aided engineering schools, of that brilliant country noted for its attainments in many practical arts. And

what is true in kind in this case will continue to be true to the end. But it would be of value to mine owners and to investors in mines to know who are qualified M. Es. There are many bogus ones, who live on pretentious display of little knowledge, and who may do much harm by their reports. We have good mining engineers trained in Canada, who use the appellation rightly; we have many good mining engineers who have never claimed it, and many others who use it without more than a shadow of knowledge of mining. The public should beware of too readily accepting the prospectus opinions of the last class of "experts." A little money out of a "boom" is generally what they are after; they have no permanent reputation to lose.

ELSEWHERE we publish the *Canadian Manufacturer's* collection of views and facts bearing on the nickel industry of the Sudbury country.

SEVERAL city contemporaries are in the habit of copying, in whole or in part, interviews and other information or opinion from THE CANADIAN MINER, without the usual justice, not to say courtesy, of acknowledging the source from which they copy. We suppose the same injustice is done to many others of their contemporaries. After a while the special offender's failing will be sufficiently known to make the press of the province chary in giving it credit for anything original in the way of mining news.

BRITISH COLUMBIA is rich in precious metals. But Ontario, where development is much more recent, promises to equal it shortly in the number of paying mines. The promoters of Ontario mines are at work developing their properties rather than in booming stocks.

COMMON sense should make organizers of mining companies avoid over capitalization and especially the allotment of the greater part of the capital to the promoters and owners of mere prospects. There are signs in Eastern Canada that many of the companies in British Columbia organized on this basis will experience increasing difficulty in floating stock. Re-organization, with the wiping out of much of the stock allotted to promoters, may be necessary in many cases. What is true of the growing feeling here in regard to the distribution of capital stock is equally so in other parts. Such companies have but little chance in New York or London.

HERE is something new and very important, perhaps. A well-known and leading analytical writer of high standing in both Britain, and in British Columbia, where he now resides, writes to us, under date of March 4th, "I am proud and happy to say I have discovered, or rather identified, Tin this last week—metallic tin, found in some rotten granite. I believe firmly the man who brought it is honest; he's an old friend, prospector of course. . . . It is a valuable mineralogical find, whether there is enough to pay or not. I believe it is all right." We hope to hear more about this matter. The find, we assume, is in the lower Kootenay country. Tin mines would be a valuable addition to the operating mines of the Dominion.

BRITISH capital is now coming in large quantity into the Rossland and Trail camps. There is every reason, from a geological standpoint, why there should be immense wealth in the district, and the Le Roi and several other

mines have given some indications of the nature of the bodies of ore to be found there in masses and also in veins. The ores that can be practically treated by stamp mills will probably prove the most profitable, and that there are such ores is proven by the runs made of Le Roi ore at the stamp mill at the O.K. mine which is largely a free milling one. Further details of the experiments with such ores will be eagerly awaited. As things are, the foreign investor will not be likely to buy prospects readily or at large figures in that district. He wants a prospect that is developed into almost the proportions of a real mine.

It is proposed to make several important changes in the British Columbia Companies Act, modelled upon the law in England for the prevention of fraud in the formation and operation of joint stock companies. Prominent features of the proposed Act are: the keeping of a public register of members and their shares, and the annual filing, for public information, of all particulars regarding the financial status of the company; examination of the affairs of the company by government inspectors; registration and regulation of foreign companies, with provision that nothing allowable according to the constitution of a foreign company shall be permissible in British Columbia if at variance with the new Act; and that no company shall commence business until ten per cent. of its capital has been actually paid up in cash. Every person named as a director in any prospectus is required to sign a copy of it to be filed with the registrar; and the prospectus must give detailed particulars of shares held by each of the signatories; the price paid for any property purchased or proposed to be acquired, and the names and addresses of the vendors; the amount estimated for preliminary expenses; the amount to be paid to any promoter and the purposes for which it is paid; and, says an exchange, various other particulars, several of which, as will be seen from the examples, would be found very undesirable regulations to many of the companies floated to operate in the Pacific province. It will be a relief to many of these companies to hear that the Act will be "prospective only" in its operations.

### THAT HUNDRED SQUARE MILES OF GOLD FIELD.

The announcement by the *Globe* the other day, of the proposed grant to a British Mining Company of the exclusive right to explore and develop over an area of 64,000 acres of territory near Rainy Lake and on the Lake of the Woods, appears elsewhere in this journal. The announcement produced at once on the streets and in business offices a profound sensation. Dread of great companies controlling the country has become a factor in practical politics in Canada, and anything like unusual privileges are properly viewed with suspicion. The influence of great railway companies, and great trusts and combines on this continent is now well recognized and feared. The territory comprised in the option is much larger than the Witwatersrand whence nearly \$10,000,000 of gold is annually derived. It has been very naturally assumed that after trying the South African field, the South African Company, which has been operating for some time in Northwestern Ontario, and been represented there for nearly a year is well acquainted with the character of the territory embraced in the

option and acquainted with many of its rich veins and bodies of gold ore, or it would not pay \$20,000 for the option and agree to spend six times that sum. The objections to the deal, are obvious, and have been the first considerations to suggest themselves to the public. They were commonly mentioned on the street by men of both sides of politics before either the press or members of the legislature had time to voice them. Mr Whitney, the leader of the opposition expressed himself strongly in the Legislature, in denouncing the grant; the Hon. Mr. Gibson Commissioner of Crown Lands replied, and was strongly supported by Premier Hardy. The Government has promised to bring down the papers relating to the deal at a very early moment. Till then, or till further information is had than is now public, full criticism of the Government's action can not be made. The option is no doubt a very valuable one, and the exclusion of prospectors, other than the Company's, a grievance to many. The area, it is true, is less than the area of three townships, but though we have in the province a gold belt a thousand miles in length, and in parts one to two hundred miles wide, it is not everywhere that rich veins are to be found, and in the richest regions the locking up in the interests of a mining company of even a hundred squares of land is something which requires strong reasons for its justification. The grant and the development accomplished under the conditions imposed in granting the land will no doubt do much to attract a flood of British and foreign capital to the gold fields of Ontario, and that fact has certainly been realized by the government. Our opportunity to draw the eyes of the world to Ontario has come, and the government is seizing it. Whether the method of doing it is just the very best is another matter. We await further developments.

### MINING LEGISLATION.

The Ontario Legislature has a very considerable number of important measures to discuss this session, and April may be far advanced before the session closes. As to the mining bill, the Government is putting out feelers in every direction—a wise course to pursue. Many of the members have yet no decided opinions as to what the character of the bill will be, and probably the Government has not attained finality in shaping its provisions. We expect to see the royalty provisions of the present act modified or even abolished. Should the latter course be decided upon we may expect a more or less definite assertion of the right of the Province to derive an income from the mines as well as the mineral lands of the Province. Simplification of the law in regard to prospectors may be looked for, and on the whole progressive legislation.

The Copper Queen Mine, Bisbee, Arizona, is producing about 1,000 tons of copper per month.

Mine owners in Utah object to mine inspection, just as they did in Colorado when it was proposed to adopt it there. They have always opposed it, in all lands.

### PERSONAL.

CAPT. CURRIE, of the brokerage firm of Campbell & Currie has gone to B.C. on a six weeks' trip. It is said that he will let contracts for sinking shaft, etc.

MR. R. H. AHN, the well known and successful miner who conducts the reduction works at Rat Portage and has done much for the development of the Lake of the Woods gold field, was in town last week and is now gone for a short stay at Old Point Comfort, Virginia, to recuperate after a severe attack of influenza, and a long period of very hard work.

### CANADIAN NICKEL.

In its recent review of the metal markets for 1896, the *Engineering and Mining Journal* says:—

The production of nickel in the United States in 1896, entirely from Canadian ores and matte, reached a total of 3,697,039 lbs., which compares with 2,678,661 lbs. in 1895, showing an increase of 1,018,378 lbs. Of the production in 1896 metallic nickel amounted to 1,600,049 lbs., the remaining 2,096,890 lbs. being in the form of oxide and sulphide.

This production may be said to represent the greater part of the world's output, as very little is reported from abroad outside of the small quantities made in Norway, Sweden and Germany. For a part of the year the Societe le Nickel, in France, has had its works and its mines in New Caledonia closed, the stocks on hand being sufficient to meet all requirements for the metal for some time to come. The demand for nickel, except for use in steel making, does not seem to increase; and the amount required for alloying steel is still comparatively small. No great increase in the use of the metal industrially can be expected until it can be furnished at a much lower price than at present.

Notwithstanding a comparatively light demand prices have been maintained at nearly the same level through the year. At the close of the year the current quotations in New York were 33c. to 36c. per pound for ton lots, and 37c. to 39c. for smaller orders. The limited extent of the trade and the absence of competition among producers have prevented fluctuations in prices.

The *Official Daily Market Report* of the New York Metal Exchange, discussing the same matter says:—

Consumption throughout the year has been rather poor and prices were depressed. German silver makers complained almost continually of not receiving sufficient orders to keep their mills going, and during the general depression of trade last summer, consumption of nickel was almost nil. On the other hand, iron and steel makers are taking larger quantities from year to year, in order to give their finished metal greater resistance, and although some progress has again been made during the year; it has not fully come up to expectations.

Stocks increased somewhat during the year, and unquestionably the production exceeds consumption. Had prices not already reached a very low level, it would have been difficult to maintain present values.

A Sudbury correspondent of the *Globe*, speaking of the facts presented by the *Engineering and Mining Journal*, and alluding to the quoted prices of nickel in that market, says:—

At these prices the value of the nickel produced by the mines of practically one company here last year was \$731,143. But

to this must be added at least a third more for the copper and cobalt in the ore, making a total amount in round numbers of \$975,000. If there are no profits in nickel-mining, as those engaged in the business so persistently allege, it is rather hard to understand why the principal company in this district has just added another smelter to its plant, and is preparing to open up two new mines this coming season. The trouble is that the industry is in too few hands now, and the want of competition keeps the price of nickel too high for general use. We need one or two more companies here. There are plenty of first-class properties to be had, and it is claimed that by using McDonald's self-roasting process the cost of making nickel matte could be reduced by nearly one-half. A plant for this purpose would not cost any more than the ordinary smelting works at present in vogue here.

If some of the Ontario money that is going to other places for mining investments would come to this district fully as good returns might be obtained in the end. There is room for a strong nickel company, and also for any amount of capital and enterprise to develop the Wahnapiatae gold mines. Some weeks ago a party of three prospectors made a flying trip into the unexplored region north of Kookagaming Lake for 50 miles, and they report that the gold belt extends all the way to the height of land there, with plenty of territory for thousands of prospectors to work in. There is sure to be a regular stampede in that direction as soon as the snow leaves in the spring, if not before then.

At the recent tariff investigation at Washington, before the Ways and Means Committee of the House of Representatives, Representative Hermann, of Oregon, asked for a duty of at least 10 cents a pound on nickel ore entering the United States. There is now no duty.

"How good are the Canadian ores as compared with ours?" Mr. Hermann was asked. "The Canadian ores average a yield of 2½ per cent. of nickel. Our Oregon ores average 5 per cent."

"What is the average value of the nickel ores per pound imported from abroad?" "Three cents a pound."

"And you want a duty of 10 cents?" commented Mr. Dingley. "Do you realize that this means a duty of more than 300 per cent. ad valorem?" Mr. Hermann looked nonplused. In a moment he answered: "My constituents must have reference to the finished product, the metal nickel, not the ore."

"You have a duty on nickel itself of 6 cents a pound already, haven't you? Why do you want it raised?" "We want to build up our industry. Why, we can produce nickel in this country to-day cheaper by 4 cents a pound than the Canadians can produce it. The industry deserves encouragement."

"If you already have 4 cents advantage over the Canadians, why on earth do you want 10 cents more?"

"We have no encouragement now, we need encouragement."

"Well," remarked Mr. Turner, "I wonder you don't come here asking for a bounty and have done with it."

The next witness was Mr. Robert J. Thompson, nickel refiner, of New York. "There is not," he said, "one mine in the United States which could be made to pay under the protection of any reasonable duty. We refiners are, of course, anxious to buy our nickel at home if we can find it here, but we cannot. We find some rich ores, but

they are small in extent and widely scattered. The Nevada ores which have been described as so rich are found in pockets of 10, 15 and 20 tons. If you put on the duty, the United States Government itself will pay the duty and nobody else."

Here Mr. Hermann interrupted to ask:—"Is it not true that the copper which occurs with the Canadian nickel ore is hard to extract and makes a decided drawback to the use of these ores?"

"On the contrary," answered Mr. Thompson, "the copper is easily taken out and is a valuable by-product. The Government's purchases of Canadian ores have been at a price of 11 cents a pound for the nickel and 4 cents for the copper contained in them, and they have turned around and sold me the copper for 6 cents."

In a recent issue of the *Mail and Empire* was an announcement to the following effect:

"It seems as though nickel at present is rather a drug on the refined nickel market, as the Canadian Copper Company, of Sudbury, has been obliged to discontinue for the present its shipments of matte, owing to difficulty experienced in marketing its refined nickel."

Mr. A. McCharles, of Sudbury, noting this statement, wrote as follows:—

"A copy of the paper of that date was sent to nearly all the owners of nickel properties in this district, which, in itself was rather suspicious, and seemed to indicate some other purpose than merely to enlighten the world on the state of the nickel market."

"We knew here that the Canadian Copper Company had been shipping more matte this season than ever before, and also preparing to open up another mine in order to get out more ore. The above announcement therefore came like a veritable surprise to most of us, and as the matter was of vital importance to the district and the country at large, I wrote at once to New York about it, and got the following reply, which shows that the report of an overstocked market in nickel was entirely at variance with the facts of the case:—

"It is impossible to find out the exact amount of refined nickel in stock. You know that the business is in a few hands, and is very closely kept. The companies will not give any information on the point. There has been, however, no unusual pressure on the market to sell, nor are we aware that stocks are any larger than is customary at this season. We have information to the effect that the Canadian Copper Company is considering the adoption of some change in its refining processes, and that may have something to do with the matter to which you refer. At any rate, it is much more likely to be that than any increase in stock which has caused the suspension of matte shipments."

"Then, in the last issue of the *Engineering and Mining Journal*, of New York, the market report on nickel is given as follows:—'Sales have been fair, and prices are unchanged. We quote for ton lots 33 to 36 cents per lb., and 37 to 39 cents for smaller orders. London prices are steady at 14 to 15d. for large orders, and 15 to 16½d. for small lots. The New York price is about on a parity with London, allowance being made for the duty of six cents per lb. here. The Paris quotation is 4fr. per kilo, equivalent to about 36 cents per lb.'

"I may say that these prices have been steadily maintained for a long time now, which would hardly be the case if nickel were a 'drug' on the market. It is quite true that the Canadian Copper Company had

not been shipping any matte for a month or so this fall, but shipments were resumed last week on even an increased scale. Furthermore, the prospects of the nickel mining industry here have improved considerably of late, and negotiations are going on for the purchase of some large properties, and the erection of new works, including a plant to test the McDonald self-roasting process in a practical way."

#### NOVA SCOTIA GOLD FIELDS.

It is not uncommon, says the *Industrial Advocate*, of Halifax, N.S., to find many men who, while not given to making rash statements concerning most subjects, when discussing the question of gold production in Nova Scotia, seem to lose their grasp of the essential features of the industry, and they may be frequently heard to remark, that every dollar that has been taken out of our mines has involved the expenditure of two dollars. Let us go into this assertion a little closer than it seems to have been studied, and see whether there is any basis for the charge laid at the door of the gold fields of the province. In the year 1896 we produced gold to the value of \$500,000 at an expenditure for labor of \$270,000, and allowing say \$30,000 for wear and tear, depreciation of plant, brings it up to \$300,000. There is \$200,000 left to represent the dividend earned upon the capitalization of the various operators. Now taking the figures given by the last census as the capital employed, we find it set down at \$340,000. If this amount be correct, we have a net return of over 58¾ per cent. profit for the year's operations, not such a bad showing when compared with the average returns of most business ventures.

Of course this leaves out some mining operations which have proved disastrous to the promoters, but it must be remembered that every person who enters into mining speculation cannot expect to be successful unless the same care and attention is devoted to his enterprise, that the successful business man finds necessary. We are of the opinion that the gold mining industry of this province offers better returns for the capital invested, than any other business, providing of course, the ventures are not mismanaged or left to direct themselves.

The surest way of placing this industry upon a paying and permanent basis, is to reduce the cost of milling and mining to the lowest possible point. It has been said, and we have no reason to doubt the statement, that ore has been mined and milled for \$1.60 per ton. This being so, it is an exceptionally poor Nova Scotia ore that will not pay a handsome profit on such a low basis of treatment. It is a fact which is every day being brought home to our notice, that ores which in the past could not be touched at all are now looked upon as good, and are being worked to advantage. It is time that spasmodic pottering and scratching of the earths condour in this province ceased, and a decided move be made in the direction of modern mining methods. There is no question of the metal being in the province; every school boy knows that fact, and the question how cheaply can it be secured, is the problem that should have the earnest attention of those interested.

The Canadian Miner will help you to make money. A showing is made of the mining industries of the country every week, and the really important mining events recorded, rather than the unimportant, or rumors circulated for selfish purposes.

## ONTARIO NEWS.

**Sudbury.**

(Sudbury Mining News.)

Several gold locations will be surveyed in the Wahnapiatae district in the next few weeks.

Prospectors Townsend and Baycroft, with a load of supplies, went out this week to open up a claim on Colin Scott Lake.

Mr. R. H. Carmichael with commendable enterprise, has established a tri-weekly stage between Sudbury and the Crystal and Comstock Gold Mines on Lake Wahnapiatae.

The steam tug purchased by Mr. D. O'Connor from the Polson Iron Works Co. of Toronto has arrived and is being forwarded to Lake Wahnapiatae by Mr. J. T. Cryderman.

Mr. W. A. Quibell, President of the Sudbury Gold Mining Co., informs us that the miners engaged sinking a shaft on the Company's coal property, have attained a depth of about 35 ft., and that the indications are entirely satisfactory.

D. McGillivray and F. C. Busby are employed in rushing forward the construction of the saw mill on Lake Wahnapiatae. Contractor J. F. Johnson is in charge, and all the machinery is on the ground.

Mr. Leith Myles of Sudbury, and Mr. Ruckel of Toronto, are on Wahnapiatae River this week, and are commencing work on a gold property under option from D. Dewar of Sudbury to Mr. Craig of Toronto.

We understand the Ontario Government has inspectors at work in the Wahnapiatae region estimating the amount of lumber thereon, and no doubt the result will be that the territory will be placed on the market for mining purposes.

Messrs. M. C. Biggar, L. O'Connor and Wm. McVittie of the Citizens Gold and Coal Mining Co., visited the diamond drill which is at work testing their coal property. The drill is down to a depth of about 80 feet. Some trouble was experienced on account of difficulty in getting water.

By direction of the Ontario Government, Professor Goodwin, Director of the School of Mining, in connection with Queen's University, Kingston, will visit Sudbury sometime during the current month, and place on exhibition about 200 specimens of mineral ore. This exhibit is to be left in Sudbury permanently in charge of two trustees appointed by the Government.

The charter of the Hub Gold Mining Co. of Sudbury has been issued. The capitalization is \$600,000, in shares of \$1 each. The promoters are Messrs. F. B. Chapin, C. Kettle, R. McBride, Mayor Cochrane, and D. O'Connor, all of Sudbury. No shares have as yet been offered for sale. The company will operate the Kettle-Ranger-McBride property. Assays shown us by Dr. G. Cole of Toronto give \$21 of gold per ton.

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**Around Madoc.**

Mr. Allen Moon has secured options on 900 acres of mineral land in Madoc and Tudor.

The Craig mine, says the Belleville *Sun*, shows a vein of rich-looking sulphurets between 200 and 300 feet long and four feet wide. The Ledyard gold mine, seven miles from Marmora, has a mill building 66x28 feet, and a wing 41x16 feet. Near this actively developing property is the Belmont mine, with 4 veins, yielding free gold to the pan, and traced by outcroppings from distances varying from 2,000 to 3,500 feet.

220 tons of ore have been milled from it and give an average of \$10.46 saved to the ton, under unfavorable facilities. On the mickel ore mine on lot 6, eighth concession of Marmora, a shaft of 80 feet has been sunk in good ore. H. Corby, M.P., of Belleville, and U. E. Thompson, Toronto, are the owners.

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**Seine River.**

Extraordinary activity prevails in the Seine River district, which J. J. O'Conner tells the *Globe*, is simply alive with men and teams, the latter bringing in machinery and supplies. He counted no less than 40 on the road from Bonheur to Saw Bill Lake, and was told that two car loads of horses were then on the way from Winnipeg to be used in this work, so as to get as much freight as possible in before the roads break up. This great activity is caused by the large number of properties now under development right in the Saw Bill group, there being at present no less than 10, and on the opening of navigation this number will at once be increased to 12. The Saw Bill mine itself is now down 160 feet, and the ore is getting richer with every foot of increase of depth. They have found on the Saw Bill property a continuation of the Hammond dyke, also that the Saw Bill vein will form a junction with it, and it is believed that at this junction an even richer property will be found than at any other point in this district.

The Saw Bill people have a millwright with a staff of men at work now putting in their mill, which is expected to be in operation by July 1st, and the Hammond-Folger people, who own the big dyke adjoining which crosses not less than ten different properties, are putting in a 10-stamp mill for testing purposes. A large gang of men are employed in the Wampum proposition, which is panning out well. The Kabaskong vein, at the foot of Saw Bill Lake, has been found to carry very rich ore, and the Hammond dyke has also been discovered in close proximity. Ten miles south of the Saw Bill and on the Seine River the Gibbs syndicate is opening up a promising property in the interest of a number of men from Winnipeg, and a number of other propositions are being developed on some good ore. Already the district for 10 miles south and east from Saw Bill Lake and Seine River has been fully surveyed and is now one continuous mass of mining claims. These have all been taken, and in a very large majority of cases by parties whose intention is to develop them on the advent of spring.

The very latest from the Foley mine we obtain on the eve of going to press. The second mill test of 120 tons of ore of the Bonanza vein at the Foley mine produced \$1,750 of bullion on the plates, the dies were not taken out. This means almost \$20 a ton for the second run. Mr. Kerr, who put through the tests, was compelled suddenly to leave to take the position of manager of the great Tomboy mine, and during the few days the mill was shut down, a new mill man and a new amalgamator and a chemist were procured. Excellent men have been obtained, and the mill was expected to start on the 11th for a two week's run before they will have a clean-up. The parties interested expressed themselves as extremely well satisfied with the test runs. Mr. Flaherty, the Superintendent of the mine, in the absence of the Manager, Mr. Foley, has been actively proceeding with development work. The bullion of their week's run, amounting to \$3,000, was turned into a 166 oz. gold brick at the works of the Ameri-

can Watch Case Company, Toronto, on Monday last, by Mr. J. C. Caldwell, the owner of the famous Sultana mine. Mr. Caldwell expressed the most favorable opinion of the Foley mine and its future prospects.

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**Round Thunder Bay.**

The Empress, Jackfish Bay, has now 25 feet of pay ore at the adit level, and the main vein has not yet been struck. This is such a satisfactory state of affairs that the owners have ordered more boiler power, and the mill will be started about the 25th inst. Another 10 stamp mill, Mr. J. J. O'Connor, of Port Arthur, says, in an interview with the *Globe*, will shortly be erected in the Jackfish Bay district, about two miles from the Empress.

At Schreiber, the Fraser and Otisee properties are showing up wonderfully well, and a car load of ore has just been shipped to the School of Mines at Kingston. Situated around these propositions are a number of other properties which give splendid surface indications, and he says that they will be placed under development at the opening of spring. A very large vein of gold-bearing ore has lately been discovered in the Township of McGregor, about 5 miles from Port Arthur, and is being developed by Mr. Murphy, of Fort William. The surface assays give from \$4 to \$48 to the ton.

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**Wabigoon.**

Wabigoon Mission, a few miles east of Wabigoon, where lots are being sold, has changed its name to Dinworic. This will avoid conflicting Wabigoon Mission with Wabigoon town hereafter.

The new and promising mining centre, Wabigoon, on Wabigoon Lake, and on the C.P.R., has two papers, the *News* and the *Miner*. The last, fortnightly, appeared for the first time the other day.

Messrs. Jones and Vincent of Philadelphia, registered at the Queen's Hotel, have been making enquiries looking toward the establishment of works equipped with the most modern appliances for treating ores and smelting at Wabigoon.

A syndicate offer has been made to the C.P.R. by the Wabigoon Land Agency, proposing to erect a railway station at a cost of \$5,000, and donating the necessary grounds at any central point suitable for the growing needs of the town, where the C. P. R. may designate.

Mr. Johnson, of the firm of Johnson & Haffner, Neepawa, is in Winnipeg, arranging for the construction of two steamboats to run between Wabigoon and different points on the Manitou and Wabigoon Lakes. It is expected the boats will be ready against the inrush of people expected at the opening of navigation.

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**Eastern Algoma.**

(From the Sault Ste. Marie Courier)

An option has been secured by the Great Northern Mining Co. on a graphite claim at Spanish River. The deposit is said to be very large and the quality is good. The property will be inspected very shortly by the company's expert.

The "Northern Light" in the township of Aweres is being steadily developed and shows better and better every day. A pan test this week showed free gold and the vein is now over three feet in thickness. From the appearance of the wall rocks it would look as if this prospect were on the line of

contact of the Laurentian and Huronian formations which cross the township very near this point if not actually at it. The fact, however, can hardly be established until the snow goes.

Mr. Wylie has been away this week at Goulais Bay inspecting the properties of the Great Northern Mining Co., and returned on Thursday night. Like Prof. Dewar he is strongly impressed with the large ore bodies in that section but reserves his opinion for results.

A pan test of ore from the Golden Egg at Mississauga, made this week by Mr. Wylie, yielded a handsome showing of free gold. The vein is of good width, between well defined walls, and well mineralized throughout. The development work is being vigorously prosecuted by Mr. Frank Marks.

The Myrtle Gold Mine was visited lately by Dr. J. H. Fell, of Manitowaning, and Dr. Fleming and Reeve Trotter, of Webbwood, and all expressed themselves as being exceedingly well pleased with quantity and quality of the mineral bearing quartz and were astonished at the amount of development work already accomplished. There is now a good substantial derrick erected at the pit's mouth and many and heavy are the bucket loads that are landed each day.

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#### Lake of the Woods.

Development work, says the Rat Portage *Miner*, employs six men at the Golden Rod.

The Rat Portage Mining Exchange is to hold a convention of mining men at Rat Portage on April 5th, 6th, 7th and 8th. Reduced fares are to be secured, and representatives of all the mining companies operating in the district around are invited to send representatives.

The Sultana, Mikado, Master Jack, La Mascotte, Lakeside, the Foley mine, any of these, or possible others, says the Rat Portage *News*, may develop a lode equal to, or better than, the Comstock. If within an area of 20,000 square miles, in all quarters of which gold has been found, we do not strike something exceedingly rich, it will be more than strange.

The sale has just been completed of M.H. 51, Manitou straits, by the Mosher Bros. to the Neepawa Gold Mining Co., for the sum of \$25,000. The deal was finally closed on Tuesday, when 10 per cent. of the purchase money was paid down, the balance is to be paid in 6 months. This property is said to be very rich. The company proposes to proceed with the development of the claim as soon as possible.

The Sabaskong Mining & Lumber Company held a meeting in the parlor of the Hilliard House last week to hear Mr. Jas. Conmee's proposition in regard to the Reserve. Mr. Conmee is willing to undertake the task of facilitating matters between the provincial and federal Governments, so that patents may be granted to the company. If Mr. Conmee succeeds in doing what he proposes, and development work is begun on some of the Sabaskong veins, Rat Portage will indeed become famous throughout the country, says the Rat Portage *News*, for it is a well-known fact that on the Sabaskong reserve is a network of auriferous veins, the extent of which has not yet been equalled by anything discovered so far, from one end of this district to the other.

It is reported that the Dominion Coal Co., of N.S., will remove a large number of their dwellings from Port Morien to Caledonia. The report states that Ronald McLeod will have the contract for removal and that the number of houses will exceed 35.

## BRITISH COLUMBIA.

### Around Rossland.

A big strike has been made in the Parker group. The assay runs \$22 in gold, and two ounces silver per ton. The shaft is down 75 feet, in 6 feet of ore. The property is near Wild Horse creek, three-quarters of a mile from the railroad, and is owned by the Dundee Gold Mining Company. It consists of three full claims, Parker, Old Bill and Lighthouse. Development is being pushed actively.

The next sensation in Rossland now will be the election for Mayor. The candidates promise to be Robert Scott, formerly of Galt, and Mr. C.O. Lalonde, the latter having, in response to a numerously-signed requisition, consented to become a candidate. The qualification for voters is exceedingly simple. Every British subject over 21 years of age who has resided here for three months is entitled to vote. There are no property or rental qualifications. This will, however, be sufficient to shut out a very large number of Rossland residents who have the misfortune not to be Canadians.

The Rossland *Miner* says:—The results of the tests made of the Le Roi ore at the O. K. mill were definitely summed up by Capt. Hall and Dr. Willis E. Everett, on Sunday morning, and their reports forwarded to the Le Roi Company. Capt. Hall of course cannot give out these reports until they have been passed upon by the company, but he had no hesitation in saying to the *Miner* representative yesterday morning: "We have now established the fact that these ores were concentrated, and in doing so we have inaugurated a new era of prosperity for Rossland." The results of the test may be summarized as follows: Gross value of ore milled, 10½ tons, \$16 per ton, gold and silver; saved on plates, \$67.85; gross value of concentrates, \$43.82, total value of minerals saved, \$111.67; percentage of extraction, 65; ratio of concentration, 6 to 1.

The Rossland *Miner* says: The whole face of the Gopher tunnel, which is now in 150 feet, is in solid ore. Some of it assays away up in gold, but the average is not high. The Home-stake shaft is now down 110 feet. Work has been begun in the old tunnel in the R. E. Lee. It has about 40 feet to run to cut the vein. Work in the shaft is delayed by reason of the non-arrival of the hoist and pump. Work on the Golden Drip is proceeding favorably. Since incorporation, two months ago, over 200 feet of drifts have been run with a force of only three men. These drifts are on two different veins. The east vein shows an average of four feet of ore throughout the workings, the values being about \$5 to \$6 per ton. On the west vein the ore body is proved to be continuous for upwards of 100 feet, with an upraise in it to the surface 60 feet long. The ore in this vein is of much higher grade than in the other, much of it showing free gold.

The Rossland *Miner* says the Ottawa tunnel is in 80 feet, and is just breaking into the ledge. The face of the tunnel assays \$6.40 in gold. The Iron Mask has started a new drift on the vein from the War Eagle's No 3 tunnel. The I.X.L. shipped to the smelter yesterday 12 tons. The Sunset started stoping yesterday and will get out 40 or 50 tons of ore for shipment to the smelters as an experiment. The Mabel tunnel is now in 235 feet, and has only about 30 feet more to run before cutting into the winze, which has been run down 25 feet on the lead. C. H. Ellacott took out a gang yesterday to survey the Daddy and the Mother Lode claims, on the west fork of Sheep creek. The Ibex tunnel is in 100 feet, just half the distance before it is expected that the ledge will be struck. Latest reports from the Victory

on Sheep creek state that the whole face of the tunnel is in good concentrating ore. The ore is of good grade, being streaked with galena and copper glance. The St. Bernard and Northern, which corner on the O.K., will be extensively worked this summer. A cross-cut tunnel is now in 75 feet. The Buffalo average assay the other day was \$12 in gold. The shaft is now down 55 feet. Five men are working continuously.

From January 1st to February 28th, inclusive, the shipments of ore from mines at Rossland to smelters were as follows:

Mine.	Tons.
Le Roi .....	5,919
War Eagle.....	2,110
Columbia & Kootenay.....	395
Iron Mask.....	452
Jumbo.....	91
Josie.....	126
Cliff.....	61
Red Mountain.....	66
O. K.*.....	50
Total.....	9,270

\*Concentrates.

From January 14th to February 28th, inclusive, the ore milled in the camp was as follows:—

Mine.	Tons.
O. K.....	929

Shipments for the past week were:—Le Roi, 974; War Eagle, 50; Iron Mask, 65; Columbia & Kootenay, 40; O. K., 19. Total, 1,148 tons. During the same period the O. K. milled 130 tons.

It is understood that the Gunnis-Neame syndicate of London, Eng., has secured, under option, 4 well-known Trail properties. These are the Jumbo, Commander, Gertrude and Maryland. The proposed total purchase price is \$895,000. The option on the Jumbo is for \$500,000, of which several thousand dollars has already been paid to hold the mine until the Englishmen's experts may further examine it. The balance is to be paid in cash on or about the 1st of April. Several thousand dollars have also been paid to hold the option on the Commander, which is for \$250,000. The Commander is stocked for \$500,000. The option on the Gertrude calls for \$125,000, the money to be paid on or about the 1st of April. The Gertrude is stocked for \$500,000. The option on the fourth claim, the Maryland, calls for \$20,000. A percentage of this money has been paid to hold the option.

Of the 500,000 shares of stock held in the Le Roi mine, that is to pass to an English Co. for \$5,000,000, 327,000 shares says the Rossland *Miner*, are owned by Spokane men, 131,000 shares are held in Danville, Illinois, and 30,000 are scattered far and wide. The Spokane holdings are as follows:

I. N. Peyton.....	75,500
W. W. D. Turner.....	47,000
W. J. Harris.....	39,000
W. M. Ridpath.....	37,500
George Turner.....	35,000
D. W. Henley.....	20,000
J. M. Armstrong.....	17,000
Frank Graves.....	14,000
Ed. Saunders.....	13,000
L. F. Williams.....	13,000
R. B. Blake.....	3,000
W. J. C. Wakefield.....	3,000
Other Spokane holders.....	20,000

Total..... 337,000

Colonel Peyton, who holds 75,000 shares, it is understood, also controls the stock placed by him to his friends in Danville, Illinois, whom

he induced to buy at 25 cents a share. They are as follows :

Valentine Peyton.....	72,000
J. G. English.....	21,000
C. S. English.....	12,000
W. A. Peyton.....	16,000
Other Danville people.....	10,000

A Spokane paper, discussing the negotiations for sale some time since, said :

Spokane is full of men who tell in saddened tones of the chances they once had to buy Le Roi stock almost for a song.

"A year ago last June," said one man yesterday, "I was button-holed for half an hour by a broker who urged me to take 3,000 shares at 46 cents. A small block had been picked up in Danville at 40 cents and the broker was making a six-cent profit. I recall that he argued that the Le Roi was every bit as good a mine as the War Eagle, the stock in which was then selling for \$1.50. Judge R. B. Blake took the 3,000 shares which I refused."

Another Spokane man had a still more sorrowful tale to tell. "I was urged once to take a block of the stock at 5 cents per share," he said, and then he wandered down the river and gazed pensively at the rushing stream.

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**The Slocan.**

The Monitor and Juggler, near Cody Creek, have been bonded to a Chicago party for \$15,000, 10 per cent. of this sum having been already paid down. Another claim recently bonded to a New York syndicate is the famous California, a mile and a half from New Denver. The price at which this property was acquired was \$60,000, of which 10 per cent. was paid in cash. The Slocan Bob, on Robinson Creek, a mile and a half north of Springer Creek, has been bonded to Vancouver parties for \$15,000, of which 20 per cent. was paid in cash. The claim has a 20-foot shaft on it and has shipped one car of ore. J. K. Clark, of Rossland, and some Montana people have purchased the Black Bess on London Mountain, half a mile north of Seaton Creek and the Kaslo and Slocan Railway, and about seven miles from Sandon. A. W. Wright and J. K. Clark, in connection with some eastern people, have purchased the Palmetto, which adjoins the well-known Queen Bess. It is located on the east slope of Slocan Mountain, one mile from Twin Lakes basin. The vein outcrops very strongly for a distance of 1,200 feet and shows a width of from four to six feet. An important mining deal has just been consummated in Kaslo. P. J. Nash has purchased a one-half interest in the mineral claims First Chance, R. E. Adams, Galt and Hillside. These claims are situated in the Jackson basin, about three-quarters of a mile from the Whitewater station of the Kaslo and Slocan Railway. J. Fred Richie, of Rossland, is interested with Mr. Nash in the new deal.

Great interest is being taken in Ainsworth camp, and properties which have been lying idle for years are now being opened up. The sales and bonds made there have been very numerous. The Mile Point for \$30,000, Charleston for \$12,000, Star for \$5,000, Krao for \$50,000, have all been bonded in the last two weeks. Jeff Davis, Helen and several other valuable properties have been incorporated recently.

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**Ainsworth.**

The receipts of ore at the station of the Kaslo and Slocan railway have been considerably above the average during the past week. The Noble Five Consolidated appears upon the list, but its shipments have not been as large as they are expected to be in the immediate future. There have been more shipping mines, however, than usual, and some carloads have

been received which have not yet been entered for shipment outwardly, and have not yet been passed into the company's books. The following are the figures for the week ending February 26 :-

Mines.	Pounds.
Payne group.....	400,000
Noble Five group.....	197,250
Slocan Boy.....	32,000
Ruth.....	270,000
Slocan Star.....	120,000
Ruby Silver.....	30,000
Reco.....	108,000
Surprise.....	68,000
Rambler.....	32,000
Whitewater.....	60,000
Wellington.....	30,000
Jackson group.....	32,000

This makes a total of nearly 690 tons. Of these shipments, the ore from the Payne, Noble Five, and Slocan Boy goes to Pueblo, Col. The Ruth sends its galena to Pueblo and the carbonates to Everett, after passing both through the Kaslo City sampling works. The Slocan Star and Ruby Silver ship to the Omaha and Grant smelter at Omaha. The Reco ore goes to Denver, Col., and that from the Surprise and Rambler to Tacoma. The Whitewater is sending to Everett. The Wellington and Jackson group consign to the Kootenay Ore Company, and its further destination has not been announced.

It will thus be seen that most of the Western smelting companies supplement their supplies from the Slocan ores, and it may be readily imagined how serious would be the effect upon this district of any legislation on either side of the international boundary which might curtail or put an end to these shipments.

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**Pannings.**

A late visit to the Exchequer mine near Nelson, B.C., shows the crosscut to be in 120 feet. At 105 feet, about 5 feet of good-looking ore was encountered. It is hoped that the main lead will be reached by the end of March.

**MARITIME PROVINCES.**

The Richardson gold mine at Isaac's Harbor produced 2,396 ounces of gold last year.

65 tons of quartz crushed in January by Dave Thompson of Cow Bay, recovered 64 oz. 17 dwts. of gold.

T. Foster of the "Tecumseh" Griswold gold property at Cow Bay, Halifax N. S., intends to erect a 5 stamp mill at the mine.

Another valuable gold lead is reported from Pleasant River farms, Lunenburg county, N.S., and a find of gold from Kingsville in the same county.

A little back of the four mile house at Halifax, about \$2,000 has been expended in the past five months on a property that yields under the crusher half an oz. of gold per ton.

The Withrow mine at South Uniake, N. S., has cleared a brick of 71 oz. as the result of three weeks of mining 75 tons. The company employs 25 men and works a steam drill and a ten stamp mill.

The "East" gold mine at North Brookfield, N. S. is to be actively developed. A new boiler and engine house has been erected and fitted with modern machinery at a cost of nearly \$4,000. T. Foster of Halifax is the owner.

The report that the Dominion Coal Co. have in view the shipping of coal to Great Britain is causing considerable comment. The old saying regarding "coals to Newcastle" does not seem to particularly apply in this case, as it is said that with present freight rates and other

conditions, Cape Breton coals can be laid down in London at a price very close to the present market value there.

Twenty tons of quartz run through in January at the Rose-Hattie mine at Salmon River, saved 30 ounces of gold. The Tonquoy property at Cariboo has been bonded to E. C. Bigelow and E. M. McNutt of Truro. It produced \$12,000 in 1896.

Premier Murray of Nova Scotia says he can not understand how the few thousand tons of our coal going to the United States can make any appreciable difference to the United States coal mines in view of the fact that they find an undisputed market in Canada for 3,000,000 tons of their coal, of which 1,500,000 tons of anthracite are admitted here duty free. The proposal to increase their duty on our coal is an ungenerous policy.

A 20 stamp mill is proposed for Griffin Gold Mining Co.'s property at Dun Cove, Isaac's Harbor. The vein is 21 feet wide; average value of ore extracted has been \$7.40. One shaft on the main lead is 126 feet down. On an east slope 126 feet is reached, and a western one 273 feet on the Hattie lode. 9,000 tons of good ore quartz is now blocked out. It is hoped that the cost of reduction in future will not exceed \$2.40 per ton.

The test at the Beaver Dam, near Sheet Harbor, N.S., in January, gave, for 100 tons crushed, a little over 4.25 a ton. With the present 10 stamp mill this is scarcely sufficient, says the *Industrial Advocate*, to pay expenses, but the owners think that by putting up a large battery, say 40 stamps, for the employment of which, night and day, there is unlimited ore to be had, the return would be sufficient to yield a gratifying profit. The mine, it is thought, can be worked at as low a cost as any low grade mine in the province.

From returns furnished by the Dominion Coal Company the production of their various collieries in 1896 was: Gowrie, 50,166 tons; Reserve, 269,802; Old Brideport, 140,539; Victoria, 62,810; Caledonia, 231,515; International, 98,721; Dominion No. 1, 161,528; Hub, 137,721; or a total output of 1,152,802 as compared with 874,431 tons in 1895 and 988,170 tons in 1894. Recapitulating the business of the company during the calendar year, we find: Coal shipped, 1,057,595 tons; land sales, 1,160 tons; collieries and railways, 56,339; employees, 18,239; or a total of 1,133,331 as compared with 854,152 tons in 1895.

A meeting of the Cumberland coal and railway company, who are the proprietors of the Springhill mines, was held the other day in Montreal. The report showed that the past year was considerably in excess of 1895. For the year ending December 31, 1896, the output of coal was 405,042, while that for 1895 was 375,788 tons. As a matter of course the strike then going on was discussed. On the whole the year's business was pretty satisfactory. Springhill is the only mine in Nova Scotia that keeps up active shipments of coal the year round. Just previous to the strike the company gave employment to 1,100 men.

The Truro *News* says the Artesian Well Boring Co. are still at their work in the rear of Gunn's Opera House. At the depth of 175 feet they struck a bed of quartz as hard as adamant, and have drilled some 20 feet into this rock; the drill, though weighing 1,000 lbs., and striking 40 strokes to the minute, is not making more headway than 2 feet per day. When well into this auriferous quartz band, fine gold was found in bringing the drillings to the surface, and the excitement on "Wall" street for a few hours was intense. Already they have secured

more gold in this little hole, east of Gunn's Opera House, than have the faithful workers in 50 years' operations on Oak Island.

A peculiar feature of the termination of the strike at the Springhill coal mines was seen, says the *Industrial Advocate*, in the disposition of an employe of the company named Crawford. It seems that previous to the strike he was a mine official, and during the progress of the trouble joined one of the lodges in order to secure his re-employment when the strike had terminated. In the settlement arrived at, it was expressly insisted that this man should not return to work. It was thought at one time that this would have prolonged the existing difficulties, but a way out of the dilemma was suggested in the expressed wish of the man to go to Rossland, B. C. The merchants of the town who were, above all, interested in adjusting affairs, came to the rescue, and amongst themselves collected \$100 which was turned over to Crawford and which will suffice to carry him to his destination.

### THE CROW'S NEST PASS.

THE following series of resolutions embodied in the report of the Transportation and Railway Committee of the Board of Trade will be considered by the Board. It is one of the ablest attempts that we have known at advising the Government and the people of Canada in regard to the Crow's Nest Pass:—

Whereas it is in the interests of Canada that the Crow's Nest Pass railway be constructed with all reasonable despatch, in order that the great mineral resources of Southern British Columbia may be fully developed; that coal, in abundance, at low rates, may be furnished for the smelting of all ores within our borders; and that our own merchants, manufacturers and agriculturists may secure the great and growing trade of that country;

And, whereas, the British Columbia Provincial Government, by the construction of the Crow's Nest Pass railway and the development of the coal and mineral resources of that country, will obtain enormous direct benefits by way of royalties upon coal and minerals by receipts from mining licenses, etc., and by the general development of the province;

Therefore be it resolved:—

That if assistance is granted by the Government of Canada to the building of such a railway, or if the Government undertake the work of construction of such a railway, it should be asked to contribute equitably to the cost of the construction of such railway to Nelson or vicinity;

That as the immense and rich deposits of coal in the vicinity of the Crow's Nest Pass are the legitimate heritage of the people, the Government should, consistent with the protection of capital, take such steps as shall make the construction of the Crow's Nest Pass railway dependent upon the retention of these coal deposits from all monopoly, thus securing for the people of the North-West and British Columbia cheap fuel supplies, and thus aiding in the development of the mineral resources of that section of the Dominion;

That no exclusive control of the Crow's Nest Pass be given, and that the Government should exercise care whereby the location of the line be so arranged as to permit of the construction of other lines hereafter where practicable, and that where impracticable provision be made for the use of the original line through the contracted section by any future company, in conform-

ity with the Railway Act, and provision covering the use of railways by other companies;

That the benefit of competition through other systems of railways should be conserved;

That the interests of the people should be so conserved as to insure that both local and through transportation rates will be obtained from time to time which shall be fair to the people and fair to the railway lines for similar distances under similar conditions. The control and settlement of such rates to be determined by the Governor-in-Council, or by a Railway Commission;

That as largely as possible consistent with the above preamble and resolutions, and consistent with public interests, the arrangements for the construction of the said railway be with a view to preserve to this country the carriage of the freight traffic to and from the mines of British Columbia through the Canadian channels; and that if such guarantee be secured and precautions taken this Board recommends the early completion of the Crow's Nest Pass Railway.

### THE RAINY RIVER REGION.

CONCESSIONS MADE TO A WEALTHY ENGLISH SYNDICATE.

AN arrangement novel in its character and of great public interest has just been concluded between the Ontario Government and a syndicate of English capitalists which, says the *Globe*, will prove of very considerable value in the development of the mineral resources of the Province. A license of occupation covering some 64,000 acres in all has granted to representatives of the South African General Development Syndicate, which was organized in England in 1894, with a capital of £60,000, to operate in South Africa. The chairman of this company, who is also at the head of the present syndicate, is Col. W. T. Engledue of Byfleet, Surrey, England, whose purchase of the Mikado mining location in Lake of the Woods district last summer has evidently given him a desire for further investments. Other directors of the South African Company are Mr. James Reid, late of Toronto, but now of London, Eng., and Mr. Bullock, a London merchant and director of the Oceana Company, which has also been operating in South Africa. This latter company was granted extensive areas by the Transvaal Government for prospecting purposes, and from the Oceana Company the South African Company obtained the right to prospect about 30,000 acres, besides about 30,000 acres procured from the Transvaal Mortgage Company. A great deal of the area covered by these concessions has, however, been shown to be poor, and this, together with the political disturbances in the Transvaal Republic, has determined the company to look elsewhere for investment. It has expended about £10,000 in South Africa.

The lands included in the license of occupation consist of two blocks, both in the district of Rainy River. One contains about 44,000 acres, and lies to the northward of Rainy Lake. The other block is of considerably smaller dimensions, containing about 20,000 acres, and consists of a part of the peninsula lying between Shoal Lake (west) and Lake of the Woods. The license of occupation grants the syndicate exclusive rights of exploration for minerals on these tracts for the space of three years from the 1st of May, 1897, and the right to purchase or lease on the terms provided in the Mines Act, 1892, or amendments thereto, any por-

tions of such tracts as may prove to be valuable for minerals. The syndicate must expend in actual exploration, development and mining upon the said lands during the first year not less than \$30,000, during the second year not less than \$40,000 and during the third year not less than \$50,000, and to ensure that both blocks shall be at once prospected, not less than \$10,000 must be expended on either one during the first year, the remaining \$20,000 to be expended upon the other. Proof of such expenditure is to be furnished at the end of each year to the satisfaction of the Commissioner of Crown Lands. Certain mining locations already granted in the Lake of the Woods block are exempted from the license of occupation, and any right or interest which may have been acquired by any person or persons within either of the blocks by virtue of discovery of mineral or otherwise previous to the date of the license of occupation (17th of February, 1897) is not to be disturbed or interfered with. The syndicate acquires no right in the pine or other timber on the land, except so much as may be necessary for mining or exploration purposes. No ores are to be removed until the lands on which they are found have been actually purchased or leased from the Crown. As evidence of bona-fides the syndicate is required to deposit with the Commissioner of Crown Lands the sum of \$20,000, which is subject to forfeiture to her Majesty for the uses of the Province if the stipulated expenditure during the first two years has not been made. It is understood that the \$20,000 has been deposited as required.

### THE FAMOUS LE ROI.

AN OFFER OF \$5,000,000 SAID TO HAVE BEEN ACCEPTED.

A SPECIAL to the *World* from London, Eng., of date March 9th, says: After a good deal of cabling between the Old and New World, a deal has about been completed that will be of the greatest interest to mining men of both continents. In a word, the famous Le Roi mine of Rossland, owned by Senator Turner and others of the State of Washington, is as good as sold, the offer cabled to London a few weeks ago amounting to \$5,000,000 having been accepted by a strong syndicate of the British capitalists. The sale of British Columbia's greatest gold producer has been brought about by Mr. R. H. Pope, a member of the Canadian Parliament, who has been in London for several months past, Senator Turner, now in the United States capital and a gentleman in Montreal or Toronto, whose name has not yet transpired. The negotiations here have spread over many weeks, yet all that can be done on this side of the water has been accomplished, the finishing touches having been put in to-day. At a meeting held last evening it was decided to immediately send two representatives to New York to close the deal, the conclusion of which will transfer Le Roi mine at Rossland, B.C., to the syndicate in question for \$5,000,000. These gentlemen will sail from Liverpool to-morrow and will be met there by Senator Turner early next week, where a contract will be signed, followed by the immediate deposit of \$100,000 in the Bank of Montreal at Rossland. The first payment of \$1,000,000 on the property is to be made soon after.

Send \$2.00 for a year of the *Canadian Miner*, published weekly, or send proportionately for a shorter term, not less than six months.

# The Spokane-Kaslo Mining and Milling Co.

A group of four full-sized Mineral Claims in the "Sterling Silver" Slovan.

Authorized Capital 900,000 shares at a par value of \$1.00 each, fully paid-up and non-assessable, of which 600,000 shares are Treasury Stock for development purposes.

**W. H. BLEASDELL & CO., BROKERS, 50 Yonge Street, Toronto, Ont.**

## PROSPECTUS—ALL PROMOTERS' STOCK HAS BEEN POOLED.

The Spokane Kaslo Mining and Milling Company has been organized for the purpose of developing Silver Mining claims in the Slovan, British Columbia, one of, if not the richest silver-producing mining districts in the world.

It will be noticed that the capitalization is but 900,000 shares, at a par value of \$1.00 each, of which 600,000 shares have been placed in the Treasury for development purposes.

The Company owns, without a dollar of debt or liability, FOUR full-sized Silver claims, of fifty-two acres each, in the heart of the rich WHITE-WATER SILVER MINING CAMP, situated upon the KASLO AND SLOVAN RAILWAY, seventeen miles west of KASLO, and about one mile north of the Railway, thus making transportation easy and inexpensive.

The four mineral claims owned by this Company are the "SPOKANE-KASLO No. 1," "SPOKANE-KASLO No. 2," "ACME" and "AMERICAN," which, by reference to Map accompanying Prospectus, you can easily locate, and see their great geographical advantages as to shipment and position in relation to the natural trend of ledges or veins upon this mountain, which invariably run in an easterly and westerly direction, each claim being 1,500 feet square.

You will observe that this Company has 4,500 feet of mineralized area, running due north and south, and so situated that they must carry all the veins upon this mountain, from and including the "Whitewater," "Wellington" and "Lone Star" claims, at the least five in number, giving a minimum of 12,000 feet, or over 2½ miles of mineralized vein matter.

The two Northerly claims embrace an area of 1,500 feet north and south, by 3,000 feet east and west, and the two Southerly claims 3,000 feet north and south, by 1,500 feet east and west, which is a wise and a profitable location, as will be appreciated by investors in this stock will duly appreciate.

Immediately about these claims, north, south, east and west, and in a small area of country, there are fifty developed and shipping silver mines, whose products rival in richness and output those of any country in the world.

"The Rich Slovan" is becoming so famous that we deem it unnecessary to go into further particulars beyond the fact that the silver output for 1896 from this small district amounted to Two and One-quarter Million Dollars, and it is confidently expected by conservative authorities that the output for the current year will exceed \$5,000,000.

In addition to the working mines referred to, there are between forty and fifty others rapidly developing, which will become shippers before the close of the present year. All of the Company's claims are advantageously situated and can be worked by tunneling.

The Company's claim, SPOKANE-KASLO No. 2, is, and has been for some time, under continuous development, and a tunnel has been run up to date, February 14th, 1897, 200 feet, and is constantly improving with depth.

Six hundred feet of tunneling is under contract, and has been paid for, to be completed by May 1st, 1897, and there still remains unused about 300,000 shares of Treasury Stock.

On the Spokane-Kaslo No. 2, along one wall the quartz is well mineralized, and the amount of galena increases with every foot in depth attained. Assays of the galena have run as high as \$30.00 to the ton. From present indications, the Company will undoubtedly be able to ship ore from this claim within ninety days.

Considerable surface development, and some tunneling, has been done upon the "ACME" and "AMERICAN," and they both make a fine showing, so far as developed. On the second and third claims east of the "ACME" and on the same ledge rich galena ore has been opened up at a depth of about thirty feet. The claim adjoining the "ACME" on the west is owned by an English syndicate, and development of the same has made such a good showing that it will be worked continuously.

A very limited amount of the Treasury Stock has been placed on the market for a short period at TEN CENTS A SHARE, Subject to advance or withdrawal without notice.

Any further information desired may be obtained from JOSEPH ROSSLow, Secretary of the Company, Spokane, Washington; W. A. DAVIES, Resident Agent at Kaslo, B.C.; or W. H. BLEASDELL & CO., Brokers, Toronto, Ont. SPOKANE-KASLO MINING AND MILLING COMPANY.

NOTE - It may not be out of place for us to say that we have a personal knowledge of the Whitewater Camp and these properties, as also of the promoters of the Company, and we have every pleasure in stating, and do honestly believe, that all buyers will make a wise and profitable investment in the stock of this Company. It is Prospectively Good. We might almost say an "absolute winner," and we will be pleased to have our clients show their appreciation of what we consider an honorable and good mining proposition. Correspondence invited. - W. H. BLEASDELL & CO., Brokers, 50 Yonge Street, Toronto, Ont. - February 23, 1897.

NOTE - The following letter from W. A. Davies, Manager of Mines, was received Monday, February 22nd. It reads as follows: - "Kaslo, B.C., February 14th. - I have just returned from the mines. Everything is going on nicely. We have six men working and will increase staff very soon. We have driven tunnel about 200 feet, and have a very good showing. As you know, we are entirely in ledge matter, lead or vein being much wider than the tunnel. Just now we have two feet of spar speckled with galena, and several wide streaks of fine talc, and some quartz."

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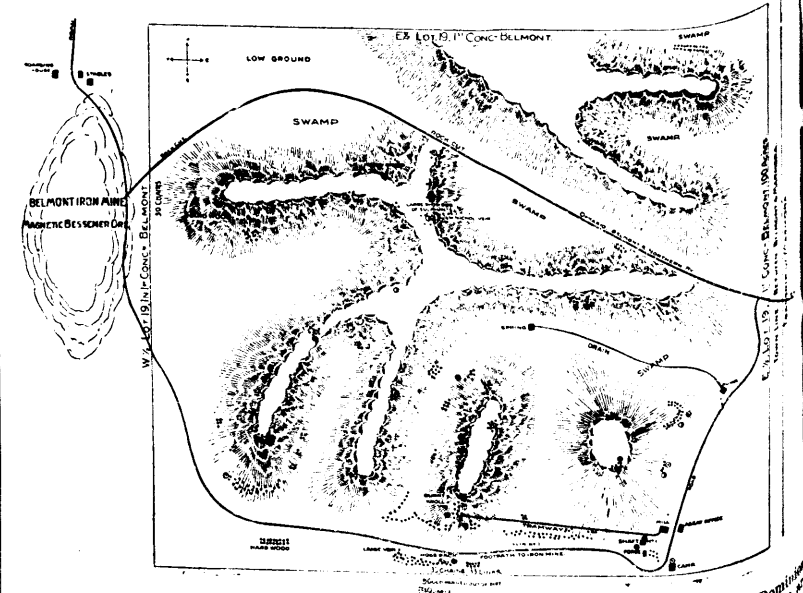
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Plan showing the E 1-2 Lot 19, in 1st Con., Belmont Township, in the County of Peterboro', Ontario, Canada, the property of the Ledyard Mines Co., Ltd.



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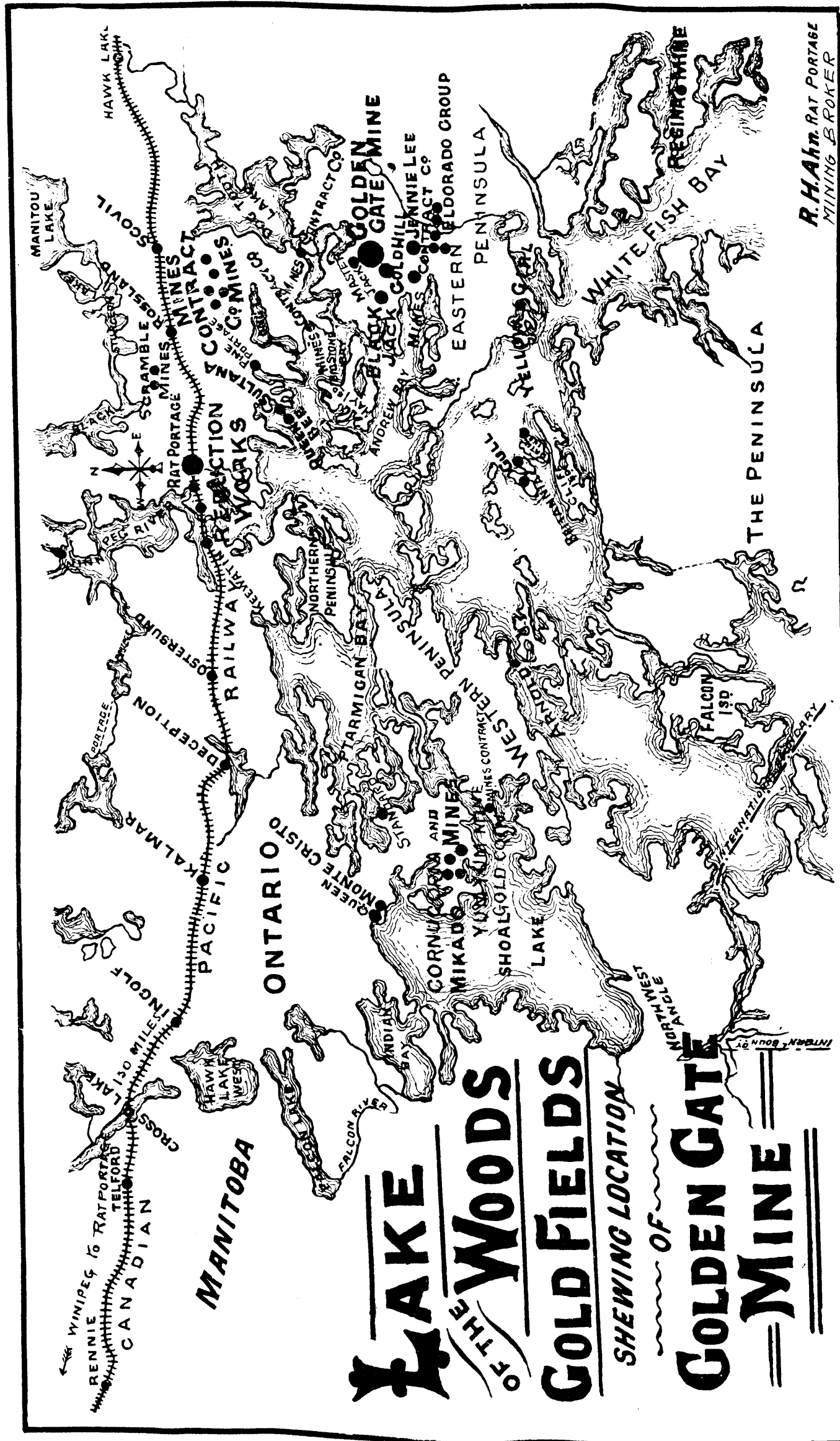
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# ROBT. H. AHN, Mining Broker.

Information relating to Canadian Mines Furnished.



R. H. AHN, RAT PORTAGE  
MINING BROKER

## LAKE OF THE WOODS GOLD FIELDS

SHEWING LOCATION

### GOLDEN GATE MINE

Choice Mining Properties for Sale in the Lake of the Woods, Seine River, Manitou and all known Rich Districts.

Offices: RAT PORTAGE---76 Canada Life Building, TORONTO---and All Board of Trade Buildings, MONTREAL

# TEXADA

## Proprietary Gold Mines

LIMITED

**AUTHORIZED CAPITAL - - \$250,000**

**Divided into One Million Shares of the Par Value of 25c. Each.**

President, - *J. M. McKINNON, Esq., President The Golden Cache Mines Company, Vancouver, B.C.*  
Secretary, - *JOHN McQUILLAN, Esq., Vancouver, B.C.*  
Consulting Engineer, - *THOMAS H. FRASER, M.E., London, England.*

This Company is formed for the purpose of purchasing and working the *SILVER TIP* Mine, situated on Texada Island, B.C., and of acquiring and dealing in Mining Stocks and properties in conformity with the "Imperial Act." 1862.

### ORE VALUE

Assays made by W. Pellew-Harvey, F.C.S., and J. A. MacFarlane, F. C. S., of average samples of ore taken from the vein from the surface to the bottom of the 64 foot shaft have shown values of from \$16 to \$44.10, and have improved with depth.

### REPORTS

The property has been thoroughly examined for the Company by Mr. John Wolcott, M.E., of Seattle, Washington, and Mr. Thomas H. Fraser, M.E., of London, England; the latter, having had large experience as a mining expert in Australia, New Zealand and South Africa.

I AM INSTRUCTED TO OFFER

# Treasury Shares At Par

**25 CENTS.**

### THE PERSONNEL

The personnel of the Company is an assurance that its affairs will be managed in an able, conservative and economical manner. The development of the property is under the personal direction of Mr. Thos. H. Fraser.

The directors believe that with a few months' active work the *SILVER TIP* Mine will pay dividends.

Maps, Prospectus and any information cheerfully supplied by

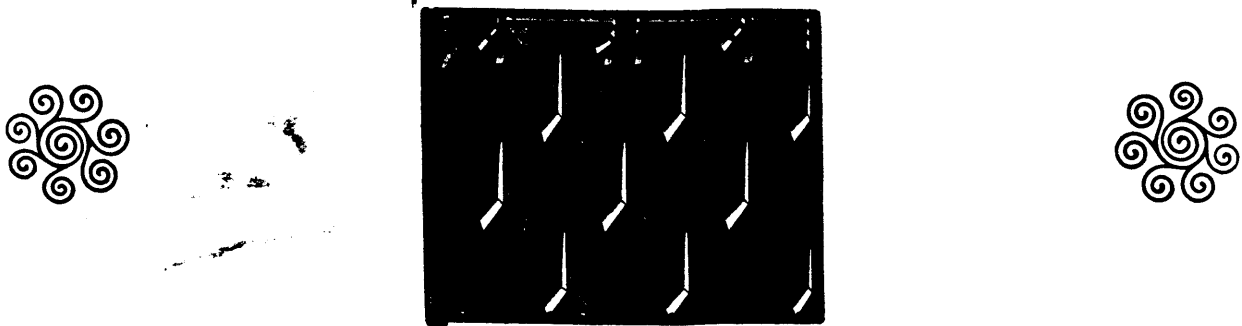
## **E. STRACHAN COX,**

Phone 1639.

7 Toronto Street, Toronto.

# FIRE-PROOF ...STEEL SHINGLES...

## The "Eastlake" Patent



The Illustration shows ONE of the **Eastlake Steel Shingles**. These Shingles are made from a very superior quality of soft steel plate, and are either galvanized or painted on both sides as may be preferred. They are provided with a **Telescopic Side Lock and Water Gutter**, which makes leakage at the joints quite impossible.

They do not require an expert to lay them. Anyone can put them on. They are Durable, Ornamental and cost but little more than wooden shingles—over which they have many advantages. Our Catalogue will tell you all about them. Send for a copy. It's free for the asking.

# Metallic Roofing Co., Ltd.

SOLE MANUFACTURERS

This Advt. will not appear again,  
please preserve it for reference.

TORONTO.

# THE CANADIAN MINER.

## THE CANADIAN MINER'S AUTHORIZED STOCK BULLETIN.

NAME OF STOCK.		NAME OF STOCK.	
Alberta	\$0 15	Jumbo	\$0 60
Bondholder	0 14	Kootenay London	0 12
Bannockburn	0 20	Kelly Creek	0 15
British Canadian Gold Fields	0 18	Lily May	0 20
Big Three	0 15	Lake Harold	0 15
Butte	0 05	Le Roi	8 00
Colorado Gold Mining and Dev. Co	0 18	Ledyard	2 50
Columbia and Ontario	0 10	Lloyd Gold Mining and Dev. Co	0 06
Caledonia Consolidated	0 10	Miller Group (Slocan)	0 7
Colonna	0 26	May Flower	0 15
Cracker Jack	0 10	Monte Christo	2 16
Commander	0 27	Morning Star	0 12
Crown Point	0 52	Monita	0 25
Cariboo M. M. C	0 53	Monarch	0 10
California	0 15	Minnehaha	0 15
Dellie	0 15	Mabel	0 18
Deer Park	0 22	Novelty	0 10
Eldon	0 10	Norway	0 10
Elise	0 05	Ottawa and Ivanhoe Silver Mines	0 12
Evening Star	0 15	Orphan Boy	0 10
Empress	0 23	O. K.	0 31
Ethel Group	0 10	Old Ironsides	0 15
Eastern Mining Syndicate	0 14	Phoenix	0 15
Eureka Consolidated	0 10	Pug	0 17
Exchequer	0 10	Princess	0 25
Enterprise	0 20	Poor Man	0 08
Germania Gold Mining Company	0 10	Queen Victoria	0 10
Great Western	0 17	R. E. Lee and Maid of Erin	0 11
Great Western Mutual Exploring and Dev. Co.	0 15	Rossland Gold Mining Dev. Co	0 12
Gertrude	0 15	Rossland Red Mountain	0 25
Golden Gate	1 50	Red Eagle	0 10
Gold Quartz	0 10	Santa Marie (Slocan)	0 06
Gold Hills Exploration and Dev. Co	0 15	St. Elmo	0 11
Gold and Silver Mines Dev. Co	0 20	Saw Bill	2 90
Good Hope	0 10	St. Paul	0 12
Homestake	0 17	Spokane-Kaslo Mining and Milling Company	0 10
Hansard Gold and Copper Mining Company	0 10	Silverine	0 10
Heather Bell	0 20	Silver Bell	0 7
High Ore	0 07	Two Friends	0 35
Iron Mask	0 45	Victory-Triumph	0 15
Ibex	0 05	Virginia	0 19
Iron Colt	0 20	West Le Roi and Josie	0 27
Iron Queen	0 04	War Eagle (Con)	1 03
Josie	0 55	Washington	0 27
Josie Mac	0 12	Yale	0 03
		Zilor	0 15

### LONDON (ENG.) QUOTATIONS.—PAR VALUE £1.

Cornucopia (Lake of The Woods)	\$7 50
Mikado	7 50
Gold Exploration Company of Canada (Seine River)	5 00