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THE CANADIAN MINER

Vol. I.

TORONTO, ONT., MARCH 20, 1897.

No. 10.

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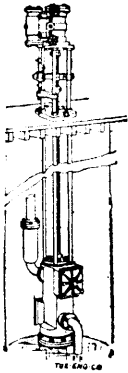
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Crown Lands sold under provisions of mining laws in force prior to 4th May, 1891, exempt from royalty.

Copies of the Mines Act, 1892, Amendment Act, 1894, may be had on application to

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TORONTO, May, 25th, 1894.

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The Canadian Miner.

VOL. I.

TORONTO, MARCH 20, 1897.

No. 10.

THE BIG GOLD OPTION DEAL.

Papers Brought Down to the Legislature.

THE SOUTH AFRICAN DEVELOPMENT CO'S REPRESENTATIVES.—MEMORANDA WHICH ONTARIO MINING MEN SHOULD PRESERVE.

THE conditions upon which the Ontario Government has granted an extensive mining concession in the Rainy River country to Col. Engledue of Byfleet, Surrey, England, and his associates, Messrs. James Reid and J. K. Kerr, of Toronto, were officially disclosed on the 15th inst., when Lieut. Col. Gibson, the Commissioner of Crown Lands, laid on the table of the Legislature a partial return of the papers. In doing so the Minister stated that he desired before the return is absolutely completed and formally presented to obtain copies of all the correspondence leading up to the decision of the Government, correspondence going as far back as July last.

The following is the copy of the order in Council which was approved by Col. Sir Casimir Gzowski on February 19th, 1897:—
"Upon consideration of the memorandum of Mr. Aubrey White, Assistant Commissioner of Crown Lands, and Mr. Archibald Blue, Director of the Bureau of Mines, dated 1st December, 1896, and of the report of the Hon. the Commissioner of Crown Lands, dated 7th January, 1897, the Committee of Council advise that upon a deposit of \$20,000 being made to the credit of the Commissioner by way of security and subject to the terms and conditions expressed and contained in the said memorandum a license of occupation be granted to Col. Engledue of Byfleet, Surrey, England, and his associates, covering the locations in the district of Rainy River set forth in the schedules herewith annexed and designated respectively as block 'A' and block 'B.'"

MINISTER'S RECOMMENDATION.

Then follows the letter of the Commissioner of Crown Lands to the Lieut.-Governor in Council recommending the issue of a license of occupation to the syndicate:—

Toronto, January 7th, 1897.

The undersigned has had under consideration the application of Col. Engledue and his associates for a license of occupation of two locations in the Rainy River district for mining purposes in pursuance of the terms of a letter addressed to the syndicate represented by Col. Engledue, bearing date the 3rd day of December last. A memorandum on the subject of the policy of making a special arrangement such as is proposed by Messrs. Aubrey White, Assistant Commissioner of Crown Lands, and Archibald Blue, Director of the Bureau of Mines, is attached hereto and sets forth the advantages which may be derived from the proposed concession to this company and deals with objections that may be urged thereto.

The undersigned concurs in the conclusions arrived at by the Assistant Commissioner and the Director of the Bureau, and respectfully recommends that upon a deposit

of \$20,000 being made to the credit of the Commissioner of Crown Lands by way of security according to the terms suggested in the annexed memorandum, a license of occupation be granted to Col. Engledue and his associates, covering the locations set forth in the schedules hereunto annexed, designated respectively as schedule "A" and schedule "B"

(Signed) J. M. GIBSON,
Commissioner of Crown Lands.

DESCRIPTION OF THE PROPERTY.

The locations are described in these words:—

Block "A"—Commencing on the northerly shore of Porter Inlet (Red Gut Bay of Rainy Lake), District of Rainy River and Province of Ontario, at a point where the said northerly shore of Porter Inlet meets the lands known as Indian Reserve, 26 B, thence following the easterly limit of said Indian Reserve to the northeast angle of such reserve; thence westerly to the line known as Niven's sixth meridian, run in 1894; thence northerly following the said sixth meridian to the northerly shore of Crow Rock Bay; thence on a course due east to the easterly shore of Otukamandan Lake; thence following the easterly and northerly shores of Otukamandan Lake to a point due north of the head waters of Spawn Inlet; thence to the head waters of Spawn Inlet; thence along the middle of the said head waters and of Spawn Inlet to Red Gut Bay; thence southeasterly and westerly along the westerly and northerly shore of Red Gut Bay to Porter Inlet, and thence following along the easterly and northerly shores of Porter Inlet to the place of beginning, together with all islands, islets, and reefs and land covered by water along the shores of the said above described parcel of land situate and within three hundred feet from the shore line of the above parcel or block of land.

Block "B"—Commencing on Carl Bay (Shoal Lake), west of the Lake of the Woods, District of Rainy River, Province of Ontario, at a point where Deadman Portage meets the waters of Carl Bay aforesaid, to the waters of Portage Bay of the Lake of the Woods, thence following the waters' edge along the westerly and southerly edge of Portage Bay and along the edge of the waters of Outer Bay and other waters of the Lake of the Woods and Monument Bay to the southwesterly extremity of the head of Monument Bay; thence in a northwesterly direction to Shoal Lake to a point where the 95th line of longitude intersects the southeasterly shore of Shoal Lake aforesaid; thence northeasterly following the edge of the waters of Shoal Lake along the southeasterly shore of Shoal Lake to the place of beginning, together with all islands, islets and reefs and land covered with water along the shores of the said above described parcel of land situate and within three hundred feet from the said shore line, saving and excepting therefrom Indian Reserve, 31 B, south of Portage Bay, mining locations D 128, D 157 on Outer Bay, D 156 on north end of Cochrane Island, islands 186 P and

187 P on Shoal Lake, also a proposed mining location applied for south of Outer Bay (L 18,335, 1896), and one at the foot of the bay east of Pine Island on Shoal Lake.

AN OFFICIAL OPINION.

The policy of granting the application of Col. Engledue and his associates is discussed by Messrs. White and Blue in the following memorandum for the guidance of the Commissioner:—

The undersigned have the honor to report as follows upon the application of Col. Engledue, of Byfleet, Surrey, England, and his associates. The proposition is that Col. Engledue and his associates shall form a company with the object of entering upon vacant and unclaimed lands of the Crown in the district of Rainy River to explore and determine their mineral value, with a right to purchase or lease such areas of these lands as may be found valuable, and to develop or dispose of them to companies or individuals who desire to invest in mining properties.

It has been pointed out in support of this proposal that to induce substantial investment in such an enterprise the work should be on a considerable scale, and that a reasonable time should be given to make such a close exploration as is intended. As to the areas applied for, Col. Engledue asks that two locations of 23,000 acres each should be set apart for this object, to be selected in such regions not hitherto explored as may be approved by the Department of Crown Lands, and that control by the applicants should extend, if necessary, for a period of three years. With respect to the merits of the proposal, the undersigned beg leave to say that while it is a novel one and not, perhaps, contemplated by existing regulations, yet, under all the circumstances, it is worthy the favorable consideration of the Government. In the first place, it is most desirable that the auriferous wealth of lands in the Rainy River district and of the other parts of the Province should be determined accurately and beyond doubt. As you are aware, it has been a matter of criticism that neither the work of the Geological Survey of Canada nor of the Provincial surveys is a sufficiently close and thorough basis to determine the existence of minerals in the waste lands of the Crown in the Province. The Governments have been called upon from time to time to make an exhaustive exploration of different localities, and it has even been suggested that the Government of Ontario should open up and operate mines in order to demonstrate the mineral wealth of the Province and as an object lesson to encourage investors. The department has to some extent by the purchase of a diamond drill provided the means for a close examination, and although this drill is at the disposal of parties who may require its services to explore their lands, upon very liberal terms, it has not been taken advantage of to any large extent. But here is a company proposing to do at its own expense, in a thorough manner upon limited areas, what the Government has been urged to do on a large scale, and agreeing to purchase at the full ordinary

prices such lands as it may by its energy and expenditure demonstrate to be of value.

AN OBJECTION ANSWERED.

The only serious objection to the proposal is the withdrawal from market of a large area of land for a considerable period of time. This objection would have some force if the auriferous area of the Province, or even of the Rainy River district, were limited or small, in which case it might not be expedient to withdraw from public exploration a block of 46,000 acres. But when it is borne in mind that gold has been found at various places over an extent, as stated by Prof. Coleman in his report, of 260 miles long, by 120 miles wide, or 20,000,000 acres, the comparative smallness of the area asked for is at once seen, and it must be further borne in mind that discoveries are daily being made in the Algoma, Thunder Bay and Nipissing districts.

Strong objection has been made to what is technically called "blanket applications," which means in general acceptance the making of applications for land on a large scale without any payment in localities where minerals are known to occur, and holding the same for considerable periods without exploration or development as a matter of speculation. Nothing of the kind is intended in the present application. There is to be immediate, energetic and close exploration, followed by development.

There is no doubt that the work of this company, if successful, will stimulate exploration and development all around the vicinity where its operations are carried on, and will be a great advantage to the district and to the Province. Even if the lands or any part of them are shown to have no mineral value there will be no loss to the Province, and the time, money and energy of small explorers, which might have been wasted there, will be directed to other and perhaps more promising fields. As to the benefits which will accrue from the operations of the company in Ontario, there are many beyond merely proving the mineral value of the areas examined. The formation of such a company in England will give our gold-bearing regions a standing which they have not hitherto reached, and should the operations of the company prove successful great interest will no doubt be awakened in the mining capabilities of the Province. The company will give employment to a large number of men in exploration, and later on, will, if successful, be the means, directly or indirectly, of providing work for a large number of miners and laborers, and markets for the produce of the farm. Such a company, surrounded by conditions and regulations which will oblige it to perform its contract, will be an object lesson in exploring on a large scale such as this country has never seen. Of course no company or person will invest capital on a large scale and undertake an enterprise such as Col. Engledue projects without some hope of return, and the obtaining of reasonable facilities and opportunities for carrying it into effect. And a company whose proposed capital is \$2,500,000 cannot be considered unreasonable in asking for a tract of 46,000 acres upon which to carry on its work of exploration unobstructed and freely, particularly as it proposes to purchase at full price the lands which are proved to be of value.

CONDITIONS SUGGESTED.

The undersigned are further of opinion that the application is one which might be granted with advantage to the public interest if surrounded with proper conditions, and if ample guarantees of good faith are given

by the company for the performance of its promises and engagements. The following are some of the conditions which, in the opinion of the undersigned, should be insisted upon:—

(1) That a substantial deposit be made in one of the chartered banks of Canada to the credit of the Commissioner of Crown Lands as security that the company will expend in exploration, development and mining in the first year \$30,000; in the second year, should one not be sufficient for its purposes, \$40,000, and in the third year, should that extension of time be necessary, \$50,000; the period to commence with the opening of navigation, say, about the 1st of May next.

(2) That the company shall have the right to purchase or lease under the provisions of the mines act such lands or locations as it may desire to obtain within the areas set apart during the period of three years at the usual prices and on the usual conditions.

(3) That the deposit shall remain at the credit of the Commissioner of Crown Lands during the period of three years, except any portion of it which may be applied in the purchase or lease of lands within the area in which the explorations are carried on.

(4) That the failure to carry out the covenanted expenditure or other conditions of the agreement shall entail forfeiture of the deposit.

VERIFICATION OF EXPENDITURE.

(5) That full particulars of the expenditure shall be furnished to the Commissioner of Crown Lands at the end of each year in detail if desired, and shall be subject to verification by such proof as he may call for, or by inspection and audit of the books and accounts of the company.

(6) That while \$30,000 is to be expended on both locations the first year, the expenditure shall not be all on one location, but so divided that at least \$10,000 will be expended on both.

(7) That such title by license of occupation or otherwise shall be given to the company as shall confer upon it exclusive possession of the locations or areas specified for the period named, except as to any right, claim or interest which any person may have acquired in lands contained in either of said locations before the execution of this agreement, which right, claim or interest shall not be interfered with or disturbed by the company, nor shall it impede, obstruct or harass any such claimants in exploring and developing the lands to which the department may give them title.

(8) That no ore shall be removed from either of the said areas, except for the purpose of assay or experiment, until the land from which it is taken is acquired by the company under lease or purchase.

(9) That should the company have fully explored one of the areas within the first year, and desire to surrender its rights under the license of occupation or other authority, it shall be refunded a proportion of the deposit, but no refund on account of the abandonment of any less area than one location shall be made.

(10) That any agent or officer of the Commissioner of Crown Lands or the Bureau of Mines shall have the right to enter upon the said locations during their occupation by the company and inspect the works of the company, and he shall not be in any way impeded in such inquiries or examinations as may be called for by the Commissioner or the department.

(11) That all timber upon the locations shall be reserved to the Government, except such timber, other than pine, as may be necessary for exploration or development

purposes, and the Crown timber agents, forest rangers and fire rangers of the department shall have the right to enter upon the said lands in the exercise of their duties.

(12) That the department shall have the right, should the same be necessary in the public interest, to construct any road or other works through the locations, and to enter upon them for that purpose.

The undersigned are of the opinion that with the above conditions the application of Col. Engledue and his associates might be granted; but as it is a novel application, and the powers to be conferred by the license of occupation are larger than have heretofore been conferred by such license, it would be well to obtain authority by order in Council for the action proposed to be taken. (Signed)

AUBREY WHITE.
A. BLUE.

TERMS OF THE CONCESSION.

The license is issued upon the following conditions:—

The said licensees shall expend in actual exploration, development and mining upon the said lands and in shipping or in opening up, in sinking shafts or other actual mining operations during the first year after the 1st day of May next not less than the sum of \$30,000, during the second year not less than the sum of \$40,000, during the third year not less than the sum of \$50,000, and shall give proof of such expenditure at the end of each year to the satisfaction of the said Commissioner, and shall furnish such details of said expenditure as the said Commissioner may require, and of the said expenditure of \$30,000 in the first year not less than \$10,000 shall be so expended in one of the blocks of land aforesaid and the remaining \$20,000 may be all expended on the other of the said blocks of land. The said licensees shall not interfere with or disturb in any way any right or interest which any person or persons may have already acquired within the limits of either of the said blocks of land, and shall not cut or remove or dispose of in any way any timber of any kind on the said blocks of land or any part thereof, except as may be necessary in the process of actual exploration and mining as aforesaid. The said licensees shall not remove from either of the said blocks of land or any part or parcel thereof any ore for purposes of experiment unless and until the parts or parcels from which said ore may have been extracted shall have been actually leased or purchased, and the rent or purchase money, as the case may be, actually paid. The said sum of \$20,000 shall remain in deposit during the first two years, the term above mentioned, and in default of such expenditure as aforesaid in exploration, development and mining during the said first two years the said sum of \$20,000 on deposit as aforesaid shall be absolutely forfeited to her Majesty for the uses of the Province.

The Department of Crown Lands agree to sell or lease to the said licensees the said blocks of land or either of them or any parts or parcels thereof which they may select at any time within the said three years upon the usual terms if purchased or leased as provided in the mines act of 1892 and amendments thereto, and will apply the said sum of \$20,000 or so much thereof as may be requisite towards the payment from time to time of such rents or purchase money as may become payable in respect to the said blocks of land or either of them or any portion thereof during the said three years. Such blocks or parcels as the case may be, shall be surveyed at the expense of the said licensees by an Ontario land surveyor, and

the plans and descriptions thereof shall be in duplicate and shall be filed in the Department of Crown Lands before the lease or Crown patent, as the case may be, shall issue. In case the said licensees shall during the first or second year of the term aforesaid surrender and yield up either one or the other of the said blocks of land and all right, title or interest therein under this license of occupation, one-half of the said sum of \$20,000 on deposit shall be refunded to them or to such person or persons or body corporate as may be entitled thereto.

Correspondence on the Subject.

The correspondence between the Engle-due syndicate and the Ontario Government, which led up to the transfer of the two blocks of land was laid on the table of the Ontario Legislature last Monday.

The matter was first broached on July 6th of last year, when Col. Engledue wrote to Hon. A. S. Hardy, then Commissioner of Crown Lands. He asked for the right to explore a territory that should not exceed two townships, or say 23,040 acres, to be under exploration for a period of not less than three years.

WANTED 21 YEARS TO EXPLORE.

The syndicate or company, on the completion of the exploration of the first granted areas, to have the right to select other similar or less areas and to be granted a further period of three years within which to explore such new lands, and so on for, say, a total period of 21 years. Should it be found during any of the periods of these years that there is no probability of finding minerals on the areas under grant such as would justify the acquisition of mining locations, the syndicate or company to have the right to abandon such areas and to have lands of similar quantity in other localities granted over which exploration may be prosecuted.

MR. HARDY'S REPLY.

Two days later Hon. A. S. Hardy wrote:—
I have to say in reply to this inquiry:

(1) The mines act of the province provides that "any person or persons may explore for mines or minerals on any Crown lands surveyed or unsurveyed," and there would be difficulty in setting apart an area for exclusive exploration by a person or company without an amendment to the act.

(2) It is not in the interest of the mining industry, nor in the public interest, that large tracts of mining land should be locked up for a long period, and if it is deemed expedient to make a concession to a syndicate or company of known position and capital, it is not advisable that a very extensive area should be set apart or that a long time should be allowed for exploring it.

(3) But with a view to encourage the further introduction of British capital in the Rainy River district, I am prepared to consider favorably an application from a syndicate or company having sufficient capital, for a tract, not exceeding one township, or 36 square miles.

A CAPITAL OF \$2,500,000.

On August 11th Colonel Engledue wrote from Byfleet, Surrey, England, saying that the company which he would inaugurate would have at least \$2,500,000 capital, but neither the area nor the time had been thought sufficient.

The next letter came from Mr. J. K. Kerr, whom Colonel Engledue had consulted:

"I venture to submit that if a concession were made to the company of two townships," he writes, "one township being located in the locality agreed upon with the

department in the neighborhood of the Lake of the Woods and the other township in what may be known as the Rainy River district, for the period of three years, to be assured to them by lease or otherwise, it might be made subject to the condition that a sum of, say, not less than \$20,000 per annum should be expended in exploration or development, in one or other of the townships covered by the concession, and in default of such expenditure to the satisfaction of the department the concession might be forfeited. On the other hand, if the Government were satisfied with the extent of exploration and mining carried on by those to whom the concession was made, such concession might be renewable for such further period as the circumstances would then warrant, and during the currency of the concession the syndicate or company would have the right to lease or purchase mining locations within the area."

SPECIAL ACT REQUIRED.

In reply, Hon. J. M. Gibson suggested that a smaller area than two townships should be sufficient and a definite amount should be spent each year, forfeiture to follow default in doing so. A deposit of \$40,000 to the joint credit of the Commissioner of Crown Lands and Colonel Engledue is demanded and that \$25,000 be spent in development during the first year. The concession should not be made for three years, but for one at a time, with the right of renewal if the agreement is carried out. Mr. Gibson, in his letter, says:—

"It is not quite clear that a concession of the character here referred to could be granted by the Government under authority of the existing mining laws, and to remove doubts it is proposed that any agreement entered into between the Government and your clients should be subject to ratification by the Legislative Assembly."

An amendment to the mining law to further facilitate operations is suggested and the districts to be handed over to the company as specified in the contract.

THE LOCATIONS.

As to the locations, he says:—

In the Lake of the Woods region a suitable tract might be set apart on the Huronian and Granite areas lying between this lake on the south and Shoal Lake on the north, and extending from Deadman Portage between Portage and Carl Bays to a line drawn due north from the head of Monument Bay to Shoal Lake, exclusive of all islands. This tract has an area estimated at 20 to 25 square miles, and only two or three small locations lying within its limits have been taken up or applied for.

In Seine River region your clients might select one or other of the three townships north of Rainy Lake—Watten, Halkirk or Farrington—or a tract north of Redgut Bay to Otukamandan Lake, from Niven's sixth meridian on the west to Spawn Inlet on the east; the eastern boundary to be continued northward from the head of this inlet to a small lake whose waters flow into Otukamandan Lake. The one is about 40 square miles, and includes Laurentian and Huronian rocks and eruptive granites.

A memorandum dated October 6, 1896, by Hon. A. S. Hardy, construes the existing law as conferring power upon the Government to authorize the issue of a license of occupation under it.

On Oct. 27th, Hon. J. M. Gibson, telephoned J. K. Kerr the amounts which would require to be spent in each year. On Dec. 3, 1896, in a further communication to J. K. Kerr, Q.C., Col. W. T. Engledue and James Reid, Commissioner Gibson commu-

icates the terms of the agreement as fully settled.

On Feb. 15, 1897, J. K. Kerr forwarded to the commissioner the deposit receipt for \$20,000 placed in the bank of Hamilton as security for "the license of occupation granted by you to Messrs. Kerr, Reid and Engledue."

AMERICAN AND ENGLISH STEEL.

IS THE EFFECT OF THE MESABI HEMATITE EXAGGERATED?

SOME very strong statements have recently been made by certain of the American technical journals respecting the prices at which a few favored American firms can at the present time produce Bessemer pig iron and steel. These statements have been repeated in this country; and simultaneously a great fuss has been made concerning certain small shipments of raw steel in the stage of billets and tin bars which have been made to this side from Philadelphia. It is alleged, for example, that Messrs. Carnegie Bros., at their furnaces at Duquesne, near Pittsburgh, can produce Bessemer pig iron for about £1 10s. per ton, and that at their works at Homestead they can make billets for \$12, or £2 20s. per ton. All such assertions as these must be taken with very great care. Notwithstanding that it is known that the firm in question has done a very good thing for themselves by their recent acquisition of new and cheap ore supplies on the Mesabi range, it is exceedingly difficult, if not impossible, to believe that they can get their ore supplies at \$2 per ton for 55 per cent ore, and \$2.40 for a 64 per cent ore. It has to be remembered that the Mesabi range is a distance of 600 miles from Pittsburgh, which is an immense journey to bring ore, and that though it may be practicable to get coke supplies at 8s. per ton at the furnaces, this is not everything. In the same way, the declarations which have been made here regarding the prices at which one or two American firms—for we believe that the "competition," if such it can be dignified, is confined to about a couple of concerns—are prepared to make deliveries, are unquestionably very misleading. Judging from the published quotations for steel billets, etc., in the States, it is impossible that the material can sell here at some of the prices attached to current reports. Even supposing that the professed figures were trustworthy, it cannot be forgotten that they do not in any way represent serious trade. A few small lots of steel have doubtless been put on the market, and have been bought up more in the way of experiment than anything else, but the idea that business at the prices represented will be permanent, or anything like them, is preposterous. American iron and steel masters may be very keen on orders, and their iron and steel plant machinery, both smelting and rolling, may be of the best and most economical description in the matter of labor saving appliances. But they will not continue to give their steel away; and in our opinion, British steel masters, while proceeding with judicious caution, need exercise very little serious concern respecting the present passing phase of the market. In this association, it should not be overlooked that it has just been established that American armor plate makers have been accepting foreign orders from Japan and elsewhere at an absolute loss.—*The Engineer, London.*

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AND

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NOTES AND COMMENTS.

GOLD mining has become one of Canada's great interests. The richness of several districts in this country has been demonstrated beyond the shadow of a doubt, and there are vastly greater fields in which equal mineral wealth is indicated. Mistakes and ill founded schemes may retard but will not prevent a development of our gold mines to a measure which will equal or surpass in mineral production the richest gold regions in the world. But what of the mining investor?

In gold mining, or rather gold stock enterprises, the spiders are still catching the flies, and often so where the web contains scarcely a strand. But fortunately the flies are becoming wary, at least those that have been buzzing about the web and have suspected the designs of the spiders. Still the unwary flies are very numerous in proportion to the spiders, and the small effort required in weaving the web is amply rewarded. The flies caught keep the spiders living at any rate. It is not you, reader, that is the fly, of course, but some other man—sometimes your wife's husband.

BUT to leave metaphor. The number of gold mining companies formed or operating in Canada is legion. Of course, nearly all of them are formed, ostensibly, to develop mere prospects and convert them into mines. Many, perhaps most, of the properties can scarcely be called prospects. Not infrequently they are mere surface showings, with a hole a few feet deep sunk into them here and there. From the surface or from these holes specimen pieces of ore are picked and assayed. The picking, even when done impartially and submitted to a competent and honest assayer, has some significance, but not very much to a wise investor who knows nothing about the property. More frequently, perhaps, the specimens of ore picked are selected ones. "Experts" are always able to guess well what are rich specimens, and sterling honesty is not one of the common virtues of our time. By way of the confidence game, when the assays run into hundreds of dollars to the ton, or even thousands, the operators take care to take specimens that average only a dollar or two; for that

impresses the gullible with the idea that the intentions of the promoters are honest.

Now, as a matter of fact, an assay that may show thousands of dollars to the ton has commonly little significance. It shows that there is gold present—that is all. We have seen specimens that would go over ten thousand dollars per ton; and the vein in which they were found, would perhaps not pay for working. The name of a well known and thoroughly trustworthy assayer given in connection with such assays signifies nothing more than that the assayer has done his work, asking no questions.

WE are not sure that even as to assays some of the companies formed are stating the truth, and other representations made are frequently wide of the mark. These companies are simply fraudulent, and the call for governmental inspection and report on companies and their properties has much justification. There are objections raised to such inspection and some of them have more or less force. The "fleece" investor is supposed to take care of himself and if he loses money he gains in experience. But there are reasons why supervision should be had over gold mining speculations just as much as in the case of insurance companies and licensed victuallers. But we must not ask too much of the State. We have expense enough.

It must not be supposed that assays are not sometimes of value, especially when shafts and tunnels have been made and frequent and impartial samples of ore taken. On or near the surface of a wide vein, assays taken across it from point to point and along its course, will indicate, at least, that the vein is worth prospecting with a view to making it a mine. Prospects and mines have been sold at good figures in the wariest of markets on such assays; the sales, of course, being conditional.

IN sampling gold ore, very great care must be taken, for a very small piece of gold in the sample makes a very great difference in the estimated value of a vein or deposit. The samples should represent the average of the vein or deposit so far as exposed by development at the time the sample is taken.

THE best tests are mill-runs or smelter returns from tons of ore—the more tons the better. The test of two or three tons does not always secure a fair average, for an unscrupulous picker may make up a few tons of higher grade than the average.

IN investing in gold prospects but little developed, the investor may win a great prize, but the chances are against him. An apparent vein, tested only for a small depth may suddenly pinch out. It may prove to be merely a "feather" or "stringer"—a small crack leading to a true fissure vein or lode. It is true that the "stringer" may sometimes produce sufficient gold to pay for the cost of its development; it is very rarely that it does more. The mining regions of California, Arizona, Nevada and Colorado have tens of thousands of holes and shafts that have been abandoned. This may be due to the inexperience of the old-time miners, who came from non-mining regions. It

may be that skilled miners and prospectors may make far fewer mistakes, and that some even may rarely make a serious one in selecting a prospect likely to prove valuable. The experience of Cornwall would indicate that development of a mine may be carried on more successfully than the development of new openings in ordinary trades.

A REPRESENTATIVE of the great Welsh firm of Vivian & Co. has been in Vancouver making inquiries in regard to copper properties within easy reach. Now is the time for the north shores of Huron and Superior to speak out about their wealth in copper.

THE Anaconda, B.C., Commercial Club has adopted the following resolution:—
"Resolved: That the fraudulent methods of unscrupulous and irresponsible so-called mining brokers, who are offering for sale shares of stock in mining properties located in the Boundary Creek district of B.C., and upon which prospectuses have been printed, which, of themselves, are gross exaggerations of the most flagrant kind in that they not only do not give a true statement of facts relative to the claims described, but also represent conditions which do not exist, and are therefore misleading to innocent purchasers and detrimental to the development of legitimate properties, be condemned by the club."

THE British Columbia Mining Record says:—"It is a question whether there has not been up to the present time more developing of companies than mines. The time has come for us to give more attention to mining and less to stock gambling. Our mines are being starved while promoters of mining companies are being made rich. We hang to our proposal of compelling all mining companies to publish a statement of their financial affairs and the condition of the property or properties held by them. It is the true method of weeding out fake concerns." In the Ontario mining field the charge of giving more attention to the developing of companies than of mines, cannot yet be made. There is danger of it, but the experience of the British Columbia will probably reduce the danger to a minimum. Our gold properties are owned by single individuals, or small syndicates, or by companies that apportion a large portion of their capital to treasury stock. It is likely that this proportion will increase as new companies are formed, at least in all cases where prospects have not attained the dimensions of a great mine.

ABUNDANCE of wood for fuel is found throughout the entire mining region of Ontario; and probably for a long time to come it will meet the requirements of most of the mines. But in all these regions water power is also abundant and may often be more profitably applied than steam generated by wood fuel. Then, too, this water power may be utilized through the generation of electrical currents, for the operation of railway lines, in such of our mining districts where the smallness of the traffic would make the costlier steam railways unprofitable. The subject should not be overlooked in the development of our "New Ontario." In California and Oregon three noted water powers are now transmitted over many miles—the waters of the Willamette give power employed to run motors in Portland, Ore., twelve and a half miles away. Those of

the American river at Folsom supply light and power to Sacramento, twenty-four miles away, and those of the San Joaquin to Fresno, thirty-five miles distant. At Ogden a power house is being built which will contain water wheels driven by water brought through a pipe nearly seven miles long. These wheels will furnish an electric current to Salt Lake City, thirty-six miles away, and even to the mines at Mercur, thirty miles further on.

A FEW millions spent on the Rainy River now will save as many in the more rapid development of our new Ontario.

WHATEVER be the merits of the Engledue deal, so far as drawing British capital to Ontario is concerned, there is no doubt that our mining regions requires millions of foreign capital to develop their vast wealth. We have not enough spare money in Canada to attempt more than a few score breaches on the rocky walls of our thousand miles long store of hidden wealth.

THE new Ontario Joint Stock Companies Act, introduced on Thursday last by Hon. J. L. Gibson makes more stringent restrictions on false statements by the promoters and provisional directors of companies. The bill is a good attempt to bring our joint stock laws into harmony with the provisions of the Imperial Act of 1862. And the Government is to be congratulated on some of its special provisions. We shall have occasion to explain its scope in a later issue.

It will now be in order for mining company promoters to recast their prospectuses.

THE GOLD AREA OF CRIPPLE CREEK.

VALUABLE SUGGESTIONS TO INVESTORS IN MOUNTAIN MINES.

THE following from the London *Mining Journal*, in reference to the great mining camp of Cripple Creek, is not without suggestions to mining men and to investors in mines in parts of Canada, the geology of which is not yet comprehended, but which in formation seem to somewhat resemble the Cripple Creek country.

"It is possible, and most probable, that English investors will have an altogether erroneous idea of the size and wealth of Cripple Creek, and it is thus necessary to publish a solemn warning to prevent misconceptions. The gold bearing area is practically limited to a tract of ground measuring about 6 miles north and south by 4 miles east and west, comprising a group of rolling hills on which the mines are located. Outside this 'golden circle' the ground is staked in claims for miles in every direction, and it is on this outside ground that the worthless or bogus company is floated. It is a fact, and one which should be profitably heeded, that practically no shipping mine has been developed outside this circle. Inside it the ground is, of course, limited in extent and for years past inflated and prohibitive prices have prevailed and done much to damage legitimate mining. They have also tended to check the flow of capital, the lack of which has naturally kept down the gold output. The geology of the district has been carefully studied by Professor R. A. F. Penrose and Dr. Whitman Cross, of the United States geological survey, and the results officially published in what is known as the

Pike's Peak *Folio*, issued by the above institution.

"The field has also been studied by numerous mining engineers of national and international repute, so that it is now fairly well understood. The consensus of opinion is that the district, while permanent as a big gold producer, is of volcanic origin and peculiarly erratic. In other words, certainty or continuity of veins and ore chutes cannot be assumed either laterally or with depth. The result is—and this will surprise a great many—that mining is more of a lottery in this district than elsewhere in Colorado, and that a mere novice in mining may, by pure chance, run across a rich vein while an experienced mining man, after the most careful investigation, may utterly fail to find a pound of ore. It is also common for a vein to terminate abruptly, leaving no clue as to the probable direction of its continuation.

"Out of a dozen typical cases of men, selected at random, who have made fortunes varying from £5,000 to £500,000 out of mining in Cripple Creek since 1892, two were painters, two farmers, two plumbers, one a ticket broker, one a schoolmaster, two druggists, one a grocer and one a carpenter. There will undoubtedly be a number of new fortunes made in Cripple Creek within the next year or two from gold actually taken out of the ground, and during the same period a very large sum in the aggregate will doubtless be lost or dissipated in ill-conceived and poorly managed enterprises. Such is the famous Cripple Creek gold field, which interested enthusiasts have declared to be the richest and greatest gold field in the world. Locally it is known as a 'geological gamble,' a term not altogether inapt wherewith to describe its uncertainties. It must be borne in mind also by would-be investors that this is only one of twenty mining districts in Colorado, and that a given amount of capital will command better value in every other district than in Cripple Creek. The conclusion, therefore, is that investors can do better elsewhere, and it would be prudent to investigate very closely any mining enterprise located there before investing therein."

PERSONAL.

SOME of the "Pennsylvania Dutchmen," are possessed of the true, proper spirit of kindness that tends more than the smart selfish devices of commercial life to make every one happier. There is Brother Bowman, of the Rainy Lake *Journal*, an enthusiastic believer in and promoter of the gold-wealth of the vast basin of the Rainy River fissured and seamed with golden veins. Brother Weidman runs the *Rat Portage Miner*. Its print appears to have been indistinct as in cold regions it is apt to be on account of primitive condition of building affecting the inks. The public are interested in results, not in difficulties. The copies of the *Miner* we have received, are well printed, but probably the stove was heated well. The Minnesota contem. however, found cold ink and helps its "Penn. Dutch" contemporary through with detailed instructions—sound even in the tropical winters of Southern Ontario—as to managing "forms and inks." There is mining other than metal mining, and the kindly advice which, no doubt, Brother Weidman might have given others, will be appreciated, or have an appreciating exchange in East Algoma that needs the advice more.

Steamers are to be put on the Wabigoon and Manitou lakes by captains Sauris and Marvin of Port Arthur.

AROUND TOWN.

THE day of the big fight at Carson, Nev., a respectable and well-informed citizen, whose tastes in life made him prefer "to let the ape and tiger die," but who had dim recollections of celebrated encounters in the ring, approached the verge of a crowd gazing at a newspaper bulletin announcing the result of the fight. He heard fight talked and asked "Who won; Tom Sayeron or Jim Mace?" The humiliating answer was—"Fitzsimmons."

"INNOCENTS at home" had another illustration in the case of one of the most respected and most alive of the mining brokers of the city. He deals only in good honest mining ventures, and is unostentatiously careful in the selection of the stocks he will handle. Moreover, it is said, he is a good churchman, and even takes up the collection. Moreover he is a Conservative in politics. An enterprising business manager of a cheap morning paper which has been pitching into the Hardy Government on the South African Development Co.'s deal made a mistake and sent him a letter setting forth that the edition next morning would be exceptionally large owing to the account to be given of the "fight" and asking a *smallpiece* of his advertising patronage. "Humph, humph—the fight, eh. Going to pitch into Hardy. Well, I'll think about it," was the comment. And the quiet business of selling sound stocks went on.

MINING COMPANIES CERTIFICATES.

THE secretary of one of our mining companies with headquarters in the Canada Life buildings, recently wrote to a subscriber in a western town, who had purchased 100 shares in the company, asking him what denomination he desired to have his stock certificates made out in. The letter was written on the 16th and the answer came back hot on the 17th of Ireland as follows:—"i don't want to get into any scrape abot it lik i did the last lection. you ask what denomination do i want my sirtifakets mad out in. now i don't want any foolin about this, i want them mad out in the *Roman Catholic* denomation, or i will send them back to you quick, so don't you make any mistak about it. yours truly."

COMPANIES.

JUST before going to press we received the prospectus of the Mines Development Co., whose announcement appears elsewhere in this number. The board includes many men of good standing. Time and space permit of no more than reference to this company in this issue.

A VERY neat prospectus, one of the prettiest yet issued in Canada, is that of the IbeX of Slocan, or more properly the IbeX Mining and Development Co., of Slocan. The authorized capital is \$300,000, in 1,200,000 shares of 25 cents each, non assessable. The Board includes well known and prominent western men, amongst them the superintendent of the Kaslo and Slocan Railway. The property to be developed is in the celebrated Whitewater country and between Slocan Lake and Lower Kootenay Lake, and but 4½ miles from Whitewater station on the K. & S. Railway. It is known as the Brennand Group and comprises three full claims—the IbeX, Triangle and Liddesdale, and, besides, the Gilt Edge. It is said there are three metal-bearing ledges on the property, two traversing the full length of three of the claims. Assays given show large percentages of silver and lead, and the first shipment of ore from the IbeX (that was in January), shows a return at the Kootenay ore smelter of \$85.51 per ton, or deducting freight, treatment and sampling, \$61.26. Tunnelling is the method adopted in reaching the vein.

ONTARIO NEWS.

Lake of the Woods.

The Rat Portage Diamond Drill Company are completing arrangements for 4,000 feet of borings.

Engineer Fraser who is superintending the improvements in the Rainy River Rapids will at the completion of this work go up to the Fort, and make a report to the Dominion Government on the cost of completing the lock at that place.—Rat Portage News.

It is said that arrangements are being completed for the Reduction Works at the old Dick & Banning Power, Keewatin, by a strong syndicate of capitalists. It will be remembered, says the News, that this water power was acquired a short time since for \$25,000.

Mr. Wm. Caldwell, of Sultana fame, says that if the alleged locating of the Sultana lead, in Bald Indian Bay, be true, it means that the Sultana will have enough gold in it to keep this and the next generation busy in getting it out. Hon. G. E. Foster, Mr. C. B. Murray, of Toronto, and Messrs. Ross, Sutherland and Deacon, of Winnipeg, visited the Sultana mines recently. Mr. Foster's company, the British Columbia Gold Fields Co., will seek an opening in the Lake of the Woods district for future operations.

C. S. Morris, sec. pro tem, of the Rat Portage Mining Exchange, in his invitations to those interested in mining pursuits as investors or otherwise to attend the mining convention at that town on the 6th, 7th and 8th of April, says: "The relations of capital and mining" will receive special consideration, as well as subjects, such as:—"The Successful Treatment of Ores;" "Cost of Opening Mines;" "The Machinery Best adapted for the Efficient and Economical Working of Mines;" "The Facilities for Carrying on Mining Operations;" and the Geological and Mineralogical features of the region will be discussed by men of experience.

The Rat Portage Miner is pleased with the Ontario Government's decision to appoint a mining officer for the district. Such an agent, it says, will greatly facilitate the taking up of the provincial mining lands in this district. He is to be a surveyor and draftsman, with a clerk and an office boy, and, we understand, will have all information in the office here so that he can give all information as to what lands are open for entry and what are taken. While he may not be able to settle disputes, no doubt he will be commissioner to take evidence and report to the department. Where the first applicant is the first to file his plans and field notes and pay his money, he will obtain a title at once, thus avoiding the circumlocution of the present system of securing lands.

Mr. J. W. Kennedy, of Winnipeg, happening to pick up an eastern paper a short time ago, and seeing an account of the Ledyard Gold Mines Company's operations in Peterboro' county, and the results obtained, at once thought him of some 200 acres he had acquired 20 years ago in the same neighborhood. He immediately made inquiries, and the result was that, probably, the same leads that run through the celebrated Ledyard Gold Mines property run through his. As the property is said to be very rich, Mr. Kennedy naturally feels elated over what, at one time, was considered almost valueless property. It is his intention, says the R. P. News, to proceed with development work this summer, and see what there is in it. The Ledyard mine is already being rapidly developed, and, from recent assays, is said to be very rich.

Says the Rat Portage News, "Much comment is heard about here in reference to this

big deal (the 64,000 acre option granted to the South African Co.), but it is generally favorable to the action taken by the Government, especially when coming from men interested in legitimate mining operations. It is the general opinion that the capital required to develop this district cannot be obtained in sufficient amount in any other way." The Rat Portage Miner does not take the same view. Under the Option "To Him That Hath," it says that five or ten years ago the option might have been advisable but not after Mr. Caldwell has proved the richness of the region. As to public feeling it says: "There is intense indignation among many in regard to this shutting out of prospectors or others from the privilege of going on those lands to prospect for minerals. We have no desire to roast the Government from a political standpoint, but claim the right to criticise the concession as being adverse to the interest of the district."

DREDGING FOR GOLD.

Captain Theodore Brisette, formerly of Rat Portage, and now managing a gold dredger on the Fraser River, writes to the Rat Portage News as follows:—"From the 9th to the 26th of January, the water in the Fraser was lower than it had ever been in the experience of the present inhabitants of the country, all the bars carrying gold being exposed. There was a great rush with rockers and sluice boxes by a large number of miners who, during the time mentioned, made from \$11 to \$50 per day. The British Columbia Gold Dredging Co. are the lucky owners or lessees of all the bars between Yale and Harrison River, 22 miles, for which they pay \$75 per mile per year. Their good luck so far has so encouraged them that they have started to build 10 new dredges to be ready for the next period of low water. The machines are to run day and night, for which purpose an electric lighting plant is to be put into operation. Head quarters for lighting will be at St. Elmo, half way between Yale and Harrison, and the lights are to be run on a trolley so they may be changed back and forth as the operations of the dredges may require." Captain Brisette is of the opinion that profitable deposits may be found in the water ways of the Rainy River District with suitable machinery to make a search. This is already, the News says, in contemplation, a fifteen thousand dollar plant being spoken of to be put into operation during the coming summer.

The Rat Portage Board of Trade last week referred to the needs of its district in regard to railway and water communication as follows: The attention of the Government has again been called to the Fort Frances lock, and to the many advantages that would follow its early completion. It is sincerely hoped that the water communication in the district will be opened up to the fullest extent possible, as on this improvement its rapid progress and settlement must greatly depend. The topography of the district is not of a nature to encourage railway construction, for the expense involved—estimated at \$18,000 a mile—is very large for the limited territory it could reach independently of water communication. The Ontario Government will grant \$1,000 per mile for the extension of the P. A. D. & W., on condition that the Dominion Government assist the undertaking. The matter will come before parliament at this session, and in all probability will be carried over, leaving things as they are for, at least, another year. Even were a grant made this year and work proceeded with at once, several seasons must elapse before communication could be established with the mining country to be served. It should therefore be evident that waterways are of first importance to the district: and that the expenditure of an amount less than the cost of 20 miles of rail-

way through this district, when devoted to the improvement of navigation, would enable boats to reach all places of importance: and, in view of the immediate requirement for transportation facilities, that it becomes our first duty to press the matter to the attention of the Federal authorities.

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Seine River.

The Port Arthur Herald furnishes from Mr. Wiley further information which we condense: Thirty men working at Hawk Bay mine; No. 1 shaft, 60 feet, being timbered up. No. 2 down 20 feet. A large building between the two is being erected for hoisting and compressor plants to secure equalized power and an economical operation of two shafts with one plant. Sleeping camp going up, will hold 50 men, and dining camp the same number, and a lot of other buildings referred to several weeks ago by the CANADIAN MINER.—A Hamilton syndicate are to spend \$10,000 on location 325 X, directly north of Hawk Bay mine. Surface indications are good on the locations now being surveyed north of Hawk Bay.—At Saw Bill mine work is pushed vigorously. Shaft down 150 feet, in rich ore. No. 1 drift south side at 60 foot level and north drift each about 100 feet in. Drifting at 120 foot level shows same uniform width of vein and same richness, and ore carries considerable rich nuggety quartz. Twenty to 30 tons of machinery, etc., arrive daily from Bonheur. Improvements include two-storey sleeping camp for 100 men and other buildings mentioned by THE CANADIAN MINER. The 10 stamp mill has arrived and doubles the milling capacity.—On the Wampum property, west of the Saw Bill, a well defined vein four feet wide is disclosed in the 10 foot shaft with ore identical in appearance with that of the Saw bill at the same depth.—At the Golden Fisher a large staff is employed. The shaft is down 60 feet, in a well defined fissure vein very richly mineralized with iron and copper pyrites and galena and panning free gold in exceedingly encouraging quantities.—On the Hammond-Folger dyke work is vigorous. A 10 stamp mill is there and this month will see everything necessary in the way of machinery and supplies on the spot. The ore shown Mr. Wiley from the shaft on 337X through which the big reef runs is wonderfully rich.—From Lynx-head Falls, north on the Seine for four miles, the country has been recently surveyed into mining locations upon which much development will be done this year by the syndicate of Toronto and European capitalists who have taken up these properties.

At Island Falls, west of Hawk Bay, Mr. H. B. Proudfoot and his associates had expended about \$8,000 in development work. In their shafts they had found some very rich showings. There are now forty teams hauling machinery and supplies from Bonheur station to the mines. About forty carloads of freight have been unloaded there this winter, with more to come.

Mr. F. S. Wiley has been in the upper Seine country, and talks enthusiastically. He says that 100 properties, within a radius of 10 miles of Sawbill Lake, will be placed under development this spring. "The great need of the country is roads. One should be constructed from Bonheur to the mines. You see in the spring the snow melts, and the muskegs and swamps become flooded and impassable. Thus, the only time machinery can be taken in is during the winter, as there are no roads in the summer."

Mr. Gibbs, of the Lake Harold mine, tells the Rat Portage Miner that the Lake Harold mine is now under option to an English syndicate. A cash offer has been made of \$1,250,000 for the Saw Bill mine. They had

gone down on the vein 175 feet, and drifted two levels 100 feet north and south on the vein, which is eight feet wide at the bottom, with richer ore at the greater depth. A ten-stamp mill is now being taken in to the Saw Bill mine. An air compressor and steam hoisting plant is being taken in to the Hawk Bay mine. A ten-stamp mill, a steam hoist, and an air compressing plant are being taken in to the Hammond-Folger dyke, where active mining is being pushed. Steam hoisting plants are also being taken to the Wampum, and another mine south of the Saw Bill.

* * *

Rainy Lake.

A lot in Fort Frances last fall sold for \$800, and a few days ago it was resold for \$1,500.

A mail route has been established between Wabigoon on the C.P.R. and Fort Frances with mail out on the 10th and 25th of every month.

Notice is given of application to the Canadian parliament for an Act to revive the Act to incorporate the Atik-okan Iron Range Railway, and to extend the time for commencing and completing the work. This is the fourth Canadian railroad now seeking to enter the rich Seine River gold fields.

Private reports received from the Rainy River gold regions during the past week fully confirm, says the Duluth *Tribunal*, all the glowing accounts of the mineral richness of that region which have recently appeared in these columns. It is no longer a debatable question as to whether that is really one of the gold-bearing regions of the world. That question has been settled beyond all peradventure, and shrewd men from far and near, who are so situated that they can do so, are planning to get in there "on the ground floor" at as early a date as possible, while most of those who have already acquired interests up there are planning to look after them just as soon as navigation shall open, if not before. People from Duluth will be going up there in droves.

* * *

Manitou and Wabigoon.

The shaft on H. P. 301, Manitou, is down 50 ft., with a vein 4 ft. 8 inches wide in rich ore.

Labreque and Dobson are arranging for the construction of a steam tug for Eagle Lake, situated between Rat Portage and Wabigoon.

An hotel and store are being erected at Wabigoon.

The Wabigoon *Miner* refers to a dull metallic gold mass 5 miles south of the village, and visible for nearly a mile and measuring 125 ft. in width.

The C. P. R. is said to be about to build a railway station at Black Water Creek, three miles west of Wabigoon, and have a surveyor laying out 700 acres in town lots.

* * *

Eastern Algoma.

It is reported that Carnegie, of Pittsburg, says the Sault Ste. Marie *Courier*, is making arrangements to take 300,000 tons of iron from Lake Huron and Algoma districts and that an agent was in the city recently perfecting the deal. If this be true an industry that will employ hundreds of men will be started on the north shore and it is said that the Hamilton Blast Furnace Company will be largely interested.

Mr. Beck, one of the owners of the Myrtle gold mine at Webbwood, says the Gore Bay *Guide*, reports development on the mine as going ahead rapidly, and that the outlook is even better than was expected. The latest assays are very fine. Application is being

made to have the company incorporated. It will be known as the Webbwood General Mining Co., and will have a capitalization of \$490,000. The applicants for incorporation are Messrs. G. Bayes, Alex Beck, G. Beck, John Robinson of Webbwood, and P. McRae of Gore Bay.

A large gold bearing vein has been discovered near Spanish Station, says the Sault Ste. Marie *Courier*. A farmer stumbled on it while clearing his land. It looks exactly like the Ophir. Mr. Dobie of Thessalon, has secured an option on it for the Missisauga River Gold Mining Company, and will have it developed at once. A party went up Missisauga River last fall to explore for iron. The man in charge of the expedition came down for supplies, which he purchased and sent up, some 60 miles north, but forgot to go back himself. The men waited till the supplies ran out, and came down in search of their boss, who had meantime left for Hamilton, and the expedition thus ended without results. This sort of thing hurts the country. There is mineral wealth undreamed of in this part of Algoma, but explorers must go out of their tents to find it.

* * *

Around Madoc.

New machinery has been added to the Deloro mine.

The Bannockburn crusher has been repaired, and will soon be working steadily.

Four prospectors have brought to Belleville a barrel of ore secured on the Kaladar road, six miles from Bridgewater.

A great rush for mining lands is reported from all parts of the district, but particularly in Marmorora, Elzevir and Tudor townships.

A. M. Chisholm of Belleville has gone to open an actinolite mine in Elzevir. He will employ forty to sixty men and build a tramway to the C.P.R. to ship to Toronto.

An old miner named Donald McKenzie, from near Malone, Marmorora, has been operating successfully on a small scale with a process of his own for extracting gold.

Three miles east of Millbridge, Messrs. Allan Moon, Arthur Coe and S. and I. Golding are sinking a shaft on gold-bearing property owned by them. The ore is a mispickel.

The following gold mines are being successfully operated, with the number of men given:—Bannockburn, 20; Craig, 15; Goulding, 15. All will materially increase their force a few weeks hence.

The test by a Toronto company of the famous old Richardson hill, where gold was first discovered in North Hastings, in 1866, is reported satisfactory, and a 40-stamp mill will be put to work there soon.

The shaft at the Craig mine has gone down 55 feet, with a mineralized body the whole way. Seven tons of ore have been sent to Kingston School of Mines and the bullion yield is said to be satisfactory. The mine was recently sold to the Toronto Tudor Mining Co., Ltd.

Hastings county has an ore known as tellurite ore, or telluric ochre, a sub-adamantine white or yellow tellurium dioxide. Tellurium is a non-metallic element of rare occurrence. It is found principally in Transylvania, Hungary, California, Virginia, Bolivia and Brazil. In Hastings, so far, only small quantities have been found.

The Minden *Echo* says there are six mines within four miles of Kinmount; a rich mineral belt extends for 18 miles from Kinmount to Gooderham, waiting for men with money to open it up and get wealth. Minerals of great variety are here in abundance. At

present mining operations are active in Galway township, but what is needed is capital to make them successful.

The railway facilities of Marmorora will be greatly improved this year. The Central Ontario Company have a branch known as the Ontario, Belmont and Northern, which runs directly through the district. This branch has not been used for some time, but is to be operated in April. This will mean that travelers will not be compelled to drive two miles from the station to the village. This mine will also be run north 10 miles to the Ledyard and Belmont mines.

A deputation from Trenton has pressed the Ontario Government for a \$10,000 grant towards reduction works asked for that town, which taps by railway the mineral region northward. It was stated that the railway had agreed to deliver ore at a reasonable rate, to extend its line to any point where business existed, and also to prospect the 75,000 acres owned by the company if the Government gave necessary assistance and provided a Government officer of assay: So the battle wages between Trenton, Madoc and Belleville.

The boom predicted in connection with the Hastings gold mining region has set in, somewhat ahead of the time anticipated. It is evidenced by the purchase of a large acreage of mining land in the vicinity of Marmorora village by a company represented by Mr. C. W. Volney, M. E. For some time past he has had associated with him, Mr. Theodore Baker, M. E., of New York, late of South Africa, and the result of their investigations has been the securing of some 1,200 acres of mining lands for their company. Work is to be commenced almost immediately on lot 20, in the 4th concession of Marmorora, about 5 miles north of that village. A plant is to be erected as soon as the spring opens to treat the ores of the company, as well as for others who may desire to have their ore treated at a moderate cost.

* * *

Chips.

A telegram received in the city on Thursday evening gives a mill test at the Foley mine, Seine River, as resulting in a gold product of \$12,870, or about \$30 per ton

Quebec and Maritime province men it is said, are putting money into Ontario, Trail Creek and Slocan mines. So far the Halifax people give preference to Ontario on account of the gold being free milling.

A ladies' mining syndicate is the latest mining enterprise. The company will be managed entirely by women. Miss R. L. Leigh-Spencer, of Vancouver, the first woman mining-broker in Canada, is the organizer and Miss Clara Brett Martin, of Toronto, the first woman barrister, is the legal adviser. Well, there are brains and energy about it, and that is a good deal in the way of making it a success.

The Ontario Prospectors Mining and Development Co., says the Rainy Lake *Journal*, are incorporating with the following provisional directors: Thos. R. Ferguson, barrister, W. J. Chapman, M. D., and Neil Campbell, of Rat Portage; J. E. Wickham, A. M. Robertson and Wm. Somerville, Keewatin, and E. B. Trubey, Chicago. This company already owns two very fine properties, the "Contact" and the "Stella," on Cassadaga lake, north of Witch Bay. The company starts with money in the treasury, and have development work in progress under the management of Mr. Neil Campbell. They are sinking a shaft 50 feet. This company has not yet offered any stock to the public, but have already received a number of applications from parties in Chicago and elsewhere.

BRITISH COLUMBIA.

Around Rossland.

Le Roi and War Eagle shipments fell of late through a block of freight.

The Red Mountain Railway is blocked with ore from want of switches and other facilities.

Large quantities of machinery are coming into camp, Morning Star, Palo Alto, and Nest Egg being amongst this week's shippers.

A Stock Exchange is to be formed at Rossland, and it is expected to be working by April 1st. Sixty applications for membership are in.

It is estimated that there are about 4,000 claims owned by prospectors who make Rossland their headquarters or purchased by development companies with head offices at Rossland upon which the \$100 assessment work must be done this season, which totals \$400,000.

During the month of February, says the *Rossland Record*, there were 94 mineral locations recorded at the Recorder's office. In January there were 1,261 locations. In January, 1895, the records show that there were only 8 locations recorded, and in February, 1896, only 25.

The report of options on the Jumbo, Commander and Gertrude is corroborated. The Commander is for \$250,000, to be paid April 1st; the Jumbo for \$965 cash and \$500,000; the Gertrude \$700 cash, and price \$125,000. Douglas John Neame, of the Neame syndicate, appears in the records for these options, and also appears as the purchaser of Sunday Sun No. 2.

The recent successful test of the Le Roi low grade ore (says an exchange) will almost assuredly result in the erection of at least 10 stamp mills in the immediate vicinity of this city, the erection of which and the extra amount to be paid out to miners and mill men on account of this method of reducing the abundance of silicious ores in the Rossland mining district will swell the wage bill of the camp by at least \$600,000. It is safe to say then, that \$1,000,000 worth of work will be done this season by these two items alone.

The *Record* reports information that active work is beginning at the Ethel Group. A shaft is down 25 feet. A steam hoist, drill and pump are to be purchased for the Morning Star on Red Mountain. The shaft, 100 feet, had filled with water, which is to be pumped out when machinery arrives. The shaft, on Copper Queen, is down 33 feet, with bottom in arsenical iron ore, with stringers of clear galena throughout it. The clear ore averages, says the *Rossland Miner*, over \$70 in all values. 205 feet of tunnel have been made in the Golden Drip. Rambler Consolidated has declared a second monthly dividend of \$20,000, payable April 15th.

The event of the week at the War Eagle, says the *Miner* of March 8th, was the making of connections between the No. 2 and No. 1 tunnels, through the No. 3 ore chute. This gives a very large block of ore ready to break down. The main shaft is now down 125 feet below tunnel No. 2 and yesterday they started to drift both ways, east and west, on the vein. These drifts at the bottom of the shaft will give as much ore to break down as the company has mined during the past eight months. Between the two tunnels there are in addition many thousand tons of ore ready to break out. The shipments, however, will continue at about 250 tons per week for some time to come.

Evening Star shaft is down 30 feet, with 4 feet face of ore. The ore is uncommon in this camp, being, says the *Trail Creek News*, an arsene-sulphite of iron in a very vitreous calcareous gague. Manager H. B. Nicholls says

he can ship 100 tons a month that net between \$20 and \$25 a ton. Five feet a day with a power drill is now the tunnel rate at I. X. L., says the *Rossland Miner*. May Flower has the deepest shaft on the South Belt. It is down 128 feet, but being perpendicular is not on the main vein. At 150 feet level a third crosscut to the vein will be run. East shaft on the Great Western is down 40 feet, all in ore as hitherto, and ore steadily improving. At the surface it assayed a trace of gold; at 12 feet, \$6; at 20 feet, \$12, and now is over \$16.

From January 1st to March 6th, inclusive, the shipments of ore from mines at Rossland to smelters were as follows:

Mine.	Tons.
Le Roi	6,813
War Eagle.....	2,137
Columbia and Kootenay	455
Iron Mask.....	517
Jumbo.....	91
Josie.....	126
Cliff.....	61
Red Mountain	56
O. K.*.....	60
I. X. L.....	12
Total.....	10,328

*Concentrates.

From January 14th to March 7th, inclusive, the ore milled in the camp was as follows:—

Mine.	Tons.
O. K.....	1,036

Shipments for the last week were: Le Roi, 894; War Eagle, 27; Iron Mask, 65; Columbia and Kootenay, 60; I. X. L., 12; total, 1,058 tons. During the same period the O. K. milled 107 tons. The Trail smelter shipped, during the last week, 71 tons of matte to Omaha. [For the week ending 13th the shipments from the mines at the Rossland smelter were:—Le Roi, 774; War Eagle, 110; Iron Mask, 80; O. K., 12. During the same period 146 tons were milled at the O. K. mine. The Trail smelter shipped, during the week, 136 tons of matte to Omaha.

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Pannings.

Phillips Arm gold properties are being developed and a considerable quantity of ore, it is thought, will find its way to the smelters at Tacoma.

The Jarvis Inlet copper field contains gold, and is exceptionally rich in copper. The field is practically unworked, but is thought to be extensive.

A Vancouver contributor to the *British Columbia Mining Record*, says Mr. Fraser, M.E., has reported very favorably on the Silver Tip mine, Texada Island.

The Orphan Boy mill, to be erected in April, is of American make; it will be carried in sections on pack mules, as the mine is far away from the highroad of travel.

A good many Americans have been in Vancouver lately trying to get offers for propositions either in the Colville reservation or at other points on the other side of the international boundary. "As, however," says a writer in the *Mining Record*, "the liberality of American mining laws and the safety of mine investments are far less favorably regarded than those of British Columbia, and as there are more than sufficient good propositions in this province awaiting the investment of home capital, little has yet resulted from the inquiries from across the border."

A set of locators have proved the existence of large deposits of good coal on the north coast of Queen Charlotte Sound, and workers have been sent thither to fully mark out the various claims and begin the work of opening them out. Easy access by water to San Francisco market

is to be had, but it is thought the new coal field will meet with formidable opposition from the Dunsmuirs and other capitalists of the Nanaimo district. Boring for coal is to be begun just outside of South Vancouver. "It is doubtful," says a writer in the *Mining Record*, "whether the coal is a good coal or merely a lignite possessing moderate fuel qualities."

NEW ONTARIO MINING COMPANIES.

LETTERS patent have been issued, incorporating the following Ontario mining companies:—

The Sovereign Gold Mining and Development Corporation of Ontario; capital \$2,500,000, in \$1 shares. The incorporators are Albert Edward Jones, London, Eng., gentleman; John Sifton Dignam, manufacturer; Francis Phillips, contractor; Orlando Randall Sprague, prospector, and James Francis Latimer, mining expert, all of Toronto, and Henry Jones of Niagara Falls, N.Y., manufacturer.

The Cronsted Mining Company of Algoma; capital \$450,000, in \$10 shares. The incorporators are William Horatio Davis, gentleman; John Kelderhouse, vessel owner; George William Maytham, secretary Maytham's Tug Line, and Oliver Wilder Day, superintendent International Ferry Company, all of Buffalo, and William Bowman, London, Ont., merchant.

The Thessalon Gold Mining Company; capital \$800,000 in \$1 shares. The incorporators are Nathaniel Dymont, Barrie, lumberman; John Knight, Township of Plummer, Algoma; John Gunn, Township of Gladstone, Algoma, lumberman, and David Gordon and Albert Edward Dymont, lumberman; James Samuel Dobie, B.A. Sc., and Mary Caroline Dobie, married woman, all of Thessalon.

The Coronada Gold Mining Company of Rat Portage; capital \$40,000, in \$100 shares. The incorporators are George Drewry, merchant; Geo. Girard, prospector; John William Colcleugh, accountant; James Malcolm Savage, lumberman, and Arthur Cyril Boyce, barrister, all of Rat Portage.

The Black Sturgeon Mining Company of Ontario; capital \$1,000,000, in \$1 shares. The incorporators are Hon. Hugh John Macdonald, barrister; Herbert Henry Beck and William Phillips Sweatman, insurance managers; Robert Henry Agur, manager Massey-Harris Company; Robert Johnston Blanchard, physician, and William George Nichols, financial agent, all of Winnipeg; William Chalmers Edwards, lumberman, and Newton Cyrus Westerfield, mineralogist, both of St. Paul, and George Alexander Hamilton of New York, manufacturer.

The Bath Island Mining Company; capital \$750,000, in \$1 shares. The incorporators are John Galt, civil and mining engineer; John Gray, lumber merchant; Robert Maclaurin Gray, banker; Ralph Kerr Burgess and William H. Collinson, gentleman, and John Ferguson, real estate dealer, all of Toronto.

The Central Ontario Mining Company; capital \$49,000, in \$10 shares. The incorporators are William Herbert Robinson, commercial traveller; Henry Wilberforce Maw, solicitor, and William Ernest Barnes, all of Toronto; George William Edgar, Toronto Junction, accountant, and Hiram Burley Smith, Yarmouth.

In the Cuzco district on the boundary line between Peru and Bolivia there is great excitement about the discovery of new and very rich gold fields. English and American capitalists are sending representatives to investigate.

CORRESPONDENCE.

THE GOLD VEINS OF FRONTENAC.

Editor of THE CANADIAN MINER:

SIR:—Dr. R. W. Ellis' letter in the CANADIAN MINER of March 13th states that it is his opinion that the quartz north and west of Ardoch, Frontenac county appears to be pockety. He also adds that it is thought probable that some day true fissure veins of gold-bearing quartz will be found. Can it be possible that when he was within say two miles of the "Weber" gold mine (which is being worked and has been worked for the last two years) that he did not inspect that very promising property, or the one just one lot to the north of it, where in both cases, I venture to say he could have seen as promising shows as he would care to inspect, with wall rocks that indicate true veins, and both these locations are turning out ore that would be called high grade in Rossland. Then again, if he had gone a little farther north, say four miles, he could have seen as fine a vein of gold-bearing quartz as one would like to see, with well defined walls, in a good formation traceable for a long distance. The vein is fully five feet wide and gives by assay \$9.00 to the ton in gold and that taken from the surface. This prospect is known as the "Stalker mine."

Frontenac may carry pockety quartz veins, but where is the section that does not. Even the far famed Rossland will no doubt carry a few of those kind of veins as some people will find out in the near future. Old Frontenac has had no show so far, but when her turn comes she will not take a back seat with her gold, silver, marble, graphite and mica.

Yours truly,

ED. F. COXWELL,
Prospector.

MORE ABOUT EAST ALGOMA.

Editor of THE CANADIAN MINER:

SIR:—I was much pleased to receive a copy of THE CANADIAN MINER and to note that Eastern Algoma is not overlooked. The fact of the Ophir mine lying idle for the last three years seemed to convey the impression that this country was no good, but from careful observation I am convinced and prepared to prophesy that we have right here from the "Soo" to Spanish River the coming greatest mining camp on the face of the globe. Bruce Mines was worked for copper nearly fifty years ago, I understand to a depth of from 600 ft. to 1,000 ft., the Ophir mine to about 100 ft. and the Grey copper vein in Wells 100 ft., and in every case the greater the depth, the wider and richer the vein. These are the only mines ever opened here. There are plenty of others with equal surface indications, and all they want is development. I venture to say there never was a mine in the Dominion, probably not on the continent, that turned out as much gold for the quantity of ore crushed, as the Ophir mine, and certainly never one that yielded as much gold for the same depth of shaft. If that mine was in Rossland, it would easily sell for a million. Gold is there in sight in large quantities and the vein is a most promising one, and yet it lies idle, simply because the locality has not been developed and is practically unknown.

The Thessalon Gold Mining Co., with A. E. Dymont, M. P. as Pres., J. S. Dobie, B.A.Sc., Sec.-Treas., and Mr. N. Dymont, the millionaire lumberman of Barrie, one of the promoters and directors, has just obtained its charter, and as it owns eleven fine locations, comprising about 1,500 acres of choice mining lands in the Ophir range, and intends

to begin development work immediately, we may prepare for revelations in this locality which will surprise the mining world.

The Mississauga River Gold Mining Co. was formed to operate a placer deposit of several hundred acres in Wells township, containing gold from 75c to \$15 to the ton, and in addition it has obtained options on some very fine quartz veins, two of them in the Ophir range, one very near Thessalon and one a recent discovery at Spanish, on which they are now working and which looks very promising. It also has a magnificent showing of copper on a property it secured on the Mississauga River.

The development companies would be wise to turn their attention to this locality, as the actual facts resulting from the small amount of development and mining done here, have knocked out all the theories of geologists and professors who condemned this country. All that is needed to reveal the greatest mining belt on the face of the earth is development. Yours truly,

J. B. DOBIE.

THESSALON, March 15th, '97.

ENQUIRIES.

Q.—How do you account for War Eagle going down so much lately? Would you recommend a holder to sell?—Nancy Yates. A.—There is nothing in the condition or prospects of War Eagle to produce a fall of the stock. We do not know whether freezing out timid shareholders is being attempted. We would advise holding for an almost certain rise.

RAINY RIVER RAILWAY.

A LARGE and influential deputation from Port Arthur and various other places in the trans Superior region of Ontario, with people in Toronto and other eastern cities interested in the development of the Rainy River district, waited upon the Ontario Government on Thursday afternoon on behalf of the Ontario and Rainy River country. Among those who were present from a distance were: George F. Marks, Mayor Port Arthur; J. J. O'Connor, President Board of Trade, Port Arthur; John McKellar, Mayor Fort William; Thomas Marks, George O. Clavet, W. J. Clark, J. L. Meikle, J. L. Matthews, D. F. Burk, Col. S. W. Ray, A. F. Mills, William McBrady, Frank Weatherspoon, J. F. Hill, Thomas Squires and G. R. Thompson, Port Arthur; John King, J. M. McGovern, E. A. Morton, Fort William.

The Government was addressed briefly but very much to the point by Mayor Marks of Port Arthur, Mayor McKellar of Fort William, Henry Folger of Kingston, Geo. P. Clavet, Thomas Marks, J. L. Matthews, Col. Roy, of Port Arthur, Bryon E. Walker, manager of the Bank of Commerce, Judge Kingsmill and J. J. O'Connor. Mr. Conmee, M.P.P., introduced the delegation. Mr. Hardy's reply was brief and encouraging, though non-committal.

It is proposed that the road shall have as its starting point Kennebeka, situated about 25 miles from the town of Port Arthur. From Kennebeka the road runs along the Mattawa valley, skirts Greenwater Lake, passes through Moss Township to the Mattawa River, and follows down to Sturgeon Falls. From the latter point it runs to Rainy Lake, thence along the Mattawan iron belt, along the Atik okan iron range, a distance of some 20 miles.

The length of the road will be about 150 miles. Fully 135 miles of this distance is over the geological coal range laid down by the Dominion Government. The charter of the railway provides for the extension as far as the mouth of the Rainy River, but it is not proposed to go beyond the 150 miles stated.

It will practically be a local colonization

railway. It will directly benefit Ontario cities, which at present are compelled to use American ore. Soft ore is required, and the region which the Ontario and Rainy River is projected to develop would amply supply the demand.

Some idea of the mineral country through which the railway passes may be had from the number of mines within a short distance of its route. In Moss township is a stamp mill complete. Then there are Partridge Lake, Saw Bill (now working eight mines), Hammond Reef, Hawk Bay, Golden Fisher, Kabiskong, Wampum, McPhillip's, Winnipeg's syndicate, the latter being only some eight or ten miles from the line of the railway. Farther up the route is the Lake Harold mine, where is erected a fine stamp mill; Calm Lake, where three prospects are working; the Sturgeon Falls group, the Foley, which has just produced a \$3,000 brick; and the Ferguson, that in about 110 feet has produced some of the richest gold ore ever seen in Canada. The Weigand, Olive and Lucky Coon are also on the route of the proposed railway.

The projectors of the road ask \$6,400 per mile from the Dominion Government and \$5,000 per mile from the Ontario Government, 150 miles of the railway to be built within 18 months. The entire cost of construction will be \$16,000 per mile or about two and a half million dollars to complete the road.

THE HAMMOND-FOLGER MINE.

AMERICAN OPINION OF THIS HUGE SEINE RIVER VEIN.

AMERICANS are gradually turning their attention to the gold fields of Ontario, and glowing articles on our mineral resources, from time to time, appear in the United States press. Following are some extracts of a New York *World* account of the Hammond-Folger claim on Saw Bill Lake:

In the new gold fields of the great Canadian North-West a discovery has been made which promises to be the richest strike made in many years. If this find continues to pan out as well as at present indicated, its present owners will be rich beyond the dreams of avarice, their bonanza strike will be heralded the world over, and a rush, which will eclipse the California gold fever of '49, will begin with the coming of spring. The lucky finders and prospective bonanza kings are Harry Folger, the private secretary of R. P. Flower, of Flower & Co., bankers, formerly Governor of the State of New York, and many times millionaire, and James Hammond, who is known throughout Canada, and particularly in the great North-West, as an intrepid explorer, and one of the most skilful mine prospectors of that region.

Mr. Folger is a young man of many prospects, financially. He is the son of Henry Folger, of Folger Bros., bankers, Kingston, Ont., who control the big steamship lines of Lake Ontario and the St. Lawrence, and who are interested likewise in railroads and some of the biggest mining enterprises in Canada and the British North-West.

STARTED OUT PROSPECTING.

It is scarcely two years since Folger Bros. began to seriously consider the apparently fabulous stories of the richness of the gold mines which were being worked in primitive fashion by a few venturesome persons, who had braved the perils of the wilderness to search for the hidden riches told of by the Indian trappers in their infrequent visits to the frontier posts.

Folger Bros. determined to send James Hammond on a prospecting expedition, and early in September, 1895, he was ready to make his

start. Harry Folger resolved to accompany him.

The two men, accompanied by a trusted Indian guide and two half breeds, left Savanne, about 150 miles west of Fort William, Lake Superior, on the morning of Sept. 1, 1895.

INDIAN CHIEF'S BIG FIND.

When out some weeks they came across an Indian chief, who told them of a great find of gold which had been made by Kabaskong, an old Indian chief who lived with a remnant of the Ojibway tribe in the Saw Bill Lake region. The Indian offered to guide Hammond to the wigwam of Kabaskong, and thither the party made its way.

They found the old Indian ready to sell his information for a small sum of money and provisions and ammunition. He showed them specimens of the ore, which Hammond recognized as of a high grade.

Kabaskong then took Hammond to the south side of Saw Bill Lake, where he disclosed to him the most promising veins of gold the prospector had ever seen. A bargain was struck at once; the old Indian released his claims to Mr. Folger and Mr. Hammond, and the two men hurried back to Fort William, which they reached about Oct. 6th. They telegraphed the news of their find to Folger Bros., and then set about the legal proceedings necessary to protect their claim.

Mr. Hammond allowed their claim to remain unworked until last spring, when they again visited Saw Bill Lake, taking with them a gang of 20 men for development work and to get out ore for the assayer. They were followed soon after by Prof. Hille, a celebrated assayer and mining engineer of Port Arthur. Then came the find which promises to make its owners bonanza kings. In a later examination of the claim Hammond struck a dyke so rich in ore that he doubted even his own experienced eye. The men were set to work, and the dyke was found to extend a mile and a half, and to be the most wonderfully prolific that either Hille or Hammond had ever seen.

A RICH REEF.

The ore outcropped continually throughout the entire length of the dyke, which was proved to have an average width of about 125 feet.

They found that the ore "panned" gold everywhere, and in some places it assayed as high as \$200 a ton. They found that the dyke would yield an unlimited quantity of what is known as free-milling ore, that is, an ore that does not need to be chemically treated by smelting, which is a very expensive process.

The distance from the claims to the railroad station (Bonheur) is 40 miles.

Former Governor Flower, who is associated with the Folgers in the Kingston and Pembroke Railroad, at once became interested in the enterprise, and is very enthusiastic over it. The former Governor is satisfied that he and his friends have struck a bonanza.

A strong syndicate, represented in Wall street, London and Canada, has been formed to operate the mines, and a milling plant is now being erected at a cost of several hundred thousand dollars. It is not purposed to form a stock company, and it is stated authoritatively that no stock will be placed on the market.

According to former Governor Flower and Mr. Folger, the mining boom in the Canadian North-West is assuming great proportions, and it is expected there will be a rush of prospectors thither this spring which will eclipse that of Johannesburg in recent years.

An old miner tells the Port Arthur *Herald* that it can say with certainty that tin exists in that neighborhood.

CONDENSED WISDOM.

It is the large supply of paying ore and not the extraordinary richness of small pieces that makes the great mine.

GOLD mining is almost the only business that never suffers hard times. But faking and mismanagement in it sometimes help to cause them.

A MINE is not made in a day. It is a long distance between prospect and mine, and the distance must be bridged by skill, energy, hard work and capital. When the mine is reached, however, everything is repaid many times over. Good judgment and experience is required to tell when the prospect may be properly developed into a mine. Mining is safe and profitable when carried on with the same amount of judgment as is used in other successful business enterprises.

THE hit-or-miss methods of conducting mining operations are fast disappearing in Colorado, says a contemporary. Experience has shown that the same rules which govern other operations should be applied to this. Properly conducted, it is possible to know from day to day the values in sight and the cost of production. Under such a system there can be no difference of principle between the purchase of mining property or mining stocks and the purchase of a farm. Mines have a measurable intrinsic value. It is within the reach of a buyer to ascertain the exact condition and present value and prospects of increase of the property he may contemplate investing in.

PREVENTION OF ACCIDENTS IN MINES.

THE recent development of metalliferous mining in British Columbia and the still more rapid development which is likely to take place in the immediate future renders this an opportune time, says J. D. Kendall in the *B. C. Mining Record*, to consider what steps can be taken to prevent or minimize the numerous accidents—fatal or otherwise—which are sure to accompany this certain expansion in mining, unless much greater care in working is exercised than at present. The majority of miners the world over are notoriously reckless of the dangers that are more or less incident to their occupation, and, to use a western expression, they look upon a man who sees these dangers and tries to prevent them as a sort of "tenderfoot." Some managers unfortunately take the same dangerous view, so that it behooves the community to protect such people against themselves, and so save their relatives and friends from all the sad consequences which are sure, sooner or later, to follow in the wake of carelessness.

Up to the present time the mines here have been mostly very shallow and the risks to life, limb and health have been small compared with what they will be as the depth increases, the workings become more extensive and the employment of more powerful and more complicated appliances are rendered necessary. But even now some dangerous practices are followed—practices which, unless prevented, will, sooner or later, bring a load of trouble to many a dependent household; and by the encouragement of a careless habit, will greatly intensify that dire result, as the days go on and the dangers increase—as naturally they must with increased development.

The method of placing ladders in shafts, at present adopted, is most dangerous. No matter what depth, or how steep, a shaft may be, the ladders by which the men descend and ascend the shaft, are made in one continuous length, without a resting place

of any kind, or any arrangement by which, if a man should slip, his fall might be arrested and certain death prevented. In England the Metalliferous Mines' Act—now twenty-five years old—provides that the distance between the platforms on ladders shall not exceed thirty feet, and that the ladders shall be placed at such an angle that the weight of a man's body shall be thrown on to his feet, and not partly on to his hands, as is the case with the more or less plumb ladders at present so largely used in British Columbia. Moreover, the ladderway should always be completely divided off from the hoisting shaft, and not be in the same compartment, as it usually is here, so that if the bucket or skip should break away from its guides, no harm could possibly come to anyone climbing the ladders. There are already several ladders in the mines of British Columbia over a hundred feet in length, many of them nearly plumb, and one over five hundred feet long. Imagine the consequences of a slip, or of a bucket getting out of its "ways" when a number of men were travelling either up or down the shaft. Yet so careless and thoughtless are some managers that three young ladies were actually taken down one of the deepest and most dangerous of these shafts and the ore buckets were whirring past them at intervals all the way down.

The ropes and other tackle at present used on sinking pits need to be greatly strengthened and the various parts should be renewed before they are too far worn.

The storage and use of explosives has received little or no attention whatever in this country. Hundreds of pounds of giant powder are not unfrequently stored at a mine in one of the driftways. In fact some mines have no other store, whilst at most of them the stores are very imperfectly built and not sufficiently far away from dwellings or workshops.

The use of tape-fuse, so common in this country, leads to very frequent accidents from what is known as "hanging fire." In case of a "miss-fire" miners should not be allowed to return to their workings for at least twenty minutes. Then, if the fuse should happen to be hanging fire, it has sufficient time either to die out or to resume its "run" and explode the charge before the men return.

The untamping of holes that have missed should be strictly forbidden. It is a most dangerous practice and one that is quite unnecessary, if the holes be properly tamped. A charge can easily be exploded through ten or twelve inches of tamping by placing a little explosive on the top of it.

I have only mentioned a few of the matters needing immediate attention, but as the mines develop many others will present themselves, not the least of which are the precautions necessary to secure efficient ventilation and ample supports to the working places.

Experience in other countries has shown that the only way of securing, generally, the discipline necessary to safe working in mines, is by Act of Parliament, the principal rules to be observed being clearly set out in such Act, and severe penalties imposed for their breach by either workmen or employers.

It is to be hoped that the Legislature, during its present session, may make an opportunity of dealing thoroughly with this subject, affecting as it does so closely the welfare of such a large proportion of the community.

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THE GOLDEN GATE MINING AND DEVELOPMENT COMPANY (Ltd.)

Notice is hereby given that the first general meeting of the shareholders of this Company, for the purpose of electing Directors and considering and confirming By-laws, and transacting general business, will be held on Friday, the 26th day of March, 1897, at 2 p.m., at the Head Office of the Company, Room 75, Canada Life Building, in the City of Toronto, in the Province of Ontario, Canada.

R. H. AHN,

Secretary and Treasurer.

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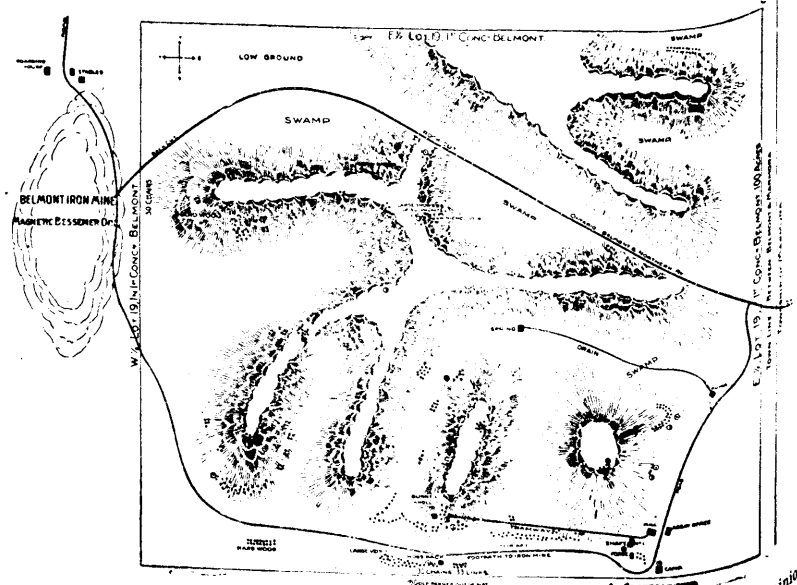
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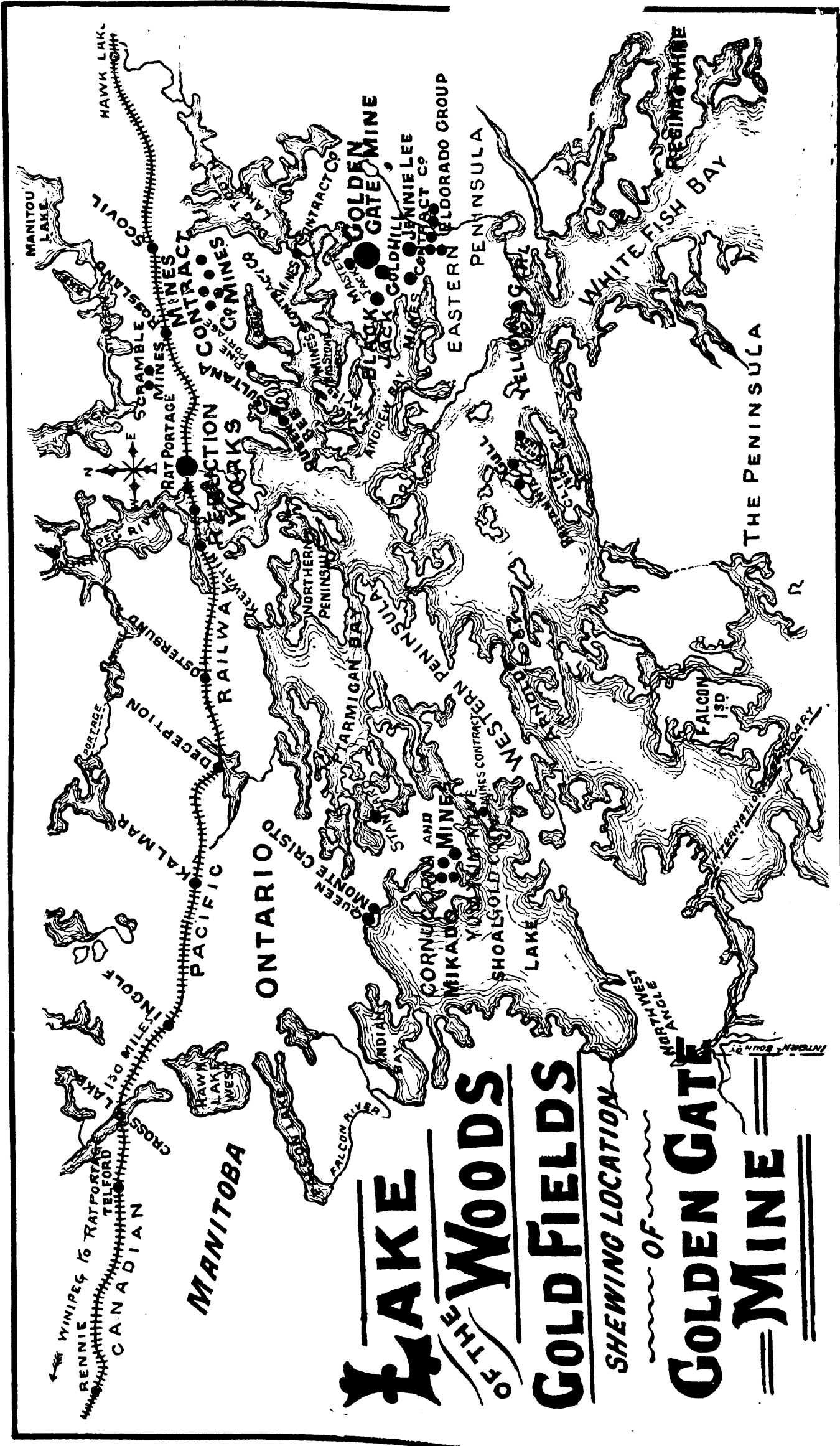
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Treasurer,	F. A. MULHOLLAND.
Secretary and Manager,	ALAN C. THOMPSON.

DIRECTORS

GEORGE McHUGH, M.P., Lindsay.
EDMUND E. KING, M.D., Toronto.
F. R. JAMES, Manager Golden Goblin Mining Co., Toronto.
ARTHUR S. THOMPSON, M.D., Toronto.
R. L. JOHNSTON, Barrister, Toronto.

ALAN C. THOMPSON, Broker, Toronto.
F. A. MULHOLLAND, Merchant, Toronto.
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THOS. HOWARTH, Banker, Oakville.
LOUIS W. MULHOLLAND, President Deer Park Mine, Rossland.

MINING EXPERTS

For Ontario—ARTHUR S. THOMPSON, M.D. For British Columbia—LOUIS W. MULHOLLAND.
Solicitors—MESSRS. DICKSON & JOHNSTON, Toronto.

Bound to Pay You

No company organized on the plan of this company has ever been recrded as a failure—if there is no failure there must be success—where there is success you can look for dividends.

This Company has a two-fold safeguard in its management for investors. The officers and directors are all well known and capable business men. Four members of the board are men of practical experience in prospecting and mining development.

2,200,000 shares are in the Treasury to supply development capital.

The entire promoters' stock is held in trust by the Traders' Bank.

100,000 shares now on the market at.....

10 CENTS A SHARE

.....Fully paid-up and not further assessable.

A comprehensive prospectus of the Company's plans and methods of operating on application to

The MINES DEVELOPMENT CO.

68 Victoria Street, Toronto.

THE CANADIAN MINER.

THE CANADIAN MINER'S AUTHORIZED STOCK BULLETIN.

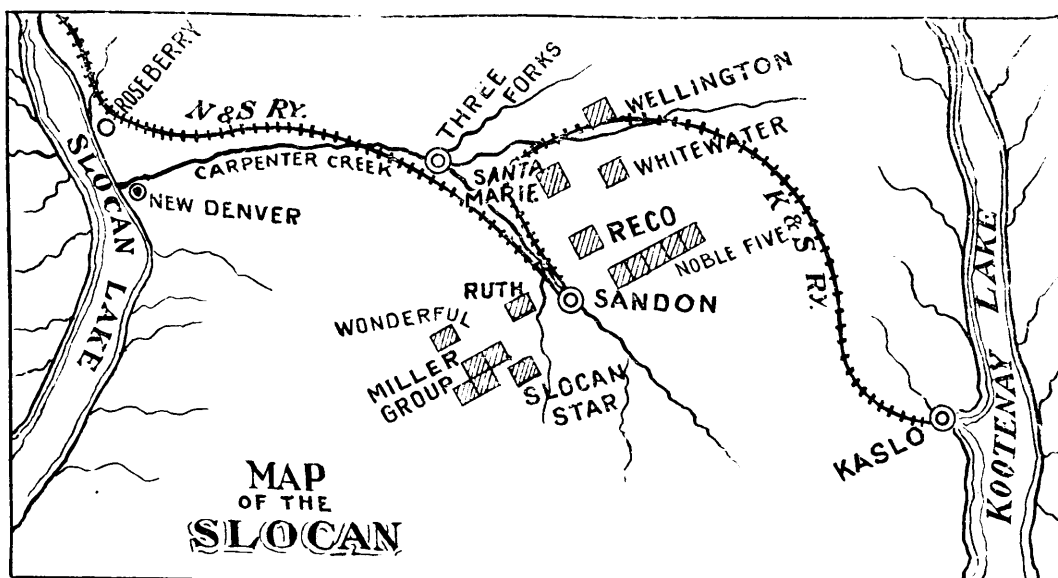
NAME OF STOCK.		NAME OF STOCK.	
Alberta	\$0 15	Josie Mac	12½
Bondholder	0 14	Jumbo	\$0 60
Bannockburn	0 20	Kootenay London	0 12½
British Canadian Gold Fields	0 18	Kelly Creek	0 15
Big Three	0 15	Lily May	0 20
Butte	0 05	Lake Harold	0 15
Colorado Gold Mining and Dev. Co	0 18	Le Roi	8 00
Columbia and Ontario	0 10	Ledyard	2 50
Caledonia Consolidated	0 10	Lloyd Gold Mining and Dev. Co	0 06
Canada Mutual	0 10	Miller Group (Slocan)	0 7½
Colonna	0 26	May Flower	0 15
Cracker Jack	0 10	Monte Christo	0 16
Commander	0 19	Morning Star	0 12½
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 20
Deer Park	0 22	Novelty	0 10
Eagle Nest	0 25	Norway	0 10
Eldon	0 10	Ottawa and Ivanhoe Silver Mines	0 12½
Elise	0 05	Orphan Boy	0 10
Evening Star	0 15	O. K.	0 31
Empress	0 23	Old Ironsides	0 15
Ethel Group	0 10	Phoenix	0 15
Eastern Mining Syndicate	0 14	Pug	0 14
Eureka Consolidated	0 10	Princess	0 25
Exchequer	0 10	Poor Man	0 07
Enterprise	0 20	Queen Victoria	0 10
Foley	3 50	R. E. Lee and Maid of Erin	0 11
Germania Gold Mining Company	0 10	Rossland Gold Mining Dev. Co	0 15
Great Western	0 17	Rossland Red Mountain	0 25
Great Western Mutual Exploring and Dev. Co	0 15	Red Eagle	0 08
Gertrude	0 15	Santa Marie (Slocan)	0 06
Golden Gate	1 50	Slocan Star	2 62
Gold Quartz	0 10	St. Elmo	0 11
Gold Hills Exploration and Dev. Co.	0 15	Saw Bill	2 95
Gold and Silver Mines Dev. Co.	0 20	St. Paul	0 12½
Good Hope	0 10	Spokane-Kaslo Mining and Milling Company	0 10
Homestake	0 17	Silverine	0 10
Hansard Gold and Copper Mining Company	0 10	Silver Bell	0 07½
Heather Bell	0 20	Smuggler	0 25
High Ore	0 07	Two Friends	0 35
Iron Mask	0 45	Victory-Triumph	0 12
Ibex	0 05	Virginia	0 19
Ibex of Slocan	0 25	West Le Roi and Josie	0 27
Iron Colt	0 20	War Eagle (Con)	1 04
Iron Queen	0 04	Washington	0 27
Josie	0 55	White Bear	0 18
		Yale	0 03½
		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

OVER

A GOOD INVESTMENT



The Santa Marie Silver Mining Company

CAPITAL STOCK, - - - 1,000,000 Shares, par Value \$1.00 each.
Fully Paid-up and Non-Assessable. 300,000 Shares in the Treasury.

OFFICERS:

JOHN HOWARD, - - - - - *President and General Manager.*
 L. J. MCATEE, - - - - - *Vice-President.*
 C. F. CLOUGH, - - - - - *Secretary and Treasurer.*

THE SLOCAN DISTRICT.

The Santa Marie is a silver property located in the great Slocan district of British Columbia which is without doubt the richest silver producing district in the world. Its richness is now attracting the attention of mining men and investors from all parts of the world.

BIG MINES.

The Slocan Star has paid \$350,000 in dividends within about a year. The "Payne Group" has been a regular payer for years. The Noble Five, Reco and Rambler-Cariboo, are three great mines. The Washington, Wellington, Wonderful, London and Idaho are regular producers and shippers of high grade pay ore. The Whitewater has paid for itself from the grass roots, and will in a short time pay a dividend of \$25,000.

LOCATION.

The above map gives a fairly good idea of the location of the Santa Marie as well as that of surrounding producing and dividend paying mines.

DEVELOPMENT.

When this Company acquired the property it immediately began preparations for development and started work with a small force of men and the result of their labors have been very gratifying. The present development consists of several open cuts to determine the true course of the ledge, the open cuts aggregating about 300 feet showing the vein to be continuous. A cross-cut tunnel was also started which tapped the 4-foot vein at a depth of 40 feet showing very favorable results. It was then determined to start tunnel No. 2 lower down the hill and thereby gain greater depth and then drift on the vein which will give increased depth with development. No. 2 tunnel is now in about 60 feet and will tap the vein within the next 25 to 30 feet. In fact it is likely to encounter a good ore body at a less distance as the formation is now showing increased value in mineral with numerous stringers.

CHEAPLY DEVELOPED.

The Santa Marie is a tunnel proposition, which is a great factor in the development of a mining property, as by the tunnel system the cost of development is materially reduced and expensive machinery is not necessary. Silver properties are much less expensive to work than gold properties. Thus while both silver and lead are very much depressed in price, it has been demonstrated that the silver mines during the past two years have paid larger profits, considering the capital invested and the cost of production, than the gold properties.

The title to the property is perfect.

The Santa Marie Company's shares are in the hands of only a few men, who have faith that the property will develop into a very valuable property and they have consequently placed their shares in pool until the property is developed.

TREASURY SHARES.

A limited number of treasury shares are now offered at six cents per share, all shares are fully paid and non-assessable. The above price is, however, subject to advance without notice.

Apply to **COULTHARD & CO., Mining Brokers,**
 28 VICTORIA STREET, TORONTO.