

## Technical and Bibliographic Notes / Notes techniques et bibliographiques

Canadiana.org has attempted to obtain the best copy available for scanning. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of scanning are checked below.

- Coloured covers /  
Couverture de couleur
- Covers damaged /  
Couverture endommagée
- Covers restored and/or laminated /  
Couverture restaurée et/ou pelliculée
- Cover title missing /  
Le titre de couverture manque
- Coloured maps /  
Cartes géographiques en couleur
- Coloured ink (i.e. other than blue or black) /  
Encre de couleur (i.e. autre que bleue ou noire)
- Coloured plates and/or illustrations /  
Planches et/ou illustrations en couleur
- Bound with other material /  
Relié avec d'autres documents
- Only edition available /  
Seule édition disponible
- Tight binding may cause shadows or distortion  
along interior margin / La reliure serrée peut  
causer de l'ombre ou de la distorsion le long de la  
marge intérieure.
  
- Additional comments /  
Commentaires supplémentaires:

Canadiana.org a numérisé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de numérisation sont indiqués ci-dessous.

- Coloured pages / Pages de couleur
- Pages damaged / Pages endommagées
- Pages restored and/or laminated /  
Pages restaurées et/ou pelliculées
- Pages discoloured, stained or foxed/  
Pages décolorées, tachetées ou piquées
- Pages detached / Pages détachées
- Showthrough / Transparence
- Quality of print varies /  
Qualité inégale de l'impression
  
- Includes supplementary materials /  
Comprend du matériel supplémentaire
  
- Blank leaves added during restorations may  
appear within the text. Whenever possible, these  
have been omitted from scanning / Il se peut que  
certaines pages blanches ajoutées lors d'une  
restauration apparaissent dans le texte, mais,  
lorsque cela était possible, ces pages n'ont pas  
été numérisées.



# THE CANADIAN MINER

VOL. I. TORONTO, ONT., FEBRUARY 13, 1897. No. 6.

Codes—Moreing and Neal's, Clough's.  
Cable address—"Dell," Toronto.

**W. H. BLEASDELL & CO.**  
**. MINES .**  
Brokerage, Treasury Stock, Incorporation.  
CORRESPONDENCE INVITED.  
50 YONGE STREET, - TORONTO, ONT.  
Official Brokers for the "HANSARD" Co.

**CAMPBELL, CURRIE & CO.**  
**Mining Brokers.**  
MINES and MINING STOCKS Bought and Sold on Commission.  
AGENTS for TREASURY STOCK  
Head Office, 52 YONGE ST., Toronto.

**ASSAY AND ANALYTICAL LABORATORY**  
(Established 1873),  
130 KING ST. WEST, TORONTO,  
Opposite the Rossin House,  
Careful Analyses of Ores. Special rates to Mining Companies. Mineral Locations and Manufacturing Processes Reported on.  
Thos. Heys & Sons, Analytical & Consulting Chemists.  
Telephone 1889.

**WM. HAMILTON MERRITT, F.G.S.**  
Associate Royal School of Mines, etc.  
**Mining Engineer and Metallurgist,**  
Will Report on Mines and Mineral Properties.  
ADDRESS :  
15 Toronto St., TORONTO ONT.

**M. P. HATCH & CO.**  
Dealers, Promoters and Brokers in British Columbia Gold Mining Properties.  
Correspondence Solicited. References : R. G. Dun & Co.'s Commercial Agency or Ellicott Square Bank, Buffalo.  
Real Estate Exchange Building, Buffalo, N.Y.

**I. EDWARD SUCKLING,**  
OFFICIAL BROKER FOR THE  
**"ZILOR"**  
GOLD MINING COMPANY,  
TRAIL CREEK DIVISION, KOOTENAY, B.C.  
N.E. Cor. KING AND YONGE STREETS,  
TORONTO.

Cable Address, "ROSSMINA." Tel. No. 87

**The A. W. ROSS CO., of Toronto,**  
-(LIMITED)-  
**MINING BROKERS, Etc.**  
4 KING STREET EAST, TORONTO.  
Official Brokers "The Gold Hills Exploration and Development Co., of Toronto," Ltd.

**SAWYER, MURPHEY & CO.**  
CANADA LIFE BUILDING,  
TORONTO, ONTARIO,

HANDLE ONLY.....

**"The Standard"**  
Stocks of the  
**British Columbia and Ontario**  
Mining Districts.

AGENTS ALSO FOR  
**The Eastern Mining Syndicate,**  
WHOSE  
List of Directors and Properties Acquired  
Can be obtained on application to  
**E. L. SAWYER, Manager,**  
Canada Life Building,  
TORONTO.

**C. F. CLOUGH & CO.**  
**Mining Brokers,**  
SPOKANE, WASH. ROSSLAND, B.C.  
36 KING ST. EAST, TORONTO.  
Correspondents, PELLATT & PELLATT.

**J. W. EVANS**  
**Mining Engineer and Assayer.**  
Mining Claims Reported On. Assays and Analyses Made.  
Laboratory, Cochrane Block, SUDBURY, ONTARIO.

**R. H. AHN,**  
**MINING BROKER**  
.....OFFICES:.....  
Rat Portage;  
75 Canada Life Building, Toronto and  
411 Board of Trade Building, Montreal.  
Refer to page 18.

**R. J. FLEMING & CO.**  
OFFICIAL BROKERS FOR THE  
**GOLD and SILVER MINES**  
DEVELOPING COMPANY, LTD.  
10 VICTORIA STREET, - - TORONTO.  
J. B. FERGUSON, H. STEVENSON, M.E.,  
Practical Miner.

**Mines, Real Estate and Stocks**  
Expert Reports on Mines in any part of British Columbia made accurately and expeditiously.  
**J. B. FERGUSON & CO.**  
ROSSLAND, B.C.  
Mr. Ferguson will be in Toronto for a few weeks and will be glad to give any information on B. C. mines.

Cable Address "Coulthard." TEL. 640  
**COULTHARD & CO.**  
28 VICTORIA ST., TORONTO  
REPRESENTED AT ROSSLAND, B.C., AND SPOKANE  
STANDARD STOCKS OF  
**British Columbia and Ontario**  
...Mining Claims for Sale

**THOS. DAVIES & CO.**  
BROKERS AND FINANCIAL AGENTS,  
ARBITRATORS, ETC.  
STOCKS, BONDS, REAL ESTATE and INSURANCE  
**MINING SHARES.**  
1 Toronto Street, - TORONTO.  
REFERENCES :  
R. L. Coady, Esq., City Treasurer, } Toronto.  
W. S. Lee, Esq., Mgr. Western C. L. & S. Co., } London.  
J. W. Board, Esq., M.P., } Eng.  
Claude Bishop, Mgr. Consolidated Trusts Co. }

**The Bertram Engine Works Co. Ltd**

.....MANUFACTURERS OF.....

**Engines and Boilers  
Mining Machinery**

**Builders of Yachts and Steamships.**

**Estimates and Prices on Application.**

**Office and Works : Niagara and Bathurst Streets  
TORONTO, - - ONT.**

**BERTRAM & CO.**

**Mining and Lumbering Supplies**

**Picks, Crow Bars, Drill Steel, Bar Iron,  
Wire Rope, Axes, Tool Steel, Saws  
Sledges, Spades and Shovels, Blasting Powder  
Cordage, Files, Chains, Etc.**

**PRICES ON APPLICATION**

**53 Yonge Street, - - TORONTO, Ont**



# PROVINCE OF ONTARIO

---

The Province of Ontario has a mineral bearing belt 1,000 miles long, by 100 miles wide, north of the Great Lakes from Ottawa river to Lake of the Woods, more easily reached by lake or railway than any other mineral district of the continent.

**NICKEL**

**GOLD**

**COPPER**

**SILVER**

**IRON**

**APATITE**

**ACTINOLITE**

**MICA**

**PLUMBAGO**

Exploration has shown the Gold districts of the Province to be extensive and rich, and new finds are constantly being made. In the Western fields the ore is mainly free milling, and wood, water, and labor in abundance provide the requisites for economic working. The yield of gold for the year ending October 31, 1895, was \$50,281, and in the period from November 1, 1895, to September 20, 1896, it reached \$142,605.

Crown lands are sold at \$1.50 to \$3 per acre, or leased at 60 cents to \$1 per acre for the first year, and 15 to 25 cents for subsequent years.

The fifth report of the Bureau of Mines contains a geological description and map of the new gold fields of the Rainy Lake and Seine river districts—free on application.

For further information address

**HON. J. M. GIBSON,**

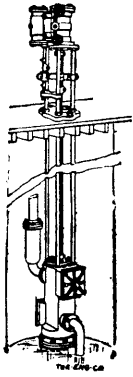
Commissioner of Crown Lands.

Or

**ARCHIBALD BLUE,**

Director Bureau of Mines, Toronto, Ont.

# Northey Mnfg. Co. Ltd.



# Pumps

& HYDRAULIC MACHINERY

## FOR MINING.

## SINKING PUMPS

... A SPECIALTY.

## KING STREET SUBWAY

## TORONTO.

### MINING PROPERTIES FOR SALE.

Advertisements under this heading cost Two Cents per word.

#### GOLD.

WE have several good Gold Mining Properties and a number of Prospects for sale at reasonable prices. We are the largest holders of gold mining locations in Canada. For reports, prices and particulars apply to Mines Contract Co., Office 75, Canada Life Building, Toronto.

TWO First-class Gold Mining Locations only a short distance east of Port Arthur, and near the C.P.R., will be sold at a sacrifice. Apply Box 13, Canadian Miner Office.

TWO Gold Properties for sale in Hastings Co., Ontario, free milling assays 24.40 per ton. Price moderate. Apply Box 14, Canadian Miner Office.

OWNER of half interest in a good Wahnapitae Gold Property, will sell out at a reasonable price. Apply Box 19, Canadian Miner Office.

FIRST-Class Gold Property near Shoal Lake for sale. Price moderate. Apply at once. Box 18, Canadian Miner Office.

DESIRABLE Gold Mining Location for sale near Heron Bay, on the C.P.R. For price and particulars write to Box 22, Canadian Miner Office.

TWO Gold Locations on Witch Bay, Lake of the Woods. Owners will sell either the whole or half interest. For report and price apply to Box 21, Canadian Miner Office.

GOOD Gold Mining Location for sale near the Scramble Mines. Good report. Only a few miles from Rat Portage. For price, etc., apply to Box 12, Canadian Miner Office.

#### SILVER.

A WELL Developed Silver Mine for sale near Port Arthur, Ontario. Reports, etc., will be furnished to intending purchasers. Apply Box 6, Canadian Miner Office.

SILVER Mining Location, 300 acres, on the Pic River, North Ontario, Will sell either whole or part interest. Apply Box 4, Canadian Miner Office.

In replying to Advertisements in this paper, mention The Canadian Miner.

#### NICKEL.

SEVERAL First-class Nickel Properties for sale, situated in the following Townships: two in Waters, four in Graham, and one in Dennison, all near the C.P.R. in the Sudbury District. For particulars apply Box 2, Canadian Miner Office.

A DEVELOPED Nickel Mine for sale in the Township of Nairn, with first-class report. For terms, etc., apply Box 19, Canadian Miner Office.

#### IRON.

A 1 IRON Location, 160 acres, for sale, near railway N.E. Ontario. Price reasonable. Apply Box 32, Canadian Miner Office.

#### MICA.

FIRST-Class White Mica Property, 200 acres, in the Township of Methuen, Co. of Peterboro', for sale. This is a rare opportunity. Price moderate. Apply Box 7, Canadian Miner Office.

WHITE Mica Property for sale in the Township of Hungerford, Ontario, adjoining Sheffield Station on the C.P.R., with good report. For particulars apply Box 3, Canadian Miner Office.

#### SITUATIONS WANTED.

Advertisements under this heading cost Two Cents per word.

PRACTICAL Miner open for engagement as Mining Captain; 10 years' experience in Cornwall, England. Apply Box 27, MINER, Office.

#### SITUATIONS VACANT.

WANTED--A thoroughly reliable, experienced man to report on Mines and Mining Properties in the British Columbia Mining Districts. Salary \$100.00 per month and expenses. Only the applications of those having first class references will be entertained. Apply (by letter only) to the Manager of THE CANADIAN MINER Publishing Co., Canada Life Building, Toronto.

THOS. G. SOOLE, : :

COMMERCIAL

PRINTER

First-Class WORK Guaranteed.

14 WEST KING ST.,

TORONTO.



## Mining Laws of Ontario.

ANY person may explore Crown Lands for minerals.

Mining lands may be taken up as surveyed locations or staked claims.

Locations range from 40 to 320 acres. Claims range from 10 to 20 acres on vein or lode.

Locations may be acquired in fee or under leasehold.

Price of locations north of French River, \$2 to \$3 per acre, and south of it, \$2 to \$1.50, according to distance from railway.

Rent of locations first year 60c. to \$1 per acre, and subsequent years 15c. to 25c. per acre.

Rent of claims, \$1 per acre each year. Claims must be worked continuously.

Royalty on ores specified in the Act, 2 per cent. of value at pit's mouth less cost of labor and explosives.

Royalty not charged until seven years from date of patent or lease, nor (as provided in s. 4 (3) of the Mines' Act, 1892), until fifteen years in the case of an original discovery of ore or mineral.

Original discoverer of ore or mineral on claim entitled to stake out a second claim.

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

ARCHIBALD BLUE,

Director Bureau of Mines.

TORONTO, May, 25th, 1894.

EDWARD MEEK,

... BARRISTER, ...

SOLICITOR, NOTARY PUBLIC, ETC.

SPECIALTIES: Incorporation of Companies and Corporation and Mining Laws.

MAIL BUILDING, TORONTO, ONT.,  
TEL. 562 CANADA.

AGENTS WANTED.

Advertising Agents and Canvassers for subscriptions, are wanted by this Journal in Halifax, Montreal, Ottawa, Vancouver and Rossland, B.C. The terms are liberal. Any one experienced in the work and willing to act for us should write to The Canadian Miner and enclose references.

THE RAT PORTAGE HARDWARE CO.  
(Limited)

GENERAL HARDWARE

Prospectors' and Miners' Supplies

MAIN STREET

RAT PORTAGE, - ONTARIO

GOLD HUNTERS

and Mining Companies

When needing supplies of Fresh or Cured Meats, Potatoes and other Vegetables, Butter, Eggs, Lard, etc., we make a specialty of catering for this class of trade, having stores in Winnipeg and connections at country points, enables us to fill all orders promptly and at lowest market prices. Your trade solicited.

A. GIBSON & CO.

Corner Second and Matheson Streets

RAT PORTAGE, - ONTARIO

JOHN GALT, C.E. & M.E.

(Member Can. Soc. C.E.)

Consulting, Civil, Mechanical and Mining Engineer

Office: Canada Life Building, - TORONTO

Examinations and Reports made on Mining Properties.

Supervision of Mining and Milling

JOHN M. BURKE,

WILL EXAMINE AND REPORT ON MINES FOR SALE,

And also on mines of which stock is being sold. If my reports are found not to be correct I will refund all moneys invested on same.

JOHN M. BURKE,  
ROSSLAND, B.C.

PALMER HOUSE,

Corner KING and YORK STREETS,

Rates, - - - \$2.00 per Day

KENSINGTON (opposite)

EUROPEAN PLAN,

50c. to \$1.00 per Day per Room

J. C. PALMER, Proprietor

# The Canadian Miner.

VOL. I.

TORONTO, FEBRUARY 13, 1897.

No. 5.

## BRITISH COLUMBIA.

MR. CARLYLE'S BULLETIN ON THE THREE MINING DISTRICTS.—A BRIGHT OUTLOOK FOR THE PROVINCE.

ANOTHER bulletin, the third since his appointment, has just been issued by Mr. A. W. Carlyle, British Columbia mineralogist. This report is upon the Slocan, Nelson and Ainsworth mining districts, and the thorough and practical information it contains makes it most valuable not only to the mining engineer, but to the investor and prospector. Mr. Carlyle has that rare faculty of presenting scientific facts in a form that the ordinary individual can grasp and comprehend, and for that reason his reports are bound to be of immense benefit to the mining industry of the Province. In the introductory remarks of his just-issued report, Mr. Carlyle states that "every endeavor was made to visit as many as possible of the leading properties within the time available, but even then some important mines were not seen. In every direction new claims were being opened up, but, as seldom satisfactory information can be given concerning mere prospects, examination was mostly confined to those claims on which more or less work had been done, and on which underground conditions could be studied."

### ON RECENT INCEPTION.

It is pointed out that the mining industry of British Columbia, outside of the placer gold and coal mining, is of very recent inception, for until eight or nine years ago, the great extent of mountainous country south of the C.P.R. was a wilderness, known to but few, and it was not till 1890-91 that the silver veins on the east of Kootenay Lake and Toad Mountain—discovered years before by men in the Hudson Bay Company's employ—began to attract mining men from abroad. In spite of the collapse in silver values, nearly \$650,000 worth of silver was sent out of Kootenay in 1894, and in 1895 the production of the different kinds of silver ore increased to over \$1,000,000, the production doubling in 1896.

### A HOPEFUL CONDITION.

"Meanwhile," says the report, "the gold-bearing pyrrhotite deposits on Trail Creek were being exploited under many vicissitudes, until the shipment of pay ore, in 1894, to the value of \$75,000, and of nearly ten times this amount in 1895, from the large ore bodies of the Le Roi and War Eagle, commanded widespread interest by reason of its being gold ore and very profitable, and in 1896 has been seen a great influx of capital's representatives and mining men, who are not only securing gold properties but are investing in silver as well. The production of the Kootenay mines, when compared with that of many of the mining centres in other countries, will not appear so very large to a casual reader, but when all the conditions are understood, that an entirely new country of a large territorial extent is being rapidly opened up under difficulties, that the supply of needed capital, until recently, has been meagre, and that in reality not a single mine has had time to do sufficient development work to put it on a really proper basis for extraction of ore and further exploratory work, this production will then be seen to indicate a most flourishing and hopeful condition of affairs. As to the future, there is now no doubt but that the number of

paying mines and mine output will steadily increase in the districts to be described, but not with that extravagant rate of increase predicted by some—at least not until those conditions exist that will permit the extraction of a much greater tonnage of ore. Such conditions are being supplied, and judging from the shipments already made in the new year, which exceed those of any previous year for the corresponding time, the output from Kootenay for 1897 will show a very substantial increase.

### THE OUTLOOK BRIGHT.

"The outlook for the coming year is especially bright, as many properties are beginning the new year with ore in sight, new mines have been added to the list, very promising prospects are being opened up, and during 1897 nearly every claim from which ore has been shipped in the past will be on the list of shippers. There promises to be a steady increase in the amount of the ore extracted and sold, and in the amount of development done, but it is both unwise and hurtful to predict very large and sudden advances in the mineral output, as it must be remembered that a greatly increased output requires also a greatly increased amount of underground work, unless large bodies of very high-grade ore are uncovered. Extravagant prophecies may travel far, and if the actual results do not approach the amount thus foretold, harm unjustly a mine or district in which the progress has been most favorable and satisfactory, quite equal to the expectations of those best qualified to know.

### THE VALUABLE SLOCAN.

"Slocan, according to the number of its shipping mines and the amount and value of the ores sold, now ranks as the most productive mining district in the Province, and in point of importance is not surpassed by any other. In an area of 15 by 25 miles there have been discovered many veins of high-grade silver-lead ore, which are being developed with great vigor and success, and among the mining men is every feeling of confidence and hopefulness. This winter nearly 50 of those properties are shipping high-grade ore that yields very profitable returns, and a large number of other claims are being opened up. So far but comparatively little imported capital has been expended here, as in the case of every mine now established, sufficient money has been realized from ore extracted during development to pay for more extensive workings, new buildings, mills, trails, roads, and also dividends, but more or less capital will be required to properly open up many other claims on which the veins exist, but are not so easily accessible as those first discovered. But as most of these veins are found along the steep mountain sides and can be worked by tunnels, and the cost of mining is low, requiring little or no machinery, capital will be necessary mostly when tramways and concentrators are to be built, or in some cases for hoisting plants and pumps when tunnel sites may not be available. The output of the Slocan during 1896 was 18 215 tons of ore, yielding 2,141,088 ounces of silver and 19,210,666 lbs of lead, or an average of 117.4 oz. of silver per ton, and 52.7 per cent. lead, which would leave a net profit of about \$75 per ton, while many carloads were shipped that yielded from 300 to 400 ounces of silver per ton. The Slocan Star, which has the largest chute of

high-grade ore yet found in the Slocan, sold 11,529 tons of ore and concentrates during the last three years, which returned 912,600 ounces of silver, and 13,482,000 lbs. of lead, and of these amounts 7,000 tons yielded 600,000 ounces of silver and 9,000,000 lbs. of lead during 1896."

### THE NELSON DISTRICT.

In the Nelson district the Silver King silver-copper mine of the Hall Mines Co., Ltd., the Poorman and some small placer workings have yielded all the production credited to the district, but other mines will be added ere long to the list. In the Salmon River country south of Nelson many claims have been staked off on gold and silver leads. In the Ainsworth district the output for 1896 was much lowered by the cessation, early in the year, of mining on the Blue Bell, in which it is reported the ore has become rather low grade for present conditions, but in several of the other mines west of Ainsworth, considerable progress has been made.

Comparative statements of the production for 1895 and 1896 of the three mining divisions dealt with in the report are given, the tonnage of ore being the net weight, that is with the moisture removed. The table represents the amount and value of the ore actually paid for as per smelter returns:

SLOCAN.					
1895.		1896.			
Amount.	Value.	Amount.	Value.		
Gold, oz....	120	152	\$ 3,040		
Silver, oz....	1,137,040	742,487	2,141,088	1,434,529	
Lead, lb....	9,751,464	315,070	19,210,666	572,479	
Total.....		\$1,057,677		\$2,010,048	

NELSON.					
1895.		1896.			
Amount.	Value.	Amount.	Value.		
Gold, oz....	1,275	511	\$ 10,220		
Silver, oz....	49,750	32,487	631,960	423,413	
Copper lb....	112,420	5,621	2,237,921	111,896	
Total.....		\$63,608		\$545,529	

AINSWORTH.					
1895.		1896.			
Amount.	Value.	Amount.	Value.		
Silver, oz....	263,030	187,279	\$125,459		
Lead, lbs....	6,724,000	217,185	2,151,000	64,100	
Total.....		\$388,944		\$189,589	

### MINES SHIPPING.

This gives a total value for the three districts of \$2,745,166 for 1896, as against \$1,500,229 for the preceding year. The number of mines shipping in the three districts in 1896 was: Slocan 42, Nelson 4, and Ainsworth 9, the number of miners employed totalling 1,550. After alluding to the fact that the great material advantages of the fine waterways have singularly favored West Kootenay for transportation, Mr. Carlyle says:

"The Provincial Government has followed a plan of assisting, as far as possible, the building of roads and trails to the various new camps, and, though it has been impossible to accede to all of the many requests for aid where so many new parts are being opened up by fresh discoveries in many different directions, still the assistance given has been valuable, and has aided materially in the opening up of the country. As the Government agents, to whose judgment the determination and carrying on of this work is entrusted, are already fully employed by their other necessary duties, it would be a good policy in the matter of economy and



more general satisfaction if men could be engaged to carefully examine the different claims for roads and trails and applications for water rights, and then to choose and lay out such as would be of service to the greatest number, and open the most country; such men to be familiar with this work and able to locate such lines of trails as would benefit the greatest number of mining claims, be suitable for the transport down of ore, and be extended as further claims are proved up. The present agents have done good work, but they are unable with so much other work demanding constant attention, to give that personal oversight necessary. It may happen that by special representation a trail may be built to a single group of claims, while another district that would be much more benefited by the opening of a wider field, would be denied, or the trail or road would not be built to serve as a main outlet, but be deflected to favor some particular property, instead of being located so that many more claims could easily connect with it by other trails.

#### MONEY WELL SPENT.

"Well directed assistance in this line is money well spent, as the more accessible this country is made the more rapid will be its certain development, as not only are the prospectors and miners better able to reach their finds, and to spend the slight capital many can command in actual work on their claims, adding materially to their value if such work shows up favorably, but investors and men with capital able to move quickly and thoroughly develop these locations can reach and examine properties more expeditiously and with less difficulty. Now that special interest is aroused and capital is here seeking investment, the more the country is opened up the more rapid and substantial will be the advance."

#### RAILWAY FACILITIES.

While on the subject of transportation and communication, Mr. Carlyle touches on the demand for more railways facilities, and goes on to say:—

"The ultimate benefit to our country and province of some new lines now projected, and their own financial success, are in the judgment of many acquainted with conditions, assured. These new lines, while having engineering difficulties to overcome, should open up a large part of the southern part of British Columbia now lying practically dormant, and make possible not only the development of resources now almost inaccessible and valueless, but known to exist, and the easy assembling at large smelting centres, of the different classes of ores and fuels, but also the fostering of a large demand for agricultural produce, for which no better market can be found than in these mining centres. For the agriculturist or rancher there can be no better market than will be found in these mining centres, where there is a large consumption of all they can produce, and where the best is demanded and readily paid for. With good railroad facilities the coast will be a very favorable point for large smelting works, where can be assembled the different classes of inter-fluxing ores, iron and lime fluxes, and the coke, now being made at the Union colliers at Comox, on Vancouver Island, which large and prosperous smelting works demand; and moreover, the refined products, base, bullion and matte, by reason of the very low ocean freights, will be able to enter the other markets of the world, without paying the excessive duties now imposed when shipped across the line to the south. England is the largest buyer of foreign lead, and much of this metal is imported into China, Japan, and other Asiatic ports, and Australia is exporting her desilverized lead to all of these buyers."

#### HOW THE VEINS RUN.

The report deals briefly with the geological formations and then gives a more particular description of the ore and ore deposits of the three districts, describing each of the many mines visited and the work that has been done on them. In the Slocan, while most of the veins are narrow, varying from two and three inches to 15 and 20 inches, with occasional widenings to three or four feet of solid ore, the richness of the ores compensates for this as shown by actual smelter returns of the ore. A number of these examples are given as: Slocan Star 80 to 95 ounces silver per ton, and 70 to 75 per cent. lead, Reco, 83 to 730 ounces silver, 19 to 67 per cent., lead; Two Friends, 248 to 380 ounces silver, 38 to 52 per cent., lead; and many others. Mr. Carlyle advises that it might be well to be on the lookout for gold in the Slocan, remembering the good values found in the galena ores of the Monitor mine, which yield from \$2 to \$14 per ton in gold. Referring to individual mines in the Slocan, it is stated that the Slocan Star has not only paid a larger amount of dividends (\$300,000) than any other mine in the Province, apart from coal or placer mines, but it is the largest silver-lead mine yet developed in the Province.

"From the rival towns of Slocan City and Brandon at the foot of the lake, trails lead off to the country drained by Ten Mile, Springer and Lemon creeks, and in this part of the district many locations have been made, some on galena veins, but many others on 'dry ore' veins, and the gold-bearing quartz leads, all in the granite. Much prospecting was being done and considerable development work; but as many investors have recently been securing bonds and options on many locations, the coming season promises much greater activity and certainly the careful attention of mining men is warranted by the very favorable results already attained by the as yet very small amount of work. Twenty miles south of Nakusp, Cariboo Creek, on the east side of the river, flows into the Columbia at a small settlement, Burton City. A trail leads thence through an area of granite six miles to the junction of Mineral Creek, at a point known as Mineral City, and thence trails lead farther on up Cariboo Creek, crossing over to Snow Creek, and also up both sides of Mineral Creek, one crossing over the divide to Blue Grouse Creek. Most of the area is the regular Slocan granite, but isolated areas of stratified rocks as slate, etc., can be seen, especially up Mineral Creek. A number of properties are reported to have been sold during the past season, and much more work will be done this year to prospect many of the claims now located."

#### NELSON DISTRICT.

A description of the Nelson mining district comes next, with a reference to the Hall mines smelter, which smelted from Jan. 14, 1896, to Jan. 1, 1897, 60,262,405 pounds of ore, or 30,131 tons, and produced 632,060 ounces of silver, 587.1 ounces of gold and 2,262,921 pounds of copper.

#### AINSWORTH DISTRICT.

In the Ainsworth district it is noted that "the tide of prospectors is spreading over this district, and from the territory at the north end of Kootenay Lake, along the Lardo and Duncan rivers and their tributaries, and from Crawford and Hooker creeks and White Grouse Mountain, back from the east shores of the lake, come reports of locations of veins of high grade ore, while at Ainsworth itself new properties are being found and opened up. By the way, it will be seen that this district embraces a wide territory, and that in reality but a small part of it has become familiar to the prospector or explorer. With large smelting plants in British Columbia, the demand will vastly in-

crease for dry ores, or ore carrying a small or no percentage of lead to mix with the galena ores; and such dry ores as are found at Ainsworth will be in special demand and command favorable smelting rates when shipped in bulk, i.e., not sacked, and there will be yet shipped large quantities of low grade ore now not very profitable."

The report covers altogether 100 pages, and gives much information not only of the districts, but of the individual mines, and just the sort of information, too, that is needed to give a proper idea of the districts visited.

#### PETROLEUM AND OZOKERITE FIELDS IN RUSSIA.

ACCORDING to a recent German writer, says the *Paint, Oil and Drug Review*, which we quote, (giving the centigrade figures in Fahrenheit equivalents), petroleum and ozokerite have been for many years known to exist in the island of Cheleken, which is situated in the south-easterly part of the Caspian Sea, being separated from the mainland by a narrow channel, and having an area of 700 square miles. The oil is forced to the surface by numerous springs of hot sulphur water (102° Fahr.) and accumulates in wells dug by the Turcomans. Long before European prospectors set foot upon the island, the natives were engaged in the production of oil and ozokerite. The ozokerite was separated from the rock by melting and sold in the market of Baku. The oil was skimmed off the surface of the water, placed in leather bags, and taken in skiffs to Asterabad in Persia.

It is estimated that the quantity of oil produced by the Turcomans during 1860-1880 amounted to 100,000 pounds, or about 12,000 barrels. In 1876 the first attempt in the direction of a rational exploitation was made by T. Palankowski, a well-known oil operator of Baku. The attempt, however, did not result successfully, because the upper sands were almost exhausted by the digging of the Turcomans. The operations commenced by Nobel Brothers, in 1881, were also stopped after a short time, partly because of the lack of labor, as the Turcomans refused to work; partly on account of the intention at that time to concentrate the production and manufacture of petroleum on the Aspheron peninsula. This field was then forgotten, until quite recently the attention of prospectors has been called again to the island, especially by the authorities of the Trans-Caspian territory, who were looking for a cheap liquid fuel for the Trans-Caspian Railway, and caused the resumption of operations on the island, which were accompanied by favorable results. The firm of Nobel Brothers has now resumed operations.

Analytical tests made in the laboratory of the Technical Committee of Baku have shown that the crude oil of Cheleken Island possesses very peculiar properties. It is of thick consistency at 9° Cent. (48.° 2F.) like salve, and becomes solid at a little below 0° Cent. (32° F.). Its water content is hard to eliminate, and this circumstance proves an obstacle in distillation. Its specific gravity at 15° Cent. (59° F.) is 8.868, the flashing point 51.° 5 Cent. (124.° 7F.) The residue possesses, at ordinary temperature, 22.° 5 Cent. (72.° 5 F.) the consistency of salve or jelly, a specific gravity of 0.900, and can be worked up directly to vaseline. Another characteristic of this oil is its high content of paraffin, amounting to 5.5 per cent., which, after being refined, furnished about 3 per cent. of white amorphous paraffin wax.

For advertising boilers, engines and all kinds of machinery and supplies needed in mines, the *Canadian Miner* is a medium surpassed by no other, for it reaches the managers of Canadian mines.

**A MINING SUPPOSITION.**

The following statement, said to be "a good and reliable illustration of the profits to be obtained in mining," is going the rounds of the boom press, and is cherished as a luscious thing by stock "miners," says *Mining Industry of Denver* :—

Some genius with a taste for figures furnishes the following as demonstrating the possibilities of an average mine with a shaft 1,000 feet and drifts for blocking out the ore. He says :— "A mineral location 1,500 feet in length, the vein on which carries one foot of pay streak, or mineralized matter, will contain 150 tons of ore for each foot of depth. A shaft 100 feet, a drift 100 feet, and an upraise of 100 feet, will block out ready for stoping 1,000 tons of ore, and if opened by ordinary methods to a depth of 1,000 feet, the vein will yield 150,000 tons of ore. These figures are on the basis of ten cubic feet of ore to the ton. At \$10 per ton, which is a very low estimate, its product to 1,000 feet deep would be worth \$1,500,000."

This estimate is made upon the supposition that all of the vein for its full length of 1,500 feet and the depth of 1,000 feet will carry a foot of ore. It is a pity the writer did not follow the example of that king of fakirs, Brick Pomeroy, and, as he did, figure that the vein carried pay ore to the centre of the earth. There is no reason why he should have stopped at 1,000 feet depth. This kind of a thing is made to catch suckers, and the bait might as well be larger, and richer and more tempting.

No such a vein as is supposed in this article ever existed, and there is no reason to expect such a one will ever be found. Ore is never evenly distributed in veins. It comes in pockets and chutes, and it is rarely the case that more than half of the ground in a vein is rich enough to pay for stoping. In a large proportion of mines not more than from a tenth to a quarter of the ground opened by shafts, drifts and winzes will pay to stope. What the miner is always hoping for is to find the ore, when he does find it, in such quantity and of such richness that he will make a profit on its extraction, which will pay for all the dead work required, and leave a large margin in addition. This is exactly what does happen in good mines well mined.

But the writer of the article quoted makes a very poor showing for mining, if the statement is analyzed. To open the mine and extract the ore would require 1,000 feet of shaft, 3,000 feet of winzes, 15,000 feet of drifts and 40,000 fathoms of stoping. The cost of this work under ordinary conditions may be placed as follows :—

Shaft @ \$20 .....	\$20,000
Winzes @ \$10 .....	30,000
Drifts @ \$6 .....	90,000
Stopes @ \$15 .....	600,000

Total .....

\$740,000  
The above includes nothing for timbers, machinery, interest on investment, nor any of the incidentals which are always surprisingly large to the ordinary man.

If the 150,000 tons of ore could be hoisted, put in a mill and treated for \$2 per ton, it would be less than the average cost. This would add \$300,000 to the debit side, bringing the cost to \$1,050,000. If 75 per cent. of the value in the ore was saved, its total yield would be \$1,125,000, showing a profit of only \$75,000 to pay for risk and interest for years on the investment. This is a poor showing. Only under exceptional conditions reducing the cost, no mining man of experience would accept as a gift such a mine as the one supposed, if such a thing existed. Ten dollar ore must come in pay streaks more than one foot wide to be attractive.

**AUSTRALIA.**

THE Mount Morgan mine in Queensland, though its production has fallen considerably below that of some of its earlier years, still remains a valuable mine and a great producer. Its output last year amounted to 130,471 ounces of gold, and its profits were sufficient to pay \$1,500,000 in dividends—30 per cent. on the nominal or 34.4 per cent. on the paid-up capital. The maximum point of production was reached in 1889-90, when the total report was 258,950 ounces of gold; since then it has gradually declined, though last year it showed a considerable improvement over the lowest level, 118,631 ounces, reached in 1893-94. There is every prospect, also, that the mine will continue a producer for a number of years to come. The grade of the ore has shown a gradual and almost regular decrease from 5.8 ounces per ton in 1887 to 1.5 ounces last year; but the latter may still be considered very good. The highest value was in the mundic or pyritic ore, which yielded last year 3.72 ounces per ton, while the ordinary milling ore gave 1.12 ounces. The sulphurets are treated by chlorination. As to costs we find from the report that, taking the ore worked as a basis, the total yield was \$30.29 per ton, while the expenses, mine and general, amounted to \$12.53, leaving a profit of \$17.76 per ton. Taking the gold product as a basis, the total receipts per ounce of gold reported were \$19.92; the expenses were \$8.26, and the profit \$11.66 per ounce reported. The heaviest items in the expenses were for labor and fuel; but the total expenses in the case of the Mount Morgan were only 41.5 per cent. of the returns

**METAL MINING IN HUNGARY.**

THE mountains of Hungary contain a great wealth of gold. While in all other countries of Europe the resources of gold are practically exhausted, gold mining is still a flourishing industry in the land of the Magyars, the output in 1894 amounted to 6,427 pounds, being the largest on record. The occurrence of gold in Hungary is, according to Professor Alexander Schmidt, in the *Pesth Lloyd*, of a peculiar nature. It is not confined here to the primary rocks of the earth crust, but the more recent tertiary eruptive rocks are those which contain the gold bearing veins of "green stone trachyte." In Hungary most of the gold occurs in veins of more recent formation, the auriferous iron pyrites being the most productive source of gold. One of the gold mining companies of more recent date is the Upper Hungarian Mining Company, which began to mine for gold and silver at Valea-Dosului, comitate of Also-Feher, in October, 1895. This company also owns an auriferous gravel pit at Foinitza, Bosnia. The other more important and private mining concerns are the Consolidated Kormosbanya Charles and City mines, at Kremnitz, the Kisalmas-Porknar company, the Kanajel, and the Fuzsed-Trestia companies. One of the most interesting of the Hungarian mines is the gold, silver and copper mine at Nagyag, owned jointly by the imperial family, the Hungarian crown, and several private parties. In that region, where the southern spur of the Tshetras mountains falls off abruptly towards the widening valley of the Maros river, 2,500 feet above the level of the sea, the Nagyag mine is located at a spot that is famous for the occurrence of rare minerals. Until the middle of the last century, this locality was still a densely wooded wilderness. In 1745, a shepherd gave to a government official several pieces of gray-looking ore which showed rich contents of gold. This mineral is now called nagyagite, and in it gold was found for the first time combined chemically with other elements.

A new mineral was discovered in this ore which later received the name of tellurium. About 1782, mining operations commenced on a larger scale in this neighborhood.

The comitate of Hunyad is the leading gold district in Hungary; here, at Verespatak, are found the most beautiful gold crystals in the world. The color of the Hungarian gold is light yellow, which circumstance is due to the high silver contents, averaging 15 per cent., and rising in the gold of Verespatak to even 38 per cent. Gold containing more than 15 per cent. is called electrum. The purest gold known so far comes from Nova Scotia and Queensland. But while in the other gold mines of the world, apart from quartz formations, the free gold is recovered mostly as alluvial gold, it occurs in Hungary as a vein mineral, and for this reason the crystals show sometimes an extremely beautiful formation. In the famous collection of the British Museum of Natural History, at London, big, dark yellow gold crystals from the Victoria can be seen, but their outlines are all rounded, proving their origin from secondary deposits, while the Hungarian gold crystals possess sharp edges. The present Hungarian gold production amounts to about 1.2 per cent. of the total production of the world.

As regards silver, the Hungarian production in 1894 amounted to 44,410 pounds; more than 50 per cent. of the total were produced by the State mines. While the bulk of the gold is produced in southeastern Hungary and Transylvania, the silver comes mostly from the mines in the northwestern and northern part of Hungary.

The production of lead suffered little change during the period of from 1881 to 1893, the average being 1,257 tons a year, the output in 1893 being 2,513 tons. The most lead is produced by the State mines in the districts of Bestercebanza and Nagybanza.

The copper production of Hungary shows a considerable decrease. From 1881 to 1885 the yearly average was 684 tons, while the output for 1893 amounted to but 343 tons. Private mines furnish the bulk of the copper, while the production of the State mines has almost ceased. The districts of Buda Pesth and Salatna lead in the production of copper.

Quicksilver was produced in 1893 in the district of Szepes-Iglo only, the output being two and one-half tons. From 1881 to 1885 the annual production averaged twelve tons.

The production of zinc has ceased altogether. The production of antimony has increased somewhat lately, most of the ore being raised in Bestercebanza. The production of antimony, in 1893 amounted to 881 tons.

The production of iron pyrites is altogether in the hands of private concerns, and it has increased considerably of late years in northern Hungary. While from 1881 to 1885 the annual average was 47,606 tons, the output in 1893 amounted to 68,188 tons, all of which was exported to Germany.

DREDGING for gold is being carried on in a systematic manner and with success in New Zealand. There are about forty dredges at work in the South Island, and their average cost is at least \$10,000 each, so that there is \$400,000 invested in machinery alone for this class of mining. The number of men employed per dredge is about seven, making a total of 280, while the amount of gold obtained last year from the total number of dredges, it is said, reached at the lowest estimate 25,000 ounces, of a total value of \$500,000.

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



# The Canadian Miner.

ISSUED ONCE A WEEK

AND

Devoted to the interests of Miners, and all kinds of Mining; to the popularizing of Mining as a great National Industry; and to the protection of investors in Mining Companies.

PUBLISHED BY

The Canadian Miner Publishing Company

Canada Life Building,  
King Street West, - - Toronto, Ont.

Letters and other Communications intended for insertion in THE MINER should be addressed to the Editor, and business letters to the Manager.

Subscriptions are payable in advance. The price for delivery in Canada, Newfoundland and the United States is \$2.00 per annum, and in Great Britain, 10s.

Subscriptions should be sent by registered letter, P. O., or Express Order.

VOL. I. FEBRUARY 13, 1897. No. 5.

## THE GOVERNMENT AND THE MINERS.

THE mining policy of the Ontario Government was announced in the speech from the Throne on Wednesday—that is as far perhaps as the Throne has shaped a policy. It expresses satisfaction with the development that has taken place—perhaps too much satisfaction with the development of other mines than gold ones. With the development made, the Government policy, so far, has had comparatively little to do. But the expression of good will toward the mining interests, and especially towards the prospectors, is, we believe, sincere, and will be followed by useful legislation. There is little doubt that the Legislature of Ontario appreciates the significance of the new activity; and we may hope that the agricultural classes of the country no longer look upon mineral development with a jealous eye. We may reasonably hope that the Government will adopt a vigorous policy, even if it has to incur a very much larger expenditure than has hitherto been devoted to mining. There may have been too much concentration in Toronto of the governmental work in regard to mining. This concentration was, perhaps, quite justifiable when that industry was inactive, but it does not seem to fit in with the developments since the last meeting of the Legislature. Local mining offices appear now to be a necessity. The simplification of the law in regard to prospectors' rights and methods, will no doubt be attended to. That some form of a taxation of mines will be retained, we scarcely question. But we are not the Government, and there are problems connected with the new situation which, are not as simple as most people connected with mining appear to think them to be. The references, in regard to mining, made in the Speech from the Throne, are as follows:

"I rejoice to know that the past year has been one of growing activity in mining affairs. Furnaces for smelting iron, nickel and copper ores, and mills for reducing and refining gold

ores, and for the treatment of other minerals, have been steadily operated. The known limits of gold-bearing country have been widened in different directions by the enterprising spirit of prospectors, and the work of development carried on in several new localities encourages the hope that in the year upon which we have entered capital directed by experience will find useful and profitable employment. Indeed, our province offers to investors, explorers and miners attractions scarcely equalled elsewhere, and I am gratified to know that its mineral wealth is receiving the earnest attention of our own people.

"Amendments of the mining laws, the necessity of which has been suggested by the experience of unusually active operations in the past year, will be submitted for your consideration, and in other ways you will be asked to give to our mining interests generous encouragement."

## MORE HINTS TO INVESTORS.

There are bulls and bears, of course, in the gold mine stock market, and it is to the interest of some people to keep up the prices of well established mining enterprises. But there are properties, partially opened, which may be known to those that take proper means to investigate, that afford as good prospects of returns as almost any of the regular mines the shares of which are high. With this important qualification, we commend the following from the *Wall Street Reporter* to our readers.

There is unmistakable evidence that mining stocks are subject to the great law of the survival of the fittest. Those which had their birth during the boom of last year and have been floated mainly on wind are steadily dropping out of sight, and will soon be only a painful reminiscence. It is certainly to be hoped that the thousands of people all over the land who unthinkingly took a gambling chance in such stocks will lay the lesson to heart, and will in the future put their money only where there is some known value and good management. Their own lack of judgment is largely responsible for the flood of paper stocks in which they have been engulfed. Instead of basing their investments on business principles, they looked upon mining as a game of chance, and anything cheap was good enough for them. No better opening could have been offered to unscrupulous promoters, and as a consequence companies were formed merely to enable a few who owned the bulk of the stock to unload at a good profit on the cost of incorporation papers, books, and advertising. \* \* \* The attention of investors has been diverted from properties of sound value by specious puffs and glittering promises. Instances of advance in price from five or ten cents to one dollar were paraded before the investor, and reasoning *a fortiori* he was convinced that a purchase at one or two cents was pretty nearly a sure thing for a profit. Good stocks were neglected, and of course dropped to a figure far below value.

Naturally the losers in these wildcats are no longer partial to mining investments. If the weeding out process shall continue until investors can select from a few stocks of known merit instead of going it blind on a mass of guess work, we may then look for a stable and permanent market founded on the well-earned confidence of the public. The good work has already gone so far that the attention of buyers is being centred upon the most reliable stocks

while sellers are chiefly concerned in dropping the others as soon as possible.

We have found many cases of careless investment in gold stocks on the part of people who are, and often properly, considered careful business men. These men act in a way utterly inconsistent with the ruling ideas on which they conduct their ordinary business, and with the advice they give to others. Many of the instances are amusing in a way; the consequences will probably be the dropping of neat little sums through investment in some companies paraded in this city, companies which may turn out all right, but on the face of things show organization not of an assuring character beyond the pretensions of their promoters. We have people that jump at ventures in gold mining, and we have people who actually look upon the recent mining development as a delusion. The latter class is not numerous, and is mostly restricted to narrow-minded and narrow-hearted men.

## IRON.

IRON abounds in practically limitless quantities in Ontario, and other parts of Canada, and often is found in prodigious quantities close to navigable waters. But our iron deposits west of Quebec are not utilized, and the vast hæmatite deposits west of Lake Superior in Minnesota, are so cheaply worked that there has yet appeared little inducement to Ontarions to develop our beds of magnetic iron. A cheap process of treating our ores is very much to be desired, and does not seem, in the light of recent progress in chemistry, to be far off.

## NOTES AND COMMENTS.

CANADA is probably on the verge of a period of increased activity in railway building. In view of this, would it not be well for the government to consider the advisability of utilizing our prison labor in securing the manufacture of steel rails in this country. We spend millions in the purchase of steel rails abroad, that might be saved to the people of the Dominion.

It is rumored that the English Company operating the Deloro mine in the County of Hastings, has obtained very satisfactory results from their experiments to discover a cheap mode of treating mispickel ores. The gold obtained is said to exceed \$20 to the ton, and the amount of arsenic obtained is in proportions that have hitherto not been approached at any gold mines in the world.

ORE at Rossland is not in the paying class unless it reaches \$18 to the ton. This leaves much dead work to be done, and a heavy loss. Smelters conveniently situated; coal by way of Crow's Nest Pass, and, perhaps, above all, the materialization of the cheap methods of extracting gold that have been hinted at for some time are needed. Our free-milling ores of Ontario cost comparatively little to treat, even where the mines are far from railways.

DR SELWYN, speaking at the Montreal mining convention the other day, spoke rather dispar-

agingly of the gold prospects of Canada, especially Eastern Canada, which he professed to regard as essentially an agricultural country, notwithstanding the refractory nature of its northern backbone of Laurentians and Cambrians. Well, probably Dr. Selwyn never was of much weight—at least amongst scientific men who have known him. He is justly charged with having delayed years ago the mineral development of the country. Motives are another matter. Suspicious people divine, sometimes correctly, sometimes not. The fact remains. A good many people who know the Doctor think that if twenty-five years ago he had taken to a farm and diligently stayed there, it would have been better for both the mining and agricultural interests of the country.

**MESSRS. SAWYER, MURPHEY & COMPANY** are to be congratulated on the care and good sense shown in their weekly bulletins. The issue of February 9th has the following:—"It has been said that the present output of Trail Creek District represents very little return upon the market value of the shares. This argument is unfair, if not ignorant, for a variety of reasons, one of these being that many mines are sure to considerably augment their profits within a few months, and of course it is the business of the astute speculator to discount such prospects. Another reason is that the total market value includes the value of a goodly number of shares which will probably never pay dividends, and which therefore have little intrinsic value. To leave "rubbish" severely alone is advice which responsible brokers will give to all concerned. Investors who are unfamiliar with mining should only pay attention to properties which either pay a dividend or have a prospect of doing so. There is one very important point which speaks very well for the shipping mines, and should not be lost sight of in connection with the present prices. It is the practice in all but a few mines to develop the property as far ahead as possible. Development means getting the mines in that condition which enables the management to at once increase the output of ore. This is done by the construction of drifts and cross-cuts, and the most considerable part of the earnings has been sunk in this kind of work. This developing coupled with assays at every few feet enables the management to predict with a singular degree of accuracy the output of the mines and future earnings, especially as the price of the product is not in any way subject to fluctuation. The only possible drawback to this developing from the shareholders' point of view lies in the fact that the management has it within its power to regulate the output, by working either rich or poor parts of the mine. But after due enquiry we are compelled to arrive at the conclusion that even if the integrity of engineers could be doubted, which on the whole is not the case, the technical possibility of the practice is remote, equal and 'straight' working being rendered imperative by the necessity of keeping the mines working to supply the increasing demand from all European countries for the royal metal."

#### PERSONAL.

**MR. JOHN LAMBE**, whose connection with the efforts to develop the iron resources of Ontario, has been remarkably worthy of note, is off to the gold mines at Bannockburn, Hastings County. The mine is a rich one, and the organization of the company operating it is excellent. The output includes a ten-stamp mill.

#### PROSPECTING PAYS.

THE *Washington Mining Journal*, of Seattle, paints the prospectors' chances in, perhaps, a somewhat roseate hue. It says:—

"The question is often asked, 'Does prospecting pay?' This question can be asked by an emphatic, Yes!

"For the amount of capital required, there is probably no business in the world that pays better. The 'plant' of the prospector, while it is somewhat more elaborate than the dress suit of a Texan—a shirt collar and a pair of spurs—is seldom more than a \$5 broncho, pick, shovel and grub enough to last him three months. On this 'capitalization' there are scores of prospectors who have multiplied their venture thousands and tens of thousand. They have not only enriched themselves but they have enriched the state as well by adding to its mineral wealth. The *Journal* knows two instances where prospectors started on their journey in June last with an outfit that cost not exceeding \$60, that now have their discoveries bonded at \$80,000 and \$120,000, and it could name dozens of men who have refused offers of \$5,000 and \$10,000 for good prospects that cost them but two months' labor in the mountains.

"While the prospector has his trials and tribulations, he also has his joys. He never leaves hope behind him, and there is always prospects of fortune and reward before him. His task is one that is filled with sunshine and hope.

"It is a business that is not overdone and the field a boundless one open to all who wish to enter it.

"It is to be hoped that thousands will enter it this year, where hundreds tried it last year."

#### THE OLDEST IRON BRIDGE.

THE idea of building iron bridges is first found, according to Ganthey, in Italian writings of the sixteenth century, and French engineers tried to act upon it in the beginning of the seventeenth. Desaguliers planned an iron bridge over the Thames. Garrin commenced in 1719 with the construction of an iron bridge over the river Rhone at Lyons, but the difficulties and the cost of the work discouraged him, and the bridge was finally built of wood. At that time only chain bridges were known, apart from wood and stone structures. Chains were stretched from one bank of a river to the other, and the flooring placed directly upon them. Bridges of that kind originated probably in China. Anastasius Kirchner describes in 1667 a bridge at Kin-tung, China, which was supported by 20 iron chains. The military bridges of the seventeenth and eighteenth centuries were of similar character. It was in England where the first permanent iron bridge was built. It is the cast iron, one span bridge over the Severn, near the famous Coalbrookdale Iron works, in Shropshire. After this pattern many cast iron bridges were manufactured in England during the last two decades of the eighteenth century and shipped even to America. The material for the Severn bridge was cast by the Coalbrookdale Iron works in 1776 to 1779, and in the latter year the bridge was open for traffic. It is still in excellent preservation and is in daily use for a considerable traffic over the river Severn.

WE call the attention of practical miners to the Dixon hand power rock drill. This valuable labor-saving machine is manufactured solely in Canada by The Bertram Engine Works Co., Ltd., Toronto. It is worth a trial.

In replying to Advertisements in this paper, mention *The Canadian Miner*.

#### CORRESPONDENCE.

##### THE RAT PORTAGE REDUCTION WORKS.

Editor of THE CANADIAN MINER:

SIR,—I send to you a reply to a criticism made in the *Ottawa Mining Review* by Mr. B. T. A. Bell, that will explain itself. Mr. Bell undertook to criticise the Dominion Gold Mining and Reduction Company's affairs in general, and Mr. R. H. Ahn in particular. This was, of course, to gratify a long standing grudge.

Yours truly,

ALAN SULLIVAN.

RAT PORTAGE, February 6, 1897.

The Editor of *The Mining Review*,  
Ottawa, Ontario.

DEAR SIR,—As one familiar with the Dominion Gold Mining and Reduction Company, Limited, of London, England, and as one also intimately associated with Mr. R. H. Ahn in business in Rat Portage, I beg to take exception to certain editorial remarks in your last issue, assuming that your publication, like all others, is equally available for the exposition of both sides of a question.

The gist of the exception you take to the report is contained in the following paragraph:—

"What do our constructing mill engineers think of the sum of over \$27,000 being spent to remodel a ten-stamp mill? And what do our Rat Portage friends think of the equity of paying over \$800,000 for the purchase of the reduction works and the few prospects that went with that sale?"

It is due to those whom your criticism may have affected to state that the expenditure of \$27,000 includes the following items:

Rebuilding of the Reduction Works, including the purchase of four batteries or 20 stamps, each battery with its own ore bin; purchase of one Prue vanner, two Krupp vanners, two Colorado Perfection Concentrators, Cornish rolls, sample grinders, all connections, belting, pulleys, shafting, etc., including all costs of construction.

Estimate \$12,000, actual cost \$11,500. Will the average qualified constructing mill engineer do much better?

The balance of the \$27,000 was spent as follows:—

Equipment of two mines, viz: Black Jack and Gold Hill. Full equipment, including pumps, two hoists in place, one not set up, two boilers, cables and running gear, buckets, ore cars, rails, etc., and also the remodelling of the ten-stamp mill on the Gold Hill property.

I think the impartial observer of the above expenditure will consider it was economical for the value received, and this, coupled with the fact that competent engineers have invariably expressed themselves favorably impressed by the Reduction Works and their standard of workmanship, will rob the quoted paragraph of some of its apparent point.

As to the purchase of the Reduction Works, the two mines and the other properties amounting to 2,500 acres that went with them, this was a matter arranged in London to the satisfaction of the company and altogether outside of the Canadian office; the latter had no say whatever in the matter. The directors made their own arrangements to suit themselves, without consulting the *Mining Review* in the matter, and those who are directly interested in the outcome are those who will make the necessary criticisms.

I regret that the remarks in the *Mining*

*Review* should be so prompted by personal animosity, as they evidently are, judging from their initial paragraphs. Personalities answer themselves and in the end the old chicken comes home to roost. No end is gained by such a course; mud is an awkward thing to throw and it does not carry far, and if the *Mining Review* will devote itself to the interests of the country in accordance with its self-stated purpose and avoid petty and misleading vituperation, it will make a step forward towards the position it so ardently longs to attain.

I am, Sir,

Your obedient servant,  
ALAN SULLIVAN.

RAT PORTAGE, ONT., February 5, 1897.

## JUMPING CLAIMS IN WESTERN ONTARIO.

AN INJUSTICE WHICH REQUIRES PROVINCIAL AND LOCAL ACTION.

AN esteemed and very careful correspondent, a leading civil and mining engineer at Rat Portage, sends us the following:—

Editor of THE CANADIAN MINER:

"There is a matter of public interest in mining circles which needs ventilating. It has so far been the legally recognized custom for the prospector finding a vein, which he considers worth taking up, to blaze a tree or post, set it up on the property, and mark or cut thereon his name and the date of discovery. He then applies to the department for the property, giving the above details and, as far he can, a sketch showing its exact locality. Owing to the very incomplete maps published of this district there is often considerable latitude necessary in the latter. The difficulty of getting surveyors, owing to the present demand for their services and, in some cases, the remoteness of the vein and bad weather make access to it difficult, and the result is the claim is "jumped," the original prospector's name and marks destroyed, and a survey made by the first jumper who happens to come that way with a surveyor in his wake

"The first discoverer is out of pocket and loses valuable time, and the jumper profits by both. We know of other cases, of which we have proofs, where a prospector has been shadowed by jumpers, his blazes and marks destroyed, and his property surveyed within a few days. Another case is one in which a man living and working upon his claim, which was an island in Clearwater Bay, was actually surrounded by survey lines while at his labor, and his property was applied for over his head. This practice has become the curse of the country, and a silent determination to get satisfaction in some way or another has taken possession of our prospectors. Looking at it from a disinterested point of view it does not seem right that the man who does the pioneer work with axe and toboggan should be cheated and robbed of his just dues.

"The trouble seems to be that those who are doing the underhand work are acting as agents. The names of their principals are not, as a rule, obtainable, but from present indications we should infer that they consist of some who, in one way or another, can pull wires and use influences unapproachable by the great majority, and yet, on the other hand, pose in public as the miner's friends and the benefactors of the district. If legitimate mining is to be carried on in the district, and the transfer of properties to be quickly and satisfactorily arranged, this must be put a stop to at once, or the probabilities are that the miners and prospectors themselves will apply the remedy which seems to be unobtainable from 'the powers that be.'

Public sentiment is strong on the matter; for there are plenty of men who are more than willing to make their livelihood by taking advantage of what they consider flaws in titles or vulnerable points in the business of others. If the district was situated some 200 miles to the south-west these gentlemen would find a change of air desirable, but, as it is, the disease exists, and the sooner it is choked out of existence the better for the mining interests of Western Ontario."

## GOLD IN THE EAST.

Editor of THE CANADIAN MINER.

SIR,—While so much has and is being written and said about "Roseland," "Trail" and Lake of the Woods gold fields, would it not be well for the public at large to know something about the rich gold and silver deposits that we have within a day's journey from Toronto. I refer to the counties of Frontenac and Addington, where gold, silver, mica and graphite are to be found, and to find any of these one has not to sink 25 or 30 feet to get at the ores, as is the case in some places I could mention.

Now let any one take the map of Ontario and find the village of Denbigh, Addington County. He will find upon examining the country, not more than one quarter of a mile from the village, a broad and well defined vein of gold-bearing rock, fully 60 feet wide at one end where it enters the waters of Cedar Lake; back from the lake in a north-west direction this vein can be traced for half a mile. Samples of this rock from "the grass roots," and assayed by J. F. Latimer, of this city, gave something over \$3 gold to the ton. A splendid water power is within half a mile of this vein.

Now go south-west four miles and you will come to the Marquette mine, a very strong, well-defined vein of quartz, fully nine feet wide. A small pit had been sunk on this vein, and some of the ore, (one ton) was taken to Madoc for treatment, and, I am informed, gave \$20 to the ton. Shortly afterwards a sad accident occurred, whereby one of the owners lost his life and the mine was shut down and has been idle for 25 years. This is a very likely property and well worth attention.

Then go due east five miles and you will come to the Holmes Location, where a very strong, steady vein can be seen, which can be traced for a quarter mile. This vein also gives gold \$2.75 to the ton, from samples taken from the very surface. No work of any kind has been done on this property.

Go south six miles and you will come to a mountain of blue-black hornblende rock, which gives \$12 to the ton in gold and silver. Thousands of tons of this ore is in sight, with a good road within 100 yards of the ore.

Go south twelve miles and you will be at the Village of Plevna, which is in the centre of a splendid mineral section where one of the best water powers in Ontario is situated. I can count at least ten good strong leads of gold bearing quartz within four miles of the village, all giving good assays in gold and that from the grass roots, as no work has been done except a little stripping, just enough to expose the veins.

Special mention should be made of a location two miles from the village, called the "Stalkee mine," which was purchased a few weeks ago for a Toronto party, by Mr. A. E. Walker, of 86 York street, Toronto. This is a very strong, steady vein of quartz, fully five feet wide and can be traced for a long distance. Samples of surface ore

from off this vein gave \$8.96 gold and silver. This is partly a free milling ore. A good water power is within half a mile of this location; a good waggon road runs within a few yards of the mine. This property is the most likely one that I have seen in that section, except the Weber gold mine five miles south of Plevna Village, where one can see a very promising property where work is being carried on in earnest, six stamps being at work. A force of miners have been working since last summer, and have made a splendid showing, they having about 100 tons of concentrates under cover ready for treatment and about 150 tons of ore out ready for the stamps. This ore is partly free milling. All the free gold is collected and run into a mould and sent to the bank. Assays of this ore made by Mr. Latimer, seven in all, gave from \$6.60 to \$200 to the ton. I could point you to several other good locations in this district, but I think I have said enough to satisfy anyone that good results can be obtained in the section referred to, without going thousands of miles away for no better ore than we have at our very doors. But there is the old saying about fields looking green at a distance.

Yours truly,

ED. F. COXWELL,

No. 3 Laurin Ave., City. Prospector.

## ONTARIO NEWS.

### Lake of the Woods.

The Standard Mining & Development Company held its first general meeting in the Hilliard House, Rat Portage, Ont., on the 9th inst.

The Lakeside Gold Mining Company Rat Portage, Ont., held its first meeting on the 3rd inst. Just as soon as organization is completed and officers elected these companies will open up for business immediately, though the question of where all the office room is to come from is one difficult to answer.

The main shaft at the Mikado gold mine is down 90 feet, and drift work has been started. The vein is nine feet wide. Average assays give \$80. Hoisting machinery worked by a 30 horse power engine is in use. The Mikado people intend to get machinery out for a 20 stamp mill before the ice breaks up.

The Atlas Gold Mining and Development Co. of Rat Portage, comprises Hon. Hugh John Macdonald, H. M. Drummond, Major Bowen and A. C. McMicken of Winnipeg, Major R. McLennan of Alexandria, Ont., and Louis Hilliard of Rat Portage, for the purpose of mining, milling and reduction. The capital stock is \$90,000, in shares of \$50 each.

A miners' convention, or more properly, an assembly of men interested in mines, mining and development companies, will be called to meet here, says the *Rat Portage News*, at an early date for the purpose of examining into the mining affairs of the Lake of the Woods and adjacent auriferous regions. Such an assembly is of essential importance at this time, when greatly varied, and, in many cases, contrary opinions are being expressed touching the working of mining laws as affecting the different interests in Algoma.

The Sweden Mining Company met in the Carmichael Block, Rat Portage Ont. The following officers and Board of Directors were elected:—President, E. L. Drewry; Vice-President, A. Buehler; Secretary-Treasurer, C. E. Carbert; Manager, J. A. Herman. The directors are:—Messrs. E. L. Drewry, Thos. Black, A. Buehler, J. T. Robarts, John Russell, Jas. Brownlee and Thos. H. Fahey. The Sw

den mine is looking remarkably well. The shaft is down seventy feet, and drifting is going on at the sixty-foot level. The Colcleugh Gold Mining Company has held its first annual meeting, and the Preston Gold Mining Company its first general meeting. The officers and directors of the Preston Company are:—President, W. Blackwood; Vice-President, Dr. Simpson; Secretary-Treasurer, A. T. R. Blackwood; General Manager, W. A. Preston. The Board of Directors consists of Messrs. Blackwood, A. T. R. Blackwood, W. A. Preston, Dr. Simpson and Mrs. Nelson.

The work of improving navigation between Rat Portage and the Shoal Lake group of mines is receiving much attention just now, and Mr. R. H. Ahn is doing good work in bringing the matter to the attention of the Government. It is not generally known that even a very small steamer cannot pass into Shoal Lake through the rapids. During the greater portion of the past season this difficulty was not so much felt on account of the exceedingly high water which prevailed throughout the Lake of the Woods, and steamers were continually passing to and fro in connection with the development of the mines. As the water, however, assumed its normal level this became more and more impossible, and Capt. Kendall came pretty nearly losing his fine new steamer in attempting to make the passage. Now, then, a movement is afoot seeking to have a system of locks established at Ash Rapids to overcome a difficulty which threatens to seriously interfere with the successful operation of a system of mines that has done much to build up the reputation of our ores. One important feature in connection with this matter is that very influential outside capital, English and American, represented by Col. Engledue and Sir Roderick Cameron, is interested in Shoal Lake, and as this is just the capital it is necessary to interest in order to secure the development of the country, everything possible should be done to encourage its increasing tendency to run in our direction. We understand that Mr. Allan Sullivan, C. E. and M. E., who is now associated with Messrs. Ahn and Hay in their mining business in Rat Portage, has prepared plans for a proposed lock at Ash Rapids, which have been laid before the department at Toronto by Mr. Ahn, and it is thought the Government may be induced to do something in the matter.

\*.\*

#### Hastings County.

The Jackson mine, near Ormsby, is causing some stir, and is reported to have assayed well in silver and nickel. The samples received are very interesting specimens of almost solid metal of pyritic formation.

Mr. T. Netteville has left us a sample of the asbestos rock from the mine on his property, near Maynooth. The asbestos occurs in small needles about three inches long in a crystalline rock, and not as usually found in connection with the serpentine rock. The vein is about eight feet wide and a quarter mile long. In addition to the asbestos there is a fair showing of metals, and an assay would be worth the cost.—*Bancroft Times.*

\*.\*

#### Thunder Bay.

Mr. F. J. SCHOOF, Collector of Customs at Gunflint Lake, Canadian terminus of the Port Arthur, Duluth and Western Railway, recently returned from Minneapolis, where he says the people are wild over the reported finds of minerals in Minnesota, just across the border from Gunflint Lake.

It is said that immense bodies of iron ore, great nickel beds and a number of gold veins were last fall discovered there, and that Minneapolis people are pledging their homes in

order to get money to invest in the region. This, it is thought, will mean a great boom to Port Arthur district, as the only available means of access to the new country is over the Port Arthur, Duluth and Western Railway, and thousands of people are expected to flock into Northern Minnesota as soon as the snow melts.

\*.\*

#### Rainy River District.

MESSRS. ÆMILIUS JARVIS & Co. have decided to issue a monthly report of the condition of the various mining districts of the Dominion. The first of these reports, that for January, has just been issued dealing with the Rainy River district. The report opens with a general reference to the condition of the industry in the Rainy River district. It says:—"The new year has been marked by a strong outburst of activity not only in the surveying of new locations and development of those already titled, but also in the purchase of locations and mines by the public and the formation of local companies to develop and mine already acquired properties. Whilst there are inquiries from London and Paris, New York and Berlin are keen buyers, and it appears probable that as usual the Americans will get in first. Their readiness to accept a cash basis and their promptness in deciding upon a deal give them the call over the slower and more cautious British investor, and they recognize that there is no field in the States that will compare with the new district for quickness of returns, economy of production, regularity of output and low initial expense, whilst after the experience of the last year the safety of life and property and the solidity of law and government found under the British flag is becoming a factor of daily greater importance to the monied men in the United States. Owing to the late fall, mild winter and light snowfall, prospecting continued up to the middle of January, proving the auriferous belt to a point 30 miles further north and demonstrating the existence of numerous promising reefs in the Huronian formation throughout the hitherto supposed barren hinterland of the Thunder Bay district."

Detailed accounts of a number of the principal mining properties are then given, and it is a pleasing fact to note that the deeper the development the better the prospect. In concluding the report says:—"In reviewing the past month it can be confidently stated that it has given to those interested in the future of New Ontario unqualified satisfaction. Everything without exception has tended to show that their confidence has been well-grounded. Those who were at first most sceptical as to the permanency in depth and richness of the deposits have candidly yielded in the face of the unquestionable evidence offered them, and the best judges are now of the opinion that the popularity of the district amongst legitimate investors is assured. There are, of course, as in all gold fields, a large number of worthless and comparatively worthless properties, but at the same time there appears to be an unusually large percentage of pay reefs, and a purchase carefully and judiciously made may be safely calculated upon as likely to yield under proper and economical management profits that will compare very favorably with any shown elsewhere. The very high assays frequently heralded may be considered as evidence that here, as elsewhere, the reefs are characterized by very rich chimneys and stringers, and must be taken for what they really are and should not prejudice investors against the district. There will probably

even be a few very rich mines, but the legitimate claims of the region are based upon the free milling character of the veins, the quantity and regular quality of the stone, and the exceptional economy with which the gold can be produced. These are the factors which assure continuous and continued dividends, and which appeal to the discriminating investor."

\*.\*

#### Wabigoon.

Mr. Williams of Winnipeg has organized a company and has a gang of men at work sinking a shaft on a vein just west of the Wabigoon River, and only a half a mile south of the C.P.R. track.

The first to invest in mining properties in this locality was the Grimsby Gold Mining Company of Grimsby, Ont. This company purchased last October from James Mackenzie and James R. Walker three gold mining locations on Pritchard Lake, near the west arm of the Big Wabigoon, and five miles from Dryden. Mr. James A. Livingston, the manager of the company, arrived here this week, and is now busy buying supplies and getting a gang together to proceed with development work.

One thing that is badly needed here is a first-class steam tug. It would be a paying investment, and would be a boon to the miners and others here. It could run from here to Lake Minnehaha, a distance of 50 miles. Dryden is situated on the C.P.R., 82 miles east of Rat Portage, where the Wabigoon River empties out of the Big Wabigoon Lake. There is 28 feet of fall in the river right in the town site, which will probably be used in the near future to supply power for various industries. Hon. John Dryden, Minister of Agriculture, has established a pioneer farm here, which is properly and well managed by the agent, Mr. Annis.

A special to the *World* from Dryden says: There is a boom on at Dryden, both in town lots and mining property. Mr. Annis, the Government agent here, reports that large quantities of land have been applied for for mining purposes. Building lots are being sold and buildings are being put up all the time. There are already two stores, a post office, an express office, a blacksmith shop and a first-class boarding house in the place. A large number of people will arrive as soon as spring opens to engage in farming, while they are already coming in to engage in mining. It is estimated that by mid-summer Dryden will have a population of between four and five hundred.

The biggest mining deal put through in this section yet was the sale by James R. Walker of his quarter interest in 23 properties to a syndicate of gentlemen in Winnipeg, consisting of Hon. Messrs. Clifford Sifton, Watson, McMillan and McDonald. The price was \$10,000. The other three-quarter interest is held by James Mackenzie and John McLeod. These properties lie south and east of the Grimsby Gold Mining properties and are said to be rich in gold. Prospector and miner John McLeod is now sinking a shaft on one of the properties, and very encouraging assays have been made. The syndicate are endeavoring to get water power privileges from the Government at the falls here for the purpose of running a big stamp mill. Other parties are also seeking power privileges for the purpose of running saw mills, flour mills, etc.

\*.\*

#### Mining at Loring.

A CORRESPONDENT of the *Parry Sound North Star* writes from Loring:—

Mr. E. H. Kelcey, postmaster and merchant, along with Mr. Jos. Columbus and others, have



opened up and developed some good white mica properties here. Some of the crystals weigh over thirty pounds, and would cut eight inches by eight inches. They have found a number of quartz veins carrying magnetic iron, pyrites and pyrotis, which may, no doubt, carry some gold or silver. They have also discovered a large vein carrying plumbago or graphite, which they intend to open up and develop this coming spring.

Thos. Cain has found some very promising quartz veins, also some good shows of mica in the neighborhood

Mr. E. Forsyth, merchant of this place, has, I understand, found a good vein of quartz and spar carrying mica on his farm.

Mr. Bowman has found a felspar vein carrying iron pyrites, near Comanda, and has done a little work on the property.

J. Kyle, proprietor of the Lakeview Hotel, and J. Guthrie, jobber, have also found a good show of white mica which they purpose opening up as soon as the weather permits.

Joseph Driver of Golden Valley, has found some good specimens of quartz carrying pyrotis, which he intends to have tested; he has also found a very good show of graphite.

Mr. W. Dobbs, sr., has a large deposit of mineral paint on his farm near Golden Valley. He has had his house painted with the material and finds it answers his purpose very well.

Mr. James Lynott, prospector from Parry Sound, spent a few days here looking over some properties. I have no doubt that we will have a large number of prospectors and capitalists in here during the coming summer.

Mr. L. Day of Catarauqui, Mr. Chisholm of Pakenham, and others, intend starting to develop and work some mica properties on Lake Me-me-sag-a-meong which they have purchased from the Government. It is their intention to commence work on a large scale this spring.

## BRITISH COLUMBIA.

### Round About Rosland.

The east drift of May Flower mine is looking particularly fine. Shipments will soon be resumed.

Red Mountain, Monte Cristo, Colonna, Eastern Mining Syndicate, Caledonia Consolidated, Iron Mask, May Flower, Consolidated War Eagle and Crown Point were all active during the past week.

The Le Roi mine is likely to pass into the hands of a London, England, syndicate. An offer of \$4,500,000 is now under consideration by Senator-elect Turner, Col. W. W. D. Turner, and Col. I. N. Peyton, whom the shareholders have empowered to sell the mine on terms satisfactory to their judgment.

The statement is made on the authority of Supt. James Clark that the Iron Mask vein has been cut at the 210 foot level and that the grade of ore is about \$45.00 per ton, the clean ore body being about 15 inches wide. Iron Mask is now shipping two carloads per day. Its daily output will soon be three carloads.

The Rosland *Miner* says: the Evening Star Gold Mining Company held a meeting in Spokane on Friday, and elected officers as follows for the ensuing year: D. M. Drumheller, president; J. N. Glover, vice-president; H. B. Nichols, treasurer; W. C. Blackmer, secretary. H. B. Nichols will have the management of the property and will remain in Rosland permanently.

The Golden Queen Mining Company, which is just coming into prominence, will develop, says the Rosland *Mining Review*, the Edna, Golden Queen and Carrie Fraction, which are

situated in the ultra-fashionable part of the Red Mountain. The property comprises 40 acres in all, adjoining the St. Elmo, Coxe, Mountain View, Giant, etc., and has three ledges, the 30-foot vein of the Giant running through the property, as does the Gertrude vein. The Coxe vein has also been traced through the property.

As is well known, the Kootenay Water Supply Company and the Kootenay Hydraulic Mining Company both have extensive power works at Waneta and on the Pend d'Oreille. Both concerns are backed by New York capital, and it is learned that an amalgamation is proposed with a view to utilizing in Rosland and other camps the 10,000 horse-power they control. In fact, it is understood that the scheme is not merely projected, but actually on foot. A large electric plant has been ordered, and the power is to be transmitted from Waneta to Rosland, fifteen miles distant, by means of wires. The idea is to furnish energy for mining and other operations at Rosland, and the company may also supply the Trail and Rosland mines with water.

\* \*

### Slocan.

The Enterprise group of mines on Ten Mile creek in the Slocan, B.C., have been bonded to D. M. Hyman and others of Colorado for \$300,000. The first payment of \$50,000 has been paid, \$100,000 is to be paid on May 1st, and the balance, \$150,000, to be paid on July 1st.

\* \*

### Kootenay Output.

SHIPMENTS VALUED AT \$760,706 FOR THE MONTH OF JANUARY.

NELSON, B.C., Feb. 3rd.—The exports of mineral from Kootenay for January, as declared at the Nelson custom house, were:—Ore, 3,402 tons, value \$258,779; matte, 1,141 tons, value \$416,727; total value, \$675,506. Eight hundred and fifty-two tons are reported as being shipped via Nakusp and Revelstoke. They are entered in the custom house at the latter place, which is still an out port of New Westminster. These 852 tons are worth at least \$85,200, bringing the total for the month up to \$760,706, making the exports for the two months, December and January, considerably over \$1,000,000.

\* \*

### The Placers of Cariboo.

With the opening of the season, the road will be well travelled by prospectors from Ashcroft to Lillooet, Barkerville, Quesnelle, Quesnelle Forks, Soda Creek and other sections, says the British Columbia *Mining Journal*. All sections will receive more attention this year than ever before. The receipts of the Government office at Barkerville for the Cariboo district alone were over \$42,000 last year. In its palmyest days \$41,000 was reached. For many years \$17,000 was the highest annual receipts, in 1894, \$23,000; in 1895, \$35,000, and last year, as above stated, \$42,000. Next year will see the receipts largely augmented. This all goes to show that mining is being successfully carried on, and yet but very few mines have been as yet opened up. It will take a couple of years yet to put some of the biggest properties on a paying basis which will justify any statement of their worth. All that we know now of the Cariboo mine is that it is valuable. Two years from now we believe development will show that instead of being worth, as is now estimated from the sale of stock, the little that changes hands being sold for about \$8, or a total of \$800,000, it will be worth many millions. This is not theory, nor is it being too sanguine, but simply the result of a knowledge of the vast amount of pay gravel in sight and the facilities for working the gravel and saving

the gold. The output will double for at least three or four years to come, and this season it paid over \$70,000 over and above actual working expenses and only worked at full capacity for a few weeks. The Cariboo Gold Fields Company have a property the value of which is unquestioned. If brought in shape for successful working it is only a question of some millions or many millions. The two examples of the big mines of the country are only quoted to show that there are almost unlimited possibilities before the investors in the other gold bearing sections of Cariboo.

\* \*

### Pannings.

Rouelle & Hallack, late of Seattle, Washington, under the style of Robson Milling Co., will shortly establish a sawmill near Robson, B.C.

The statement is made that Revelstoke is again to have a smelter. The story is that English capital has purchased the assets of the old smelter company, and is to use part of the old plant.

## MARITIME PROVINCES.

From the *Industrial Advocate*, Halifax.

A correspondent draws our attention to the possibilities of mineral wealth in the iron ores and deposits at Robertson's Cove, Richmond County, C. B. The seams are said to crop out at the surface in several places. A man named Catherine of St. Peter's, C. B. is said to be getting out a number of tons of a grade of ore which is reported as of very fair quality.

Our correspondent at Bonne Bay, Nfld., writes us that the company which has been boring for oil at Parson's Pond, Cow Head, in the Strait of Belle Isle, have struck a flow of oil at a depth of 1,300 feet, and that every indication points to the quantity and quality as being highly satisfactory.

At St. Paul's Bay, twenty miles from Parson's Pond, petroleum has also just been struck, and in this connection it is interesting to remember that as far back as 30 years ago, this district was in the hands of a Halifax company which spent some \$15,000 in the work of prospecting and boring. The men interested at the time were the late John P. Mott, Wm. P. West, Wm. Harrington, deceased, and several other well known citizens, who are still living.

A discovery of gold is reported from Ecum Secum, Guysboro Co., close to the old workings. Further details will no doubt be forthcoming in a few days. This district is a regular puzzle to mining men, abundance of rich drift has been found there for many years; but only one lead has ever paid working expenses, and it has not been a very large producer.

A number of Halifax men, including W. E. Bremner, Joseph Manuel, George Maling, George Taylor, John Bremner, and John H. Anderson, the veteran gold miner of Musquodoboit Harbor, have started in to open up a property at Grand Lake, west of Porter's Lake, Halifax County, which has been taken up within the past two months. There are about 60 acres in the claim, and so far 18 leads have been cut, all of which are mineralized. The company will likely erect a mill on the property in the spring, and there is every indication that the gentlemen comprising the new company have struck a rather good thing.

ONE of the most gratifying points in connection with the coal trade of the past year, is the remarkable increase in the shipments to the United States. Time was, and that not so long ago, when politicians, pure and simple, and coal mine managers who were somewhat of political partisans, declared that it was and would re-

main an impossible thing for coal to be shipped advantageously from Nova Scotia to the United States. We were gravely told that Nova Scotia could not compete in price, nor could Nova Scotia coal approach American coal in quality. It has been demonstrated during the past year that we can compete as to price, and that, as regards quality, there is little apprehension. Indeed, there is this gratifying fact to record, that those who have so extensively used the coal, are so satisfied that they are likely to remain customers. In 1895 the shipments to the United States reached 73,000 tons, a large quantity compared with shipments of previous years. In 1896, the shipments not only doubled, but reached 162,000 tons—this from the Dominion Coal Company alone. This is about a sixth of the total sales of the company. In years previous to 1895 shipments to the United States cut no important figure. That now cannot be said. Had it not been for the large shipments to the United States the hard times said to have been experienced in certain parts of the Province would have been much harder than they were. Indications, at present, are that the coal trade for this year will be fairly active. Of course it is too soon to speak with definiteness of the probabilities for sales in the home market. It is understood that during the months of January, February and March some 20,000 tons monthly will be shipped by the Dominion Coal Company to the United States, to be followed by perhaps, say, 40,000 tons in April. We hope that not only will this quantity be reached, but exceeded, before the regular business of the year usually begins.—*Stellarton Journal*

#### UNITED STATES NOTES.

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

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

The Anaconda company owns over 100 localities at Butte, Mont., and has expended over \$80,000,000 since 1881. An average of 2,500 men are employed. The output of copper for 1896 is estimated at 130,000,000 pounds.

Nearly all of the militia at Leadville, kept there for months to preserve the peace, have been sent home. The strike is nominally still in existence but amounts to little, as the mine owners can get all the labor they want. The legislative committee is on the ground investigating the strike.

State Mine Inspector Shoemaker, of Montana, recommends that the Legislature pass a law providing that all mines worked below a certain depth must have two means of exit. He also believes that the powers of the mine inspector should be so extended that he could order any needed improvement made at the expense of the mine owner or operator.

Another mining lawsuit is in sight at Cripple Creek, which will test the tunnel law. It will be between the Chicago and Cripple Creek tunnel and lodes located along its course. The tunnel was located in 1891, and has been run under Globe hill about 1,500 feet. At the time of its location there were few claims located along its course. Since, all the ground has been located, and much of it patented. This suit will decide what "continuous" work on a tunnel means, and what constitutes an abandonment, and probably all tunnel rights under our laws.

The geological survey of the mines of

Butte, says the *Butte Miner*, is not yet complete and a number of men are still working at the great chart of the Butte copper belt of this district. One of the most startling theories which came to light during the progress of the work in this district was the amount of copper washed away in the water flowing from the different mines. A letter received yesterday from Washington, written by one the United States geological survey party recently in Butte, contains the following startling statement: "It is still an open question with us as to whether the amount of copper washed away in the water from the mines of Butte district is not equal in value to the total output of all the mines of the district if it could be saved."

In the U.S. Senate lately Senator Perkins, of California, introduced a concurrent resolution which sets forth that the mining interests have not a clearly defined representation in the Government, and for the collection of statistics and other information that will be of value to mining and related industries better plans are necessary. To accomplish this a plan is set forth in this form: *Resolved*, That a commission be and is hereby formed, consisting of the Commissioner of the General Land Office, the Commissioner of Labor and the Director of the Geological Surveys, whose duties shall be to determine the best method of ascertaining all the facts of general importance relating to mines and mining within the United States, whether by the Mining Bureau, the Secretary of Mines and Mining, the Commissioner of Mines or a commission, and to report to the Secretary of the Interior for his examination and approval a bill providing means for securing all the necessary information concerning mining and its related industries within the United States.

The communication was addressed to a well known mining man says the *Butte Miner*, who furnished the geological survey party with a good deal of information and assistance in the work here. Speaking of the subject the mining man said recently: "It is popularly supposed that only the water from the Anaconda and St. Lawrence mines is of value for precipitation purposes, but that is a mistake. Of course on account of the fire in the St. Lawrence mine the water coming through that mine is more strongly impregnated than from others. Ledford made over, \$100,000 on his lease from the Anaconda company by a lucky discovery, as the water was several times richer on account of the heated condition of some parts of the mine. In all the big copper mines of Butte and elsewhere water from any depth in the mines is rich in copper and can generally be precipitated with profit. Wherever there is oxidation there must be heat, and the water flowing through the lower levels of the mines become impregnated in proportion to the heat. There is no fire in the Parrot mine, but the water is leased and a precipitation plant is in operation which produces a good deal of copper in the course of a year. At the Celusas of the Boston and Montana a plant is in operation to save the copper from the water flowing through the mines. Other mines in the district have precipitation plants in operation. In Arizona and other copper districts precipitation is used to save the copper carried away by the water. Old iron is used by all the mines in this work and the process is very cheap. Simply a number of vats and troughs are used filled with old iron. The water is turned in and runs over this heap. It is the object to have as much surface as possible, so the troughs are made in long sections.

Even in this way much of the copper is lost, but usually enough is saved to make it profitable. The precipitants runs from 15 to 16 per cent. pure copper and the expense is very small. I look for some method to be discovered that will save most of the copper lost in this way. It would mean millions to Butte annually, as it would probably have the effect of doubling the output of the mines."

\*.\*

#### The Deepest Mine.

At the greatest depth ever attained by miners in the history of the world, the miners in the vertical Red Jacket shaft of the Calumet & Hecla, copper mine in Michigan have recently stopped sinking at a depth of 4,900 feet, as this is the required depth necessary for this company to reach the limit of its underground territory. Bored wells have been carried down to a greater depth, but the Red Jacket shaft is the largest and best constructed mining shaft in the world. Its inside dimensions are 14x22½ feet, divided into six compartments and timbered throughout with pine. The new shaft rock house will be built of iron and will be made fireproof throughout, the only part of the work necessary to put the deep shaft in commission, as the hoisting machinery, which consists of two pair of triple expansion engines of 3,000 horse-power per pair, and will hoist a load of ten ton sixty feet per second, was planned and put in place while the sinking of the shaft was going on.—*Exchange*.

#### NEW MINING COMPANIES.

The Crow's Nest Coal Company, Montreal, is being incorporated with a capital stock of \$1,500,000.

The Winnipeg Mining and Development Company, Winnipeg Man., is being incorporated with a capital stock of \$100,000.

Camp McKinney is one of the mining regions of the Pacific province that has lately come into great prominence amongst experienced mining men, but notwithstanding the newness of the camp so far as quartz mining is concerned, it is one of the dividend payers of the country. It is 60 miles west of Rossland. The ore of the camp is free milling. A new mining company has been organized under the Imperial Act of 1862—the Minnehaha Gold Mining Co. of B. C., Ltd., to operate a new and promising property on which development has been made. Treasury stock is a little less than one-third of the capitalization—\$1,000,000. Prof. Montgomery of Trinity College University, Toronto, is president, aided by several enterprising men as directors.

Letters patent have been issued by the Ontario Government incorporating the following mining companies:

The Toronto and Western Mines Development Company, capital \$99,000, in \$1 shares. The incorporators are Frederick Wyld, John Flett, Alexander A. Allan and James Carruthers, merchants; and James Kirkpatrick Kerr, barrister, all of Toronto.

The Golden Goblin Mining Company of Ontario, capital \$500,000, in \$1 shares. The incorporators are: Allan Cameron Thompson, broker; Frederick Reesor James, capitalist; Robert Alexander Dickson and George Leith Lennox, barristers, and James Falconer Mitchell, mining engineer, all of Toronto.

The Gold Hills Exploration and Development Company of Toronto, capital \$2,000,000, in \$1 shares. The incorporators are: James David Edgar, Q.C., Oronhyatekha and Frederick William Strange, doctors of medicine; John



Foy and William James Douglas, managers, and George McMurrich, insurance agent, all of Toronto; John George Bowes, ironfounder of Hamilton, and James Benjamin McArthur of Rossland.

The Hawk Bay Gold Mining Company, capital \$150,000, in \$1 shares. The incorporators are: John Henry Tilden, manufacturer; Henry Norman Kittson, Henry Charles Beckett and Francis Carmichael Bruce, merchants, and Sidney Charlton Mewburn, barrister, all of Hamilton; Harold Andrew Wiley and George Thomas Marks, merchants; and Franklin Samuel Wiley, broker, all of Port Arthur; and Hugh C. McLean of Toronto, publisher.

The Leap Year Consolidated Gold Mining Company of London, capital \$1,000,000, in \$1 shares. The incorporators are: James Drysdale Balfour, superintendent General Hospital; Frederick James Hammond and Alexander Gillean, insurance agents; George Rountree, grocer; Cassius Wilkinson Belton, physician; John Alexander Croden, commercial traveller; George Harrison Belton, lumber merchant; Arthur Wellesley Mayell, manufacturer; Adam Thornton McMaster, wholesale dry-goods merchant; Thomas Beattie, Edward Daniel Croden and Herbert Carfrae Screaton, bookkeepers; Archibald Screaton, merchant; Duncan Campbell Ross, barrister; James Clarence Belton, broker, and Herbert Carroll McBride, architect, and Charles Albert Barnes, Public school inspector, all of London; John Donald Meekison, merchant; William Dawson, tailor; and William Hamilton Stepler, druggist, all of Strathroy; Charles McGregor of Byron, gentleman; Alexander Ross McFarlane of Hamilton, wholesale tea merchant; and George Jacob Schlieff and Joseph Yarnell Brown of Rossland.

### LOW PETROLEUM MARKET.

THE petroleum situation is not a particularly hopeful one from producers' standpoint, says the *Paint, Oil and Drug Review*. With Pennsylvania crude oil down to 85 cents, and the Ohio and Indiana product quoted at 56 and 51 cents, the encouragement held out to oil men to continue or renew operations is very meagre. Oil at present prices, when there is so much expense involved in its production, loses whatever connection it ever had with bonanza profits, and make the petroleum fields decidedly less enticing to men of means.

Perhaps a retrospective glance at the price-movement may bring out more prominently some of the brighter shades in the gloomy picture. When oil was selling at 15 cents a barrel, 56 and 51 cents seemed a long way in the distance. At that time, it will be remembered, there were producers who pledged themselves that if oil ever rose to 40 cents a barrel, they would contract all they expected to produce, and proceed to furnish it with all possible haste. Opinions change, and the same operators are downcast and dejected over 56 cent oil in the North Lima district.

The history of the oil trade teaches that conditions, adverse or favorable, are very likely to be temporary. It will also be remembered that crude oil prices advanced to a high level two years ago, when stocks were low and production light, so stimulating production that the industry has been humming pretty much ever since. Oil fields have been worked over, and wells have been sunk in territory that long before was abandoned as worthless. In many instances such efforts have been rewarded, and wildcaters have the Chipmunk field to show for their pluck and industry. The sensational gushers of the past few weeks reported from Indiana are attracting much attention, and even at 55 cents a barrel these

wells will yield large incomes to those who control them. As a rule, however, the modern gusher has a meteoric career—is "a gold mine" while it lasts, but its lasting qualities are very uncertain.

The activity in oil drilling recently has not been confined to the Pennsylvania, Ohio and Indiana fields, but has extended over the whole country. In California, Kansas and Indian Territory, Texas, Tennessee and Kentucky the oil producing business is gaining in importance. However much these territories promise, the condition of the oil market is such that until the visible supply reaches a lower point, or the market for oil is more extended, the wealth and affluence that oil men are wont to entertain will be simply "castles in the air" to the average producer. Meanwhile a few lucky anglers after gushers may pile up treasure for a brief season, while the hard-working, steady-going producer will week after week give value received in the way of labor and means for such benefits as he may secure.

### Drilling Notes.

Wm. McRae struck a good well Monday of last week for Sanson & Simmons on the McNaughton farm. It is good for five barrels a day up to date.

Fred. Tichbourne struck a splendid well on the Kerr property in the North-west last week. It started off at a fifteen barrel gait, and supplies enough gas to run a pumping rig. It is one of the best wells in the North-west.

Holmes Bros. struck a good well last week, which is said to be pumping in the neighborhood of five barrels a day.

Drilling is brisk, most of the rigs being busy, and a large number of wells are being added to the list every week, good, bad and fair.—*Petroleum Advertiser*.

### BRITISH CAPITAL WILL COME.

"I SHALL not be surprised," said C.D. Porter yesterday, "to see a majority of the big mines of Trail Creek and Slocan pass out of the hands of their present owners, and into the possession of British capital. English and Canadian investors are awakening to the fact that within their own borders they have mining districts the equal of any on earth. There is not another country on the globe, with like age and development, that can show as many dividend paying mines as Kootenay."—*Spokane Review*.

### CHARCOAL THREAD.

WHAT is the most expensive product in the world? It is charcoal thread, which is employed for incandescent lamps. It is, for the most part, manufactured at Paris and comes from the hands of an artist who desires his name to remain unknown in order to better protect the secret of manufacture. It is by the gram (15½ grains) that this product is sold at wholesale. In reducing its price to the basis of pounds, it is easily found that the filaments for lamps of 20 candles are worth \$8,000 per pound, and that for lamps of 30 candles they are worth \$12,000 per pound. The former have a diameter of twenty thousandths of one millimeter (1 millimeter = 0.0394 inch) and the latter four and one-half thousandths of a millimeter. The filaments for lamps of three candles are so light that it would require nearly 1,500,000 to weigh a pound. As the length of each of them is ten centimeters (3.937 inches) their total length would be 187 miles.

The Canadian Miner has the largest circulation of any mining paper in Canada, and it reaches miners and investors with unequalled directness and completeness.

### DISCOVERERS OF GREAT MINES.

"IN the gold mining districts of this country there is a superstition," says the *Messenger* of Challis, Idaho, "that the discoverers of great mines always come to violent ends. It is said the belief is founded on the fact that the finders of forty of the richest mines in the world have died in this way, twelve being shot, three engulfed in their mines and the rest unaccountably disappearing. George H. Fryer of the Fryer Hill mine committed suicide. Two years before his death he was worth a million, yet the authorities buried him. The discoverer of the Standard mine in California was killed by an avalanche; Colonel Storey was killed by the Indians; William Fairweather of the Alder Gulch mines, came to his death through riotous living. The owner of the Homestake mine turned highwayman. He was shot dead. John Horner of the Horner mine, finding himself penniless, shot himself. 'Doughnut Bill,' 'Old Eureka' and 'Ninemile Clarks,' were killed in bar room rows, and Montana Plummer, who found one of the richest mines in the world, died on the gallows. 'Dutch William,' the discoverer of gold in Cariboo, British Columbia, after whom the famous William Creek was named, died a pauper, and Marshall, the discoverer of gold in California, was a pensioner on the state some time before his death."

### TO BOOM PORT ANGELES.

A BRADDOCK, PA., special to the *New York World* says:—"Mill workers at the Carnegie plants here and at Homestead, Duquesne and Pittsburg, and employes at the Westinghouse works on Turtle Creek and Wilmerding are forming a joint stock company to build a \$2,000,000 iron and steel plant at Port Angeles, on Puget Sound. The company has been incorporated under the Washington laws. The officers are George Linon, of Braddock, president; Thomas Murphy of Pittsburg, vice-president; M. E. George, Braddock, secretary; W. J. Weissal, Allegheny City, treasurer. Twelve hundred prominent mill workers of this section have in the last fortnight subscribed about \$1,000,000 worth of stock. The plant will employ 2000 men and will cover 30 acres of ground. The work on the mill buildings will be started in April and subscription books will remain open until that time. The company has been given great inducements to locate at Port Angeles. Eight acres of land for a manufacturing site, and 200 acres for a townsite, with 500 feet of wharf on Puget Sound, and railroad rights of way for proper development will compose the bonds. The iron and steel plant will include a blast furnace of 300 tons, 30 open-hearth furnaces, bloom and billet mill, rolling, bar and wire and nail and sheet and tin plate mills, foundry, machine shops and blacksmith and boiler shops. The company holds six hundred acres of iron ore land of 69 per cent. pure iron, and 1000 acres of coal land that make coke equal to Pennsylvania Connellsville coke.

There is, says the *World*, a big boom in Toronto, in mining stocks, as the following communication, received by a Toronto street broker, will show:

"Sir,—I saw your advertisement in the *World*, Jan. 12th, about the gold mine in Cracker Jack, and that there is 20,000 shares to be sold at 10 cents a share. I will take two and a half shares at 10 cents each. Please send me full information about it, and how it would work, and if my share of the mine would be sent to me. Send me your prospectus. Answer this and I will forward 25 cents for two shares and a half."

# Germania GOLD MINING CO.

(Limited Liability)  
OF ROSSLAND, B.C.

BUSINESS OFFICE, BERLIN, ONT.  
Capital, \$1,000,000. Shares of \$1 each.

PRESIDENT, WM. ROOS (of Randall & Roos), BERLIN,  
VICE-PRESIDENT, H. G. LACKNER, M.D., Ex-Mayor Berlin.  
With a strong Board of Directors.

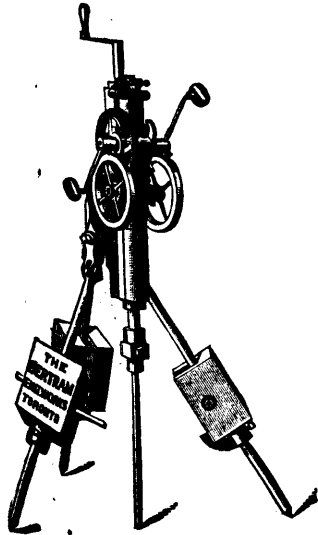
The Company have been developing one of their properties day and night for some months, with good results.  
Property situated in Green Mountain, West Kootenay.  
Developing Stock now selling at 10 Cts. per share.  
The cheapest and best purchase on the market.  
Write for a Prospectus which contains LILJEGREN'S report of property and other information.  
JOHN R. EDEN, Secretary-Treasurer.

BERLIN, January 30th, 1897.

EDGAR, MALONE & BIRD,  
Hos. J. D. Edgar, Q. C. E. T. Malone.  
J. F. Edgar. J. Edward Bird.  
Barristers, Solicitors, Notaries, Etc.  
RAT PORTAGE, ONT.

Toronto Office: TORONTO GEN. TRUSTS BUILDING.

WM. BENNISON & CO.  
MINING ::  
BROKERS,  
Rossland, - - B. C.  
FOR GOLD MINES.



THE DIXON  
Hand Power Rock Drill  
For Mines and Quarries.  
One man with the Dixon Drill will do more than two men drilling by hand.  
Sole Manufacturers for Canada:  
The BERTRAM  
ENGINE WORKS CO.  
(Limited)  
TORONTO.

SMITH CURTIS,  
CONVEYANCER, Etc.  
MONEY TO LOAN ON IMPROVED REAL ESTATE. Low Rates. Easy Terms.  
Office up-stairs in 2nd block east of Grand Union Hotel, ROSSLAND, B.C.

Cowper-Coles & Johnson,  
MINING BROKERS,  
AGENTS  
AND INSURANCE.  
Agents Cassel Gold Extracting Co., Quebec Fire Assurance, Birkbeck Investment Security & Savings Co., of Toronto.  
Columbia Ave., - Rossland.

WALPOLE ROLAND,  
Civil and Mining Engineer.  
REPORTS, SURVEYS, ESTIMATES,  
AND DEVELOPMENT.  
REFERENCES:  
Engineering and Mining Journal, New York. The Canadian Mining Review, Ottawa, and The Mining Journal, London, England.  
CONSULTING ENGINEER.  
OFFICE: LA SEINE RIVER, ONT.  
Cable Address, "ROLAND," A1 Code.

J. B. Ferguson & Co. . . .  
ROSSLAND, B.C.  
Next Door to Bank of B.N.A.

# PRINCESS GOLD MINING CO'Y OF ONTARIO (LTD.)

NON-PERSONAL LIABILITY.

Authorized Capital, \$500,000  
of which 300,000 shares are in the Treasury.

DIRECTORS:  
PRESIDENT, E. MACKENZIE, Toronto Railway.  
VICE-PRESIDENT, JOHN FLETT, Wholesale Merchant.  
H. O'BRIEN, H. LOWNDES, MAJOR HARSTON, THOS. SHORTISS all of Toronto.

Situated on the famous SCRAMBLE vein at Rat Portage, Ont. THE BONANZA OF ONTARIO.  
71 BAY STREET, TORONTO.

Write for Prospectus.  
Mr. Z. J. S. Williams, M.E., who has been employed and sent out to Canada by the great mining firm of John Taylor & Sons, 6 Queen St. Place, London, England, says: "The ore in these veins is perfectly free milling. I have seldom had the pleasure of examining a property that shows such promise of lasting success as this does."  
Please mention that you saw this advt. in The Canadian Miner.

ROBBINS & LONG,  
ASSAYERS AND CHEMISTS.  
PRICES FOR ASSAYING.  
Copper only \$2.00 Zinc \$3.00  
Gold and Copper 2.50 Sulphur 3.00  
Gold only 1.50 Aluminum 3.00  
Silver only 1.00 Antimony 5.00  
Gold and Silver 2.00 Arsenic 5.00  
Lead, fire assay 1.00 Nickel 10.00  
Lead, wet assay 2.50 Cobalt 10.00  
Silica 2.50 Coal Analysis 10.00  
Iron 2.50  
Ten or more samples from same party in any one month, 30 per cent. off list prices. Five or more brought in at one time same discount. Special attention given to samples by mail.  
OFFICE WITH THE REDDIN-JACKSON CO.  
ROSSLAND, B.C.

WM. E. DEVEREUX,  
Civil Engineer, Provincial Land Surveyor and Notary Public.  
Office over Weeks, Kennedy & Co.  
COLUMBIA AVE., - ROSSLAND, B.C.

MOYNAHAN & CAMPBELL,  
MINING OPERATORS  
Superintending Mines a Specialty.  
ROSSLAND, B.C.  
J. J. Moynahan. W. A. Campbell.

ARCHER MARTIN,  
Barrister at Law,  
43 Government Street,  
VICTORIA, B.C.

R. W. DeMOREST,  
Ontario Land Surveyor.  
Civil and Mining Engineer,  
DRAUGHTSMAN, VALUATOR, ETC.  
SUDBURY, ONT.  
Surveys, Plans, Descriptions of Properties, etc., promptly executed. Timber limits and mining claims located. Mining properties examined and reported on and fully developed.  
Room 6.7 & 8 Johnson-Washburn Block.

J. K. Clark & Co.  
MINES AND  
MINING  
Correspondence Solicited.  
Columbia Avenue, - Rossland.

KERR, GLADMAN & KERR.  
BARRISTERS, Solicitors, etc., 134 1/2 Hunter Street, Peterborough. First door west of Post Office, Peterborough. MONEY TO LOAN  
Wm. Kerr, Q.C. F. D. Kerr, B.A.  
F. W. Gladman.

Stratton & Hall  
BARRISTERS, Solicitors, etc., Peterborough Ont. OFFICE - Corner of Hunter and Water streets, over new Bank of Commerce, Peterborough.  
W. A. Stratton, LL.B. R. R. Hall

DENNISTOUN, PECK & STEVENSON.  
BARRISTERS, Solicitors and Notaries. OFFICE - 417 Water Street, Peterborough. MONEY TO LOAN.  
E. A. Peck, R. M. Dennistoun, A. Stevenson.

A. P. POUSSETTE, Q.C.  
BARRISTER, Solicitor, Etc., 379 Water Street, Peterborough.

O'CONNELL & O'CONNOR.  
BARRISTERS, Solicitors, Etc. OFFICES at 134 1/2 Hunter Street, one door west of Post Office, Peterborough. MONEY TO LOAN.  
L. V. O'Connor, B.A. Daniel O'Connell, B.A.

E. S. TOPPING,  
Trail and Deer Park Lots.  
Mines for Sale. Choice Stocks Handled. Examines and Reports on Mines.  
TRAIL, B.C.

LEDOUX & COMPANY,  
9 Cliff St., New York.  
Engineers, Metallurgists and Assayers.  
Public Ore Sampling and Storage Works.

All the principal buyers of furnace materials in the world purchase and pay cash against our certificates of assay, through New York banks. By special permission of the Secretary of the Treasury of the United States, cars of ore or Copper matte passing through in bond can be opened and sampled at our works. Consignments received and sold to highest bidder. Send for circular giving full particulars.  
Mines examined and sampled. Assays and Analyses of all kinds.

MICHIGAN MINING SCHOOL.  
A State School of Mining Engineering, located in the heart of the Lake Superior mining region, giving practical instruction in Drawing, Blue-printing, Mechanics, Mechanism, Properties of Materials, Graphical Statics, Mechanical and Electrical Engineering, Shop-practice, Analytical and Technical Chemistry, Assaying, Ore Dressing, Metallurgy, Plane, Railroad and Mine Surveying, Hydraulics, Mining, Mineralogy, Petrography, General, Economic and Field Geology, etc. Has Summer Schools in Surveying, Shop-practice, and Field Geology. Laboratories, Shops and Stamp Mill well equipped. Tuition free. For Catalogues apply to the Director, HOUGHTON, MICH.

# THE QUEEN'S HOTEL

W. G. CAMERON,  
PROPRIETOR.

Rat Portage, Ontario.

Modern Conveniences.

Good Accommodation.

RATES FROM \$1.00 to \$1.50 PER DAY.

Reduced Rates to Tourist Parties by the Week

Bus meets all Trains.  
Boats and Livery in Connection

Full and reliable information furnished of Mining Properties, and Guides  
procured when necessary.

FOR FURTHER PARTICULARS ADDRESS—

W. G. CAMERON, Rat Portage.

## Hilliard House

LOUIS HILLIARD, PROPRIETOR.

This Hotel is known from the Atlantic to the Pacific as Rat Portage's most progressive house; one that has kept fully abreast of the times.

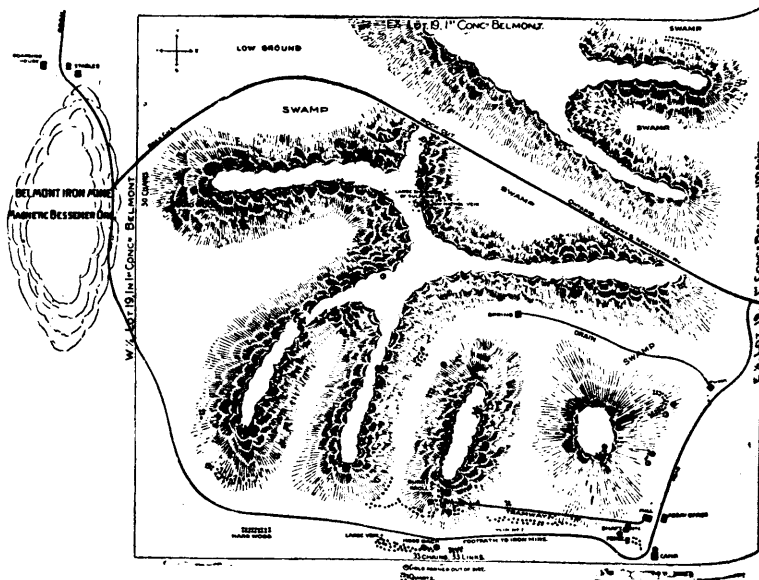
**The Largest and best Equipped  
Hotel of the Lake of the  
Woods.**

Largest stock of Foreign and Domestic Wines, Ales, Lagers, Mineral Waters. Best Brands of Whiskies, and the largest stock of Foreign and Domestic Cigars West of Toronto.

—MAIN STREET—

Rat Portage, Ont.

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



In 1893 Mr. H. P. Brummel, the Mining Engineer of the Geological Survey of the Dominion of Canada, made a thorough inspection of the mine and pronounced it entirely free from impurities, and a good paying ore; also a number of good sized veins which have all the appearance of true fissure veins.

**T. D. LEDYARD** Dealer in MINES and MINERAL LANDS.  
57 COLBORNE STREET, - TORONTO, CANADA.

SPECIALTIES:—High grade Bessemer Iron Ores. LOW GRADE GOLD ORES.

Canada is rich in economic minerals. 110 miles east of Toronto is a large deposit of iron ore suited to make the highest grades of tool steel, being rich in iron and very free from impurities. Into this Belmont mine a Railway has been built which connects with The Canadian Pacific Railway and The Central Ontario Railway, giving easy access to Lake Ontario, the ore can be shipped to any point on the great lakes. Adjoining the Belmont iron mine is the property of the Ledyard Gold Mines Co., (Ltd.), in which are several veins of quartz containing free gold and auriferous pyrites, on which considerable development work has been done. These mines can be reached by all rail route, in about five hours from Toronto.

**THE SMITH-HEWITT CO.**  
Mines, Stocks and Real Estate

COMPANIES ORGANIZED. CORRESPONDENCE SOLICITED.  
SCOTT BLOCK, COLUMBIA AVE. AND LINCOLN ST., ROSSLAND.

A. A. NEWBERY. CHAS. G. GRIFFITH,  
Mining Engineer.  
**NEWBERY & GRIFFITH,**  
DEALERS IN MINES,

JAMIESON BLOCK, SPOKANE, WASH.

**WALTER C. ARCHER,**  
Mining Agent and Stock Broker.  
Quotations on all Stocks by Letter or

LALONDE & RODIER BLOCK,  
ROSSLAND.

In replying to Advertisements in this paper, mention The Canadian Miner.

# INGERSOLL ROCK DRILL CO.

## Rock Drills

For TUNNELS,  
MINES AND QUARRIES.

STRAIGHT LINE, DUPLEX AND COMPOUND

# AIR COMPRESSORS

Stone Channelling Machines, Coal Mining Machines, and Complete Plants  
of Mining Tunnelling and Quarrying Machinery.

64 St. James Street, - - - Montreal.

## MINING AND MILL MACHINERY.

Steam Engines, Rock Crushers, Boilers, Derricks, Steam Pumps, Water Wheels,  
Brass and Iron Castings of every description.

ALEX. FLECK, - - VULCAN IRON WORKS, - - OTTAWA.

MONTREAL TESTING LABORATORY.

**Milton L. Hersey, B.A.Sc.**

Formerly Demonstrator in Chemistry, Faculty of Applied Science, McGill University,  
and Chemist of the Canadian Pacific Railway.

ANALYTICAL AND CONSULTING CHEMIST,  
ASSAYER AND MINERALOGIST.

Analyses and Assays of Lubricants and Burning Oils, Paints, Varnishes, Foods,  
Liquors, Waters, Cements, Fuels, Iron, Steel, Ores, Minerals, Bullion, Etc.  
Examination of Processes—Superintendence—Counsel—  
Co-operation with Engineers in all Lines.

Office and Laboratory: Canada Chambers, 16 St. Sacramento Street, MONTREAL.

(Few Doors East of Board of Trade Building.)

**The Reddin-Jackson Co.,**

LIMITED LIABILITY.

The Pioneer Brokers of Rossland.

THE EXCELSIOR  
**VALVE CUP WORKS**

EAST END, PETROLIA,

We have now on hand a large quantity of  
—the best—

**SPANISH TANNED CUPS**

for sale. Special sizes made to fit any working  
barrel on the shortest notice. Usual discount  
to the trade. Factory and office at the Curling  
Rink, East End.

**H. COOLEY, Manager.**

**W. M. NEWTON,**  
**Customs Broker,**

Mines and Mining Stock Broker, Fire  
Insurance, Notary Public.  
Assisted by Edwd Baillie, Expert Accountant.  
52 Columbia Ave., ROSSLAND, B.C.

**BRITISH COLUMBIA  
EXPLORATION CO., Ltd.**

John Thomas, Pres. Jas. B. Owens, Secy.  
Ernest G. Locke, Con. Eng.

Bids Offered on Mines and Prospects.  
Contractors for Treasury Stock.

OFFICES—1 AND 2 HART BLOCK, ROSSLAND.

**PEARD, CRANSTOUN & CO.,**  
**Mining Brokers,**

Mining Properties, Developed and Undeveloped,  
Bought and Sold. Contractors for  
the sale of Treasury Stock.

515 Hastings St., - VANCOUVER, B.C.

**HENRY CROFT**

Assoc. M. Inst. C. E., M. I. M. E.  
**Real Estate, Mining and Financial  
Broker.**

ROSSLAND, B.C.

**THE R. J. BEALEY CO.,**

(Limited Liability.)

Mines, Real Estate, Insurance,  
... Notary Public ...

In replying to Advertisements in this paper, mention The Canadian Miner Telephone 4. 50 Columbia Ave, Rossland, B.C.



HIGHEST AWARD TO

# Vinolia Soap

SOLD :: :: ::

ALL OVER :

THE WORLD

FOR

# Sensitive Skins



# Vinolia

GUARANTEED HARMLESS

40 CENTS PER BOX.



A Plastic Emollient Cream

.....FOR.....

**Minor Skin Ailments.**

# Vinolia

Shaving

Stick . .

**CAUSES  
NO  
BLOTCHES**



Does not leave the Skin  
Leathery and Shrunken.



Price, - 15 Cts.

**SOLD ALL OVER THE WORLD.**



# THE MINNEHAHA GOLD MINING AND MILLING CO.

OF BRITISH COLUMBIA, LTD.

OFFICES : Camp McKinney, B.C., and Toronto, Ont. MINE : Camp McKinney, B.C.

Capital Stock 1,000,000 Shares, par value \$1. Stock Fully Paid and Non-Assessable.  
Treasury Stock, 250,000 Shares, with an additional reserve of 50,000 shares.

OFFICERS :—President—Professor Henry Montgomery, M.A., B.Sc., Professor of Geology, Trinity University, late State Geologist Utah; Vice-President—Capt. J. F. Ramsay, Wholesale Merchant, Toronto; Second Vice-President—Alexander K. Roy, Esq., Merchant, Toronto; Manager—Major Ainsley Megraw, Camp McKinney, B.C.; Secretary-Treasurer—Hiram Kiteley, Esq., Broker.

DIRECTORS :—Prof. H. Montgomery, Toronto; Capt. J. F. Ramsay, Toronto; Alex. K. Roy, Esq., Toronto; S. G. Detchon, Esq., Wholesale Chemist, Toronto; Walter Wells, Esq., L.D.S., Waterloo; Capt. J. A. Currie, Toronto, Broker; W. R. Barnett, Esq., Paisley, Merchant; A. G. Seaman, Esq., Lumberman, Wiarton; J. L. Ballantyne, Esq., Merchant, Tiverton; G. K. Mills, Esq., B.A., Stratford; Barthelemi Verret (Messrs. Verret, Stewart & Co.), Wholesale Merchant, Quebec, P.Q.

## Prospectus :

The Minnehaha Gold Mining Co., of British Columbia (Limited), is incorporated under the Imperial Act of 1862, with a capital stock of one million shares of par value of one dollar each, fully paid-up and non-assessable. The primary object of the company is to develop the "Minnehaha" mineral claim in Camp McKinney, B.C.

### BRITISH COLUMBIA GOLD MINES.

Only two gold mining camps in the whole of British Columbia can boast of dividend paying gold mines. The one is Rossland in Trail Creek District, with its dividend-paying Le Roi and War Eagle, the other is Camp McKinney, with its equally prolific Cariboo mine.

### CAMP MCKINNEY.

"Where is Camp McKinney?" the reader may ask. It is situated about 60 miles due west of Rossland, and about the same distance north of the international boundary line. It forms one of the mining camps situated in the rich mineral belt that follows north of the line of the international boundary from the Rockies to the Cascades, comprising Fort Steele, Trail Creek, Rossland, Boundary Creek, Grand Forks, Fairview and Semillekmen. In Camp McKinney is located the **Cariboo Mine, which pays dividends** and is **not to be confounded with the scores of other so-called Cariboo Mines** in British Columbia. This Cariboo mine in Camp McKinney is **not a Placer or Hydraulic Property**, but a quartz mine, and the district in which Camp McKinney is located is one of the oldest mining districts in the Province. Below Camp McKinney in the valley of Rock Creek and the Kettle River the placer miners panned their gold in the early sixties, long before Williams Creek and Cameron Town gave their gold in millions in nuggets in Northern Cariboo. At Rock Creek white men can even earn good wages washing gold with the pan and rocker to-day.

The army of shrewd quartz prospectors that followed the placer miners from San Diego northward, seeking to locate the quartz lodes that fed the placer deposits in the river beds, reached Rock Camp late in the eighties. In 1887 the advance guard reached Camp McKinney, where the first claims staked were the Cariboo, the Amelia and the Montreal—the latter now known as the Minnehaha.

### THE CARIBOO MINE.

The Cariboo mine was opened by the Cariboo Mining, Milling and Smelting Company in the

summer of 1894. A 10-stamp mill was erected, and since it started this mill, up until December 1, 1896, stamped out \$243,115.95 in bullion. No stamp mill of its size on the whole Pacific slope can show a better record. It has paid dividends of \$124,964.76 in this time, on a capital stock of \$800,000.

### CHARACTER OF THE ORE.

Most of the ore in Camp McKinney is free milling. The quartz is largely silica, and carries gold values clean throughout, being what is known to the miners as "sugar quartz." There is little or no gold to be seen with the naked eye, and the sulphurets form but a very small percentage of the ore. This is the very best kind of free-milling ore, and yields rapidly to treatment with a stamp mill and amalgamators. The product of the mill can be turned into bullion on the spot. The country rock is what is generally called auriferous shales, or schists, the rock in which gold-bearing true fissure veins occur according to the highest geological authorities. It is in this formation the richest and most permanent free gold mines in the world are found.

### THE MINNEHAHA.

The Minnehaha Claim is the southern extension of the Cariboo and Amelia, which were located along the vein as can be seen by the map. It is **not a mere surface prospect**. It is a full-sized claim, 1,500 by 1,500 feet, containing 52 acres. A Crown grant has been issued to the property, and the title of the Company is clear. Work done on the property consists of a shaft, which is down 43 feet on a quartz ledge, which lies straight in the direction of the Cariboo mine shaft-house, giving every reason for the belief that it is the Cariboo ledge. The ore also is similar in appearance to that found in the Cariboo mine. The shaft was started on this vein of "sugar quartz," which was 18 inches in width at the surface, with clearly defined slate walls. At 43 feet this ledge is 4 feet wide, and, whilst no gold can be seen in the ore with the naked eye, still separate assays from samples across the ledge average from \$25 to \$252 in gold. An assay of the quartz, sampled clean across and mixed, gave \$108. The ore has been tested and assayed at the Toronto School of Practical Science and in Victoria. There are 35 tons of this ore on the dump ready for treatment. Some of the poorest ore containing sulphurets was sent to Vancouver to test with cyanide. A mill test for cyanide treatment gave an average return of \$25. The cost of treatment, \$2 per ton, and over 92 per cent. of gold recovered. It is the intention to treat the quartz by crushing and amalgamation to recover the coarse

free gold, and to treat the tailings with a cyanide plant, which is the plan adopted in South Africa with great success. In South Africa the gold recovery from the tailings by cyanide alone pays for the working expenses of the mines. The assays appended represent, not picked specimens, but what the ore may be reasonable expected to contain from wall to wall. There is plenty of wood on the property, and two streams give a never-failing supply of water, sufficient to run a 105-stamp mill. It is the intention of the company to work the property on the most approved modern methods.

### A RARE CHANCE.

It is very seldom that an investor has the opportunity of securing stock at a discount in a mining property adjoining and on the extension of a dividend-paying gold mine. Dividend-paying gold mines are very scarce, and the Minnehaha, in Camp McKinney holds the same relative position with regard to the Cariboo as the Black Bear and Centre Star mines in Rossland do to the War Eagle and Le Roi. No more promising claim than the Minnehaha can be found in British Columbia.

We would call attention to the unique advantages.

The claim is located on a dividend-paying and proved camp.

The ore is free milling and easy and cheap of treatment.

There is a shaft down on the claim to a depth sufficient to prove the permanency of the quartz ledge.

The vein is between three and four feet wide and assays exceptionally high.

The gold is not found in bunches in the quartz, it is decimated all through it, a sign of the permanency in gold value. Mines rich in gold can be seen with the naked eye often pinch out. It is the quartz where the gold is not visible that yields the best results.

The property can be worked economically and the ore yields to cyanide treatment, the cheapest and best way of recovering the ore. The mine is now in such a position that almost every foot of development work done will more than pay for itself in bullion; all that is needed is the plant and labor to get it started.

There are 35 tons of pay ore on the dump. There will be no necessity to announce a rich strike, as the ore carrying rich value has been found, and no property in British Columbia has a better or more promising showing.

Equipped with machinery, there is no reason why the Minnehaha should not be stamping out dividends inside of a year.

CAMPBELL, CURRIE & CO., - - - 52 YONGE STREET

# THE CANADIAN MINER.

Vol. 1.

FEBRUARY 13, 1897.

No. 5.

## THE CANADIAN MINER'S AUTHORIZED STOCK BULLETIN.

NAME OF STOCK.		NAME OF STOCK.	
Alberta	\$0 15	Josie Mac	\$0 12½
Bondholder	0 17	Jumbo	0 65
Bannockburn	0 20	Kootenay London	0 12½
British Canadian Gold Fields	0 20	Kelly Creek	0 15
Big Three	0 12½	Lily May	0 20
Colorado Gold Mining and Development Company	0 35	Lake Harold	0 15
Columbia and Ontario	0 10	Le Roi	10 00
Caledonia Consolidated	0 10	Lloyd Gold Mining and Development Company	0 06
Colonna	0 26	May Flower	0 17½
Cracker Jack	0 10	Monte Christo	0 18
Commander	0 30	Morning Star	0 12½
Crown Point	0 57	Monarch	0 10
Cariboo M. M. C.	0 58	Minnehaha	0 10
California	0 15	Mabel	0 15
Delhi	0 15	Novelty	0 10
Deer Park	0 23	Norway	0 10
Eldon	0 10	Ottawa and Ivanhoe Silver Mines	0 12½
Elise	0 15	Orphan Boy	0 14
Evening Star	0 13½	O. K.	0 30
Empress	0 23	Old Ironsides	0 15
Ethel Group	0 10	Phoenix	0 15
Eastern Mining Syndicate	0 16	Pug	0 17
Eureka Consolidated	0 10	Princess	0 25
Exchequer	0 10	Poor Man	0 10
Enterprise	0 20	Queen Victoria	0 10
Germania Gold Mining Company	0 10	R. E. Lee and Maid of Erin	0 11
Great Western	0 17	Rossland Red Mountain	0 25
Gertrude	0 15	Red Eagle	0 10
Gold Hills Exploration and Development Company	0 10	Santa Marie (Slocan)	0 05
Golden Queen	0 10	St. Elmo	0 12
Good Hope	0 10	St. Paul	0 12½
Homestake	0 17	Spokane-Kalso Mining and Milling Company	0 10
Hansard Gold and Copper Mining Company	0 10	Silverine	0 12½
Heather Bell	0 20	Silver Bell	0 10
High Ore	0 07	Victoria Triumph	0 10
Iron Mask	0 60	Virginia	0 19
Ibex	0 06	West Le Roi and Josie	0 27
Iron Colt	0 20	War Eagle (Con)	1 25
Iron Queen	0 04	Washington	0 25
Josie	0 60	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