

Rossland Weekly Miner.

Published Every Thursday by the ROSSLAND MINER PRINTING & PUBLISHING CO. LIMITED LIABILITY.

JOHN B. KERR, Managing Editor.

LONDON OFFICE.

J. WALKER, 24 Coleman Street, London.

TORONTO OFFICE:

L. P. RESS AGENCY, L.D., 35 Yonge St.

SPOKANE OFFICE:

ALEXANDER & Co., Advertising Agents, Room 2 First National Bank Building.

EASTERN AGENT:

EMANUEL KATZ, 230 Temple Court, New York

THE SUBSCRIPTION PRICE OF THE WEEKLY ROSSLAND MINER for all points in the United States and Canada is two dollars a year or one dollar and twenty-five cents for six months.

THE QUEEN'S BIRTHDAY.

The Queen's Birthday, May 24, is rapidly approaching, and it is time that preparations were under way if there is to be a celebration of it held by the citizens of this city.

THE SANDON FIRE.

The town of Sandon was early yesterday morning completely swept away by one of those sudden conflagrations which are all too common in the West.

ent open season to take greater precaution than ever against fires. This city has very fair protection now. It has a good fire department, an excellent chief, a well arranged fire alarm and paraphernalia sufficient to fight any ordinary fire.

THE CAPE NOME DISTRICT.

The Mining and Engineering Journal says: It looks very much as if some of the schemes for mining the shore deposits of the Nome District in Alaska are being prepared without counting the cost, and with very little knowledge of the true conditions.

ROSSLAND GETTING ITS SECOND WIND.

The mining situation is improving, and the promise made by the mine managers that there would be 2,500 men at work in the camp by the fall is likely to be easily verified.

when this has been thoroughly developed and is made to attain the maximum of its production it will make Rossland a mining city—not a camp—of which the whole of Canada will be proud.

SWELL THE RELIEF FUND.

A good start was made Saturday in the matter of the Sandon relief fund, and doubtless during the next few days it will be largely augmented.

ORIENTAL IMMIGRATION.

Whatever may be the result of the elections in the Province—whichever party may be successful—there is no doubt that to insure a continuance of the confidence of the people the government will have to deal promptly and forcibly with the question of Oriental immigration.

SHOULD VISIT THE KOOTENAYS.

The Canadian Institute of Mining Engineers has sent an invitation to the American Institute of Mining Engineers to hold the autumn meeting in Canada in conjunction with their society.

picton, by boat to Silver Islet, to Rat portage and the gold mines of the Mine Center district.

These annual meetings of mining engineers are fruitful of much good, as each member gathers something new from the experience of the others in attendance, and the result is beneficial to the whole.

HON. JOSEPH MARTIN'S CAMPAIGN.

The vigorous campaign which Premier Martin and his clever lieutenant, Hon. Smith Curtis are now prosecuting in the interior of the province is chiefly remarkable for the excellent attendance at their meetings, the amusement which the auditors obtain from the addresses delivered by the members of the government.

in the opposition ranks; but he did not seriously attempt to deal even with his own platform except to defend his position on the question of Oriental immigration—a question on which the great majority of those who are opposing his return to power feel as strongly as he does himself.

A LABOR OPINION.

The action of the Miners' union in endorsing the candidature of Hon. Smith Curtis will not, we think, be regarded as an absolute claim made by organized labor on the votes of the workmen of this constituency.

ALBI AND ALBO.

The prisoners, Albi and Albo, the former charged with attempting to murder Herbert McArthur, and the latter with being accessory to the same, were brought before Magistrate Southey yesterday afternoon.

Warlike Australia.

Western Australia is recognizing its responsibilities in a very earnest fashion. The latest proposals include the creation of permanent artillery forces and the reorganization of the Colonies' defences.

with the political enemy and destroyed what we considered important, and what he himself considered important, if his words mean anything. I must therefore judge him by his past actions.

Too much emphasis cannot be laid on the fact that, according to this letter, Mr. Ralph Smith has no confidence whatsoever in Premier Martin, and we think that his position that he is not "prepared to allow the enunciation of certain theories" to affect him in Mr. Martin's favor should be carefully weighed, not only by every member of organized labor, but by every voter in the province.

When we consider that Mr. Smith Curtis is pledged absolutely not to the Martin platform but to Martin himself, and that he must support the premier without question in whatsoever he may do, should he be elected as head of the government, we begin to see that it is not Mr. Curtis for whom we are asked to vote, but a man who knows little and cares less, for the interests of the province, and whose only desire is to serve private ends.

A DREADFUL DEATH.

Alick Carson Goes to His Long Home Unwatched and Unknown.

Morris Riddle, walking along the railway yard of the Red Mountain line yesterday morning, noticed that the cabin of Alex Carson, a well known prospector and a friend of his, which is situated near the water tank, back of Third avenue, was rickety on the inside, and, therefore, it was presumed that his friend, Alick, would be inside.

Case Remanded for Eight Days—Probable Enlargement Till After Assize Week.

The prisoners, Albi and Albo, the former charged with attempting to murder Herbert McArthur, and the latter with being accessory to the same, were brought before Magistrate Southey yesterday afternoon.

Vancouver Court Sitings.

A telegram has been sent to Registrar Schofield from the District Registrar at Victoria, saying that the Vancouver fall court sittings set for the 21st inst., have been postponed to the 28th inst., and asking Judge Schofield to notify the profession of the change of date.

ACCUSED

Preliminary Hearing. Soccor.

EXAMINATION

Case Adjourned for Witnesses are He. Circumstantial But gram on the Stan

Toney Soccor, formerly Police Magistrate, fore morning, with set fire to his shop J. L. G. Abbott and Mr. C. E. Gille hearing lasted all were on the stand. The first witness mer, who, sworn, officer and that d 30 April he was on the prisoner about was at the northeast and Spokane street First avenue. The of his door just as the corner about 50 He walked to the ed space between it east. He had his on, and was in his eed and apparently between the two b not being by his s see if he had any thrown in. The back to his store. Raymer passed on store, and stopped. cormorman came o body had tried his o went on a few s steadfastly, saw the door of his store s then crossed the str and went back First off to nearly the of the sidewalk a the darkness. W the prisoner com apparently throw s buildings as before. ed by his store an two buildings but in the morning O Raymer were in t International hotel that alley to the re Macdonald contin turned north toward the alley which r The alley comes about 100 feet from of the accused's b came out of the a down the street, b sight. He turned s along the south sid wards towards S. When within 20 fe thought he saw sm the one east of it and looked. Smelli forward, and seeing building that was c cupied by the on Soccoromann' of a patch about 5 on the next buildi About 36 inches of been charred. Thi patch. Raymer soe litch whistle, from then jumped down tngs. He picked a per because it sm perter and a wait came along and he per is that kind w around oranges o of boots saturated of Officer Macdonal him in charge. R Ingram and came thief went into t about 30 to 40 m fire. In all this tin visible. Raymer o other end of the store. When th building Raymer p the space between is just 1 1/2 inch s 3 feet 3 inches between the buildi building of the ac with the sidewalk, and rear door in t there is a side doo building opening t the side buildings from the ground accumulation of l the end of the p height of about person would h climbing over th could any person sage from the s The joists under p building run par a space below the tween the joists. ed down between out some excelsi space between t visible, hardly t wall. It was m patch. The hole just below the stelling strongly reached from t possible to pack found from the clared that the just lit as he g just begun to e is 27 feet 6 in door from the further to the the rubbish pil First avenue, a allow of an esc

ACCUSED OF ARSON Preliminary Hearing of the Case of Soc McCormann. EXAMINATION OF H. J. RAYMER

Case Adjourned for This Afternoon—Many Witnesses are Heard—The Evidence is Circumstantial But is Not Direct—Chief Ingram on the Stand.

to the back. When Raymer went into the store in which is sold fruit, groceries and tobacco, he saw two measures (produced) standing by a can of oil. These had been used for coal oil, as they smelt of it.

GRAND LODGE OPENS The Knights of Pythias Transit Considerable Business. 29 LODGES WERE REPRESENTED

Reports of the Officers Show That the Order is in a Flourishing Condition—Session Will Close Today—A Banquet to be Given Delegates Tonight.

THE STOCK REVIEW Sales for the Week Aggregated Only 58,300 Shares. MARKET CONTINUES SLUGGISH

that this is the cause for the demand. Iron Mink is weak, and on the board 30 is asked and 35 bid for it.

DEATH to His Long Home and Unknown.

along the mountain line yesterday the cabin of a mountain prospector and is situated near the third avenue, was last seen by a neighbor.

Re-examined by Mr. Abbott, the chief stated that the only possible means of exit from the narrow passage where (1) into first avenue at one end; (2) over the pile of rubbish at the other end into a space behind; (3) into the prisoner's store.

THE SANDON FIRE The Subscription List to Date—Telegram From the Mayor.

FROM THE RECORDS Bills of Sale.

COMPANIES INCORPORATED MINES DEVELOPED AND REPORTED UPON

J. L. WHITNEY & Co Mining Properties Bought and Sold.

AND ALBO. Eight Days—Probable After Assize Week.

Re-examined by Mr. Abbott, the chief stated that the only possible means of exit from the narrow passage where (1) into first avenue at one end; (2) over the pile of rubbish at the other end into a space behind; (3) into the prisoner's store.

Re-examined by Mr. Abbott, the chief stated that the only possible means of exit from the narrow passage where (1) into first avenue at one end; (2) over the pile of rubbish at the other end into a space behind; (3) into the prisoner's store.

THE SANDON FIRE The Subscription List to Date—Telegram From the Mayor.

COMPANIES INCORPORATED MINES DEVELOPED AND REPORTED UPON

J. R. CRANSTON & CO. Financial, Real Estate and General Mining Stock Brokers

TELEGRAPHIC AND CABLE ADDRESS "BORNITE," ROSSLAND, B. C.

AND ALBO. Eight Days—Probable After Assize Week.

Re-examined by Mr. Abbott, the chief stated that the only possible means of exit from the narrow passage where (1) into first avenue at one end; (2) over the pile of rubbish at the other end into a space behind; (3) into the prisoner's store.

Re-examined by Mr. Abbott, the chief stated that the only possible means of exit from the narrow passage where (1) into first avenue at one end; (2) over the pile of rubbish at the other end into a space behind; (3) into the prisoner's store.

THE SANDON FIRE The Subscription List to Date—Telegram From the Mayor.

COMPANIES INCORPORATED MINES DEVELOPED AND REPORTED UPON

J. R. CRANSTON & CO. Financial, Real Estate and General Mining Stock Brokers

TELEGRAPHIC AND CABLE ADDRESS "BORNITE," ROSSLAND, B. C.

AND ALBO. Eight Days—Probable After Assize Week.

Re-examined by Mr. Abbott, the chief stated that the only possible means of exit from the narrow passage where (1) into first avenue at one end; (2) over the pile of rubbish at the other end into a space behind; (3) into the prisoner's store.

Re-examined by Mr. Abbott, the chief stated that the only possible means of exit from the narrow passage where (1) into first avenue at one end; (2) over the pile of rubbish at the other end into a space behind; (3) into the prisoner's store.

THE SANDON FIRE The Subscription List to Date—Telegram From the Mayor.

COMPANIES INCORPORATED MINES DEVELOPED AND REPORTED UPON

J. R. CRANSTON & CO. Financial, Real Estate and General Mining Stock Brokers

TELEGRAPHIC AND CABLE ADDRESS "BORNITE," ROSSLAND, B. C.

AND ALBO. Eight Days—Probable After Assize Week.

Re-examined by Mr. Abbott, the chief stated that the only possible means of exit from the narrow passage where (1) into first avenue at one end; (2) over the pile of rubbish at the other end into a space behind; (3) into the prisoner's store.

Re-examined by Mr. Abbott, the chief stated that the only possible means of exit from the narrow passage where (1) into first avenue at one end; (2) over the pile of rubbish at the other end into a space behind; (3) into the prisoner's store.

THE SANDON FIRE The Subscription List to Date—Telegram From the Mayor.

COMPANIES INCORPORATED MINES DEVELOPED AND REPORTED UPON

J. R. CRANSTON & CO. Financial, Real Estate and General Mining Stock Brokers

TELEGRAPHIC AND CABLE ADDRESS "BORNITE," ROSSLAND, B. C.

THE MINING REVIEW

Interesting Developments Upon the Iron Mask.

Two or rather three finds of ore bodies during the past few days lends a brilliancy to the record which the mining review in these columns in the course of its account of the weekly development of the camp does not always possess.

FOUR OZ. GOLD IN ANNIE SHAFT

The Development of the North Le Roi Vein—Record Shipments From the Le Roi—Work Upon the Centre Star—Compressor at the Evening Star.

Two or rather three finds of ore bodies during the past few days lends a brilliancy to the record which the mining review in these columns in the course of its account of the weekly development of the camp does not always possess.

Table with columns for mine name, output, and date.

The output for the past week has capped the promise of the previous two weeks, three having elapsed since the resumption of work.

terry which has been ordered but which is yet to come have been received but there is not sufficient on hand to allow of the installation of the boilers to be proceeded with.

Iron Mask.—The past week should be a noteworthy one in the history of the mine. On the continuation of the winze down from the 450-foot level, where the beginning of crosscuts to the drifts east and west had been started so as to clear the shaft for work when active development of this level was taken in hand, it

Centre Star.—The work below ground upon the Centre Star is progressing and the developments is proceeding as usual. On the surface the foundations for the hoisting engine are completed and the engine itself was begun to be set up yesterday.

Ann.—This mine has up till quite lately been worked by the West Le Roi company from the extension of the levels of the Josie, but it has been decided to sink a shaft upon the ground. For economical reasons a joint shaft has been made on the boundary line between the Le Roi and the Annie, the expense being partly borne by the Le Roi and partly by the West Le Roi company.

Arthur.—In the tunnel, which is in some thing over 70 feet, there has been encountered the main ledge of the property. The ledge carries gold-copper ore. At last advices from the Arthur the crosscutting of the vein was in progress.

War Eagle.—There is nothing new to record about the condition of the development of this mine, except that the management report that the various drifts are being extended, and that contracts are being gradually let from time to time, filling up the headings of the same.

Evening Star.—A station is being cut out in the lower tunnel for the purpose of sinking a shaft. The timber for the gallows frame has been hauled to the mine and will in due course of time be erected.

A TEN-DRILL PLANT

Addition to be Made to the Machinery of the Knob Hill.

UMATILLA IS TO RESUME WORK

A Party Visits the Arthur and the Lodge There Has Been Found—London-Larreau Syndicate is to Resume Work on Its Properties.

The Knob Hill Mining company in the Phoenix camp, have purchased a ten-drill compressor, two 80-horse power boilers and two 50-horse power hoists from the Jencks Machine company.

Professor F. H. Blochberger, during his recent trip across the line, arranged for the reorganization of the Umatilla Gold Mining company. This corporation owns several mine claims on Sophie mountain.

No. 1.—As with the Josie, the No. 1 is at present in a comparatively dormant state, its due development being greatly handicapped by the lack of the necessary power.

Arthur Ledge Located.—A party of gentlemen visited the Arthur on Sunday and report that when they were there the ledge had just been reached.

Messrs. Boyer & Co., who have the contract on the Rossland-Ymir for the deepening of the shaft, writes that the shaft has reached a depth of 34 feet.

Nickel Plate.—The headworks of the Nickel Plate are now practically completed. The water in the mine is gradually lessening and much progress is being made in sinking of the shaft which is now nearing the 600 level.

White Bear.—Work continues along the usual lines. Nothing of importance occurred during the past week.

Little But Searching.—Dr. Von Star's Pineapple Tablets are not big narcotic doses that contain injurious drugs or narcotics—they are the pure vegetable pepsin—the medicinal extract from this luscious fruit, in form as the fruit itself.

THE S. CARSLY C. LIMITED

Notre Dame Street Montreal's Greatest Store April 3d, 1900

DON'T FAIL TO WRITE

For a Copy of The Big Store's NEW SPRING CATALOGUE JUST PUBLISHED

CONTAINING 184 PAGES DESCRIPTIVE MATTER FULLY ILLUSTRATED Sent to Any Address in Canada, POST FREE



The Mail Order trade done by the Big Store throughout the Dominion, especially in the Mining Districts and the Province of British Columbia and Maritime Provinces has wonderfully increased during the past year.

Now Do All Their Shopping by Mail. That a few years ago never thought of such a thing—how fine it pays; how not you. Just send us a trial order, you'll soon learn how simple and economical it is to do your shopping by mail.

SEND A TRIAL ORDER AND YOU'LL BE CONVINCED Also try for one of the Prizes offered in our Catalogue.

THE S. CARSLY C. LIMITED 765 to 1783 Notre Dame Street, 184 to 149 St. James Street Montreal

Oriel Mining and Milling Co., Limited

Own the Good Hope Group, Ymir, B. C.

Fifty thousand treasury shares are now offered to the public at 10 cents. The property is one of exceptional merit, having a clearly defined outcrop of 2000 feet.

Rossland, B. C. Rolt & Grogan

GEORGE PURGOLD

Stocks and Mines. Stocks Bought and Sold on Commission Only Weekly Market Letter Forwarded on Application.

MUNROE & MUNROE

MINES AND MINING 68 Canada Life Bldg, Montreal, Quebec.

TADDY & CO.

ESTABLISHED 160 YEARS London, Eng. "ORBIT" Brand and PREMIER Navy Cut Tobaccos

GERMAN FESTIVITIES.

Coming of Age of the Crown Prince.—The Dreibund and the Press.

Berlin, May 7.—Suitable ceremonies in connection with the celebrating of the coming of age of the Crown Prince of Germany are reported from Cologne, Kiel, Wilhelmshaven and a number of other cities.

Mr. G. F. Burnett, of Montreal a member of the firm of Rossland, Lyman & Burnett, general managers for Canada of the Ocean Accident Guarantee corporation, is in the city on a visit.

Berlin, May 7.—The Reichstag today adopted a resolution forbidding subsidized steamers to convey to German, Belgian and Dutch ports, agricultural products which compete with German agriculture.

Stockholm, May 7.—Both houses of the Riksdag today, by a vote of 212 to 149, agreed upon the expenditure of 4,830,000 kronor for new defenses.

Stockholm, Sweden is Arming.—The Swedish Government has ordered that the arms and munitions of the Riksdag should be stored in the city.

Birmingham, Eng., May 7.—The late Mr. Wm. Crowninshield Edcott, United States secretary of war under Cleveland, was not unknown in Birmingham. He had paid several visits to "Highbury," the residence of his son-in-law, Mr. Joseph Chamberlain, and this evening the Liberal Unionists of West Birmingham and Central Birmingham adopted resolutions of condolence with Mrs. Chamberlain.

Waukees

S.S. Lines

Robt. Irving

Waukees

S.S. Lines

Robt. Irving

Waukees

S.S. Lines

Robt. Irving

Waukees

S.S. Lines

Robt. Irving

Waukees

S.S. Lines

Robt. Irving

May 10, 1900
14,033 39
12,023 95
11,241 11
11,526 89
11,197 57
13,690 72
13,556 60
15,095 74
18,214 44
14,922 30
\$156,946 36
Corrections in the above
total for the year

Ports
Goods, Dutiable
Goods, Total
13,706 49,214 59,980
21,862 36,833 58,755
8,287 52,338 60,725
6,997 47,609 54,606
9,125 44,906 54,121
9,461 44,894 54,355
9,608 48,740 58,348
12,428 51,577 64,005
11,734 54,349 66,083
12,063 62,983 75,046
20,061 75,227 95,288
18,442 59,875 78,317

\$153,934 \$625,695 \$779,629
Surveys given month by
year. There are some
make the official total
All other
721 246,102
3,152 54,385
3,349 267,189
3,413 286,561
2,965 244,563
1,939 471,240
3,997 249,215
2,936 432,841
2,167 382,891
2,106 314,142
11,186 460,412
3,618 429,068
41,579 3,929,549

bullion, \$4,800; total,
hoisting engine and a
20-drill compressor, three
wheelers, one 40-horse power
over hoisting engine, 16
gals, and a safety cage.
Boundary Creek Mining
(mine)—A 20-drill com-
pressor tubular boiler,
waterwheel hoisting en-
gine cars, and 10 machi-
nes.
in Division.
power hoist.
berland.—Hoisting and
Hoisting and pumping
Company—No. 7
pump, two 3 1/4-inch
over.
One drill with mount-
ing 16 1/4x18 air compres-
sor.
Two drills with
mine. Five-drill com-
pressor tubular boiler, boil-
er receiver and four drills.
ney and Fairview.
Stamp mill true vanner
ries.
ated.—A 30-horse power
power hoist, 80-gallon
ills.
drill compressor and sev-
er and hoist.
ing Co.—A seven-drill
power boiler, a Lid-
No. 5 Cameron sinking
ills.
Division.
A ten-drill compressor
ine.—A 80-horse power
20-stamp mill and a
or.
100-horse power boiler, a
ing engine, 50,000 feet of
able.
o.—A 20-horse power ver-
deau Country.
ed.—One Pelton water
at Monogram mine ven-
t Kootenay.
A seven-drill compressor,
oiler and five drills.
A seven-drill compressor,
omotive boilers and five
ing the Coast.
A 10-drill compressor, 80-
er, 6 drills, and 40-horse

PARIS BELLE.
Be Installed as Soon as
Possible.
Since work was start-
ed by Mr. J. M.
okane, representing the
of First avenue and St.
shaft was sunk to a depth
cate a ledge disclosed by
at that point. A shaft was
block 27, of Paris Belle
the street, to a depth of
ledge matter, but surface
its abandonment.
is being sunk at rear of
within 30 feet of the inter-
ledges; one an east and
other having a southwest
end.
As any ever discovered
surface were found in
Burnet's residence, lo-
lot abutting the alley,
is located.

PARIS BELLE.
Be Installed as Soon as
Possible.
Since work was start-
ed by Mr. J. M.
okane, representing the
of First avenue and St.
shaft was sunk to a depth
cate a ledge disclosed by
at that point. A shaft was
block 27, of Paris Belle
the street, to a depth of
ledge matter, but surface
its abandonment.
is being sunk at rear of
within 30 feet of the inter-
ledges; one an east and
other having a southwest
end.
As any ever discovered
surface were found in
Burnet's residence, lo-
lot abutting the alley,
is located.

PARIS BELLE.
Be Installed as Soon as
Possible.
Since work was start-
ed by Mr. J. M.
okane, representing the
of First avenue and St.
shaft was sunk to a depth
cate a ledge disclosed by
at that point. A shaft was
block 27, of Paris Belle
the street, to a depth of
ledge matter, but surface
its abandonment.
is being sunk at rear of
within 30 feet of the inter-
ledges; one an east and
other having a southwest
end.
As any ever discovered
surface were found in
Burnet's residence, lo-
lot abutting the alley,
is located.

PARIS BELLE.
Be Installed as Soon as
Possible.
Since work was start-
ed by Mr. J. M.
okane, representing the
of First avenue and St.
shaft was sunk to a depth
cate a ledge disclosed by
at that point. A shaft was
block 27, of Paris Belle
the street, to a depth of
ledge matter, but surface
its abandonment.
is being sunk at rear of
within 30 feet of the inter-
ledges; one an east and
other having a southwest
end.
As any ever discovered
surface were found in
Burnet's residence, lo-
lot abutting the alley,
is located.

PARIS BELLE.
Be Installed as Soon as
Possible.
Since work was start-
ed by Mr. J. M.
okane, representing the
of First avenue and St.
shaft was sunk to a depth
cate a ledge disclosed by
at that point. A shaft was
block 27, of Paris Belle
the street, to a depth of
ledge matter, but surface
its abandonment.
is being sunk at rear of
within 30 feet of the inter-
ledges; one an east and
other having a southwest
end.
As any ever discovered
surface were found in
Burnet's residence, lo-
lot abutting the alley,
is located.

PARIS BELLE.
Be Installed as Soon as
Possible.
Since work was start-
ed by Mr. J. M.
okane, representing the
of First avenue and St.
shaft was sunk to a depth
cate a ledge disclosed by
at that point. A shaft was
block 27, of Paris Belle
the street, to a depth of
ledge matter, but surface
its abandonment.
is being sunk at rear of
within 30 feet of the inter-
ledges; one an east and
other having a southwest
end.
As any ever discovered
surface were found in
Burnet's residence, lo-
lot abutting the alley,
is located.

ROSSLAND WEEKLY MINER

Two Dollars a Year.

ROSSLAND, B. C., THURSDAY, MAY 10, 1900.

Fifth Year, Number 11

THE MINES OF THE BOUNDARY

News from Some of the Properties Which Are Being Developed in the Progressive Camps.

Though British Columbia—western gate of the British Empire—possesses vast wealth in her fisheries and timber to say nothing of her agricultural resources, her history as an important part of the Dominion and the empire has just begun, for the mining industry, which is now being placed on a substantial footing.

The story of the growth of lode mining in British Columbia and the corresponding increase in the importance and prosperity of the province, is brief and yet brilliant with achievement, while her wide runs may read a promise of infinitely greater results in the days to come. The adventurous prospectors, almost the only inhabitant of the "sea of mountains," blazing his lone trail into the heart of the trackless wilderness, prepared the way for the builder of cities and railways. With assiduous pick and drill the goldseeker attacked the obscure rocks inclosing the precious objects of his quest, and disclosed immense deposits of mineral. His skill and perseverance were rewarded, and his faith in the country justified when capital, attracted by the manifest value of the mineral areas of the province, began to make itself felt and mining in British Columbia was established on a firm basis by the development of Rossland, the Sloan and other sections, which are yielding large and ever increasing dividends to shareholders in many lands.

The mining industry in British Columbia though only in its infancy, affords absolutely unlimited opportunities for the safe employment of capital with enormous rewards for enterprise, skill and perseverance. Year by year it adds increasing millions to the wealth of the nation; it gives lucrative employment to vast armies of miners, mechanics and laborers; builds and maintains cities, railways and steamships, and affords infinite scope for the profitable exercise of inventive, executive and constructive talent and scientific skill.

This province possesses mineral resources of boundless extent and many generations must elapse before its vast areas are prospected. Each district must await its turn for development, owing to the insufficiency of the amount of capital available for the exploration of our mineral deposits, and thousands of immense fortunes must lie for many years in the hearts of the mountains, awaiting the steel and powder of the miner. Notwithstanding the inadequate amount of capital employed in developing our mines, however, we can point to a record of steady and gratifying progress since British Columbia ores were first brought to the notice of the mining world. The gold-copper boom which placed the Red Mountain mines on a permanent dividend-paying basis and built up in less than four years Rossland, the Golden City of Kootenay and the third city of British Columbia, is now transferred to the wonderful Boundary Creek district, where ore bodies just as extensive as those of Rossland are being disclosed, and thither the eyes of the investing public are now turned.

For several years the mining men of this new district have been developing their properties and now many of them have reached a stage where the steel and fairness be brought to the attention of investors who desire stock in assured mines in preference to investments in properties in the prospect stage. At the same time there are hundreds of first class prospects awaiting development, which mines in preference to investments in properties of this class will yield even larger returns than will the proved mines.

To meet the demand for independent and reliable information regarding the mines of the Boundary Creek district, the Miner detailed one of its representatives to visit the various camps and describe for the benefit of its readers the prominent properties. This task has just been completed, our representative having, so far as possible, visited every working mine or prospect in the Boundary. In this number is given the result of his observation of the district and its mineral stores.

The Boundary Creek district has no defined limits, but may be said to extend from Christina lake on the east to the confluence of Rock creek and the Kettle river on the west, a distance of 40 miles, and from the International boundary line on the south to the headwaters of Long Lake and Pass creek, 20 miles to the north. The topography of this section of country affords great variety of scenery, with the broad valleys of the Kettle river, North Fork, Boundary creek and Christina lake, rounded foothills and grassy plateaus, and the heavily timbered mountains with their precipitous peaks and rocky canyons, with here and there a lakelet and everywhere the many branched mountain streams. In the rich bottom lands along the rivers ranches for years contended against many difficulties, chief of which was the distance from any market, but with the advent of the miner and the upbuilding of many towns they have seen their pre-eminence increase in value to an enormous extent, owing to the demand for fruit, vegetables, grain and hay, which they produce so abundantly. Many of them have passed into the hands of townsite promoters, with the result that a large crop of empty "cities" has sprung up. The Miner saw different towns during his visit to the district.

There are nearly twenty "camps" in the Boundary. Each one of these represents a group of from 50 to 200 locations. These camps are connected with each other and with Grand Forks and Greenwood, the centers of supply, by a network of roads and trails, while the C. & W. railway is now extending spurs to the more important groups, while at points of vantage near each of the more important camps towns

are rapidly springing up, and townsite promoters and real estate agents are just as busy as the miners. The first notable discovery of mineral in the Boundary was made, it is said, in 1884, when the big surface croppings of the Volcanic ledge, on the North Fork of the Kettle river were found by James McConnell, though the ledges of Copper camp were spoken of before that date. In 1887 a few scattered locations were made, but nothing of great value was developed until 1891, when systematic prospecting began, and the discovery of the big ledges of Phoenix, Copper and White's camps followed. Then development work began, and wonderful stories regarding the size and value of the ore bodies began to reach the outside world, while shrewd operators hastened to acquire some of the best properties and hundreds of prospectors rushed into the district, staking in a few seasons all the vacant ground in the vicinity of the discoveries.

The geological formation of the district is succinctly described by a well known mining engineer as follows: "The basal rocks of the district are quartzites, mica and hydro-mica schists, some clay slates and bands of limestone. I have assumed these to be of the Cambrian or pre-Cambrian age. They are highly tilted and altered and extend from just west of Boundary Creek eastward. From this western limit we find more recent, probably Devonian or lower carboniferous limestones, and further west again cretaceous sandstones, shales, etc., appear.

"All these stratified rocks are penetrated and disturbed by an extensive series of eruptive rocks of different ages and nature. These include granite, syenite, trachyte, porphyry and diorite. These eruptives are more or less ultimately connected with almost all the mineral deposits examined. No systematic geological survey has been undertaken here.

"In a general way, however, I may say that the granites along Boundary creek seem to be accompanied by the dry river and gold ore shown in Providence and Skylark camps, etc., while the diorite belts running nearly east and west are accompanied by the basic sulphides in considerable bodies along contacts. In this respect the district is somewhat similar to Trail Creek, although there the diorites are found to penetrate the granite rocks rather than the metamorphic series.

"As a whole the ores of Boundary Creek may be classed as gold. They consist largely of mixtures of various iron sulphides, with small amounts of copper pyrites, all more or less auriferous, but in some cases we find an essentially straight copper ore. It consists principally of copper glance in quartz, with more or less red oxide or native copper near the surface. In Deadwood camp the most prominent feature is a large body of magnetic iron (often polaric), through which is disseminated auriferous copper pyrites. Passing east over the Boundary Creek valley to Greenwood camp, we find again large bodies of magnetite on some claims; in others, at less elevation, quartz accompanied by specular iron and calcite. In each case copper pyrites are present, with more or less gold. White's camp and Wellington both show considerable amounts of iron and copper sulphides, gold-bearing in all cases. In the north part of the district the Long Lake camp is found in a granite and schist belt radiating from the east. These are quartz, carrying free gold and silver, native tellurium, along with blende, and small amounts of galena in some of the veins. Again in Providence and Skylark camps, on both sides of Boundary creek, quartz veins in the schists or occasionally small amounts of galena, etc., are present. Graham camp exhibits purely copper ores; here, however, these are almost entirely copper pyrites instead of glance, as in the Copper camp.

"The great number of claims located have been principally on ground in or near the largest of the diorite belts. There is much ground that has yet never been walked over; much of it is covered by dense forest; in many places the wash is heavy, and yet minerals in place continues to be found. Whether or not lead ores will be found in any more than the limited quantity shown at present at the Boundary is essentially one of copper and gold, and in which more or less dry promise is incidental."

The first camp of the Boundary district to be reached from Rossland is on Christina lake, where there are large iron-capped veins carrying ore remarkably like that of Rossland camp. The first discoveries in this section were made on rather level ground, which runs into the lower end of the lake from the east, the creek being named after one of the pioneer prospectors of the district. In 1896 big showings were discovered on Baker and McCrae creeks, and at the head of the lake and the following season saw a good deal of prospecting in the vicinity with the result that many claims were staked on the iron caps near the lake, and the Burnt Basin camp, east of the lake was discovered. This latter section, which is one of great promise, is tributary to Rossland.

Though the veins of Christina lake are of considerable size the fact that low values prevailed on the surface tended to retard development. During the last few months, however, depth has been gained on several properties with uniformly encouraging results, and there is no doubt that several mines will be opened up there in the near future.

Between Christina lake and Grand Forks there are no properties of importance, there being but little work done on any of

the claims lying between those points. Tributary to Grand Forks, however, there is an extensive mineral area, which must in the course of time make that city a point of great importance. Here is located the Granby smelter, which will be ready for operation in the spring. It will be the most complete smelter in Canada, and will treat the ores of the Knob Hill, Old Ironsides, and other properties controlled by the corporation which is building the smelter. Here also will be situated the first Canadian smelter to be operated on the Loder system of pyritic smelting, by which the sulphur and other combustible materials in the pyritic ores of the district will be utilized in smelting. By this system, it is claimed the cost of reduction will be reduced one-half, and may, under favorable conditions be brought as low as \$1.50 a ton. Should this system prove practicable it will give additional impetus to mining in the low grade camps. The Iron smelter has stated that they will construct a smelting plant on any mine which will guarantee an output of 150 tons daily.

On Observation mountain, immediately overlooking the town of Grand Forks, there are a number of claims, while others are situated within a mile or so of the town. The nearest properties of any prominence, however, are on Hardy mountain and extend from just west of Boundary Creek eastward. From this western limit we find more recent, probably Devonian or lower carboniferous limestones, and further west again cretaceous sandstones, shales, etc., appear.

"All these stratified rocks are penetrated and disturbed by an extensive series of eruptive rocks of different ages and nature. These include granite, syenite, trachyte, porphyry and diorite. These eruptives are more or less ultimately connected with almost all the mineral deposits examined. No systematic geological survey has been undertaken here.

"In a general way, however, I may say that the granites along Boundary creek seem to be accompanied by the dry river and gold ore shown in Providence and Skylark camps, etc., while the diorite belts running nearly east and west are accompanied by the basic sulphides in considerable bodies along contacts. In this respect the district is somewhat similar to Trail Creek, although there the diorites are found to penetrate the granite rocks rather than the metamorphic series.

"As a whole the ores of Boundary Creek may be classed as gold. They consist largely of mixtures of various iron sulphides, with small amounts of copper pyrites, all more or less auriferous, but in some cases we find an essentially straight copper ore. It consists principally of copper glance in quartz, with more or less red oxide or native copper near the surface. In Deadwood camp the most prominent feature is a large body of magnetic iron (often polaric), through which is disseminated auriferous copper pyrites. Passing east over the Boundary Creek valley to Greenwood camp, we find again large bodies of magnetite on some claims; in others, at less elevation, quartz accompanied by specular iron and calcite. In each case copper pyrites are present, with more or less gold. White's camp and Wellington both show considerable amounts of iron and copper sulphides, gold-bearing in all cases. In the north part of the district the Long Lake camp is found in a granite and schist belt radiating from the east. These are quartz, carrying free gold and silver, native tellurium, along with blende, and small amounts of galena in some of the veins. Again in Providence and Skylark camps, on both sides of Boundary creek, quartz veins in the schists or occasionally small amounts of galena, etc., are present. Graham camp exhibits purely copper ores; here, however, these are almost entirely copper pyrites instead of glance, as in the Copper camp.

"The great number of claims located have been principally on ground in or near the largest of the diorite belts. There is much ground that has yet never been walked over; much of it is covered by dense forest; in many places the wash is heavy, and yet minerals in place continues to be found. Whether or not lead ores will be found in any more than the limited quantity shown at present at the Boundary is essentially one of copper and gold, and in which more or less dry promise is incidental."

The first camp of the Boundary district to be reached from Rossland is on Christina lake, where there are large iron-capped veins carrying ore remarkably like that of Rossland camp. The first discoveries in this section were made on rather level ground, which runs into the lower end of the lake from the east, the creek being named after one of the pioneer prospectors of the district. In 1896 big showings were discovered on Baker and McCrae creeks, and at the head of the lake and the following season saw a good deal of prospecting in the vicinity with the result that many claims were staked on the iron caps near the lake, and the Burnt Basin camp, east of the lake was discovered. This latter section, which is one of great promise, is tributary to Rossland.

Though the veins of Christina lake are of considerable size the fact that low values prevailed on the surface tended to retard development. During the last few months, however, depth has been gained on several properties with uniformly encouraging results, and there is no doubt that several mines will be opened up there in the near future.

Between Christina lake and Grand Forks there are no properties of importance, there being but little work done on any of

the claims lying between those points. Tributary to Grand Forks, however, there is an extensive mineral area, which must in the course of time make that city a point of great importance. Here is located the Granby smelter, which will be ready for operation in the spring. It will be the most complete smelter in Canada, and will treat the ores of the Knob Hill, Old Ironsides, and other properties controlled by the corporation which is building the smelter. Here also will be situated the first Canadian smelter to be operated on the Loder system of pyritic smelting, by which the sulphur and other combustible materials in the pyritic ores of the district will be utilized in smelting. By this system, it is claimed the cost of reduction will be reduced one-half, and may, under favorable conditions be brought as low as \$1.50 a ton. Should this system prove practicable it will give additional impetus to mining in the low grade camps. The Iron smelter has stated that they will construct a smelting plant on any mine which will guarantee an output of 150 tons daily.

On Observation mountain, immediately overlooking the town of Grand Forks, there are a number of claims, while others are situated within a mile or so of the town. The nearest properties of any prominence, however, are on Hardy mountain and extend from just west of Boundary Creek eastward. From this western limit we find more recent, probably Devonian or lower carboniferous limestones, and further west again cretaceous sandstones, shales, etc., appear.

"All these stratified rocks are penetrated and disturbed by an extensive series of eruptive rocks of different ages and nature. These include granite, syenite, trachyte, porphyry and diorite. These eruptives are more or less ultimately connected with almost all the mineral deposits examined. No systematic geological survey has been undertaken here.

"In a general way, however, I may say that the granites along Boundary creek seem to be accompanied by the dry river and gold ore shown in Providence and Skylark camps, etc., while the diorite belts running nearly east and west are accompanied by the basic sulphides in considerable bodies along contacts. In this respect the district is somewhat similar to Trail Creek, although there the diorites are found to penetrate the granite rocks rather than the metamorphic series.

"As a whole the ores of Boundary Creek may be classed as gold. They consist largely of mixtures of various iron sulphides, with small amounts of copper pyrites, all more or less auriferous, but in some cases we find an essentially straight copper ore. It consists principally of copper glance in quartz, with more or less red oxide or native copper near the surface. In Deadwood camp the most prominent feature is a large body of magnetic iron (often polaric), through which is disseminated auriferous copper pyrites. Passing east over the Boundary Creek valley to Greenwood camp, we find again large bodies of magnetite on some claims; in others, at less elevation, quartz accompanied by specular iron and calcite. In each case copper pyrites are present, with more or less gold. White's camp and Wellington both show considerable amounts of iron and copper sulphides, gold-bearing in all cases. In the north part of the district the Long Lake camp is found in a granite and schist belt radiating from the east. These are quartz, carrying free gold and silver, native tellurium, along with blende, and small amounts of galena in some of the veins. Again in Providence and Skylark camps, on both sides of Boundary creek, quartz veins in the schists or occasionally small amounts of galena, etc., are present. Graham camp exhibits purely copper ores; here, however, these are almost entirely copper pyrites instead of glance, as in the Copper camp.

"The great number of claims located have been principally on ground in or near the largest of the diorite belts. There is much ground that has yet never been walked over; much of it is covered by dense forest; in many places the wash is heavy, and yet minerals in place continues to be found. Whether or not lead ores will be found in any more than the limited quantity shown at present at the Boundary is essentially one of copper and gold, and in which more or less dry promise is incidental."

The first camp of the Boundary district to be reached from Rossland is on Christina lake, where there are large iron-capped veins carrying ore remarkably like that of Rossland camp. The first discoveries in this section were made on rather level ground, which runs into the lower end of the lake from the east, the creek being named after one of the pioneer prospectors of the district. In 1896 big showings were discovered on Baker and McCrae creeks, and at the head of the lake and the following season saw a good deal of prospecting in the vicinity with the result that many claims were staked on the iron caps near the lake, and the Burnt Basin camp, east of the lake was discovered. This latter section, which is one of great promise, is tributary to Rossland.

Though the veins of Christina lake are of considerable size the fact that low values prevailed on the surface tended to retard development. During the last few months, however, depth has been gained on several properties with uniformly encouraging results, and there is no doubt that several mines will be opened up there in the near future.

Between Christina lake and Grand Forks there are no properties of importance, there being but little work done on any of

\$11.80 to \$673.49 in gold. The highest figure was from a specimen assay, but it is claimed that averages of the ore at this point run as high as \$235.60. The Mammoth also has two parallel showings, one of pyritic and the other of quartz and galena. On these veins not so much work appears to have been done. The ore is said to carry shipping values. The Pathfinder wagon road runs through these claims.

Other claims of more or less importance are located on Pathfinder mountain, including the Pay Ore, Tiger, Ontario Boy, Orange Blossom, and Robinson, which possess good showings but were lying idle when visited by The Miner. The latter has returned to the main wagon road, and pursuing our way to Knight's camp, which adjoins Brown's camp on the north, we see the Derby, on which there is a vein of good looking quartz, said to carry good values in gold. The only work done consists of a 40-foot crosscut tunnel and an incline shaft sunk some 15 feet on the ledge. The width of the vein is not defined.

Adjoining this claim on the north is the Little Bertha, owned by Greenwood men, and now in process of development. This property has a 3 1/2-foot vein of milling quartz, which has granite walls and the usual northerly and southerly trend of the North Fork veins. The vein has been traced for 200 feet and considerable surface work has been done. In a short tunnel cutting the ledge a winze has been sunk, giving a depth on the vein of 40 feet. There is a 50-foot drift, in which an average width of three feet of quartz is found. This, it is claimed, assays \$36 in gold and 11 ounces in silver. The management states its intention to ship a car of ore for experimental purposes.

On the London, adjoining the Little Bertha on the north, there is a similar showing. A crosscut tunnel is being driven in order to tap the vein at depth. At the mouth of Pathfinder creek there is a camp known as Bonanza City, in the vicinity of which are several prospects on which little but assessment work has been done. The wagon road from Grand Forks had its terminus at this point until about a month ago, when the Little Bertha people assisted by the owners of the Bonanza group, extended the road to the Little Bertha, the Bonanza company carrying it from that property to Cedar creek, and thence to their property on the summit of Bonanza mountain, north of the creek, a distance in all of some five miles from Bonanza City. The Bonanza company has built a depot camp at Cedar creek, and has made preparations for continuous work on an extensive scale during the winter. A contract for a steam plant has been let and it is expected that development will be rapid. This property consists of four original locations, on which there is a contact vein of quartz carrying considerable copper and iron. This has been traced for over 500 feet, showing from four to eight feet wide on the surface. Besides surface cuts and stripping there are three shafts on the ledge, the first being 60 feet deep, the second 90 feet, and the third, on which work is now in progress, was 20 feet deep when examined. It is the intention of the owners to sink to the 100-foot level in this shaft and explore the vein as far as possible by means of drifts and crosscuts. The ore taken out of the shaft is of good appearance and is said to average \$34 in gold and copper, while the surface showing is such as to justify the development of the property. Stock in this company is largely held in Grand Forks, where the Bonanza offices are located, and the officers are well known citizens of that town.

Again fording the river we reach the Strawberry and Orphan Boy, recently incorporated by Rossland. These properties are located on Brown's creek, and have two leads, apparently on a contact of lime and diorite, and having the regular northerly trend of a majority of the North Fork veins. Joe Trainor, well known in Rossland, is superintendent of the property, which he is developing in excellent shape. On the discovery lead there is a prospect pit in oxidized ledge matter and iron ore. From this a good deal of ore has been taken out, but sufficient work to define the width of the ledge has not been attempted. At present work is being concentrated on this vein, at a point where it crops in a very strong iron cap, an incline shaft 9 x 5 being sunk on the vein. At a depth of 20 feet the rock in the shaft was well mineralized, while 60 tons of ore assaying \$12 a ton had been taken out. On the second vein there is a shaft 70 feet deep, in which there is said to be four feet of mixed ore carrying good values. There was considerable water in this shaft.

This was the last North Fork property visited. This section of the Boundary is certain to become one of the richest of its mineral areas, when the development now in progress has brought its big properties to the shipping point. There are many veins on which little work has been done and which have not been mentioned in the foregoing description, but which promise to fully repay development. There are other groups of prospects further north of which great things are spoken. Two days' journey up the river in Franklin camp, from which, a few weeks ago, some remarkable specimens of free gold and copper ores were brought. There gold is stamped in the direction of the new discoveries but the new arrivals found a foot of snow on the ground when half way to the camp, and were obliged to turn back. It is certain that there will be a rush to Franklin camp in the spring.

There are half a dozen stopping places at various points on the North Fork, and though the accommodations are primitive the charges are fully equal to those of the best metropolitan hotels. Through the railway runs up this valley it might as well follow some other route, so far as any benefit to the North Fork is concerned. On the west side of the river the hills are very precipitous and the railway runs high above the valley, with no stopping place between Grand Forks and Eholt. It is on the cards, however, that the North Fork branch of the C. & W., the right of way for which is already surveyed, will be constructed within a year, and as this line will run through the valley it will be of the greatest service to the North Fork camps, and will certainly give great impetus to the mining interests of this

section. A wagon road from the North Fork takes us to Eholt, passing the large group of claims on Pass creek, none of which are being developed. Three and a half miles from Eholt, by the new wagon road, is the Long Lake camp. Here, in 1898, free gold was discovered and the Gold Drop and Jewel were located a large number of claims being taken up in the rush that followed the discovery. Long Lake is about two miles in length, and lies in a heavily timbered basin, some 3,000 feet above sea level. The principal claims of the camp are situated on the south side of the lake the ledges running northeasterly, nearly parallel with the shore of the lake. The best developed property in Long Lake camp is the Jewel, owned by a British corporation. On this claim a great deal of work has been done, comprising over 1,500 feet of shafts, drifts and upraises, and serving to develop the main vein to a depth of 230 feet. This vein is of quartz, carrying galena and tellurides and susceptible to treatment by dry crushing and cyaniding. Its average width on the various levels varies from four to five feet and there is in sight in the mine fully 12,000 tons of ore, which will average throughout \$13 in gold and silver. The estimated cost of extraction and treatment is under \$5 a ton. In the course of development a quantity of ore estimated at 1,500 tons has been taken out of the mine. There is a second lead on the property which courses about northeast and shows in surface croppings for a length of 1,000 feet, with an average width of five feet. To tap this vein a crosscut was run from the 230-foot level on the first vein, and the ledge was found at a depth on the vein of 400 feet. At this

with handsome buildings standing by the dozen where, six months ago there was nothing to be seen but a thick growth of spruce and fir.

On the left, looking down the gulch, to be seen the immense lodging house just erected for the benefit of the men employed on the Graves properties. This "hotel" will accommodate 350 men. The big shaft house of the Knob Hill and Old Ironsides mines is also very much in evidence, crowned by three smokestacks and flanked by extensive dumps of ore and waste rock. On the other side are the shaft houses of the Stenwinder and Brooklyn. There is a railway spur on each side of the gulch, though construction is not completed as yet. The whole scene is one of the greatest activity, well illustrating the progress of the district and the energy of its mining men.

A Famous Band of Mines.

The largest group of claims in Phoenix is that which though owned by three separate companies, is being worked under the management of Jay P. Graves, and includes the Knob Hill, Old Ironsides, Victoria, Actna, Phoenix and Fourth of July. These claims lie in a compact group and are being developed together, the use of the same shafts and levels being effective in reducing the cost of development to lower figures than would be reached were the claims worked independently, a matter of no little importance with mines which, though possessing immense ore bodies, have low shipping values.

What must be regarded as the largest vein in the camp is that on which the Knob Hill and Old Ironsides are located. This ledge is something over 200 feet wide on the surface, and lies in lime and diorite, having the usual northerly and southerly strike. Parallel with this big vein, on the east, there are two other ledges, which occur on the Actna and Victoria claims of the Granby company.

The Old Ironsides.

The greatest amount of work has been done on the Old Ironsides claim, which was the first in Phoenix camp to undergo systematic exploration. In addition to surface work there is nearly half a mile of shafts, drifts and crosscuts. No. 1 shaft has been sunk on the vein to a depth of 210 feet, being in ore all the way. At a distance of 320 feet from the first shaft, the No. 2 shaft has been sunk over 330 feet, being on the ore body from the collar to the bottom. A drift has been run to connect the two shafts at the 200-foot level, and this, with its crosscuts, proves a width of 80 feet of ore on that level. At the 300-foot level some 300 feet of work has been done, and the drifts are well in ore.

Two Hundred Feet of Ore.

Active work on the Knob Hill did not begin until about 18 months ago, yet it has resulted in the disclosure of an ore body that is the wonder of the camp. On the same ledge as that on which the Old Ironsides work has been done, a tunnel has been run a distance of 920 feet. A great deal of drifting and crosscutting from this tunnel has been accomplished. In all some 2,400 feet of work has been done and the miners have practically worked in ore throughout; certainly a remarkable instance. There is an upraise from the tunnel to the surface, a distance of 140 feet. This is used for ventilation. A shaft is being sunk 170 feet, to connect with the tunnel at a point higher up the hill. In the east crosscut there is a winze to a depth of over 90 feet, and this also is in ore.

At a point 336 feet from the mouth of the tunnel, which is driven on the hanging wall of the vein, there is a crosscut to the foot wall. The distance between the two walls is exactly 200 feet, and this space is filled with ore. From the end of the crosscut there is a drift along the foot wall for 180 feet, from its face a crosscut was run to the tunnel on the other wall, thus blocking out a square of ore 200 feet in width and practically 200 feet in length along the vein. It has been practically proven that the ore body maintains about the same width for a distance of over 600 feet.

Connecting Their Workings.

At the 300-foot station in the Knob Hill tunnel a winze is being sunk to the Old Ironsides 200-foot level, on which level a drift will be run to meet that on the Ironsides. The drifts, when connected, will have a total length on the vein of over 1,200 feet.

The values carried by the ore of these properties have not been made public. It is understood, however, that the greater part of the ore carries three per cent and upwards in copper, with low gold values. Unlike Rossland ores, the values are not consistent, so far as is apparent at present, paying mineral being found in bunches throughout the ore body. The ores of these claims will be treated by the Granby smelter at Grand Forks.

The allied properties employ over 100 men. Mr. W. Yolens Williams, of Rossland, is general superintendent of the group.

Brooklyn-Denominator.

The mines of the Dominion Copper company, a recently organized corporation which includes in its membership several Canadian millionaires, are worthy of considerable attention. They comprise the Brooklyn, Stenwinder, Idaho, Montezuma and Standard, on the north side of Phoenix gulch, and the Rawhide, a mile away. These properties, though they have not reached the same stage of development as those already described, give evidence of becoming big producers of ore, and already employ 60 miners.

On the Brooklyn there is an iron-capped lead with a northerly and southerly strike, dipping to the east at about 70 degrees. This ledge is traced through the length of the claim, and on the surface shows ore for 100 feet in width. An incline shaft is being sunk on the foot wall of the vein, which is well defined. This shaft has reached a depth of 265 feet. At 150 feet there is a crosscut, 100 feet in length, across the vein to the hanging wall. The vein is mineralized throughout, with solid gray ore aggregating 25 feet in width and giving average assays of four per cent copper and \$5 to \$6 in gold; while bunches of chalcopryrite return as high as 25 per cent copper and \$10 in gold. On the 150-foot level there is 700 feet of work. The vein on the 250-foot level is 100 feet wide, and has been crosscut. The crosscut has been driven a total distance of 207 feet, with the object of tapping another ledge further east. This has not yet been reached. The main Brooklyn vein is also found on the Idaho.

Has Knob Hill Vein.

The Stenwinder vein is evidently the same as that of the Knob Hill and Old

Ironsides. It runs parallel with the Brooklyn vein, but has a greater width, having been crosscut for nearly 120 feet. On this claim as on the Brooklyn an incline shaft is being sunk on the foot wall. It is 300 feet deep, with a crosscut at the 115-foot level. At this point the vein is 114 feet wide. The ore is of higher grade than that of the Brooklyn vein, but is also more lumpy. Some 22 per cent copper ore has been taken from this vein, on which considerable surface work was done before the main shaft was begun.

Work on the Idaho has just begun. There is a 50-foot shaft, which is in ore. The vein, which is the one developed on the Brooklyn, shows 200 feet wide on the surface.

A 20-drill compressor and a hoisting plant of large capacity are to be installed shortly to supply power to the Brooklyn, Stenwinder and Idaho.

The Rawhide has a big surface showing of copper ore. A 400-foot tunnel is being run to the vein.

Other Working Properties.

On the Snowhow, which is under bond to Rossland and London men, there is a big surface showing, the C. P. R. having uncovered 11 feet of good ore in making a grade through the property. The ore is an iron and copper sulphide. A shaft is being sunk.

A tunnel is being run by the owners of the Gold Drop to tap a lead which runs through the property, and which carries ore of good grade.

"Barbarian" Brown, the owner of the Monarch and Tamarack, intends to install machinery when the railway is completed. In the meantime a small force of men is at work on preliminary development. There is a 50-foot "streak" of ore on the surface of the Monarch which is said to assay \$30 to the ton.

The War Eagle is another property with a big surface showing which is being prospect with good results.

A Boundless Future.

It is hard to realize, without seeing, the immensity of the ore deposits of Phoenix, and should a decent proportion of the ore contained in the veins of the camp give smelting values there is no doubt that this section that will open the eyes of mining men all over the country. The possibilities of the future are, for Phoenix, utterly boundless. Within a few weeks large and regular shipments of ore will begin, and the public will then learn more about the grade of the ores of the camp than is allowed to become known at present.

WILL RIVAL THE BEST.

Summit Camp Has Wonderful Bodies of High Grade Copper Ore.

Four miles south of the C. & W. railway at Eholt, and high up in the mountains, is a basin of considerable extent, surrounded by hills which rise several hundred feet above the flat. Here is the summit of the range, and at this point Fourth of July creek and Brown's creek have their source. In 1893 some of the prospectors who overran the district found the copper-stained croppings of a number of ledges, and as a result a large number of claims were staked. It was not until three years ago, however, that any important discoveries were made. Then the owner of the B. C. claim, who had paid \$600 for the prospect, did a little work, and on breaking through the cropping of his ledge, found solid chalcopryite ore. Further development demonstrated that there was a large deposit of ore, the property passed into the hands of the present owners, and soon the ore bodies which have made the mine famous were opened up to a depth of 150 feet, prospecting on other claims disclosed quantities of pay ore, and the name of Summit camp became familiar throughout the province. Considerable work has been done on various properties, and a careful inspection of the veins of Summit camp compels the belief that this, though one of the newest camps of the Boundary, is bound to become one of the richest, if, indeed, it does not surpass the other sections in grade and value of production.

Summit is first of all a copper camp, its values being almost entirely in the red metal, the average grade of its ores being higher than those of any other important camp in the Boundary, while its veins so far as explored do not carry such immense bodies of ore as the great ledges of Phoenix, there are undeveloped properties with showings scarcely inferior in size to those of the Knob Hill and Old Ironsides. Serious development is in progress on a number of properties, and it is hardly predicated too much to say that Summit will, on development, rival even Rossland as a producer. This is supported by the announcement that the B. C. will soon ship 400 tons of ore, worth approximately \$14,000, each day, while other mines are likely to do as well.

The Copper Mine of the Province.

The property which has made Summit famous and which owing to the amount of work done is the most valuable in the camp, is the B. C. mine, which is owned by a close corporation, composed in part of the Canadian capitalists who control the famous Republic, the banner mine of the camp to which it gives its name, and the Payne, a famous Slocan mine. The B. C. is being developed on an extensive scale, the intention of the owners being to make it a big dividend payer before putting any of the stock on the market. There is a belief, it may be remarked by the way, that the fortunate men who now own the mine, are not likely to let very much of the stock fall into other hands, being of opinion that the mine is good enough to keep.

The property consists of 11 claims, though the B. C. is the only one developed to any extent. A railway spur five and one-half miles in length, connects the mine with the C. & W. railway. The ore occurs in shoots or chimneys along a contact of porphyry and diorite, there being no defined vein. The mine is being worked from a vertical shaft, which has now reached a depth of over 200 feet on the centre ore body. Drifts from the shaft serve to open up in all three shoots of ore, aggregating 115 feet in length, and having an average width of 27 feet. There is 2,000 feet of underground work, consisting mainly of drifts on the 50- and 150-foot levels. In the course of this work some 10,000 tons of ore was taken out of the mine. Three thousand tons of this will return values of \$50 or thereabouts to the ton, as it carries 22 per cent copper. The balance yields 15 per cent copper, totalling \$27 a ton. The ore carries silver in the proportion of one-half ounce to each unit of copper, but no gold values are obtained. In the mine there is blocked out above the 150-foot level 45,000 tons of ore.

Thirty per cent of this is first class ore, the remainder being second class in grade. The ore is fine grained chalcopryite in an altered diabase which is known as "garnet rock," and requires no smelting.

At the 150-foot level in the shaft a big station has been cut out, and from that point a three-compartment shaft is being sunk to the 230-foot level. When this depth is reached the shaft will be enlarged to the same dimensions between the 150 and the surface. At a point 800 feet from the shaft, on the second body of ore, a winze is being sunk from the 50 to the 150. This will be continued to the 250. There are two ventilating shafts, and the workings of the mine are well planned.

Great improvements in the surface equipment of the mine are now being made. On the railway track, below the dumps, ore bins with a capacity of 450 tons are being constructed, while preparations are under way for the installation of a 40-drill compressor and complete hoisting and pumping machinery. This plant will be placed in operation on the completion of the working shaft to the 250. Two cages will afford ample hoisting facilities. At present 40 men are employed on the property, but when the present three-drill plant is superseded by the new machinery 200 men will work in the mine.

The Oro Denoro.

On the steep hillside west of the town of Summit, and almost adjoining the embryo city, is the Oro Denoro, which is owned by a company composed almost entirely of Rossland men. The railway spur which taps Summit, Phoenix and Wellington camps runs through this claim, the fame of which has spread as the tunnel has been driven a good deal of work has been done on the body of fine copper ore uncovered a few weeks ago by the railway graders. This property, though in an undeveloped condition, and notwithstanding the fact that its ore bodies are almost unprospected must be classed as one of the mines of the Boundary, such is the excellence of the showings it possesses. There is in temporary use on the property a two-drill compressor with hoist and pump, by means of which the time the property has been done in the hands of its present owners. Though the nature of the ground made tunneling feasible, the company preferred to sink, and have a shaft some 200 feet deep, from the bottom of which a crosscut is being driven towards the ore body uncovered in the railway cuts. This crosscut had reached a distance of 170 feet from the shaft, and when seen by the writer was being directed to meet a tunnel which had been commenced below the railway track. About 70 feet of this crosscut has considerable ore on the west side, and evidently runs along a considerable body of mixed copper ore. No attempt had been made to define the limits of the ore, which is supposed to lie in a cross vein.

In addition to the underground work there was considerable surface work in progress and this was being rewarded by the uncovering of considerable quantities of ore at the grassroots. A 30-foot tunnel was all in ore of very fine appearance, is filled with ore and mineralized rock from the railway grade for several hundred feet the Oro Denoro ledge, while at one point over 50 feet of solid ore is to be seen where a rock outcrops the ledge diagonally. In another place 10 feet of ore is uncovered in the same manner, while the extensive croppings of oxidized and mineralized rock seem to indicate that the main vein is nearly 300 feet wide. This ledge has been traced for 500 feet by the railway cuts and surface work. There are two smaller veins evidently running parallel to the main vein. On these little work has been done. The ore of the Oro Denoro is chalcopryite, carrying as high as 26 per cent copper, with some gold and silver. The formation is diorite, with ribs of granite, the whole formation being apparently oxidized. There is every indication that this property has large bodies of good copper ore.

Another Big Showing.

The Rathnullen group, though on the Brown's creek side of the divide, must be included in Summit camp, as it adjoins the B. C. group and is only one and a half miles from Summit City. This company owns a very large area of mineral ground, its claims covering 700 acres, and is controlled by Rossland men, and is being energetically worked by a superintendent who graduated in the Rossland mines and knows how things should be done—Tom Burden. The work now in progress is the exploration of the big vein on the Maple Leaf, which is being accomplished by means of a vertical two-compartment shaft, from which crosscuts are being driven across the hill. On the surface the showing is very good, and the ledge at depth appears to hold its own. At a depth of about 65 feet in the shaft a crosscut was run and the ledge was encountered in 40 feet. On this hanging wall six feet of solid ore was cut, the remainder of the vein, about 18 feet across being in mixed ore and ledge matter. When visited the shaft had nearly reached the 200-foot level, and preparations were being made to crosscut when that point was reached. The 75-foot vertical vein is said to return values of \$25 to \$60 a ton.

Prospective Mines.

The Emma, adjoining the Oro Denoro, has a surface showing of fine copper ore, which appears to occur in a large body, but was not working. There is a 120-foot shaft on the property. Being full of water this could not be inspected. This claim will probably be developed without much delay, as a result of the fortunate find in the railway cut, which is similar to that on the Oro Denoro.

The R. Bell, which is said to be owned in Salt Lake City, has a surface showing of a fine character, there being from four to five feet of high grade copper ore in a prospect pit. There are two shafts, one an incline on the vein, some 50 feet deep, and the other a 75-foot vertical shaft. These were both full of water. There is a good deal of ore on the dump. The Cordick, with a similar showing, but less work, adjoins the R. Bell.

There is a big cropping of low grade copper ore on the Mountain View. On this there had been some gobering near the surface, but no useful work. The claim has now passed into new hands, however, and the vein will be prospected in more systematic fashion. This property should prove one of the mines of the camp.

Next to the Mountain View and adjoining the townsite, is the J. S. Fraction, which is likely to become a valuable location. Work is in progress with a small force of men, and good results are obtained. The ledge is apparently 30 feet wide, the formation being ore resembling those of the Oro Denoro.

A short distance south of the B. C. is the Josie, which has a very attractive showing of copper ore. There are two veins on the claim, and a shaft has been sunk where they intersect. The showings are unique in Summit camp, the other properties finding their copper in the form of chalcopryite while the Josie ore is a true fissure, carries borate in white quartz, and the main lead is notable for its native copper. Some copper pyrites is found in the ore, however, and it is believed that when depth is gained the mineral will be found in the usual form. The shaft has reached the 100-foot level, on which the work of exploring both veins will be carried on. The property is owned by a company organized in Grand Forks, and its prospects are good.

WELLINGTON CAMP.

It Has Two Mines and a Number of Promising Prospects.

The next camp to Phoenix is known as Wellington camp, which is situated on the summit, about two miles from the town of Phoenix. Though there is a number of good looking prospects in this camp, only two properties have been developed to any considerable extent. These two however, have served to make the name of the camp familiar to everyone in the province.

The veins of Wellington camp differ from the majority of Boundary leads in that, their general trend being north and westerly, they carry mainly iron pyrites and occur mainly in gabbro and serpentine. The country rock here is of a dark felspathic nature, and is locally classed as a diorite.

The Winnipeg Mine.

The property on which the greatest amount of work has been done is the Winnipeg, which as a result of the dump of some 2,000 tons ready for shipment by the railway spur which is graded to its shaft house, while the showing of ore underground is extensive enough to make regular shipments feasible. Besides a small quartz vein which carries high values in gold, there are two big leads carrying sulphide ore in quantity. On the first vein a railway cut exposed a large body of ore within a few feet of the surface. On this lead, besides several prospect shafts, and other surface work, there is a 300-foot shaft, with some 1,300 feet of drift and crosscutting on the 50-, 100- and 300-foot levels. Down to the 100-foot level the vein has been explored for 300 feet along its length, and ore for this distance will probably average over six feet in width. On the 300-foot level there is a 200-foot drift to the west. On this level a crosscut was run 160 feet to the northwest, with an extension of 400 feet to the north. This work, which was run to explore the ground in that direction resulted in the discovery of an immense vein, 50 feet in width, carrying ore similar in character to that of the first vein. This ore body is now being explored and is likely to prove one of the big things of the district.

Winnipeg ore is said to average two per cent copper and \$15 in gold to the ton, values which must be accounted very good for such bodies of ore as this mine has in sight.

Brandon and Golden Crown.

An ore showing similar in almost every respect to that of the Winnipeg is found on the Golden Crown, the adjoining claim, which possesses the same leads, and on which almost as much work has been done. On the first vein—the same as that on which the Winnipeg's main workings are located, the Golden Crown has sunk a 300-foot shaft, which crosses to the vein at the 100- and 150-foot levels, on which a good deal of drifting has been done. On this ledge, so far as explored, the ore has been found from four and a half to 10 feet wide. From the bottom of the shaft a crosscut is being run to the 30-foot vein discovered by the Winnipeg on the same level. This is supposed to be the lead which has been traced near the north line of the Golden Crown. This crosscut has reached a distance of 250 feet from the shaft. At a point 50 feet from the shaft the crosscut went through a body of copper ore eight feet wide.

Considerable surface work has been done on this property, showing that it possesses a number of veins. Besides the gold quartz vein, there are at least three which carry iron and copper sulphides of good grade. These were cut in a 300-foot tunnel.

The ore is slated to assay on the average \$20 a ton, including two or three per cent copper. There is a train load or so ready for shipment. The railway, which runs within fifty feet of the shaft house, should be ready to carry ore within a few weeks.

CENTRAL CAMP.

A Coming Producer of High Grade Ore—Some Silver Veins.

White's or Central camp, as it is more commonly called, is situated almost south from Phoenix, and near the International boundary. The usual iron and copper sulphide ore of the district is here found in good bodies on the City of Paris, Majestic, and other groups, while another class of ore, i. e., quartz carrying gold, silver and some copper in various combinations of galena, blende, pyrrhotite and gray copper, is found on the No. 7, Jack of Spades, Mabel, McKinley, etc. Some of this ore yields as high as 200 ounces of silver to the ton, with occasional high gold assays.

The City of Paris and Majestic groups, which are under one management, though owned by separate companies, are the only properties in this camp which can show any considerable development. Being located on a steep hill, the claims afford good facilities for tunneling, by which means they are being opened up. On the City of Paris group there is a 20-foot ledge carrying gold-copper ore. On this a tunnel has been driven, opening up a large body of ore which will return an average of \$35 a ton in all values. At a point 350 feet from the mouth of the tunnel at a depth of 230 feet a station has been cut out, and sinking to the 350-foot level is in progress. Over 3,000 feet of work has been done on the tunnel level, and an upraise to the surface, just completed, provides ventilation.

Will Team Ore to Smelter.

The City of Paris will ship some ore to Grand Forks during the winter. There is 1,000 tons of \$35 ore on the dump and nothing will be carried on in the 100-foot level. From 2,000 to 5,000 tons of ore will be sent to the Granby smelter by sleigh before spring.

The Majestic group has practically the same showing as the City of Paris. A tunnel has been driven 400 feet on the vein, encountering considerable high grade ore in the last half of its length. The groups are equipped with a plant of 120-horse power, and employ at the present time 60 men.

The ore, on numerous assays is said to yield one ounce of gold, 20 to 30 ounces of silver and two to five per cent copper to the ton.

PROVIDENCE CAMP.

The Home of the Gold Bug, With Its Kean Silver Ore.

The nearest camp to Greenwood is Providence, which comprises several groups of claims lying from one to two miles north of the town on Boundary creek. The most important of these groups is that owned by the Boundary Creek Mining & Milling company, which is the only one at present under development. On the Gold Bug, one of the company's claims, a force of men is engaged in prospecting a big ledge of quartz and taking out \$120 worth which is being sacked in readiness for shipment to the Trail smelter, whither quantities have already been shipped. This ore, which is a galena of beautiful appearance, carrying native silver, occurs in a seam which varies from four inches to as many feet in width. Though work is at present concentrated on the vein from which this ore is obtained, the company has a number of others, on which good ore is found, and their property bids fair to prove a paying proposition when adequately prospected.

In Kimberley, Graham's Skylark, and Copper camps there are excellent showings, but no regular development is in progress.

DEADWOOD CAMP.

Immense Reserves of Ore in the Mother Lode Vein.

One of the big camps of the Boundary—in the eyes of some mining men the one big camp—is Deadwood, to which the C. P. R. is now building a spur of the well-known C. & W. branch. The claims of this camp lie three or four miles west of Greenwood, on hills of moderate size which surround a large basin, through which runs Copper creek.

The chief property in Deadwood camp is the Mother Lode, owned by the B. C. Copper company. This mine has developed in such a satisfactory manner that its owners are building at Anaconda a 250-ton smelter for the reduction of its ore. The Mother Lode was one of the earliest locations in the Boundary district, being of the 600 x 1,500 size, and possessing the extra lateral rights conferred under the old law. On the claim there is now a regular village consisting of bunk and boarding houses, cottages, mine buildings, etc., while the railroad contractors are hurrying towards the mine with the construction of the line over which the ore is to be shipped.

Improvement With Depth.

Starting on low grade surface ore, the owners of the Mother Lode ran a drift for 800 feet. After crosscutting the ore for 160 feet. A 300-foot shaft, with 800 feet of drifting and a winze from the upper level, blocked out an immense amount of ore, which in the lower levels carries as high as \$70 to the ton. It is claimed that most of the ore blocked out in the mine will average \$15 to the ton in gold and copper.

The ore is iron and copper pyrites in garnet rock. There is a great deal of ore on the dumps ready for shipment. This property appears to be the greatest mine in the Boundary, and affords an illustration, though perhaps an exceptional one, of the much cherished theory of some miners, i. e., that gold values in this class of ore improve with depth.

More Big Properties.

The Sunset group, adjoining the Mother Lode on the east, appears to have three leads, on two of which work is being carried on. That on the Crown Silver is 75 feet wide on the surface. The Sunset lead appears to be 150 feet wide. These veins both carry ore similar to that of the Mother Lode, that is chalcopryite and iron pyrites in a gangue of calcite and magnetic iron, and some shoots and bunches of rich ore are found in the ledges.

On the Arlington-Burns group considerable work has been done. The controlling interest in the Buckhorn property is now owned by the Buckhorn company, which is operating the group, and has so far met with encouraging results, though not sufficient work has been done to define the veins. The Morrison is one of the best known claims in the camp. It possesses the earmarks of a good mine, having an immense vein which carries a good deal of pay ore. A tunnel some 400 feet in length has cut a 73-foot vein at a depth of 225 feet. The ledge carries 14 feet of clean pay ore, with a considerable mixed ore and quartz, here has been a temporary let up on development in the Morrison, pending the re-organization of the company as a Canadian corporation. The change will bring increased capital for development, which should soon place this property in the list of shippers.

There is a good surface showing of ore on the St. Lawrence, which is supposed to have the continuation of the Mother Lode lead.

The Greyhound, Ah There, and Peacock are properties which bid fair to add to the reputation of Deadwood as a camp of big showings.

On the West Fork.

R. E. (Barbarian) Brown and other operators are opening up claims at Beaver Lake, on the West Fork of the Kettle river. This section, judging from reliable information, is likely to be a valuable addition to the camps of the district.

SUMMIT CAMP.

It is Situated in the Midst of Excellent Properties.

Few of the many towns which owe their existence and prosperity to the mining industry possess the advantage of being situated in the very midst of the best claims of a big mining camp. Up to the present Rossland and Phoenix have been the only towns in British Columbia so fortunately located. There is a town springing up in the Boundary, however, which is as happily situated as either of the well known camps just mentioned—one which, moreover, bids fair to become nearly, if not quite, the equal of either Rossland or Phoenix. Summit City, which is just becoming known as the centre of the famous camp of the same name, is, in many respects, much more favorably conditioned than was Rossland at the same stage of its history. The townsite which comprises 500 acres, is situated between the wonderful B. C. mine, which has over \$1,250,000 worth of ore blocked out, and the Oro Denoro, which possesses an ore body giving every indication of size and value, while on every hand, adjoining the townsite and within a distance of half a mile in every direction are working properties and prospects of the greatest value. And Summit is a copper camp, every vein on the working properties carrying good values in the red metal. It has come to be a recognized fact that a copper camp is a permanent and paying one, the common belief of miners that "you can't dig a copper mine out" having never been disproved, and it is not unreasonable to expect that Summit camp, with its wonderful bodies of copper ore, will fulfill in years to come the expectations of those who are expending their money in developing its resources. As the exploration of the veins of the camp proceeds millions of dollars will be expended for supplies, machines and wages, and as the greater part of the money so expended will pass through the hands of business men in Summit City, that place should certainly become a most prosperous town.

The townsite is located on nearly level ground, and radiating from it is a network of roads reaching the working mines of the camp, and trails affording access to the many prospects which though possessing good ledges, have not as yet been developed to any extent by the Boundary C. P. R., which taps the rich mineral district to the south, including the great mines of Wellington and Phoenix camps, runs through the townsite, alongside of which the railway spur to the B. C. mine also runs.

Summit City is distant 10 miles from Columbia and Grand Forks, 12 miles from Greenwood City, five and a half miles from Phoenix, six miles from Boundary camp and four and a half miles from Eholt. It will be seen that the town is very easy of access, being connected by railroads, wagon roads, and trails with all the points mentioned, and being also the nearest camp of importance to the great mineral district along the north fork of the Kettle river. Fisherman creek, which affords a never failing supply of pure water, and another smaller creek running through the town, affording plentiful water facilities for all municipal purposes for a town of fifteen or twenty thousand people, while the surrounding hills, which are heavily timbered, ensure an almost inexhaustible supply of timber for mining and building uses and for fuel, while communication with the outside world by rail is convenient and rapid.

Until September of this year the town of Summit consisted of a few log cabins and tents, but in that month property covering all the ground suitable for building purposes, laid out a townsite and erected a twentyroom hotel. Other buildings followed rapidly, and since that time the town has been a scene of activity, two good hotels being in operation, as well as a restaurant, while a three-story hotel is in progress of construction. This building, which is to be one of the finest hotels in the Boundary district, will cost in the neighborhood of \$6,000, and will be ready for the reception of guests within a few weeks. Two large stores are also being erected. In one of these a large and complete stock of mining and general supplies is carried, the other will soon open, thus enabling the miners and prospectors of the camp to obtain everything necessary for their work and living right in the camp.

The mining company has sold a large number of lots, and the purchasers are buying many miners and employees of the companies operating properties in the camp—a pretty good indication of the confidence in the town which is entertained by those on the ground, who are certainly in a position to judge of its prospects. A large amount of money has been expended in opening up the streets and making other improvements in the town, while arrangements are now under way for the construction of a water supply system which will prove sufficient to afford fire protection and water for domestic and manufacturing purposes for years to come, the townsite company being the owners of water rights on Fisherman creek which will enable them to bring water a distance of only 2,500 feet, with a fall of fully 200 feet.

The post office department is about to establish a post office in the town, and a railway station, telephone and telegraph offices will follow before the end of the year, as the grading of the railway has been completed, and trains will be running through the town within a few weeks.

The promoters of Summit City are A. W. Ross, Wm. C. Hayward and Fred Whitaker, men whose known energy and experience guarantee the success of the town.

It will not be out of place to mention some of the properties within a mile of the centre of the town. These include the B. C. Mines, Oro Denoro, Emma, Rathnullen group, R. Bell, Cordick, J. S., Mountain View, Summit, Josie, Blue Bell, Homestake, Remington, Tiger, Mountain Rose, Mary B. and others equally well known and promising. With such properties, which must within a short time employ one and a half to two thousand men, at their very door the people of Summit City are bound to have reason to feel satisfied with the prospects of their town.

A PROMISING PROPERTY.

Which is Being Developed by the Boundary Creek Mining and Milling Co.

Eight years ago the district now familiarly known as the Boundary country was hardly suspected even by the few prospectors who had begun to search for iron caps, and its population might almost be counted on one's fingers. Even then, however, there were men who could see a bright future for the trackless district, and who staked their own future on the issue. One of these pioneers was Mr. D. A. Holbrook, who, after considerable experience as a miner in Washington, crossed the forty-ninth parallel and made his home on some of the "swamp lands of the crown" at the forks of Eholt and Boundary creeks, half a mile or so from where the city of Greenwood stands today. His knowledge of mining told him that the rock formation of the district was favorable for the finding of ore-bearing veins, and he diligently prospected the hills on Boundary creek. He discovered very promising outcroppings of quartz and copper ore, and in the course of three or four years secured, by local sale and purchase, 14 claims, covering a tract of ground 700

acres in extent, which he presented to the performance of his claims on the claim carrying high values. The company was formed, claims, 540 acres of water rights on the was incorporated as a Mining & Milling of a capital stock of

more favorably considered at the same time the townsite which is situated between the two creeks, which has been blocked out, and a possession of an ore vein of size and location adjoining the distance of half a mile is being worked proper the greatest value for camp, every vein carrying good ore. It has come to that a copper camp, which you can't dig never been dig, unreasonable to expect, with its wonderful in the future in the expectations of those in money in development, millions of dollars, and as the greater expended will pass in business men in case should certainly go town.

located on nearly level from it is a network working mines of the through access to the though possessing has yet been developed branch of the C. rich mineral district in the great mines, phenix camps, runs alongside of which the B. C. mine also

about 10 miles from Forks, 12 miles from and a half miles from Wellington, a half miles from that the town is being connected by, and trails with all, and being also the distance to the north fork of the creek, which supply of pure smaller creek running affording plentiful municipal purposes or twenty thousand pounds hills, which ensure an almost timber for mining for fuel, while outside world by rail.

This year the town of a few log cabins a month the present who had secured all the ground situated, laid out a twenty-room hotel, owned rapidly, and has been a scene hotels being in operation, while a in progress of completion, which is to be the main business in the neighborhood of the reception of the week. Two large erected. In one of the complete stock of mining is carried, the other enabling the miners the camp to obtain for their work and equipment.

has sold a large number of the purchasers being employees of the properties in the indication of the completion, who are certainly of its prospects. A has been expended streets and making in the town, while under way for the water supply system sufficient to afford fire for domestic and for years to come, being the owners Sherman creek which bring water a distance of a fall of fully 200 feet.

Summit City are Haywood and Fred known energy and the success of the

of place to mention within a mile of town. These include the Denoro, Emma, Rathbell, Cordick, J. S. Smith, Josie, Blue Bell, Tiger, Mountain and others equally well known. With some within a short time of men, at their very Summit City assuredly satisfied with the prospect.

developed by the Boundary and Milling Co.

The district now familiar Boundary company was owned; its mineral riches even by the few prospectors to search for iron might almost be expected. Even then, however, who could see the trackless district, their own future on the pioneers was Mr. D. after considerable exploration in Washington, cross-parallel and made his "waste lands of the of Eholt and Bound- mile or so from where road stands today. His told him that the district was favorable of ore-bearing veins, and prospecting the hills on. He discovered very veins of quartz and cop- per of three or four location and purchase, a tract of ground 700

has now in sight above the 150-level re to the value of nearly \$1,500,000 had surface showing that could compare with that on the Oro Denoro, while none of the ore bodies on the former is as wide as that exposed in the railway cut on the property of the King company. This will give an idea of the possibilities of the latter.

The Oro Denoro is a full claim lying on the side of the mountain near the centre of Summit camp, and adjoining the Emma, which also possesses a large showing of copper ore. There are several veins on the claim, the largest, known as the main vein, being 700 feet long, and having on the surface an apparent width of 200 feet. The course of this vein, judging from the outcroppings, is northeasterly. There are two smaller veins, with surface croppings of the same character, i. e., iron oxides with copper stain. These run parallel with the main ledge, but are considerably smaller.

When the company which owns the property began work it was decided to sink a vertical shaft at a point which seemed to afford the easiest method of exploring the main ledge. This shaft, which is of double compartment size was sunk on a good showing of mineral and had reached a depth of over 200 feet when the railway cut opened up the big body of ore which has attracted such general attention. The grade at one point exposed over 50 feet of practically solid copper ore, with over 10 feet showing in another cut some distance away. From the 205-foot level in the shaft a crosscut was run to tap the largest showing at a point some 50 feet below the surface. When this crosscut was examined its length was 170 feet. Up to the point where its direction was changed it had run for some 70 feet, along what appears to be a crosscut of considerable extent. The north side of the crosscut shows ore for the whole 70 feet, the mineral evidently lying mainly on that side. Though high copper values have been obtained from this ore the management has deferred its exploration until after the connection of the crosscut with the tunnel which is being run from the surface under the big copper showing. When this is completed it will be possible to explore all the ledges with ease, as the tunnel will obviate the necessity of hoisting ore and waste and pumping water.

It is proposed to cut out a large hoisting and pumping station in the shaft on the tunnel level, and continue the development of the mine by sinking the shaft to deeper levels which, from the nature of the ground, cannot be opened up by means of tunnels. The plant at present in use will suffice for some time.

The aggregate amount of work done on the property is considerable, there being, in addition to the underground workings, which are being rapidly extended, a number of prospect pits, tunnels and open cuts on the various veins, tending to show their strength and continuity. The rock formation is the usual diorite, with ribs of granite.

The values in the Oro Denoro veins are principally in copper, some assays running as high as 38 per cent that metal. The ore throughout appears to be high grade. A car shipped to the Trail smelter returned a ton.

The mine is being developed under the direction of Mr. Neil Cochrane, M. E.

THE MORRISON.
Description of One of the Most Promising Properties of Deadwood Camp.

There are not a few people in the Boundary who believe that Deadwood Camp is destined to become the richest section of the whole district, and the big bodies of pay ore which have been opened up in the working properties seem to afford grounds for the confidence felt by the miners of Deadwood.

The camp, which now has a townsite all to itself, lies west of Boundary creek, about four miles from Greenwood, being reached by wagon road, and a branch of the C. & W. railway. There are half a dozen working properties in the camp, including the famous Mother Lode and the Morrison. The latter property, which owing to its immense ledge, has attracted considerable attention during the past season, is situated in the centre of the camp, about 1,500 feet south of the Mother Lode. A description of the Morrison will be reserved for another time, as it has been practically exhausted by the great amount of work done by the present directors. It is evident that the treasury stock of a property of such undoubted merit will sell at a price high enough to amply guarantee the opening up of the mine.

The Morrison first came into prominence about a year ago, when a shaft was sunk 102 feet on the vein, being in pay ore for its entire depth. At the bottom of the shaft the ore pitched into the hill, and it was deemed advisable to prosecute future work by means of a crosscut tunnel from the creek level, the existence of large bodies of ore, mostly of shipping grade, having been demonstrated by the work done in the main shaft and in prospect pits and open cuts. In driving this crosscut two unexpected veins were encountered. These were respectively five and 12 feet wide, and though the gold values obtained from their ore do not exceed \$8 at the points where cut by the tunnel, it is believed that are worth exploring in the future.

At 400 feet the tunnel reached a point under the main shaft and an upraise was driven to connect with it. A short distance from the shaft the ore was found, and since that time a great deal of exploratory work has been done on the vein at the tunnel level, which is 225 feet from the apex of the vein. There are numerous drifts and crosscuts which serve to show an immense vein, carrying 73 feet of ledge matter including a body of solid ore 14 feet wide and considerable mixed ore in a fine quartz which promises well for development at greater depth.

On this big vein there are two main drifts. That to the south has been driven on the hanging wall for a distance of 150 feet, with ore all the way. When the

Miner visited the mine this drift had a face of solid ore of fine appearance and good ore. The north drift is 50 feet long, and also shows ore throughout.

Owing to the depth of wash covering the surface of the claim it has not been possible to define the size of the vein on top, but judging by the showing in the tunnel and drifts the ledge is of unusual size and contains an immense amount of shipping ore.

The ore of the Morrison vein is an iron and copper sulphide in a quartz gangue. The values are high, the gold being 1.1 gold are obtained, while the ore throughout carries \$12 in gold to the ton, with three per cent copper, values which are easily above the pay limit. The amount of ore contained in the main vein, where it has been explored is sufficient to justify preparations for shipping, and further work on this and the two smaller veins will without doubt disclose other bodies of ore, and the Morrison one of the big producers of the district.

The railway branch to Deadwood camp is half a mile from the Morrison workings, but a spur to the mine has been surveyed, and as soon as the company's engineers decide on the location of the permanent working shaft and ore dumps the Columbia & Western railway will build a spur to the mine in readiness to haul ore to the C. P. R. smelter at Trail. The Mother Lode smelter at Greenwood, it may be mentioned, is only a couple of miles from the mine, and the rate for freight and treatment will not exceed \$5.50 a ton, which will allow a good margin of profit even at the maximum cost of smelting, which is likely to be reduced on the completion of all the reduction plants now under way.

Pending the construction of the railway spur to the mine a wagon road has been built, and access to the property is now most convenient. It is proposed to replace the present machinery by a plant which will provide power for 10 drills and hoisting capacity sufficient for the development of the mine to a depth of 500 feet.

It is probable that shipment of several tons of ore will be the object of making a smelter test. This, however, cannot fail to be satisfactory, and the regular shipments which should follow further development should bring good dividends to shareholders in the Morrison.

Pending the reorganization of the company the full working force is not retained but everything is in readiness for the employment of a large additional number of men on the consummation of the plan. The head office of the company in the future will, it is understood, be located in Montreal or Toronto. A considerable proportion of the stock being held in those cities.

THE PATHFINDER.
What Promises to be a Great Mine on the North Fork.

The reputation of the North Fork district is in no small degree due to the development of the ore bodies which have made the Pathfinder one of the best and most favorably known properties in the Boundary country. This claim, which is a crown-land location, is the property of the Pathfinder Mining, Reduction & Investment company, of Grand Forks. It is located on Pathfinder mountain, 14 miles from Grand Forks, and is reached by means of a good wagon road. The claim, which is of full size, lies in a "basin" near the summit of the mountain. It has been developed in the most intelligent manner, and may fairly be said to have passed the prospective stage. The workings are of considerable extent, and have disclosed a large amount of ore, which carries paying values throughout. A summary of the concise report recently presented by Mr. D. M. Waters, the engineer of the company, which The Miner commissioner, after examining every part of the property, is unable to discount in any single particular, will give a good idea of the work that has been done and its result.

Almost the whole of the formation consists of original eruptives of the porphyritic and trap groups, with slight secondary alterations. Towards the centre of the ground there is a strong belt of granite, with limited areas of intrusive diorite and some granite. This belt is from 200 to 300 feet wide, and is intersected by a series of dykes, some of which are highly altered dioritic rock and disappear, the diorite, in turn, being replaced by porphyry. Traversing the granite longitudinally are two parallel systems of porphyry dykes, extending northward from the main mass of porphyry for over 2,000 feet. These dykes vary from 60 to 100 feet in width, and are seldom more than 200 feet apart. It is in this belt of granite and its contact with the dykes that the ore bodies of the Pathfinder are found. There appear to be four veins, though there are indications that they have a closely related source and may prove in depth to be one and the same vein. No. 1 vein occurs near the southern limit of the granite, having a strike nearly east by north. Having proved this ledge on the surface, for 120 feet a shaft was sunk to a depth of 115 feet. Owing to surface faulting, the ore was found misplaced twice within the depth of this shaft. It was recovered, however, by crosscutting on the 50-foot level, where the ore body was found to be 12 1/2 feet wide. The great amount of water in the shaft compelled the abandonment of work soon after crosscutting was begun on the 100-foot level. This work will be resumed on the installation of pumping machinery. No. 2 vein occurs about 300 feet east of the No. 1 shaft and on the eastern side of the principal porphyry dyke. At the point where No. 2 shaft was sunk this vein has 33 feet of ore between the walls. This narrowed at one point to four feet, but was continuous to the bottom of the 67-foot shaft. Seventy feet south of the ore was found in an open cut, and continued in a drift of over 50 feet to the south. A prospect tunnel was run to crosscut the dyke, vein No. 2 and the granite and to tap the ore in the bottom of No. 2 shaft. This was accomplished in running 138 feet. Between 60 and 70 feet from the mouth of this tunnel four feet of ore was found, what became known as No. 3 lead. This vein was subsequently found on the surface, the ore being opened up at points respectively 142 and 215 feet south of the tunnel discovery. At the 142-foot point a prospect pit, 10 feet by 14 feet across the ledge, sunk to a depth of 16 feet was found to be all in ore sorting about 60 per cent shipping ore to 40 per cent mixed ore and waste. In a drift from the tunnel on this vein, continuous ore was found for nearly 40 feet. A drift to the north shows this shoot to be at least 65 feet in length. At 33 feet the ore was found to be at least nine and a half feet wide. From a point

90 feet in, to the face of the drift, the ore was again found to be continuous, a crosscut of 20 feet showing clean ore throughout. This drift is only beyond the surface cut, and shows no interruption of the ore body.

Having proved this ore body, the management began a permanent working shaft of two compartments, 120 feet east of the No. 1 shaft. In grading for the shaft house another body of solid sulphide ore was found in direct contact with the second porphyry dyke. This will be explored in the new working level of the shaft.

The ore on all the veins is the typical sulphide ore of the Boundary—pyrrhotite iron pyrites and copper pyrites. The values obtained from samples run as high as \$40 to \$142 in gold, while selected specimens from No. 3 vein gave from 20 to 27 1/2 per cent copper. Averages of the 50 tons of ore taken out of the various workings in the course of development yield from \$12 to \$15 a ton, which must be considered a remarkably satisfactory showing regard to the showing of ore.

The ore body of No. 3 vein, which is regarded as the main shoot of the mine, assays from \$8 to \$12 in gold and three and a half per cent copper.

As soon as possible The Miner man was informed, the company will place hoisting and pumping machinery, as well as power drills, on the property, which they will then be enabled to work on a scale commensurate with the value of the property. A tramway line 3,500 feet in length, will convey ore to the North Fork branch of the C. P. R., already surveyed past the foot of the mountain.

The new working shaft was found by The Miner to have been sunk to a depth of 35 feet, with four feet of the east side of the shaft in clean pay ore, though it was not expected that this ore would have been met above the 75-foot level. It appeared, in fact, that wherever the management did any prospecting they found bodies of good ore, and the workings throughout cannot fail to impress any visitor very favorably, not only with the merits of the mine itself, but also with the careful and scientific methods of those who have charge of the property.

The stock of the company is held largely in Grand Forks and by eastern investors. Of the original promoters stock 600,000 shares remain in the hands of the locators of the property. Of the 350,000 shares of treasury stock 201,000 have been sold. Of this amount only 15,000 has been retransferred on the company's books, a fact which shows the confidence the shareholders feel in the company. The stock is simply caused by the presence on the market of several blocks of stock, included in the 15,000 referred to, and has no relation to the merits of the property.

THE WONDERFUL WINNIPEG.
Has Two Big Veins and a Lot of Shipping Ore Ready to the Smelter.

One of the Boundary mines which is only awaiting the advent of the railway in order to ship ore to the smelters is the Winnipeg, which is situated in Wellington camp, near the summit of the Boundary range. This property is owned by the Winnipeg Mining & Smelting company, limited, which was incorporated on July 14, 1897, with a capital stock of \$1,000,000 in \$1 shares. The head office of the company is in Greenwood, and its officers are the following gentlemen: President and superintendent, Duncan McIntosh, Greenwood; vice-president, John Mack, Spokane; secretary, W. F. Honey, Park River, North Dakota; E. J. Dyce, Grand Forks, North Dakota; E. J. Dyce, Spokane, is also a director. David Oxley is in charge as foreman. The stock of the company is largely held in Greenwood and North Dakota, though there are many shareholders throughout British Columbia and Eastern Canada.

The Winnipeg takes rank as one of the best partially developed mines in the Boundary, having in sight a large showing of ore which is being added to as regular development proceeds. Some 2,000 feet of underground work has been done on the mine, with the result that the company is only awaiting for the completion of the railway to ship ore at the rate of at least two cars a day.

The number one vein of the Winnipeg, on which the greatest amount of work has been done, is an iron-ore ledge on the west which is regarded as a contact of gabbro and diorite, the rock formation and the ore resembling those of Rossland. On this vein a number of prospect shafts were sunk, and the vein was traced for a considerable distance. Then a vertical double compartment shaft was sunk to the 100-foot level, where the vein was out. From the bottom of the shaft follows the vein, on an incline to the 300-foot level, the greatest depth as yet reached in this property. On the 50-foot level, after crosscutting to the vein, a drift was run on the ledge for 100 feet on either side of the shaft. These drifts are all in ore, disclosing a body which varies in width from six to eight feet, and carries about two per cent copper and average values of \$15 in gold. On the 100-foot level there is a drift to the west which is 200 feet long, and a 50-foot drift on the east. On this level the ledge carries the same width of ore as on the 50, and the values average the same. This vein has also been proved by a 200-foot drift on the 300-foot level.

The great showing on the Winnipeg, however, was found recently in a crosscut from the shaft on the 300. This was run with the object of exploring at depth the drift to the west and north of the shaft. After running 100 feet to the west the direction of the crosscut was changed and it was run 400 feet to the north. At this point a vein 50 feet wide was cut. The ore body, which is practically the width of the vein, is of the same character as that blocked out in the first vein, and carries about the same average values. Considerable work is being done on this vein, with the result that the management are convinced that the ore body is of great extent. So far as can be determined, the course of this vein is northeasterly. It is known as a blind lead, from the fact that its surface croppings, if it reaches the surface, have not been discovered.

In the course of development the Winnipeg people have taken out something like 2,000 tons of ore. This is said to carry shipping values throughout, and is piled up on the dumps ready for shipment on the completion of the railway which is graded to the shaft house.

In addition to the two big leads already described there is on the Winnipeg an 18-inch vein of quartz which carries high values in free gold.

Glazen, First avenue and Spokane street, buys second hand goods. First class typewriter for sale.

BRANDON AND GOLDEN CROWN.
A Promising Mine in Wellington Camp With Ore Ready to Ship.

One of the two mines in Wellington camp which is ready to ship ore, and to which the Columbia & Western railway is building a spur is the Golden Crown, which adjoins the Winnipeg on the east. The claim, which is of full size and crown granted, is owned by the Brandon & Golden Crown Mining company, limited, which has its head office in Rossland, and in which many people in this camp are interested, though a good proportion of the stock is owned in Brandon and other Manitoba cities and in Greenwood. Hon. T. Mayne Daly is president of the company, the other directors being W. J. Porter, Greenwood; vice-president and superintendent, George H. Collins, Greenwood; managing director, Andrew Kelly, Brandon; W. A. Fuller, Spokane; W. A. Macdonald, O. C. Nelson; Hon. J. H. Karchhoffer, Brandon; James Currie, Montreal; and James A. Russell, Greenwood. The capitalization of the company is \$1,500,000, in \$1 shares.

Several leads have been found on the Golden Crown and considerable development work has been done on the number one vein—which is the same as that on which the main workings of the Winnipeg are—while more or less surface work has been done on other ledges.

The working shaft is of double compartment size and has been sunk vertically to a depth of 300 feet. On the 100-foot level a crosscut of 16 feet cut the vein, on which a 260-foot drift was run to the east. This work is all in ore, varying from the width of the drift—about four feet—to 1 1/2 feet. On the 100-foot level there is a 30-foot crosscut to the vein, with a drift 75 feet long, all in ore. In this drift there is a winze 20 feet deep, showing ore throughout, and an upraise to the 100-foot level, this being also in ore.

At the 300-foot level in the shaft a crosscut was run to the north, and at a distance of about 50 feet from the shaft an unexpected find was made, the crosscut going through an eight-foot vein carrying a good grade of copper ore. This is evidently a "blind" lead. The crosscut has been continued for a distance of 250 feet from the shaft, with the object of cutting the big vein recently found in a crosscut at the 300-foot level in the Winnipeg near the Golden Crown ground. As the vein on the Winnipeg carries nearly 50 feet of pay ore it is certainly worth seeking for, especially as there is every indication that the vein is that which has been proved by surface work to run through the Golden Crown, with a course nearly parallel to that of the number one vein.

The Golden Crown, like the Winnipeg, possesses several other veins which promise to justify development. A 300-foot tunnel has cut three of these veins, each of which carries good ore. There is also a 40-foot shaft on the small vein of free milling quartz which runs through the Golden Crown and the Winnipeg, and from this ore some very high assays have been obtained, as well as specimens rich in visible gold. In grading for the railway the laborers uncovered a big body of ore on the main lead three or four hundred feet from the shaft house.

The formation on a gabbro on the foot-wall, with diorite on the hanging wall, and the work so far done on the vein seems to indicate that the ledge is of the same character as the big veins of Red Mountain. The ore is a sulphide of iron and copper similar in appearance to that found in the Rossland mines, while the values compare very favorably with those of the Red Mountain. The ore is taken out of the Golden Crown carries from two to three per cent copper, with gold values ranging as high as \$50 and even \$100 a ton. The average values contained in the ore, it is stated, run \$20 to the ton, which would place the product of this mine well above the shipping limit.

No attempt has as yet been made to block out the ore for stoping, and any estimate of the amount of ore available for shipment would be mere guesswork. It is evident, however, that when the company is ready to send ore to the smelter there will be no difficulty in making regular shipments. The railway spur passes within a few feet of the shaft house, and as soon as the rails are laid and ore cars are available the Brandon & Golden Crown company will be able to produce ore in considerable quantities, with dividends for the shareholders as a natural sequence.

In the course of development a goodly pile of shipping ore has been hoisted to the surface and is heaped up on the dumps awaiting the ore cars. When stoping begins the ore dump should grow rapidly, as the hoisting plant has a capacity of 100 tons a day, the only cage in the Boundary facilitating the work of hoisting. The plant consists of two boilers of 90-horse power, a five-drum compressor, hoist and pump, which are all in first class condition and of sufficient capacity to develop the mine to a fair depth. At present 15 men are employed, and the work is progressing in good progress is being made.

The Golden Crown is being worked in a rational manner, and judging from the surface showings and the amount of ore disclosed in the underground workings the shareholders may congratulate themselves on the possession of a property that is very likely to become a good dividend payer.

KITTY W. CLAIMS.
Two Valuable Properties on Pathfinder Mountain.

A mining company which is most favorably regarded in Grand Forks, where its property and officers are best known, is the Kitty W. Gold Mining company, limited. This company, which is formed on the non-personal liability system, owns the Kitty W. and Kitty W. Fraction mineral claims on Pathfinder mountain, in Brown's camp, which has become easily the most prominent of the North Fork camps, owing to the remarkable bodies of ore disclosed on various properties which are in the immediate vicinity of the Kitty W. group. The two claims owned by the company were first located in 1895. They cover approximately 65 or 70 acres of mineral ground, and take up all the ground between the Pathfinder and the Little Bertha, two of the best properties in the camp. On the north the claims adjoin the promising Ontario Boy, while on the south is the Mammoth, with its immense surface showing. On the other surrounding claims rich ore has also been found, including the showings on the Volcanic, Diamond Hilt, Pay Ore, Orange Blossom, Tiger, and Hidden Treasure. It is not the richness of the adjoining claims, however, that makes the Kitty W. a valuable property. The two claims have surface show-

ings of a most excellent character, including within their bounds the continuation of the No. 1 or east and west vein of the Pathfinder, which can hardly fail to prove a good vein on this ground. The iron capping which indicates the presence of big veins on the property is nearly 400 feet in width, making the work of prospecting one of some magnitude. A great deal of surface work has been done, however, there being a number of open cuts and test pits, which establish the fact of two ledges running through the claims. A series of porphyry dykes, similar in character to those on which the ore bodies of the Pathfinder occur, traverses the ground, and it is along these dykes that the ore is found. At present work is in progress on what is known as the Pathfinder vein, the men being engaged in sinking a shaft which will in all probability become the main working shaft of the property. Sinking was begun on a fine showing of oxidized quartz uncovered in one of the numerous open cuts on this vein. There was a steady improvement in the character of the vein matter as depth was gained, and when the writer saw the property, at a depth of 15 feet in the shaft there was considerable good looking ore, which carried \$8 in gold. Since that time, as a result of further work a strike is reported which would go to prove that the Kitty W. has much richer ore in this vein than was at that time visible. It seems extremely probable for that the stock of the company which has been recently placed on the market at a very low figure, will soon appreciate, as the result of improvements in the adjoining properties, and new discoveries on the ground owned by the company. The stock of the Kitty W. is held almost entirely in Grand Forks, where the directors reside. The capitalization is \$100,000 in 10 cent shares, and there are 600,000 shares in the treasury. The original owners of the claims, Messrs. Wm. A. Pfeifer and W. L. McKay, are respectively president and vice-president of the company. The other directors are: Messrs. B. Cochrane, Hugh Sweeney and M. D. White. Inquiries regarding the property should be addressed to the secretary of the company at Grand Forks.

EARTHQUAKE GROUP.
Three Promising Claims in Brown's Camp on Volcanic Mountain.

During the last few weeks not a little attention has been attracted by the Earthquake group, which lies near the centre of Brown's camp, on Volcanic mountain, in one of the best mineral districts on the North Fork of the Kettle river. This group is the property of the Earthquake Consolidated Gold Mining Co., and consists of three claims. The Earthquake, Phil Sheridan and New Last Chance.

While these claims were among the first locations in the district and possessed very fine surface showings, lack of transportation and other disadvantages prevented any serious development work until the present season. Last spring the claims were purchased by the present company, which was incorporated for that purpose. An influential board of directors was chosen and a systematic plan of development mapped-out. During the summer a good force of men has been kept at work, and when The Miner representative visited the group, about 400 feet of work had been done, with results of the most encouraging nature. There are four veins on the property, and on all of these more or less work has been done. Three of these veins have the usual north and south trend, the fourth being a cross lead, cutting the formation and the other series of veins. This cross lead is by many regarded as the best on the property, it having been determined that it is the same ledge as that on the Golden Eagle, which is noted as one of the richest gold-copper properties on the North Fork.

The nature of the ground on the Earthquake claim, on which the principal workings are located, permits of development by means of tunnels on the ledge, reducing the cost of working to the lowest point. The main tunnel has been run a distance of 135 feet on a well defined vein, from which assays averaging from \$6 to \$14 were obtained. Specimens yielded much higher returns. The width of this vein varies from 14 inches to two feet. The face of the tunnel is in ore, maintaining the same width and values. From the end of the tunnel a crosscut is being run to cut the other veins. When the writer visited the property, this crosscut was 80 feet in length and had encountered two other leads and several stragglers. Number 2 tunnel has been driven a distance of 86 feet, with a 62-foot crosscut. The object of this tunnel was to intersect the Golden Eagle vein a good depth. At the end of the crosscut, the vein was encountered, having at this point a width of seven feet. A flatault cut off the vein at this point and a winze was sunk with the object of getting below the break in the ledge. In this the superintendent was successful, and at a depth of 30 feet in the winze the ledge was found 10 feet wide. Average assays from this point, give returns of \$10 and \$15 in gold with some silver and copper. On the summit of the hill, in a test pit sunk on this vein, values from \$20 to \$80 to the ton were obtained.

The work on development is being prosecuted in a painstaking and intelligent manner under the direction of Superintendent D. G. Evans. The head offices of the company are in Grand Forks. The officers are: President, C. A. Powell; secretary and managing director, Frank Sears; treasurer, J. McLaughlin, local manager of the Eastern Townships Bank.

A good road leads to the property, which is one and a half mile distant from Eagle City on the main North Fork road. Within a few months it is likely that railway facilities will be afforded, enabling owners of the Earthquake group to obtain supplies and transport ore to the smelter at the lowest rates.

The secretary states that there is yet in the treasury about 375,000 shares of stock or future development. Up to date the treasury stock has been sold mostly in Eastern Canada in large blocks, there being an increasing demand for the stock from that section. The company is organized upon a non-assessable plan.

ON BONANZA MOUNTAIN.
A Promising Group of Properties on the North Fork.

One of the most promising group of prospects in the famous mineral belt of the North Fork of Kettle river, is that owned and operated by the Bonanza Mountain Gold Mining company, and which is situated on the Bonanza mountain. Until this season this property, in common with all others north of the Pathfinder, was to be

reached only by means of rough trails, making the cost of packing supplies a very considerable item of expense, and greatly retarding the development of a number of valuable properties. Notwithstanding this disadvantage, however, considerable work was done by the Bonanza company on its claims, the sum of \$3,000 having been expended. Several weeks ago the management of the company began the construction of a wagon road from Banook City, a new mining camp, at the mouth of Pathfinder creek, to the property, a distance of five and a half miles. The Little Bertha company, owning a mine near the mouth of Cedar creek, assisted in building up road to their property, but for the remainder of the distance the Bonanza company undertook the entire expense, which has proved very considerable, owing to the difficult nature of the ground and the abruptness of the mountain. From Banook City the road follows the North Fork valley of Cedar creek, where the work of actual development had been temporarily suspended, the men being engaged in building bunk houses and preparing for the machinery. The property of the company consists of the Bonanza, Colorado, Nevada and Mountain View mineral claims, which form a compact group and cover about 200 acres. These were the first locations on Bonanza mountain. The claims are situated on the summit of the mountain and form the central group in what is known as Knight's camp. The veins of this camp have the same trend as those of Brown's camp, and undoubtedly belong to the same mineral belt as the Pathfinder, Volcanic, Golden Eagle, Earthquake, Little Bertha, etc. The principal showing on the property of the Bonanza company is the outcropping of a well defined vein which has the usual northerly and southerly strike. Its minimum width, where exposed, is 4 feet, while in places the showing is fully eight feet wide, and in the cuts and workings it shows from six to eight feet wide. On the surface the vein matter carries a great deal of iron and copper pyrites, the entire capping of the ledge being heavily oxidized and copper stained, and the ore occurs in quartz of an excellent character. The vein is evidently on a contact of porphyry and granite, and is traceable for nearly 1,000 feet along a porphyry dyke which extends through the property. Considerable work has been done on the group with very satisfactory results. The No. 1 shaft, sunk three years ago, is 80 feet deep, with a nine-foot cross-cut in the bottom. The ledge matter in this shaft is well mineralized and shows a good deal of copper. The second shaft was sunk on the ledge at a point 500 feet south of the first, and is 30 feet deep. In this shaft the vein is very clearly defined, being seven feet in width between good walls. Three feet of the ledge was the closed here, consisting of good looking ore and bears considerable copper. An average sample of the whole ledge at this point, gave an assay of \$3 in gold, with some silver and copper. The solid ore taken out of this shaft carries much higher values. The third shaft, which was begun this season, and which will be made the working shaft, has attained a depth of 20 feet. It has been sunk on the widest cropping of the vein, and from it a quantity of very fine pyritic copper ore has been taken. An average of the solid ore from shafts 1 and 3, taken by the manager of the property, returned values of \$34 in gold and copper, while specimen assays run as high as \$70. The plan of development which is to be pursued provides for the sinking of the working shaft to a depth of 100 feet, and a thorough exploration of the ledge at that depth. The vein has been well prospected on the surface by means of the shafts before referred to and several open cuts, and when further explored by means of the shaft and drifts by means of tunnels. The management has very wisely decided to sink on the ledge to the 100-foot level at least before tunneling, having profited by the experience of a number of other mining men who left their ore to drive crosscut tunnels and were obliged after all to return to the surface and follow the vein. From the extent and character of the surface showing on the main vein of the Bonanza group there is little doubt that the results of the development work will be most favorable. There is another vein running parallel to the main ledge. This has not been prospected to any great extent.

The management of the property is in the hands of Mr. F. H. Knight, an energetic and practical mining man, who has devoted a great deal of time and attention to the affairs of the company, in which he is heavily interested. Associated with him in the management of the property, is Mr. A. H. Dawson, a prominent Grand Forker, who was for some time mining recorder in the Northport district. When the financial affairs of the company were in a somewhat languishing condition, these two gentlemen knowing the merits of the property and having the utmost confidence in its future, agreed to construct a wagon road, purchase the necessary machinery and develop the property to a depth of at least 100 feet, assuming the responsibility of placing sufficient treasury stock for that purpose. In this they have been eminently successful, having placed several large blocks of stock in the east. The chief shareholders of the company also entered into an agreement by which they guarantee to supply additional funds if required. It will be seen that the company is in a most favorable condition. With a conscientious and capable management actuated by a desire to place the company on a dividend paying basis, and acting

on the best expert advice; with a vein which gives every indication of developing paying ore bodies, the shareholders feel satisfied that their interests are not likely to suffer. The directors of the company are all well known business men of Grand Forks and Columbia, the personnel of the board being as follows: Neil McCallum, president; F. H. Knight, vice-president; C. H. Hay, secretary-treasurer; C. M. Marden and William Direskov, directors. It may be mentioned that the construction of the projected branch of the G. & W. railway, which is likely to be accomplished next season, will prove of great importance to the Bonanza Mountain company, as it will bring the cost of transporting ore and supplies down to very low figures.

Prospectors' Packing Outfits.
In the Boundary and Similkameen districts next season will undoubtedly see great activity in prospecting. Owing to the remarkable developments of the last few months in the last named section, many of the prospectors of Kootenay will undoubtedly turn their attention to that western district, where their work may be carried on with much less inconvenience than in more rugged sections. As all prospectors in that country use horses, those who intend to go there in the spring should bear in mind what H. C. Smith, whose establishment is on Bridge street, Grand Forks—opposite Megaw's—makes a specialty of supplying prospectors with complete riding and packing outfits, of any style or grade desired. Mr. Smith, whose long experience in Rossland and Grand Forks has made him familiar with all the prospector's requirements in riding and pack saddles, bridles, etc., intends to have ready for the spring trade the most complete stock of harness and saddlery in the Boundary, and asserts that his prices will be found as low as possible and all his goods reliable.

A Good Townsite.
The original townsite of Phoenix, which will undoubtedly become the residential section of the camp, is situated on high and level ground overlooking most of the mines, and covering the ground of the New York mineral claim. There is an abundant supply of spring water in Marshall lake, a pretty body of water adjoining the townsite. This lake is fed by rock springs. The railway runs close to the townsite, which is also easily accessible by wagon road. Forty-five acres have been laid out in lots, while the ground of the Tiner Fraction, though not subdivided, also forms part of the townsite. There are two hotels and a general store on the townsite as well as a number of dwelling houses, and its rapid growth may be looked for. From its beautiful situation and proximity to the mines the original townsite is certainly the most desirable residential portion of the camp. Mr. George Breckenridge, formerly of Rossland, is agent for the sale of lots.

RUMBERGER'S PHOENIX.
The history of the Newest and Busiest Mining Town in the Boundary.
There are three townsites at Phoenix camp, but the business of the town is centered in what is officially known as Rumberger's subdivision, which covers part of the ground of the Cimeron mineral claim, the place where for years the prospectors working in the vicinity made their camps, and where the Providence creek trail left the main trail from Grand Forks to the west. In 1891, when the first discoveries were made in what is now Phoenix camp, George A. Rumberger, a young man with some experience as a miner and prospector in Colorado and Idaho, started prospecting in the Boundary Creek district, and, with his partners, located the Brooklyn, Idaho, and a claim covering part of the Cimeron ground. The first cabin in the camp was built by Mr. Rumberger in that year on the Brooklyn claim. In 1895 the Cimeron was relocated under its present name, in order to take in additional ground under the act, which increased the size of claims from 600 x 1,500 to 1,500 x 1,500 feet. The title to this claim was acquired by Mr. Rumberger, and though it has not been developed and will perhaps never prove a mine, it is now one of the most valuable claims in the whole district. Its lots are considered as good as gold, the subdivision being located in the centre of the mines which have made Phoenix famous.

On the old camping ground, now covered by big buildings, a log "hotel" was built in 1895, and became a regular stopping place. Other buildings sprang up by degrees, and in June, 1898, the first store was erected. In this a postoffice was established and Messrs. Wynkoop & Stephens did a thriving business in supplies. Mr. Rumberger then began to think of obtaining the surface rights to the ground of the Cimeron, and after due process he acquired a title to the land in August, 1899. In the meantime he had laid out streets, Dominion avenue, now the main business street, and Brooklyn avenue, a residential street. A number of new buildings were erected on these streets, and by the time lots were on the market there was already a thriving little town.

The town has now a population of about 1,000 not to mention the streams of visitors which make up a considerable floating population. There are eight hotels in Rumberger's subdivision and four in other parts of the town. Two newspapers are published weekly—the Pioneer and the News, and both are creditable sheets. Every line of mercantile business is well represented, and the town throughout wears a bustling and prosperous appearance. The present water system, sufficient for the needs of the town, is likely to prove inadequate in view of the rapid growth of the camp, and Mr. Rumberger and others have incorporated a company and formulated a plan for a gravitation system by means of which the town will be supplied with a sufficiency of the purest water from Marshall lake and other sources. This work will be undertaken as soon as practicable in the spring.

The electric power line from Cascade is being constructed through Phoenix, and will supply all the electricity required for power and light.

The Phoenix branch of the Columbia & Western railway has been graded into the town, and within two or three weeks trains will doubtless be running from the main line to the town. It does not appear that the location for the depot has as yet been selected, but if it is placed near the business centre it will be on Rumberger's subdivision.

One of the principal brokers of the Boundary country is Mr. Frank Sears, whose advertisement on another column will interest those who contemplate investment.

Adambra Theatre and Hotel.
The amusement loving people of the Boundary, which class, it is almost needless to say, includes practically the whole population of the district, have heretofore had few opportunities for diversion. The newest enterprise in Greenwood, however, is one that will really fill a decided want. The Adambra Hotel & Theatre company have just taken the Adambra building, which in addition to a modern hotel establishment, including a handsome bijou theatre with seating capacity for 700. The building is a four-story structure, with complete restaurant and club rooms and 30 elegantly furnished rooms. The theatre is under the management of Mr. Delphos Lawrence, a producer of high class comedy who is well known to theatre goers in Rossland, Spokane and other northwestern cities. The management has announced its intention to provide for the entertainment of the people of Greenwood and the surrounding camps a succession of clean and amusing vaudeville shows, without any of the objectionable features which have detracted from the success of similar enterprises in other towns. The cleverest people in the amusement business will appear at the Adambra, and as the program will be changed every week there will be no lack of new features. To say that the musical part of the show is under the direction of Prof. Con Meich is to guarantee its excellence. The Adambra is certain to prove a successful venture.

Megaw's Wonderful Stock.
The name of W. R. Megaw is well known in Grand Forks in connection with the largest wholesale and retail business in the town. Mr. Megaw has recently occupied a handsome new store on Bridge street, and there the fashion lovers and bargain seekers of the Gateway City are to be found daily. In this store a specialty is made of miners' and prospectors' supplies, and this branch of the business is one of the chief sources of the reputation of the establishment. The mammoth stock also includes general dry goods, carpets and house furnishings, clothing, hats, and caps boots and shoes, groceries and provisions, fruits and vegetables, flour, feed and grain, china, crockery, harness, saddlery, sewing machines, bicycles, agricultural implements—in fact, everything from a needle to a thrashing machine. Mr. Sweeney is in charge of the Grand Forks store. There is also a store at Vernon.

ANTI-MONOPOLY MEAT.
Enterprising and Independent Men in the Butcher Business in Phoenix.

The people of the Kootenay mining camps, who are, of course, the consumers of great quantities of meat, have been confronted with a serious problem in the monopoly which has resulted in forcing upon the price of the necessary article of food to a point regarded by many as being little short of extortion. In Phoenix camp, however, this undesirable condition is not to be apprehended, thanks to the enterprise of the men who are doing business under the firm name of Vaughan & McInnes. Messrs. Leonard Vaughan and Donald McInnes are pioneers of the Boundary country, familiar with its needs and resources, and enterprising enough to pass the one and utilize the other. In the early days of Phoenix camp they established a meat business in the embryo town, and succeeded in securing the business of most of the mines and hotels, which they still hold.

Their store is situated on Old Ironsides avenue, adjoining the establishment of the Wynkoop-Stephens company, and their stock for excellence and variety is not surpassed in the district. They carry a full line of beef, mutton, pork, ham, bacon, salt meats, sausages, lard, fish and fowl, with all kinds of game in season and as a result of their enterprise the price of these commodities is on a much more reasonable scale in Phoenix than in other camps, notwithstanding that the lack of adequate transportation has had a tendency to increase the cost of bringing meat to the town.

WYNKOOP-STEPHENS TRADING CO.
A Big Concern Which Does Business in Phoenix and Wellington Camps.

The mercantile establishments of the mining camps occupy a place midway between the general stores of country towns and the immense department stores of the great cities, and have some of the characteristics of each. They pay as close attention to the wants of the customer as any country storekeeper who knows every customer personally, while the range of stock they carry is fully as wide as that of the department store. In every camp there is one mercantile concern that commands the bulk of the business with miners, prospectors and citizens, and it is needless to say that the proprietors of such a store must be ever on the alert to maintain their position.

In a camp of the importance of Phoenix it is evident that the chief business houses must be one of considerable magnitude, and it requires but a visit to the stores of the Wynkoop-Stephens Trading company, limited, to convince the observer that the camp is fortunate in the possession of an establishment that would do credit to any town.

In the month of June, 1898, a year before there was any town of Phoenix, a postoffice was established on the present site of the camp, for the convenience of the handful of miners and prospectors who made their homes in the vicinity. Rightly judging that the value of the surrounding mines would soon bring the camp into prominence, and foreseeing that its population would quickly increase, Messrs. George R. Wynkoop and J. M. Stephens opened the postoffice store with a general stock, which they were compelled to increase constantly until they found it necessary to erect a larger store for the accommodation of their business. A joint stock company was formed under the corporate name of the Wynkoop-Stephens Trading company, limited, and in November last the company took possession of its new store on Old Ironsides avenue, in the upper town.

wide and 70 feet long on the ground floor, while in the second story it is 130 feet in length. The remainder of the front building is 32 feet wide and 40 feet long, consisting of only one storey. In the rear of the two lots are located the tinshop and the iron and steel warehouse, while a building for the storage of sashes, doors and other supplies for builders and contractors is in course of construction. The stores throughout are the most complete and extensive in the Boundary district.

The company also maintains a branch store in Rumberger's subdivision of Phoenix, though the greater part of its business in that section of the camp also is carried on by the main stores, it being impossible to carry anything like a complete stock of goods in the smaller store. It is only to be expected that a concern like the Wynkoop-Stephens Trading company should look to the many mines which surround the camp for a considerable proportion of its business, and nearly every one of the camps of working properties in Phoenix and Wellington camps obtains its supplies from the company's stores, as do the miners' boarding houses and hotels, while the prospectors also obtain their powder, steel, provisions and other necessities at the Wynkoop-Stephens stores.

Though it would be almost impossible to give a detailed description of the extensive stock carried by the company, an enumeration of the various departments will serve to show the magnitude of the business. The grocery department is on the ground floor of the main store, and includes every variety of staple groceries and necessities, while canned goods and other delicacies constitute a large and important part of the stock, which in addition to the retail department occupies an immense store-room on the upper floor.

The hardware department is hardly second to the grocery branch in importance and extent. In mining supplies it includes miners' and prospectors' tools, iron, steel, machine and boiler fittings, powder, caps, fuses, builders' and general hardware, guns, rifles and ammunition, etc., in great variety. The dry goods department is also the most complete in the town and includes an immense stock of new goods of every grade.

In clothing the company has a complete assortment from the working suits of miners, prospectors and mechanics, to the finer clothing affected by business men, in which the latest styles are to be found. In men's furnishings, underwear, neckwear, etc., there is a very complete assortment, calculated to please all tastes. The company carries a large stock of household supplies, including stoves, cooking utensils, dishes, tableware, glassware and kitchen requisites of every character. The boot and shoe department contains the finest variety of footwear in the district, from the most ordinary article of footgear to a point regarded by many as being little short of extortion. In Phoenix camp, however, this undesirable condition is not to be apprehended, thanks to the enterprise of the men who are doing business under the firm name of Vaughan & McInnes.

STRAWBERRY AND ORPHAN BOY.
Two North Fork Claims That Promise to Produce Good Ore.

A section of the Boundary district which is likely to rival any of the older camps is being opened up by the enterprising men who are operating along the North Fork of the Kettle river. The valley of the stream will in a short time become known as the route to the principal camps of mines which, though now in the prospective stage, give unfailing indications of great merit, and will add to the already widespread reputation of the Boundary district.

One of the properties which bid fair to develop into producers is the Strawberry group, consisting of the Strawberry and Orphan Boy mineral claims, which are situated on Brown's creek, near where that stream flows into the river, and opposite Volcanic mountain, wide its immense mineral showing. These two claims were recently acquired by Mr. A. B. Clabon of Rossland, who has succeeded in organizing a strong company to develop them.

The formation of Brown's camp, wherein the Strawberry and Orphan Boy lies, is mainly due to the discovery of lime and porphyry along with the veins occurring on the Strawberry, which is the principal claim of the group, there are two ledges which may be traced for some distance along the mountain side by the iron cap which covers the ore.

On the discovery vein more or less surface work has been done; serving to show the trend of the lead, which is northeasterly. A prospect pit on this ledge uncovered a nice body of ore and oxidized ledge matter, and Mr. Clabon, on taking over the property, decided to sink at this point on the vein. An incline shaft is now being sunk, and when seen by the Miner reporter had reached a depth of 25 feet and the indications were excellent, some 50 tons of ore having been taken out of the vein in the shaft and cuts. In grading for a horse wagon, which is to be installed at once, a discovery was made which indicates that the vein is of considerable extent, a body of ore being encountered several feet above what was taken for the hanging wall. Sufficient work to define the width of the vein has not been done as yet, but when the 50-foot level is reached the ledge will be crossed in order that its size and dip may be known. The ore in this vein is a massive sulphide, carrying little copper, but averaging on the surface \$12 in gold to the ton.

MR. KIRKUP'S REPORT.

Statistics Compiled by the Gold Commissioner of This District.

Subjoined will be found the report of Mr. John Kirkup, the gold commissioner, for the Trail Creek mining division for the past year. Attached to it will be found a table showing the progress made year by year since 1894.

The gold commissioner's office, Rossland, B. C., Jan. 24, 1900.
The Honorable Inspector of Mines, Victoria, B. C.:
Sir—I have the honor to present, herewith, my annual report on the condition of the mines in the Trail Creek division for the year ending December 31st, 1899. I have taken the liberty to preface this report with a brief reference to the rise and progress of the mining industry of this division for the sextile period beginning in 1894 and ending in 1899.

A reference to this comparative statement will show the progress this trade has made since its inception. It will be seen that the output of ore from Trail and valued at \$75,524.64 in 1894 had increased to 180,300 tons valued at \$3,211,400 in 1899.

The most noteworthy features connected with the mining industry of last year are the increased production over 1898, when the output was 111,282 tons valued at \$2,470,811, being an increase in 1899 of 69,018 tons and an increase of \$740,589 in value, amounting to 62 and nearly 30 per cent respectively; the large amount of development work done, especially in the regular producing mines; the various extensions and modern character of the machinery employed; the successful flotation of the Centre Star Mining company, its progress as a producing mine and a dividend payer and the large amount of work outlined for the future.

The amount of ore shipped by the various producers, regular and occasional, together with its value are, for the year 1899, given in a separate table; the value of the ore for December being estimated in the absence of complete smelter returns.

The ore shipments from the Trail Creek mines for the year ending December 31st, 1899, amounting to 180,300 tons, is as follows, odd figures having being dispensed with:

Tons.	
Le Roi	92,250
War Eagle	63,250
Centre Star	16,700
Iron Mask	5,400
Evening Star	1,000
Monte Christo	400
Columbia-Kootenay	110
Virginia-Kootenay	100
I. X. L.	100
Miscellaneous	990
Total	180,300

Statement showing the amount of ore shipped from the various producing mines, regular and occasional, together with the value thereof, also the amount of work done on properties which are not shipping and the average number of men employed:

Tons of ore shipped		
Le Roi Mine	92,500	
Gross value	\$1,250,000	
Average number of men employed	350	
Columbia-Kootenay.		
Tons of ore shipped	110	
Gross value	\$1,400	
Average number of men employed	40	
Development work—Driving 4,300 feet; sinking, 750 feet		
Nickel Plate.	5,050 ft	
Development work—Driving, 1,930 feet; sinking, 440 feet	2,370 ft	
Average number of men employed	25	
Great Western.		
Development work—Driving, 300 feet; sinking, 200 feet	500 ft	
Average number of men employed	20	
Development work—Driving, 650 feet; sinking, 480 feet		1,130 ft
Average number of men employed	20	
No. 1.		
Development work—Driving, 1,900 feet; sinking, 430 feet	2,330 ft	
Average number of men employed	35	

Output From the Trail Creek Mines Beginning 1894, and ending 1899.

Year	Tons ore.	Oz. gold.	Val. oz. sil.	Value.
1894	1,856	3,723	59,568.00	5,357 \$3,214.20
1895	19,693	31,497	602,957.00	46,702 27,021.20
1896	38,075	55,275	1,104,500.00	89,285 50,830.00
1897	68,894	97,024	1,940,480.00	110,068 65,821.00
1898	111,282	173,343	3,466,861.00	170,304 94,535.00
1899	180,300	101,500	1,928,000.00	272,300 109,000.00
Total	420,010	376,362	7,832,361.00	694,016 \$4,042,540

In comparing the figures of Mr. Kirkup's report with those given in these columns on the 22nd inst, a wonderful agreement will be found. The Miner's estimate of the tons shipped is nearly two per cent higher than the smelter return. Taking that as absolutely accurate, the discrepancy lies between the ore as sent out, wet and the ore as received, dry.

With regard to the value of the shipments, of course the figures given in these columns on the first day of publication of the new year were, as was stated at the time, merely an approximation arrived at by striking a mean between the conflicting estimates given by the various companies of the values of Rossland ore. Yet, according to the report of the gold commissioner, the value thus arrived at was within a trifling percentage of the real average, which is a little less than \$18.

Black Eagle.	
Development work done cost	\$250 00
War Eagle.	
Tons of ore shipped	63,250
Gross value	\$1,138,500
Average number of men employed	250
Centre Star.	
Tons of ore shipped	16,700
Gross value	\$225,900
Average number of men employed	75

Iron Mask.	
Tons of ore shipped	5,378
Gross value	\$70,268 81
Average No. of men employed	40
Development work done, feet	2,852
St. Elmo.	
Development work done, feet	296
Average No. of men employed	8

Gertrude.	
Building including plant and machinery cost	\$3,380
Development work, shafting, drifting, etc., 430 feet	\$10,564
Prospecting	\$190
Total cost	\$14,134
Coxey.	
Development work, 415 feet, cost	\$7,995
Prospecting, etc.	381
Total	\$8,295
Jumbo.	
Tunneling, feet	500
Average No. of men employed	5
Big Four.	
Drifting 32 feet, cost	\$500
Prospecting	\$200
Total cost	\$700

Iron Colt.	
Tunneling in 1899, feet	30
Total amount of work to date	1,400
Average No. of men employed	20
California.	
Work resumed Sept. 5, 1899	
Drifting, feet	78
Wagon road built, feet	1,600
Building improvements, cost	\$4,300
Average No. of men employed	25
Sunset.	
Shafting, feet	235
Drifting, feet	1,175
Average No. of men employed	22
Curlew and Parrot.	
Shafting, feet	61
Velvet.	
Drifting, feet	564
Crosscutting, feet	490
Sinking, feet	55
Raising, feet	75
Average No. of men employed	25
Homestead.	
Sinking main shaft, feet	110
Drifting, feet	630
Crosscuts, feet	29
Average No. of men employed	19

Portland.	
Drifting, feet	230
Sinking, feet	147
Average No. of men employed	12
Masco.	
Development work done during 1899	2,688
Average No. of men employed	25
Southern Belle.	
Development work done during 1899	381
Average No. of men employed	10
Heather Bell.	
Tunnel, feet	60
Average No. of men employed	5
White Bear.	
Main shaft, feet	368
Drifting, feet	750
Average No. of men employed	10

In addition to the foregoing a large amount of work has been done in small properties in excess of the amount required for the purpose of obtaining the annual certificates of work.

Your obedient servant, (Signed) J. KIRKUP, Gold Commissioner.	
The details of the work done in the Rossland office for the year ending Dec. 31, 1899, are as follows:	
No. of mineral claims recorded	617
Placer claims	8
Certificates of work	788
Money paid in lieu of work	17
Certificates of improvement	113
Bills of sale, transfers, etc.	309
Water grants	6

High Assays on Monitor
Ore has been assayed by Malcolm Matheson on his claim on Copper Creek. He has on his property Messrs. Cameron and went in tract of 80 feet adjoining the James H. Dim the Morning G and an extension Comaplex.

J. A. Magee on his claim of Comaplex. Ass claim run from the John L. the Annie F. will be vigorous mer. From three different this property, in gold was of C. A. Irwin Friday last. E work on the Comaplex, on Mr. Irwin's samples taken.

The Silver G the owner, J. syndicate, as fissure on the work has been the company, splendid body crosscuts.

N. E. Lay Rady, Grant a for Tenderfoot erations on the be driven for and the lead vein on the seven feet and value.

The Great T on which cons work has been pany, which C. H. M. City. There is the dump ave gold and copp

into the office in lieu of work.

Two Dollars FROM OTHER PROSPECTORS GET THE WORK ON

Items of Interest For Trout Lake, Fort Cascade, Phoenix

Appended will be a review of various other camps around the perusal of the review the public may become acquainted with the many properties in bonanzas and as acquired for a number of others which are over the district have as strong a out by experienced proprietors of the development of activity and the record breaker to at least six weeks

Two Important Y in the Wheel T Ivo very import at the latter end Kamloops mining curred on the W about four a the town. Consi dere on this propriety of a prosp object of finding by mineralized, about 60 feet in copper values. L which is down at some excellent cing about 8 or 9 gold values. Besi being sunk, there about 60 feet, wh property is south which was recentl by mineralized, value with a litt The other strike derfoot at Copper nite ore, 14 inch tated. This drift the vein and abo mouth of the tu being crosscut to urday was looki The bonrite was ed and grey cop is about the spot expected and jud tions should be work so far don 9,000 tons of ore 24 feet in width values. After th struck the drift tance of about 5 the vein will be

THE High Assays on Monitor Ore has been assayed by Malcolm Matheson on his claim on Copper Creek. He has on his property Messrs. Cameron and went in tract of 80 feet adjoining the James H. Dim the Morning G and an extension Comaplex. J. A. Magee on his claim of Comaplex. Ass claim run from the John L. the Annie F. will be vigorous mer. From three different this property, in gold was of C. A. Irwin Friday last. E work on the Comaplex, on Mr. Irwin's samples taken. The Silver G the owner, J. syndicate, as fissure on the work has been the company, splendid body crosscuts. N. E. Lay Rady, Grant a for Tenderfoot erations on the be driven for and the lead vein on the seven feet and value. The Great T on which cons work has been pany, which C. H. M. City. There is the dump ave gold and copp