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The Mining Record.

VOL. I.

NOVEMBER, 1895.

No. 2.

BRITISH COLUMBIA MINING RECORD.

Devoted to the Mining Interests of British Columbia.

PUBLISHED MONTHLY.

Alex Begg, Editor and Manager.

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VANCOUVER, OR VICTORIA, B.C.

Permanent offices are being arranged for in Vancouver and Victoria, the former to be the headquarters for the Mainland, and the latter for Vancouver island.

Branch offices are also being established in Montreal, Toronto, London, and New York.

Full particulars of above will appear next month.

VOL. I.

NOVEMBER, 1895.

No. 2.

Announcement.

A SPECIAL (illustrated) number of THE BRITISH COLUMBIA MINING RECORD will be issued in December, and will form a handsome Christmas souvenir to send to absent friends. It will contain from fifty to sixty pages, beautifully illustrated with the best photo-engravings that can be obtained. The illustrations will embrace scenes in all parts of the province, as well as in the cities and towns. The resources of British Columbia will be fully set forth in an interesting manner, and it is the confident hope of the publishers that their efforts will prove to be of lasting benefit to the mining and general business interests of the province. A large circulation is already assured.

Special advertising rates on application, and also rates for the special number in quantities to send abroad. Send in your orders early.

Editorial Notes.

The *Saturday Review*, of London, England, is evidently hostile to the Lillooet-Fraser River & Cariboo Gold Fields Company and has published several articles denouncing the scheme. Some people in British Columbia seem to attach a great deal of

importance to the unfavorable criticisms of the English paper and apparently are inclined to accept them as gospel truth.

We do not. In fact we take no stock in them whatsoever, because we know that in London, as well as elsewhere, there are wheels within wheels and the sayings of the financial papers in the great English metropolis are not always to be relied upon.

On financial subjects of a general character they have the reputation of being sound, but, when they deal with individual cases, their utterances are too often guided by interested motives.

We do not mean to infer by this that they are open to direct bribery, although it is quite possible that some of them are occasionally so influenced. But what we do say is that the best of them will advocate or denounce a scheme just as it may suit the interests of those who have been fortunate enough to gain their ear.

The criticisms of the Lillooet Company by the *Saturday Review* may have been written in good faith, but the virulence of the attack leads to the suspicion that there is some influence behind the scene which is not altogether of a disinterested character.

According to the *Saturday Review* the chief offending of the directors of the Lillooet Company appears to lie in the manner adopted by them to induce subscriptions to the re-organization stock. If the statements of the company's chairman, as published, are untrue, then it is a clear case of trying to obtain money under false pretenses.

But the *Saturday Review* does not say that they are untrue, only highly colored. Perhaps, if its editor would pay a visit to our mines, he might alter his opinion somewhat.

One thing the *Saturday Review* does say, however, which is worthy of note as confirming what we suspected, that some English papers are open to bribery, and that what they say need not always be accepted as gospel truth. The *Saturday Review* is our authority for this statement, although we were aware of the fact beforehand.

What seems to trouble the *Saturday Review* is that the directors of the Lillooet Company are being paid too much for their services. This may or may not be the case—all depends on the

future management and success of the company, but the *Saturday Review* might, perhaps, enlighten us how some of its friends are paid—the sums they are paid and the services they render as directors of companies. It is quite the thing, almost a profession in London, to follow the calling of a “company director.”

We see no reason, however, why British Columbian papers should take the *Saturday Review* articles as a text to denounce an enterprise which has been undertaken for the good of this province.

Because some of the men engaged in it are likely to derive a direct personal benefit is no reason for an attack on the enterprise itself. Business men are not generally guided solely by philanthropic or patriotic motives. What is expected of them is to be honest and true to the interests of those who are associated with them. So long as they prove themselves to be so, we need not grudge them a liberal reward for their services.

There is a suspicion in the public mind that political reasons have something to do with the discussion of the company's affairs by British Columbian papers.

If this is the case it is to be deprecated because the mining interests of this province, like the Manitoba school question, is a subject which should not be allowed to enter the political arena.

It is the duty certainly of the provincial press to denounce fraud or any wrong-doing in connection with mining, as in anything else, but, in doing so, the motive should be pure and only the actual facts of the case laid bare.

If the newspapers will deal with actual facts and lay aside all thought of using them merely as a political bludgeon with which to strike an opponent, their criticisms in mining affairs will tend to do good and keep unscrupulous speculators within bounds. But the moment any suspicion of political bias enters into the discussion the virtue of the criticism, no matter how fair, will lose its strength in the public mind.

The attack in British Columbia appears to be more against individuals than against the company itself, and we can assure the newspapers in British Columbia in which the discussion has been carried on that this is the general feeling of the public.

The effect outside, where our political squabbles are unknown, is to injure the reputation of a company which has been formed for the development of British Columbia mines.

Is the attack deserved? Let us see. In February of this year the company was formed with a capital of £50,000 for prospecting purposes.

There is nothing to show that the money thus subscribed was squandered or stolen. On the contrary, only £7,000 was spent, and the balance is in bank. If anything, this shows caution on the part of the directors.

Now, at a time when there is a good opportunity for the safe investment of capital in development, it is proposed to change the character and object of the company in that direction, and to do this well requires, as we all know, a larger capital than £50,000.

So the capital of the company is increased to £300,000. The directors are to be paid £200 per annum, and Mr. F. S. Barnard, as manager, is to get £1,000 for his services. After a certain dividend is paid to the shareholders, the directors are to be paid a percentage of the profits—a commission as it were—on a successful operation of the company's affairs.

There is nothing very dreadful in all this. Then a part of the stock is to be retained for certain purposes, and this, it is insinuated, is to be for the future benefit of the directors. But we have no right to suspect anything of the kind any more than we have a right to consider a man dishonest until he is proved to be so.

If the directors of the Lillooet-Fraser River & Cariboo Gold Fields Company show, by mismanagement or dishonest proceedings, that they deserve condemnation it will be time enough to attack them. At present the criticisms they have been subjected to savor somewhat of persecution.

We cannot see that any case has been made out against the directors or the company by either the *Saturday Review*, or the papers in British Columbia following in its footsteps. In fact, the criticisms, we think, are somewhat premature.

In our opinion the statement of Hon. Mr. Turner, the Premier of the province (which we publish elsewhere), in regard to the standing of the men connected with the company, more than offsets the criticisms of the newspapers, and the British Columbians, who have succeeded in attracting so much capital to this country, deserve thanks rather than condemnation.

A discussion has been going on in some of the mining journals published in the interior as to the advisability of endeavoring to attract foreign capital for the development of our mines, and one paper advances the singular argument against it that the more outside money is used in working the mines the less will be the benefit to the province.

Now we were foolish enough to believe, and are still of the same opinion, that the more foreign capital we can attract into the country the better it will be for the community generally. What would the Cariboo District be to-day—what would Kootenay be at the present moment if foreign capital (English and American) had not been expended in their mines? It is just foreign capital that we want. We have the mines, but unless they are worked they are useless. The more profitable we can make the employment of foreign capital to those investing it the better it will be for the province.

An export duty on ores has been urged in some quarters. If we wish to curtail the development of the province and give its mining interests a black eye, we will adopt some such suicidal

policy. If provincial smelters cannot get enough to do without aid of this kind they had better close up.

As a matter of fact, however, the few smelters in British Columbia have as much as they can attend to, and the trouble is that there are not enough of them. We want smelters in every direction wherever the ore can be transported to them, and there is little danger that they will not have plenty to do. Fortunately the desire for an export duty on ores is not at all general.

What is wanted is encouragement by the Dominion Government in the shape of bonuses to smelters to induce capitalists to erect them at a time when they are much needed in the province. A liberal policy in this direction on the part of the Ottawa authorities is what is needed. As for the paying capabilities of the smelters when erected, there is no doubt upon that score.

The members of the British Columbia Board of Trade have had an excursion to the Kootenay. That they enjoyed themselves there is no reason to doubt, and that they kept their eyes wide open to the great possibilities of the mining district, their report, which appears elsewhere, will show.

These gentlemen have returned to Victoria fully impressed with the importance of developing our mining resources. Their report now being published in pamphlet form (which is much better than allowing it to remain in the pigeon holes of the Secretary's desk) will assist greatly in advertising the mineral wealth of the province. We hope, however, that the members of the Board of Trade will not rest satisfied with merely publishing an account of their trip—that they will continue the good work by modesty almost forbids our mentioning it, but in the interests of the community generally and ourselves in particular we will throw modesty to the winds and say boldly—by subscribing liberally to this journal.

There is very little doubt now in the minds of most men that the Cariboo country is full of gold, and it is equally certain that, to secure the precious metal from the gravel beds, water is needed. At present each company working in the Cariboo procures its own water, sometimes at great cost, whereas, if some general system was adopted of supplying it for hydraulic mining, the charge to each company using it would be much less than digging ditches of their own.

Here is an opportunity for a most profitable investment of capital. In California the supplying of water to the mining companies is one of the best paying investments in the state. Why should it not be the same in Cariboo? And look at the immense development in hydraulic mining that would follow.

A strong company going into this enterprise would be able to supply all the mining companies in the district with a plentiful supply of water. The ditches already constructed might in some cases be made part of the system and their cost refunded to the companies that built them. Altogether the suggestion is one worthy the attention of capitalists.

It would mean a tremendous boom in Cariboo.

There is a difference of opinion on the South African boom in London, England. Some think the bubble will burst, others that there is no bubble about it, but sound substantiality, and that it will last. The probability is that, like in all booms, many will lose and a few gain, but in the present instance any great collapse of the whole fabric is not likely.

In British Columbia mining stocks we want no such boom. We desire no inflation of values, but what we do wish to see is good substantial dividends to those who invest their money in this province. We seek stability and permanence rather than passing notoriety, and, if anything, would prefer to go slow and be sure.

We fully expect that some of the investments in British Columbia will pay so well that it will cause some excitement in the foreign money market in the same way as South Africa has done. We cannot help that. Nor can we prevent speculation in stocks, but what we can do is to see that the investment of foreign capital here is protected from unscrupulous sharks and speculators. Let everyone assist in this so far as able, in order that the character of British Columbia mining investments may be upheld. A good character is of priceless value, and that is what we desire for British Columbia mining stocks.

The organization of a Mining Bureau is, we understand, occupying the attention of the Minister of Mines. Would it not be a good idea to turn it into a School of Mines, where courses of lectures could be given during the winter months? We feel sure these would be well attended by persons desirous of obtaining a more thorough knowledge of all the branches connected with mining, and, at the close of the season, certificates might be granted to those who would successfully pass an examination. These certificates would permit the holders to act as mining engineers, assayers, etc., and in this way a competent staff of men would be available to examine, report upon, and manage the various mines. Should this suggestion be acted upon, we would like to see a course on geology added to the lectures.

The best lecturers would have to be engaged, and this, of course, would entail expense, but it would be proper to charge a fee in connection with the lectures which people would be only too glad to pay, and this would, in some measure, meet the expenditure. A mere bureau for the purpose of obtaining reliable information about the mines will be difficult to manage successfully, owing to the large outlay it is likely to entail. Besides this, it would place upon the shoulders of the Government a great responsibility should investors rely upon the official reports in making investments. By placing in the field a number of competent men, in addition to those now engaged in the work, the Government would better facilitate the development of our mines.

One thing we would like to see undertaken in a most thorough manner, is a collection of mineral specimens from all parts of the province. These specimens should **always** be in duplicate, one set to be placed in the Government collection, and the other to be sent to the Imperial Institute in England.

It is gratifying to be able to state that the Provincial Government, the Dominion Government and the Canadian Pacific Railway Company are sending a large number of copies of the MINING RECORD home to Great Britain, for circulation there amongst people who are interested in mining, and who are looking for safe investments in that line.

In this way the work of making known the resources of the province is greatly assisted, and we have it in mind to add, at the beginning of 1896, other departments besides mining to this journal, so that all the various resources of British Columbia, such as lumber, the fisheries, fruit, seal-hunting, etc., may be dealt with. If we receive sufficient encouragement to warrant the extra expense we will do this. It is for the business men of the province to say whether it shall be done.

A perusal of the "Happenings at the Mines," in this issue, will show the large number of fresh discoveries being made, and the wonderful progress taking place in all the mining districts. East and West Kootenay, Cariboo, and Alberni, are all going ahead with rapid strides, and it is confidently expected that the year 1896 will be one of the most prosperous years British Columbia has experienced. It looks, too, as if American capitalists will not have it all their own way in the Kootenay, as the attention of English investors is now being directed to that wonderfully rich country.

We are glad also to note that the Canadian Pacific Railway Company are alive to the importance of thoroughly tapping, by branch lines, our mining regions. It is not too much to say that before long the Pacific division of our great transcontinental line will be one of the best paying parts of the road. It is proper that the trade of our mining regions should be enjoyed by British Columbia, and by Canada as a whole. It is through the exertions of the Canadian Pacific Railway Company that this will be done. We wish the railway company all success in their endeavor to open up our mining regions to the outside world, since an efficient transportation service will do more towards the development of our mines than anything else.

It has been demonstrated without a doubt that mining investments, if conducted on business principles, are the safest that can be entered upon. All that has to be done is to make sure that a property is really what it is represented to be. This can easily be accomplished by using ordinary caution, and employing only thoroughly reliable and experienced men to report upon it. When full particulars are ascertained, it is not difficult to calculate the value of the property, and the extent to which money should be expended upon it to give satisfactory returns. This is the rule, and, while sometimes there are exceptions, arising from unforeseen natural causes, which upset all calculations, they seldom arise where ordinary caution is used.

Speculating in mining stocks is one thing; investments in mining properties is another. In regard to the former, we have no advice to give, but, so far as the latter is concerned, we say to investors: Keep your eye on British Columbia.

Press Opinions of the "Record."

"The British Columbia MINING RECORD is a monthly journal devoted to the mining interests of this province, the October number of which was recently issued by Mr. Alex. Begg. It contains a large amount of information in its twenty-four pages descriptive of various mines and mining districts, also an excellent condensation of the mining laws, lists of officials and assayers and of the several routes by which the mining centres are reached. The publication is well got up in all its departments and will prove a valuable addition to the provincial press. It is an enterprise that may truthfully be said to fill a long felt want and is deserving of encouragement by all interested, directly or indirectly, in the development of British Columbia mines."—*Colonist*, Victoria, B.C.

"We have received the first number of the British Columbia MINING RECORD, a monthly journal. It is excellently printed and well got up and contains a great mass of information culled from all the local journals in the mining district. It is a journalistic concentrator. We hope that it will succeed in saving all that is best in the mining news of the province and help in keeping it distributed far and wide."—*Miner*, Nelson, B.C.

"The first number of the British Columbia MINING RECORD has come to hand this week. The RECORD is a monthly journal devoted to the mining industries of the province. It is replete with information of the various camps, and will no doubt be well patronised. In addition to the general mining news, information is given regarding the mining laws of B.C., the Gold Commissioners and Government Agents of the various districts, stages, lines and distances, the mining centres and how to reach them."—*Golden Era*, Golden, B.C.

"We are pleased to see the first number of what promises to be a very useful publication, The British Columbia MINING RECORD (monthly). The aim of the publishers, as set forth in the introductory, is 'to make the RECORD a reliable authority on all subjects connected with the mining interests of British Columbia, so that investors and others may be able to keep thoroughly posted on what is going on in regard to the rich resources west of the Rocky Mountains, which are now only in the infancy of their development.' Full page maps of East and West Kootenay, Cariboo and Vancouver Island mining districts are being prepared and will, it is hoped, be ready for early issues. The paper comprises twenty-four pages and cover, well arranged and neatly printed. The matter is up to date and interesting."—*The Province*, Victoria, B.C.

"The British Columbia MINING RECORD is a new monthly publication devoted to the mining interests of this province, with offices at Victoria and Montreal, and under the management of Mr. Alex. Begg. In introducing itself to the public it says:

"The MINING RECORD is published for the purpose of making known the mineral resources of the various mining districts of British Columbia. The greatest care will be taken to have the information as correct as possible, and for this reason steps are being taken to secure reliable correspondents at all the most important points in the province. It is the aim of the publishers to make the RECORD a reliable authority on all subjects connected with the mining interests of British Columbia, so that investors and others may be able to keep thoroughly posted on what is going on in regard to the rich resources west of the Rocky Mountains, which are now only in the infancy of their development. Full page maps of East and West Kootenay, Cariboo and Vancouver Island mining districts are being prepared and will, it is hoped, be ready for the November number of the RECORD. These maps will be of great service to the reader in locating any of the points referred to in the reading columns."

"In its first number the MINING RECORD gives good promise of living up to the standard it has set for itself, and the many people interested in the mining industry are liable to find this new journal a storehouse of useful information."—*Times*, Victoria, B.C.

History of the Mines.

As early as 1848, gold was discovered in British Columbia, upon the Queen Charlotte Islands, and mining operations on a limited scale were carried on for a year or two when the enterprise was abandoned, owing to the difficulties which the miners had to encounter. About ten years later, discoveries of the precious metal were made on the banks of the Thompson, a tributary of

the Fraser River, by some employes of the Hudson's Bay Company, and the fame of the new gold fields soon attracted a host of miners from California. It is estimated that in a few months over 20,000 people arrived at the trading post, which stood upon the present site of the city of Victoria. These were miners bound for the Fraser River gold fields, which at that time were so inaccessible that many perished in trying to reach them. The country was without roads, the Indians were treacherous and the rivers were full of impracticable torrents, so that travelling in those days was no easy matter. Many of the gold seekers returned disappointed, but a sufficient number reached the Fraser cañons and went to work on the bars of that river. The gold found on the lower reaches was what is known as "fine gold," but further up the river it became coarser, and the impression this gave rise to was that still further up the great stream the source of all the gold should be found. To the present day, the same impression prevails—that large deposits of gold will yet be found in the upper country.

So the miners of the early days pushed on with restless activity till the now famous "Cariboo" was reached, and for years the deposits of "placer" gold were worked with remarkable success, considering the small number of men engaged. The output of the Lightning and Williams Creeks was remarkable, and led the miners to adopt more extended operations. It was discovered that, by searching deeper, richer deposits were found. Pumping and other machinery, which necessitated much labor and great expense, was adopted, and old buried channels of streams were brought to light. These were found to run from \$200 to \$1,000 in gold to each running foot in length, and the amounts taken out in some instances were enormous. For instance, in Williams Creek, on the Diller Company's claim, over 200 pounds weight of gold, valued at \$38,400, was raised in one day, and, in 1863, twenty claims were producing from 70 to 400 ounces of gold per diem. The Lightning Creek claims yielded from 300 to 600 ounces of gold per day.

It must be remembered that, at the time in which these great discoveries were made, Cariboo was almost inaccessible, and consequently every article required by a miner was obtained at an excessive cost. But, so long as the gold was found in large quantities, the miners did not grudge the expense. Unfortunately, however, the difficulty in the way of mining with primitive machinery became each day greater, and the amount of gold taken out smaller, until finally the country was practically abandoned. This abandonment, however, was gradual, and the old valleys of the Cariboo yielded, in 1892, over \$200,000.

It is generally admitted by practical men that the indications in the Cariboo point to immense deposits there yet to be discovered. The nuggets found have often been actually mingled with the quartz of the parent vein, and before long these veins will be drawn upon for a second harvest. At the present time, hydraulic works are being carried on extensively where the early miners may be said to have stopped, and the prospects are that a rich return will reward this mode of mining.

The chief difficulty in the Cariboo district is its great distance from the railway, and the consequent lack of proper transportation facilities, but the day is not far distant when this condition of affairs will be remedied, and the fame of the Cariboo will once more spread far and wide. In a little over thirty years, it has produced more than \$50,000,000 in gold, notwithstanding all the difficulties it labored under. What, then, is it likely to produce during the next thirty years under more favorable conditions and with the ground, as a miner puts it, skimmed over.

But now, before proceeding further in tracing the development of the gold fields, we must turn our attention to what, at the present time, is one of the most important industries of the province—coal mining. As far back as 1835, the Hudson's Bay Company discovered outcrops of coal in British Columbia, and made use of it at their posts, but it was not till nearly twenty years afterwards that any attempt was made at mining. The company then brought out some coal

miners from Scotland, and, in 1853, about 2,000 tons were raised at Nanaimo. Subsequently the mines were sold to the Vancouver Coal Company, of London, England, which was subsequently re-organized as the New Vancouver Coal Company, which owns and operates them to-day, under the management of Mr. S. M. Robins.

Hon. Robert Dunsmuir, subsequent to the discoveries at Nanaimo, discovered coal at Wellington, and immediately commenced to develop the mines, which to-day are famous all over the Pacific coast for the excellence of the coal produced. The two principal coal districts of Vancouver Island are those of Comox and Nanaimo, the first being estimated to contain 300,000 square miles, and the latter 200,000; the workable coal in this vast region being computed at 16,000,000 tons to the square mile. Anthracite and bituminous coal are found on Queen Charlotte Islands, but it is not being mined to any extent, and deposits of bituminous coal are also known in the interior of the province. A remarkable undeveloped field of coal lies in the Crow's Nest Pass in the Rocky Mountains, where beds of great thickness and superior quality have been defined. So much for coal. Now let us return to the precious metals.

In 1865, prospectors from the Thompson and Fraser Rivers went into the Great Bend of the Columbia River and eastward across the Shuswap Lake looking for gold. These men were successful for a time, and a considerable amount of money was realized by them, but, when large numbers of miners rushed into the country, the work was overdone and many were disappointed. While this was going on at the Great Bend, miners entered the Southern Kootenay, and the rich placers of that district yielded in a short time over \$10,000,000. These placer operations may be regarded as the beginning of mining development in East and West Kootenay. The way was opened for greater enterprise.

In 1886, prospectors, still in search of placer gold, entered the Kootenay region and camped on Toad Mountain, where one of them stumbled upon an outcrop of ore, of which he took specimens. These were afterwards assayed, and were proved to contain nearly \$300 to the ton of silver. The prospectors staked out the claim, and this was the commencement of the famous "Silver King" mine. The result of this find was a rush of prospectors into the Kootenay region, and claims were staked in every direction. Towns sprang into existence with marvellous rapidity, and the whole district became one of extreme activity. The deposits discovered ranged from \$40 to several hundred dollars to the ton, and the whole region seemed to be full of it.

The building of the Canadian Pacific Railway next gave a fresh impetus to mining, and in the neighbourhood of Illicilliwaet, good prospects were discovered. Many claims were taken up to the north of the track, and much work in prospecting and developing the mines was undertaken. At Revelstoke, a smelter was erected, which, however, owing to faulty construction, has not proved a success. Then came the Kaslo-Slocan discoveries, the deposits being of very high grade ore, and from there prospectors worked their way through the mountains to the head of the Upper Arrow Lake, and thence up Fish Creek. In every direction, success rewarded the efforts of the searchers, and the wonderful richness of the Kootenay region became more evident day by day.

Americans were not slow to recognize the importance of the new country being opened up, and in a short time over \$2,000,000 of American money was invested in the mines. Canada seemed to be asleep to the wealth of minerals she possessed within her borders, while Uncle Sam was quietly appropriating them to himself. Happily the store of riches was too great to be carried away in so short a time, and plenty still remains for the Canadian and English investor. Gold, as well as silver quartz, was discovered, and is still being discovered from day to day, until it seems as if the whole district of West Kootenay is one vast mine of precious metals.

While East Kootenay has not progressed as rapidly as the West, there is no doubt it is equally rich, although the ores found

there are mostly low grade, which requires more capital to work. But the mines may be classed as of a permanent character for investment, and not a few look upon East Kootenay as the coming great mining region of British Columbia.

The mining of precious metals in British Columbia has now entered upon a new era. Capital is flowing into the country. Machinery of the most approved kind is being brought in and put to use. Skilled engineers and managers are being employed to direct the work, and development everywhere is going on with amazing rapidity. The great wealth, which has lain dormant for ages in the rocks and rivers of British Columbia, is now being utilized for the good of mankind, and the work of the pioneer miners is bearing fruit for the benefit of our great Dominion.

British Columbia as a Field for Investment.

BY R. E. GOSNELL,

PARLIAMENTARY LIBRARIAN, VICTORIA, B.C.

British Columbia has long been well known as a great timber and fish country. It is true it first became prominent on account of the discovery of gold, but it was placer gold, and after the first excitement and early working was over it gradually declined in importance as a gold field, while its other resources came to the fore. Its exports in coal, lumber and fish exceeded last year \$8,000,000, which is over \$1,000 per head of its white population, a remarkable showing, more especially when we consider that the resources of the province have just been tapped as yet. It is quite safe to say that, within three years, by the addition of gold and silver ore exports, that large sum will be doubled. It will be as a mining country that British Columbia will be best known during the coming years.

At the present time it is quite impossible to predict, with any degree of certainty, which district will take the lead so as to dominate in influence—whether Kootenay, or Cariboo, or Yale, or Vancouver Island, or the Mainland Coast. So little is really known of the real prospects by discovery that it is well to suspend judgment. Four years ago the Slocan division, the banner camp of the province, was regarded by prospectors as barren. Only a small part of Kootenay has been exploited and within a few years, where before minerals were not even suspected, such promising camps as Trail Creek, Nelson, Lardeau, Trout Lake, etc., have arisen. The Blue Bell, on Kootenay Lake, was known for many years and was a subject of much litigation, but, apart from that, Hot Spring Camp, where a tier of rich mineral formations exist, leading us as far up as the Skyline, was, until recently, an unknown quantity. What will develop out of the great coal beds and petroleum deposits and the silver and gold of East Kootenay, as yet largely inaccessible, one cannot foresee. Southern Yale has important gold veins, silver, platinum, as well as placers, which may turn it into a mining camp of great importance. Kamloops is the centre of a very large and important district, which has iron, coal, placer and quartz leads in abundance. The great mother lode of the \$50,000,000 of gold that came out of Cariboo has not been discovered. It exists as surely as the gold that came out of it existed. The promoters of the large hydraulic enterprises in that district expect to get \$50,000,000 more by the newer methods.

Vancouver Island, for substantial results, has, so far, been the chief mineral producer, its vast coal beds now yielding 1,000,000 tons a year. The Alberni district is coming forward into promise with quartz propositions, and rich iron deposits have been located at Barclay Sound and other points. There are now wide coal areas yet untouched, and the whole interior and northern part of the Island is practically a *terra incognita*.

The whole coast of the mainland, with its innumerable islands and indents, is furnishing fresh evidence of extended distribution of economic metals, iron, coal, gold and, if we may include them, building stones or constructive material. Gold claims have been located on Phillip's Arm and development is going on. Texada Island is a veritable *olla podrida* of minerals in curious geological

association, but undoubtedly of richness and extent only faintly exploited. Queen Charlotte Islands are unknown quantities, but known to possess important coal formations, both bituminous and anthracite. The gold excitement of British Columbia occurred there, though the gold was all found in a pocket on the water's edge. Rich silver ore was found there, but the lead was lost.

Then we penetrate Cassiar, a vast district, which gave us the Omineca and Dease Lake diggings, out of which six or seven millions were taken, and the Yukon, where a rush is now being made, and the great country beyond on the Arctic slope, all of which are gold bearing. There is scarcely a river or stream in British Columbia that will not give colors of gold.

Such a wide distribution of minerals, precious and base, and in such frequent and important occurrence, can scarcely, if at all, be paralleled. Only a very small portion of the country has been prospected and very little of it thoroughly, and the importance which attaches to the fact consists in this, that as settlement and population advance, and the mining industry develops, new and valuable discoveries will continue to be made. We have most of the metals in abundance, and, as to the principal of which we lack, viz., tin and nickel, there is ample room for their existence, and formations favorable to their occurrence are not unknown. Nickel has been discovered, but not in extent to base large expectations upon it. Concerning a wide area of British Columbia, there is much pioneer work for the geologist and prospector, roads and railways before being introduced to the attention of the capitalists; but there already exists in the more settled districts a field most favorable for investment; about the value of the mineral properties therein, the extent and richness of the ore, there cannot be any doubt. The mine owners of Southern Kootenay, where communication is now established, have properties which have paid from the start and which are yielding large profits despite high freights, long hauls to the smelter, dearness of labor, and all the rest of it incident to a new country full of physical obstacles to success. The value of the ores per ton, if it were not the actual price realized at the smelter, to an experienced mining man would appear very much like fiction, but regarding which there can be no room for question.

Within a year \$1,500,000 worth of ore has been shipped out of Kootenay and in four-and-a-half months of that time \$800,000 worth went out. Considering that four years ago most of the producing mines were absolutely unknown, the record is not a bad one. There are hundreds of good claims that can be secured on reasonable terms. What is true of Kootenay is true of properties in various parts of British Columbia, to which reference has been made. Kootenay, being most prominent in the public mind, is used as an illustration, but it is not at all certain that Kootenay will always take the lead, because, as stated previously, it is a subject about which it is impossible to predict, in view of the wide distribution of minerals and the increasing probability of new discoveries.

Regarding investment in mines in British Columbia, extracts from an article in the *British Trade Journal* (reproduced elsewhere) are recommended for perusal. The writer has evidently struck the keynote in appealing to the British investor through his trade instincts, and he also points out what has often been remarked, that the British capitalist usually waits for somebody else to develop the mine before investing, and pays a pretty stiff price, the cream of the transaction going to the promoters, instead of doing as the Americans do, entering upon development on their own behalf and reaping the whole of the profits. As it is, in Kootenay Americans are the principal mine owners and have a number of the best properties. Without any doubt, they have in view selling out in time to the British capitalist at fancy figures. The latter, who is paying so much attention to South Africa just now, should examine more carefully the prospects for investing in British Columbia. Under our laws the capitalist, of whatever nationality, has an absolute guarantee that his rights will be thoroughly protected.

Alberni.

BY HON. D. H. HIGGINS,

SPEAKER OF THE LEGISLATIVE ASSEMBLY.

Public attention has quite recently been attracted to the west coast of Vancouver Island as a prospective gold-producing section, and, more particularly, to the district of Alberni, once the theatre of important lumbering operations, but for more than thirty years a *terra incognita* to most British Columbians, as well as to the outer world. The sawmill, established at Alberni by the great mercantile firm of Anderson & Anderson, of London, England, was, in its day, one of the best equipped and largest on the Pacific Coast. The mill buildings, offices, and dwellings of the employes covered several acres. The loggers pushed far into the interior of the Island along the waterways and valleys and for some distance up the hillsides. The timber was of favorite marketable varieties, and ships from all parts sailed into the canal for cargoes of lumber and spars. The canal, which is some forty-one miles in length, was named by the company Alberni, after one of the firm—a Portuguese shipowner or captain—a beautiful sheet of water, while the stream that drains it was called after Gilbert Malcolm Sproat, one of the managers. Stamp river and its romantic falls were named from Capt. E. Stamp, also one of the managers, and the nomenclature of other lakes and streams had a similar origin. Alberni was the scene of a busy hive of industry for some years. Churches and schools, stores and workshops, sprang up, and all things pointed to a profitable and permanent establishment. But one day it was found that the business would not pay. Then the mill was dismantled and the population, of several hundred persons who had established themselves on the banks of the canal, melted away. Soon the place was deserted, except for a caretaker and his family. Next a fire attacked the mill buildings and swept them off, and one by one the dwellings disappeared before the inroads of time and the thieving hands of vagrant Indians, until to-day, of the original Alberni, scarce one stone is left upon another to mark the spot where £100,000 of English money was lost to the investors thirty odd years ago. Two miles further up the canal, at the mouth of Sumas river, the present town of Alberni stands. It contains two stores, two hotels, two blacksmith shops, a well-conducted school, two physicians, and a population of about one hundred. The situation is a charming one. There are many fine farms in the vicinity and the town must, sooner or later, attain to importance, especially if working results should sustain the high opinion now entertained of the mining resources of the district. Quartz, which assays very well in gold, has been discovered on China, Mineral and Granite creeks and Sproat lake and river. As a rule the quartz veins are large and well situated for successful working. Those at Mineral Hill are narrow, but make up for lack of width in richness. The assays from the Alberni and Missing Link claims have been very high—from \$160 to \$4,000 to the ton, with the veins steadily improving as they are sunk upon. Granite Creek comes well to the front with rock which assays from \$40 to \$600 to the ton. Here the veins widen out and show well to the eye. The Star of the West claim is particularly noticeable, standing in a solid wall of sulphurets six feet in width and traceable for at least 500 feet by surface indications. The rock on Columbia Creek is of a peculiar formation—rotten, crumbling, and slate, interspersed with small veins of grey quartz—the latter being supposed to carry the gold. In the Starlight district Mr. Sutton found quartz which averaged \$40 to the ton—the ledges being wide and strong. Both sides of the banks of China and Granite Creek, for a distance of several miles, have been taken up for hydraulic mining. The prospects vary, but are generally satisfactory. Good progress has been made towards developing these claims and piping will begin in a few weeks' time. These mines are all within a radius of thirty miles of Alberni, and the most remote will not be difficult of access after a few hundred dollars shall have been expended upon trails by the Government. But gold and silver are not the

only treasures which Alberni has to offer. Indications of coal has been found, and copper and magnetic iron ores are found in several sections, and, no doubt, other of the economic metals exist there too. The railway belt embraces many of the best mines so far discovered; but the claim of the Crown as against the railway company to the royal metals seems too strong to admit of even the possibility of failure before the Privy Council of Great Britain, whither the case has gone in appeal. There remains, however, the matter of surface rights to which the railway company are clearly entitled, and which they have expressed a willingness to part with at a nominal figure. We look with confidence to great developments in Alberni so soon as capital in sufficient volume shall have found its way there. Already representatives of English capitalists have appeared in the district, and, before another twelvemonth shall have rolled away Alberni should rank high among the gold-producing centres of the world.

British Columbia's Future.

In a leading article under the above heading the *London Mining Journal* has the following:

"Miners are rushing there by thousands, and gradually, but only too surely, the attention of the outside world is being attracted in the same direction. In a paper recently read before the Royal Colonial Institute, Professor Sir G. M. Dawson, K.C. M.G., F.R.G.S., Director-General of the Royal Geological Society of Canada, stated that the Cordilleran belt had, whenever it had been adequately examined, proved to be rich in precious metals as well as in other ores; and though some parts of this ore-bearing region are undoubtedly richer than others, generally speaking, it is throughout a metalliferous country. 'The Province of British Columbia alone from south-east to north-west includes a length of 800 miles of the Cordilleran region, and adding to this the further extension of the same region comprised within the boundaries of the Dominion of Canada, as a whole; its entire length in Canada is between 1,200 and 1,300 miles. Circumstances have favored the development of the mines of the Western States of the Union, but it is, as nearly as may be, certain that the northern half of the similar region will eventually prove equal in richness to the southern; and when the mines of these Western States may have passed the zenith of their productiveness, those of the north will be still increasing in this respect.' The professor then pointed out that, in addition to gold, British Columbia is extremely rich in numerous other minerals. Here may be found large deposits of iron, whilst copper ores have also been discovered in many places. Mercury, in the form of cinnabar, promises to be of value in the near future, whilst plumbago, mica, and asbestos are also known to exist. Coal, likewise, is abundant, and, at the present moment, rests on a substantial basis of increasing prosperity. Mr. John B. Hobson, in the course of his speech before the Chamber of Mines, in San Francisco, in December, 1894, enthusiastically exclaimed: 'I do not hesitate to predict that the day is not far distant when the gold output of British Columbia will astonish the civilized world.' Had we space at our disposal, we could, of course, enumerate the confirmatory opinions of many other experts, but we have sufficient evidence, we think, to say that British Columbia is a country destined to come to the front, and that in the not distant future, and it will be strange if English capital is longer withheld from it."

Assayers' Examination.

Some misapprehension appears to exist as to an advertisement lately published by the Minister of Mines, stating that an examination would be held for competency in assaying, and that those who passed the examination successfully would receive a Government certificate of competency. It has been interpreted in some quarters that the Government intend a compulsory examination for all persons practising assaying in the province, but such is manifestly not the case, as the words of the advertisement plainly show to those who wish to read them intelligently. The examination was confined to assaying those metals only which are generally offered for assay—namely, gold, silver, copper, lead and iron, and the certificate of competency merely included these metals.

In point of fact, not one official in a thousand ever asks an assayer for an assay of any other metal. Now that the mines of the province are being developed, each mine owner employs an

assayer on the spot, and many appointments are open to well-qualified young men in that direction. A certificate from the Government would be an assurance that the holder of it was competent to perform ordinary assays.

The examiners are Mr. Carmichael, the provincial assayer and analyst, who has high certificates of competency from Owens College, which is one of the best scientific colleges in the world, and Mr. Pellew-Harvey, of Vancouver, who had the best of training in assaying in Swansea, who also holds certificates of competency and is a man of great experience.

We believe that the Hon. Colonel Baker contemplates instituting a course of instruction in assaying during the winter, to be followed by an examination and the granting of honor certificates, as well as ordinary certificates, to the successful candidates, and that he has already had numerous applications to join the course of instruction. Fees will, of course, be charged and applied to the general revenue.

Coal assays are a specialty and require appliances which are not always available. Some of the leading assayers in London will not undertake an exhaustive analysis of coal, but refer the applicant to specialists in that branch of assaying.—*The Colonist*.

Dredging.

The following is taken from a prospectus sent us by the Dominion Gold Dredging and Placer Mining Company (Limited), which is now carrying on operations on the Fraser River:

A Charter of Incorporation has just been obtained from the Dominion Government for a company known as The Dominion Gold Dredging and Placer Mining Company, and formed for the purpose of raising sufficient capital to build, construct and maintain all plant and machinery necessary to work on the rivers of British Columbia and elsewhere, to take the gold out of the beds of the rivers, where it is known to exist in large, rich quantities, having been washed down from the mountains. The Chinamen and Indians are making thousands of dollars every year, washing the sands from the shores of those rivers after the freshets; some idea may be had, therefore, of the wealth that lies under the rivers themselves. The difficulty in working these rivers has been in getting machinery sufficiently powerful to take the sand and other deposits from the beds of the rivers. Several companies have been formed, and have put on heavy sand pumps to lift the deposits, yet none so far have been successful in doing the work.

James Amess, of the city of Toronto, architect, having spent considerable time in British Columbia, and having had practical experience and knowledge of the difficulty, hit upon the idea of a mechanical device known as the Cable Dredge. He tested this on the Thompson River in September, 1894. The experimental dredge proved successful; taking up from the bed of the river the gravel deposits with a paying quantity of gold at each test.

There is no doubt in the minds of any who have visited British Columbia as to the rich deposits of gold in those rivers.

Mr. Turner, Finance Minister of British Columbia, in conversation with a *Montreal Gazette* reporter, in the month of May, 1893, said that the Chinamen were making thousands of dollars by washing the sands of the rivers in the Cariboo district, and the Indians also reaped part of this harvest of gold by washing the deposits along the shores of the Fraser and Thompson Rivers, after the freshets. A recently formed company, known as the Horse Fly Hydraulic Company, located on the Horse Fly River, on November 15th, 1894. The sluice boxes yielded them \$13,000 as the result of two weeks' work. Mr. Hobson, the manager of this company, gives a very satisfactory account of the mineral riches of this country and the prospects ahead. With respect to the richness of this region in gold, Mr. Hobson states that all the river gravel deposits are very extensive, and of much higher grade in their gold tenure than those of California. Sample lots have been washed, and give results varying from one to five dollars per cubic yard.

This testimony is of especial value, he being fully qualified to judge, having spent twenty years gold mining in California.

Those who have taken hold of this project are practical, business and mechanical men, who not only understand the nature of the work to be done, but have practical experience in mechanical work. Giving, as they have done, their time, energy and thought to the project, those who invest have the best assurance that the machinery will be admirably adapted to the work that needs to be done. Mr. Amess has already spent a great deal of time and money in developing and perfecting the project. He will personally superintend all the operations in British Columbia, while the financial affairs of the company will be under the

control of a board of directors, who will be in touch with the work as it progresses, and will meet at frequent intervals, so that no benefit may be lost that can be turned to the advantage of the company.

Copper Mining.

A confident belief prevails throughout British Columbia mining circles that the province is on the eve of a very great development of its varied mineral resources. It is known that a representative of the largest copper interests in South Wales has paid a business visit to the gold and copper bearing fields of West Kootenay, accompanied by one of the most noted metallurgists in the province, who has received for his services an exceptionally large fee. The actual intention of the investigator is naturally kept, as far as possible, undisclosed; but, viewed in connection with the recent rise in the value of copper, caused by the rapid increase in demand for that metal, it is fairly to be assumed that a very considerable investment of British capital is likely to result from the visit, should inquiries on the spot prove as favorable as expected. The assayer in question speaks, it may be added, very confidently of coming large developments in copper melting, which probably point to one object of the visit.

Prospecting and Mining.

A "distinction and a difference" is made by the *Colliery Engineer* and *Metal Miner*, which, in the current issue of that excellent journal in an article on prospecting and mining, says:

"Prospecting" may roughly be defined as looking for precious metal we hope and believe exists, but of whose actual presence we have no positive assurance. "Mining" on the other hand, is when we have actually found ore and are following and developing it. Under this definition there are many kinds of prospecting. There is prospecting for mineral leads with pick and shovel and for placer gold with a gold pan and rocker.

There is prospecting on a bigger scale by diamond drills, such as are now puncturing the mountains above Leadville in search of the gold belt. It is prospecting on a gigantic scale when a company, like one at work at Idaho Springs, drives a tunnel for five miles through the mountains in search of veins of gold, some of which they know to exist, and others they hope to find. It is prospecting still when, as in the present case, a company undertakes to work the gold-bearing sands of Clear Creek on a gigantic scale and with gigantic and novel appliances. Instead of the miner's little ditch or sluice, they have constructed a flume a mile or more in length, twelve feet wide and eight feet deep to turn the course of the primeval torrent and carry its water bodily on one side, so as to expose and lay bare an interval of a mile and more of the river bed for their operations. Instead of the miner's little pipe short tom or long tom and dribble of water, the latest invention, Allen's big stave pipe over three feet in diameter is brought to bear and has been laid down for a mile, while attached to it is another mile of black steel sixteen-inch pipe forking at the end to accommodate two giant nozzles with a pressure of 125 vertical head and a force like that of a cannon.

CORRESPONDENCE.

EAST KOOTENAY, B.C.

To the Editor of the MINING RECORD:—

The North Star has been shipping ore to the Everett smelter. The first two car loads averaged \$68 to the ton, gross value; after paying the expenses of mining, shipping, smelting, duty, etc., about one-third of the above should be net profit. When the Crow's Nest Railway is completed, and smelters are erected in East Kootenay, the profits will be greatly increased.

This mine is situated about twenty miles north-west of Fort Steele, and has had a fair amount of development work done on it, consisting of shafts, cross cuts, etc., extending along the lode for about 450 feet.

At the main shaft the lode is now fourteen feet wide, at a depth of seventy feet, and, in many places, it is much wider.

There are several cross cuts at and near the surface, all showing solid galena, and carbonates in large quantities; also much concentrating ore.

The Sullivan group, about two miles north of the North Star, on the same mineral belt, and similar in character of ore, are now

being opened up under a working bond and will soon be worked to their full capacity.

The lodes of the Jupiter group, farther north on the same belt and near the head of Upper Columbia Lake, are much larger and carry more gold, along with argentiferous galena and iron pyrites, and in the quartz.

Two parallel lodes, one 60 feet and the other 100 to 150 feet wide, traverse this group of claims for over a mile, in a north and south direction, the east, or widest lode, carries the most gold, and the west lode the greater amount of silver and lead.

On the latter, there are large chimneys of concentrating and shipping ore, of about a similar grade to that of the North Star, but requiring more sorting to obtain a grade that will pay to ship.

These mines are capable of supplying one thousand tons of ore a day, and negotiations are now going on for the erection of a large plant.

On the Elk group, still further north, the lodes are similar to the Jupiter, but carrying less lead and more gold. The last assays, from twenty-pound samples, gave, (1) \$12.42 gold and \$2.25 silver, and (2) \$8.18 gold and \$3.60 silver.

The Thunder Hill, between the Elk and Jupiter, also on the same lodes, has had a great deal of surface work done on it. A tramway, one-and-a-half miles long, has been built to the concentrator on the lake, which is capable of handling fifty to seventy-five tons of ore per day.

Unfortunately, this company got into financial difficulties before the concentrator was finished, consequently the mines are idle, and the concentrator has never made a run.

On the south side of Findlay Creek immense lodes of mineralized quartz grow out on a ridge rising from 800 feet to 3,000 feet above the level of the lake. No work has been done on these claims yet, but it is the intention of the owners to prospect them thoroughly with a diamond drill.

On Toby Creek, opposite Windermere, there are many locations that are well spoken of, and behind Windermere a copper lode has been worked to some extent, with satisfactory results as to the ore, some of which was shipped to England.

On Bugaboo Creek, a large gold quartz lode has been located within the last year, and promises to develop into a fine property. The ore is abundant and assays high.

On Spallumcheen and Jubilee Mountains fine bodies of lead-bearing silver ore, and several copper claims, have been opened up to some extent. And back of this, on the various branches of the Spallumcheen River, in the McMurdo district, are some large gold quartz lodes, and high grade silver lead veins. From the latter several shipments of ore have been made, the return being over \$100 per ton.

The many advantages possessed by this district for mining, milling, and shipping ores, cannot long be overlooked by mining men.

The Columbia and Kootenay Rivers form a great highway through the very centre of the district, north and south, from the Canadian Pacific to the Great Northern Railway, for the shipment of ores, bringing in of machinery, supplies, etc.

The Crow's Nest Railway will add greatly to these facilities, particularly as regards the mines in the central and southern part of the district, and will supply coke for smelting at a cheap rate, from the great coal mines of the Crow's Nest Pass.

The numerous large streams flowing into the Columbia and Kootenay Rivers at short distances apart, will furnish convenient power for electric transmission to all the mines on either side, and the enormous size of many of the lodes will certainly, before long, make East Kootenay one of the largest producers of gold, silver and lead on the continent.

E. K.

HAPPENINGS AT THE MINES.

WEST KOOTENAY.

Following are the ore shipments from Trail Creek mines by last report received:

| | TONS. | VALUE. |
|-----------------------------------|---------------|--------------------|
| Le Roi mine, Rossland..... | 567 | \$ 27,850 |
| War Eagle mine, Rossland..... | 321 | 16,050 |
| Josie mine, Rossland..... | 84 | 4,150 |
| Iron Horse mine, Rossland..... | 17 | 850 |
| Total..... | 978 | \$ 48,900 |
| Total so far for 1895..... | 21,928 | \$1,780,400 |

The first carload of ore shipped over the Kaslo & Slocan Railway was landed at Five-Mile Point, lately, by the steamer *Alberta*. It was from the Goodenough mine, and was invoiced for export at \$150 a ton, or \$3,000 in all. It went to the smelter at Everett, Wash., over the Nelson & Fort Sheppard Railway.

Track laying on the Kaslo & Slocan Railway reached McGuigan Creek first week of October, and the engine passed over the lofty bridge, which crosses the stream at that point. The next important structure is the Howe truss bridge, which carries the railway over the Noble Five slide. Timber, truss rods, bolts, and castings are ready for this, and it is estimated that, in a few days, the road will be completed to Sandon, leaving a small amount of trimming up to be done.

James Breen, resident manager of the Trail smelter, was in Nelson not long ago. He said that, if no untoward difficulties cropped up, the works would be in operation by December 1. At present, the one difficulty is to get bricks, of which nearly a million will be needed.

The country to the south of Nelson is attracting the attention of both prospectors and mining men, as the veins discovered on Champion, Lost, Sheep, Bear, and other creeks, all carry ore, very much like that from the veins around Rossland. It is said that assays ran as high as \$22 in gold, from ore from Champion Creek, and that ore of a still higher grade has been obtained from discoveries made in between the head of that creek and Salmon Siding.

The Wellington will be among the shipping mines this winter. The lower tunnel thoroughly drains the upper tunnels and shafts, and permits the working of the ore chute without pumping. The force at the mine is engaged in getting out ore and sacking it ready for transportation, as soon as it can be rawhided, when it will, probably, be sent to the Tacoma smelter.

Grading for the site of the Silver King ore bins, at Nelson, is nearly completed. There will be six bins, 25x50 feet, and 15 feet high. It is said the smelter will be one of the most complete ever erected for treating copper ores.

Work has practically closed, for the season, in the Cariboo Creek district. This is one of the new sections which promises well, capital at present being the one thing lacking. The Cariboo Creek belt, as far as it has been explored, consists of some 100 square miles, and is reached through Burton city, on Columbia River, about twenty miles south of Nakusp. In the spring, 1894, considerable excitement was occasioned by finding gold in the bed of Cariboo Creek, which empties into Trout Creek, one and a half miles behind Burton City. The creek was staked for miles, everything of a likely character being taken up. The returns were not up to expectations, however, and the freshet of August, in the same year, cleaned out the miners' sluice boxes, flumes, and dams, and closed out Cariboo Creek's history as a placer district. A number of disappointed men turned their attention to the hills on the other side of the creek, and located a number of ledges, the iron capping of which gave gold assays, running from a trace, to \$6 and \$9.

Returns on a shipment of Cliff ore were received early in October, and the figures were very satisfactory, ranging from \$17.50 per ton, to \$70 per ton. The car netted about \$500. There was 8.02 per cent. of copper, which was the highest yet returned from any smelter, on ore shipped from Trail Creek.

The uncovering of a fine ore body, in the surface of the Homestake, continues. It has been stripped lengthwise a distance of twenty-four feet, and across, from side to side, for five feet. There is a solid body of ore, fifty inches wide, running off on both sides, like walls of a pyramid. The value is well maintained throughout, passing 100 ounces in silver, and averaging \$12 in gold.

The greatest showing now, on the Robert E. Lee, is in the new shaft being run down 800 feet east of the old tunnel and Maid of

Erin shaft. All work is concentrated here, pending the arrival of new hoisting apparatus. An ore body, four to five feet wide, has been opened up at the bottom of a shaft ten or twelve feet deep. This ore has been almost solid from the surface down, all of it being available for shipping. Its value runs about \$30 in gold. The Lee will, in all probability, be a good shipper long before the 1st of January.

A new body of high grade, free milling ore, has been opened in the further workings of the No. 2 tunnel of the O.K. A big chamber of ore has been taken out near the same place, when the vein was lost, but a shot was put in what appeared to be a solid wall and an ore body, which has since proved to be more than three feet wide, exposed.

The owners of the "Noble Five" group expect to ship at least 1,000 tons this winter. There are eighteen men at work and the ground is in such shape that a small force can make a big showing when they commence stoping, the ore being blocked out ready to take down. A shipment of three cars was recently made to Pilot Bay, and there are two cars more ready for shipment. They are at present running a new tunnel and will connect them all, greatly facilitating work. There is considerably more than 2,500 feet of tunnelling upon this group, the bulk of which has been done upon the "Bonanza King" and "World's Fair."

In the "Ruby Silver" basin work has been commenced on the "Surprise" and "Antoine." On the former ten men are sinking a winze and drifting on the ledge. There is a large body of ore in the "Surprise," and the mine is expected to make regular shipments during the winter. One carload was shipped recently. Living quarters and necessary buildings are being erected close to the workings. On the Antoine, in the same basin, there are four men working, chiefly with a view to preparing for the winter's work. Substantial cabins are being put up, with sufficient accommodation for ten or twelve men, which number it is proposed to work. The lower tunnel is now in some 125 feet and has ore the greater part of that distance. The shipments from this property last year amounted to some seventy-six tons, which went to the reduction works at Everett. The shipments for the coming year will exceed this amount, as the property will be in much better shape.

The War Eagle mine had, at the beginning of last month, put out and shipped 7,015 tons of ore. The last 27 shipments amounting altogether to 2,300 tons, brought an average return from the smelter of \$38.30 per ton. From this must be deducted \$10.50 for freight and treatment, \$2 per ton haulage to Trail and \$4 for mining, leaving a net profit of \$31.30 per ton. A new tunnel is now being run in from below to tap the vein, which it is expected to reach in 1,800 feet. Two new boilers of 100 horse power each are under order and are expected to arrive shortly. They will be used for driving from ten to twelve drills. The driving power will be located in one place and will be available by means of compressed air to operate drills in any part of the mine.

The Iron Horse, which is under bond to Mr. Humphreys, is showing up exceedingly well. The ledge, which is twenty-one feet wide, like so many other Trail Creek properties, becomes richer as they work down. They have been showing the assays of rock representing a fair average sample for each day's work. For the last six days, these have ranged from \$34 to \$96 per ton, giving an average of about \$60 in gold. A trial shipment of the ore has gone to Tacoma.

Work is progressing on the smelter at Trail. It will have a capacity of 125 tons a day. Of this amount about 100 tons will be received from the Le Roi, leaving only a capacity of 25 tons for other customs work. Mr. Heinze, however, says that, as soon as there is sufficient ore offering, he will double, or treble, if necessary, the accommodation of the works.

The Le Roi mine is putting out about 90 tons of ore a day, and shipping from 70 to 75 tons.

On Monday last, at a meeting of the directors of the Alamo Mining Company, held at the concentrator, Three Forks, a dividend of 7½ per cent., amounting to \$35,000 was declared. At the same time the proprietors of the Idaho, which is a private partnership, divided \$4,500 among themselves. In April last they received \$30,000. Very little ore has been shipped from the mine during the summer, which accounts for the disparity in the dividends. Work is now fully resumed, and the output will soon be large. The Alamo is supplying the concentrator with sufficient ore to turn out 20 tons of concentrates a day.

Dan. Mann, the well-known railway man, has purchased an interest in seven claims from his brother, Hugh Mann, and will work some of them this winter. They have already commenced to work the Carnation, a claim on Tributary Creek.

A group of mines on Lookout Mountain or South Park Mountain, of which little or nothing has been said, is being developed with encouraging results. Two of these are the Emu and Kiwi. A mill test from the ore taken from one of these gave \$42 in gold, and the showing on both is very good.

Red Mountain, on which are located the Centre Star, Le Roi, War Eagle, Josie and Cliff, seems to be almost all ore. To be sure, much of it is low grade, but with cheap smelting it can be handled with a profit to the owners. But there is so much ore that is rich that will run from \$40 to \$60 in gold, that the baser product is allowed to accumulate on the dump.

J. D. Farrell, manager of the Crown Point and Iron Horse properties, says: "We are now drifting each way from where the ledge was cut. In the face of the drift there is twenty-two feet of solid ore, which will average \$50 per ton. The initial shipment was made a few days ago, the returns of which have not yet been received. The Iron Horse is one of the most remarkable properties in the district, and is being thoroughly prospected. The Crown Point is now down sixty-five feet and a drift is being run on a rich body of ore. Bids have been received for the machinery."

From E. H. Tomlinson, owner of the Last Chance mine on Noble Five mountain, in the Slocan district, it is learned that an incline was run 106 feet into the mountain, and for thirty feet on the roof of the incline there is one to two feet of solid ore. The first 100 tons taken out from this opening ran 184 ounces in silver and 74 per cent. lead. As a curiosity several large pieces of ore were taken out, the largest of which weighed from one to three tons. In the mine there is also a product of carbonates mining from 66 to 113 ounces in silver. There is about fifteen tons of second-class ore on the dump awaiting shipment, from which the assays are 100 ounces of silver and 29½ per cent. lead. A lower tunnel is also being run and is now in 170 feet in ore all the way. No shipments have been made from this tunnel. They are now mining on a vein from two to four feet in width. This vein carries 80 ounces carbonates and 180 ounces ore. This tunnel at its face has a vertical depth of 150 feet. There is 412 feet of development on the property, and every foot of work on the vein is in cre. The mine has an elevation of 7,500 feet.

The Le Roi, since the installation of its new hoisting machinery, has all but doubled its former output, turning out ninety tons per day. The directors have paid one dividend already, and expect henceforth to pay a monthly dividend of five cents per share. The company has contracted to supply 36,500 tons to the reduction work now being erected at Trail, with the option of increasing it to 75,000 tons. The Northport road is in such bad repair that the wagons cannot carry all the ore turned out, and a reserve of some 125 tons is now held in the bins.

Professor Fowler, representing Chigago capitalists, has secured a site for a 50-ton pyritic smelter at Midway, and expects to have it in operation April 1 next. Water and timber for mining purposes are plentiful and a railway line from Marcus past the mouth of Curlew creek to Midway, would tap the centre of the district, besides opening up the richest portion of the Colville

reservation, with a length of only forty-five miles. Many Spokane people are becoming interested in the district. The elevation of Midway is 1,900 feet, and the camps range from that to 4,500 feet.

J. A. Manley, of Grand Forks, B.C. is an enthusiast on the subject of the mining region between Christiana lake and Boundary creek. He says there is no doubt that a smelter will be erected on Grand Forks. In speaking of some of the mining properties in that vicinity he says that some of the ledges are enormous, and mentioned the Knobb Hill, a property not yet much developed, but the ledge is over 100 feet wide and carries gold and copper. Another property which carries \$16 gold and nine per cent. copper has been bonded to Chicago parties for \$12,000. There have been over 700 locations made this summer between Christiana lake and Boundary creek. The Stemwinder shaft is down thirty-three feet and it is reported that the ore in the bottom carries \$40 in gold and the vein on this property is said to be sixty feet in width. The ore is free milling.

A thirty-day option has been given on the Athabasca, Alberta and Manitoba to Spokane parties. These properties are located on Morning mountain near Nelson, and are regarded as most promising. The ledge is visible on the Athabasca only, and consist of free milling gold quartz. Out of eight assays it is said the lowest was \$96 in gold.

Parties just down from Rossland report a rich strike on the Iron Mask, owned by the War Eagle Company, and adjoining that property. While digging a road a vein of ore was uncovered, the first assay of which, it is said, went \$167 in gold. Not being satisfied with this, James Clark, the superintendent, accompanied by his assayer, went down and took samples which, it is said, assayed \$256. The vein where discovered is from four to sixth feet in width.

The Canadian Pacific has completed its grade from Three Forks to Sandon, bridges are being put in and it is expected that the road will be completed and in operation very shortly. This road is standard gauge. It is also stated, on apparently good authority, that the company will extend their line from New Denver to the foot of Slocan lake to the new camps on Lemon and Springer creeks. The mines are beginning to attract attention, but little has been said regarding them. All of the claims so far located are in dry ore. The Wellington is the most prominent in the district; it is only a prospect being down but fifteen feet. It has a seven foot ledge and native silver is freely interspersed throughout the vein. So far as development goes, it is certainly the richest yet discovered in that country. There is considerable curiosity manifested by those familiar with the property as to whether or not it will continue with depth.

The site of the Hall mines' smelter is a scene of activity. Men and teams are at work grading foundations for the charge-floor ore bins and for an assay office, other men are at work framing timbers and laying the floors of the ore bins at the tramway; rockmen and teams are getting out granite for the foundation walls of the building, and masons are laying walls as rapidly as they were ever laid in any country. Machinery is arriving on every train, the last delivery being a large boiler.

CARIBOO.

Word comes from Cariboo that, after twenty-nine days' run, with 2,500 inches of water, the clean-up of the sluces on the Cariboo has been completed, the result being a cone of gold weighing 2,435 ounces and valued at \$41,857. The run of the Horsefly, with 2,700 inches of water for forty days, resulted in 1,151½ ounces, worth \$26,000. Bed rock was not cleaned and the clean-up of the cuts was not completed. Rich gravel west of No. 1 pit prospects variously up to \$8 per ton. Neither of the mines will close down till the frost compels them to do so. Much interest has been felt in these mines, and, as this is a splendid

indication of the wealth they contain, waiting capital will no doubt flow into Cariboo.

A gentleman, directly interested in the mining of the province, made the following general statements to a correspondent: The results of the large washups of the present season, in connection with the Cariboo and Horsefly hydraulic mining companies, of Cariboo, in which Montreal capital is largely interested, are expected to be made known very soon. A very encouraging return is understood to be confidently expected by the Vancouver representatives of the companies concerned. Placer mining in Cariboo has, however, as was predicted by experts, proved this season rather disappointing, and few of the adventurers engaged therein have returned with more than moderate wages as a result of the gold gotten. The Cariboo gold deposits in the districts at present prospected are emphatically such as can in general only be profitably worked by hydraulicing.

On October 1st the Beaver Mouth Hydraulic Company made its second payment on the property sold to them by F. S. Reynolds several months ago. The property located a year ago last spring by Bever and Clark has made a good showing. Four shafts have been sunk to bed rock, depth being from ninety to 136 feet. The reports of experts Anderson and Evans were satisfactory and the property will soon be ranked among the great mines of Cariboo. The surveying has been done by the engineer, Mr. Betts, and blue prints and plans are now being made.

Mr. Berry Youill, who has been spending the season in development and exploration work in the Cariboo, and associates are sinking and drifting on a bench opposite Stanley and have full confidence that they have an old channel of Lightning creek there. It is on the same level as Butcher's flat and other noted claims that yielded high in the '70's. Mr. Youill thinks the time will soon come when, by a bed-rock tunnel in Lightning creek, the gravel below Stanley will be drained and that there is more gold in the bed of the creek that could not be taken out on account of water than ever was taken out. In addition, there is every reason to believe that the creek bed is equally good below the Eleven of England ground.

Mr. Brobeck is engaged in surveying for Ohas. Ramos on Slough creek, Mr. Ramos having secured a lease of two miles of this famous creek. The Slough creek company are still energetically pushing work and every indication is favourable to bringing this enterprise to a favourable termination. The value of the creek bed is beyond question. The depth and surrounding circumstances are such that time will be required. The management is at present undoubtedly in good hands.

During the season of '95 many important locations have been made in the upper country, and, while more attention has been paid to placer ground than to quartz, it is very evident that, in the near future, quartz mining will take a front rank in the district. We have been shown specimens of gold and silver bearing ore this season, that came from different sections of the country and hundreds of miles apart, that would attract the attention of mining men anywhere. Certain it is that a very large per cent. of the gold found in gravel in the Cariboo country came from quartz veins not very far away. These veins in many places are, of course, covered with slide and debris and are difficult to find, but again in other places the ledges show up boldly and can be easily proven. In many of the mining countries men have worked for years on a creek or gulch and not noticed the material surrounding very closely. Other men come along and discover and locate a valuable quartz ledge from which the gold washed out by the early miners had been ground out by glacial action many centuries before. The great Treadwell ledge in Alaska, now owned by the Rothschilds and D. O. Mills, was not located until long after men had found placer ground on the beach below and worked it successfully. Yet this mammoth ledge, 520 feet wide, first located by French Pete and sold by him for \$40, resold by John Treadwell for \$2,000,000 and worth at the present time, as its stock shows \$14,000,000, was at any

one's disposal for several years, and no one had enough faith in the proposition to locate it. It will pay the prospectors of Cariboo to keep an eye out for quartz and to investigate any rational proposition that they come across. The demand for quartz is good and any fair proposition can be readily handled.—*Mining Journal*.

ALBERNI.

The Alberni district is to-day a scene of very considerable excitement and of an excitement which seems thoroughly warranted by the assays of such reliable men as Mr. W. Pellew Harvey, of Vancouver. Prospectors are at work all through the district and a large number of valuable quartz ledges have been located and are being opened up by the locators. Money is being put in by Victoria, Nanaimo, Wellington and some outside capitalists. A second stage has been started on the Alberni road and the Indians are kept pretty busy taking new comers down the canal to China, Granite and Coleman Creeks. The Coleman Creek rock is the queerest looking stuff that ever carried gold. Men seem in doubt as to its true nature. Some of it looks like conglomerate, other parts like rotted slate with thin veins of quartz running through it. It seems to be pockety, though the experts declare that the few unsatisfactory assays which have been made are of rock taken from a "horse" which pushes through the mineral bearing rock. Some of this rock is so soft that you can crumble it in your hands, and from this we have seen wonderful pans made. The assays on Coleman Creek go from a trace to \$480, and there is a hill side of the stuff. It is rumored that another strike of the same kind of ore has been made on the Canal, and it is known that an extremely extensive quartz ledge has been struck upon Sproat River. This ledge, which is being rapidly developed, is opened now for forty feet and is said to be some twenty or thirty feet wide. The rock on the top was soft and had a large proportion of lime in it, but now, at a depth of nine feet, it is harder and darker, carrying an unusually large proportion of small iron pyrites and looking much like that favorite property, the Star of the West. The assays obtained from it were from Platt, of New York, \$11, \$14 and \$60, and from Price, of San Francisco, \$4. Mr. Pellew-Harvey's assays, upon which all Alberni men are beginning to base their opinion of quartz, are not to hand yet. This property is magnificently situated with regard to water power and road facilities and improves with every blast. It is said that the dispute as to the ownership of the rich Alberni claims, the Chicago and Warspite, will be settled in court next month, the money for litigation, having been found on both sides. Claim jumping has already begun here, nine hydraulic claims having been jumped last week. Some nuggets I saw brought in by Chinamen from Sproat River last week were enough to make men hunger for claims to jump.—*Nelson Miner*.

LILLOOET MINES.

On Cayuse Creek three shifts of men, under Mr. Hughes, the superintendent, are hard at work developing the Bonanza quartz mine. The company to whom it is bonded have agreed to spend \$15,000 in prospecting, and already there are 500 tons of ore on the dump. The ore is free milling, running in gold from \$8 to \$200 a ton, and some of it much higher. Work will go ahead all winter, and should the results be satisfactory a mill will be erected for treating the ore. The same company have a bond on the Vancouver Enterprise placer claim on Cayuse Creek. The old company spent \$36,000 in development work, and, as soon as pumps can be got in, winzes will be sunk in the tunnels already made, so that bedrock may be reached. The property looks well and should pay. The Bridge River Gold Mining Co., on Horse Shoe Bend, have twenty-five men at work making a cut to change the river bed. When the cut is finished the company will have a quarter of a mile of river channel, which is known to have very rich pay dirt, to work. The cut is being pushed to completion as rapidly as possible.

Some new quartz strikes have been made on Anderson Lake. Four of these, belonging to Messrs. Peter D. Frazer and Wm.

Allan, show on the surface quartz running \$18 in gold and \$5 in silver and growing rapidly richer as depth is attained. The ore is partly free milling and partly sulphurets. Several other new claims have been recently taken up there also.

A new company, with English capital, has just taken up the McDonald and Hurley placer leases back of the town, beside Lillooett hydraulic lease and five leases on the east side of the Fraser. They will run a ditch at a cost of \$40,000, to bring the water from Cayuse creek to work the leases. The ground has already been thoroughly prospected and work is going right ahead. The new telegraph line from Ashcroft to Lillooet is now half completed, and will be ready for operation about the middle of October.

Alberni.

(FROM A SPECIAL CORRESPONDENT TO THE RECORD.)

The mountains of Vancouver Island are comprised within what is known to geologists as the Vancouver Range, being the most westerly of the four great ranges of British Columbia grouped under the Cordilleras.

The Vancouver Range is similar in many respects to the Gold Range which has produced most of the mineral wealth of British Columbia. The Alberni settlement is situated at the head of the Alberni canal and is easily reached by stage from Nanaimo, sixty miles, and by steamer from Victoria, deep draught vessels being able to unload freight, even heavy machinery, at the wharf within fifteen miles of the mines. Starting from the Alberni settlement you proceed by a pack trail a distance of about fifteen miles, following the banks of China Creek to its intersection by Mineral Creek. The trail passes over a comparatively level country along which a good wagon road could be easily built; the Provincial Government no doubt will build a road to the mines when active operations there justify the same. China Creek has been worked for its alluvial gold as far back as 1862, principally by Chinamen, by the most primitive methods with very profitable results. Companies are now being organized to work the entire length of the creek.

The following results are from a few pans taken by your correspondent from the "Duke of York" claim; one pan from hill side, thirteen colors; one pan from hill side, twenty colors; one pan from moss, growing on boulders at side of creek, thirty colors fine gold; one pan nearedge of stream twenty-seven colors; and one pan from ground already washed by Chinamen, thirteen small colors; in many cases the gold is found with quartz adhering to it.

The locations mentioned in this letter are reached by a steep ascent up Mineral Hill, which is covered by magnificent timber for mining purposes, mostly cypress or yellow cedar.

The water on the hill is abundant for all ordinary purposes, and is considered by many sufficient for mill power.

Of the many claims located on Mineral Hill, the Alberni shows an immense body of ore heavily mineralized, and very high assays have been made, ranging from \$15 to \$117 per ton (this on good authority), the latter being obtained from a rich pay streak, which runs from nine inches at surface to two feet at a depth of twenty feet. An open cut in Hillside, about twenty feet by six feet, wide shows lead very clearly, and the openings on other claims would indicate that the Mineral Hill contains large bodies of ore, which could be taken out and delivered at will on smelter at foot of hill for less than \$1 per ton. Supplies can be taken in at a very low rate of freight and should not exceed one cent per lb., and work can be prosecuted all the year round. It would be hard to find an easier country to work, as the mountain rises more than 3,400 feet above the sea level at an angle of forty-five degrees, so that the ore can be moved by means of tunnels instead of shafts.

The following are some of the claims in this district:

"Ophir."—No development.

"Vancouver."—No development.

"Crow Point."—Commenced stripping, lead visible, but not followed for any distance.

"Champion."—Lower drift twenty feet into side of hill sixteen feet from surface; assay for 150 lbs. \$14 per ton. Price & Sons, San Francisco.

"Champion."—Upper drift on cut, lead 1.6 at surface 3.6 at ten feet; assay \$6 to \$1,400.

"Victoria and Alberni."—This lead appears to run through the "Missing Link" and into the "Alberni," thus showing that it is extensive.

"Jack Taylor."—No development.

"Belcher."—No development.

"Adelaide."—Stamping work now.

"Queen of Diamonds."—No development.

"Queen of Hearts."—No development.

These other claims without development:

"Missing Link."—Five cuts all showing quartz resembling "Alberni" and "Champion," in fact, openings indicate that the quartz in the immediate vicinity of the "Alberni" and "Champion" is heavily mineralized, and carries a large percentage of gold.

In conclusion I would say that I think the mineral claims in the Alberni District worth an exhaustive examination by the expert and capitalist.

THE ATTACK ON THE GOLDFIELDS COMPANY.

In our "Editorial Notes" we take ground against the attack on the Lillooet-Fraser River and Cariboo Goldfields Company because we consider it ill-timed and undeserved. It looks too much like an attempt to discredit British Columbia mining investments generally, and that, too, at a time when this province is looking for capital to develop the mines. There was not, in our opinion, sufficient reason for the violent attack of the *Saturday Review*, and its being accepted as a text by British Columbia papers to denounce an enterprise, formed for the good of the province, and which is as yet only in its infancy, is altogether inexplicable. It will be time enough to criticise unfavorably the promoters of the enterprise when they do something to warrant such a course. Out of a large number of papers in Great Britain and Europe containing comments on the formation of the Goldfields Company, the *Saturday Review* was the only one to publish an unfavorable opinion. Why is it, then, that the *Saturday Review* article is the only one quoted by the British Columbia critics of the company? To say the least of it this is most unfair—that only one (the hostile) side of the question should be presented to the British Columbia public.

It is evident the British people do not take much stock in the *Saturday Review* articles since the shares in the company have gone up in price. It is not our intention, however, to act as an exponent of the company's affairs. When the directors do anything to deserve condemnation we shall condemn, but at the present moment it is somewhat early in the day to criticise their actions. At a time when we are seeking English capital to develop our mines it is, to say the least of it, unfortunate that British Columbia newspapers should echo the violent attack of the *Saturday Review* simply because some of the British Columbians interested in the company are political opponents. There is no other view we can take of the matter.

The MINING RECORD will not hesitate, should occasion arise, to denounce any attempts to mislead investors, but in discussing the mining affairs of this province political or personal prejudices should not be allowed to play a part. They will not in our case.

Board of Trade Excursion to West Kootenay.

At the quarterly meeting of the British Columbia Board of Trade, held last month, in Victoria, the following report of the Board of Trade excursionists to West Kootenay was presented:

To the members of the British Columbia Board of Trade, Victoria:

GENTLEMEN.—Since the previous meeting of the Board, the members of the Board, whose names appear in a list appended hereto,

have visited Kootenay, and we now beg to report the information acquired and impressions received by them.

The tour included Trail, Nelson, Ainsworth, Kaslo and Slocan mining divisions, and the principal properties in each were inspected.

From Revelstoke south, the country traversed is mountainous, the higher summits exceeding 8,000 feet, upon which snow remains throughout the year. The timber line appears to be 7,000 feet above the sea; below this the growth is varied; in places, there is an abundance of well grown timber, whilst other parts are inferior in this respect, and some of the mountains are almost barren. Portions of the wooded area at high elevations are free of undergrowth and remarkably picturesque.

West Kootenay possesses many natural advantages, the most important of which are the navigable waters of the rivers and lakes, over 300 miles in length. On the Columbia River, a first-class steamship service is operated by the Columbia & Kootenay Navigation Company as a feeder to the Canadian Pacific Railway. On the Kootenay River and Lake, the same company has other steamers, connecting at Nelson with the Kootenay & Columbia Railway, operated by the Canadian Pacific Railway, and the Nelson & Fort Sheppard Railway. At Bonner's Ferry, the steamers connect with the Great Northern Railway, thus giving the district competitive rates with the Canadian Pacific Railway and two American transcontinental railways. There are several other steamers plying on the lakes and rivers. Short lines of railways have been constructed to bring the products of the mines to these waterways, and to form a connection between the Columbia River and the Kootenay Lake. Considering how recently this country has been under development, it is well opened up.

The town of Rossland, situated ten miles north of the boundary, dates only from the early part of this year, and is now the headquarters and central trading point of the Trail division. Over 200 well-built frame houses, including stores and hotels, have been erected on the townsite, and the population in and adjacent thereto numbers approximately 2,000 souls.

The Cliff was the first mine visited, distant about fifteen minutes' ride from Rossland. The upper tunnel has been driven in 190 feet, and the ore averages \$35 per ton in gold and copper. Shipments have already commenced. Passing on to the Le Roi, we found extensive works in operation, upon which the sum of \$150,000 had been expended. The main shaft, from which the ore is taken, is down 375 feet, and the present output is 100 tons *per diem*. The average value of the ore is \$40 per ton in gold, silver, iron and copper. The vein is in no place less than six feet in width, and, in the lower levels, widens to thirty feet; the best ore yet found was taken from the bottom of the shaft. Eighty-five men are employed in connection with this mine, the miners and helpers being paid \$3.50 and \$3 per day, respectively. The ore costs to mine \$3 per ton; transportation by waggon to Northport, freight to the smelter and treatment, an additional \$13.50; it will thus be seen that there remains a good margin of profit, and at the date of our visit there was the sum of \$50,000 cash available for the payment of a dividend, this over and above the repayment of all outlay on the mine by sale of ore. The War Eagle adjoins the Le Roi, and the character and value of the ore are very similar to the last named. As this mine is referred to in the annual report, it is only necessary to state that another dividend of \$50,000 has since been declared, making a total of \$132,000 paid within six months. Ore has been shipped from other properties in this division, notably from the Josie; and much development work is progressing at all points. All around this centre the mountains are alive with prospectors and miners; 1,600 new claims have been recorded within the past six months and there is reason to believe that many of them, when developed, will reveal mineral in richness and quantity as great as any mine now in operation. Prior to 1890 very little was known of this division and the present activity is due to the recent development of the Le Roi and War Eagle mines, both of which have paid ever since work commenced on them. The fact that the veins of ore so far developed increase in width and richness with depth is an unmistakable indication of permanency. A smelter is being erected at Trail on the Columbia river, for the treatment of the ore of this district.

The next mine visited was the Poorman, on Eagle creek, near Nelson, where there is a ten-stamp mill in operation with a capacity of twenty tons per day. The ore averages about \$20 in gold per ton, the vein from which it is taken varying from ten inches to two feet in thickness. Other veins have been found on the claim and the development work has exposed a large quantity of ore rich in gold. The Silver King is situated 5,000 feet above, and, as the crow flies, is about four and a half miles from Nelson. Here ore is already in sight to an estimated value of \$3,000,000. Six hundred and forty tons shipped carried silver 116 ounces, copper 12 per cent, and gold \$2 per ton. The aerial tramway is nearly completed. It will connect the mine with a smelter now in course of erection at Nelson. There are several other rich mines on Toad Mountain, tributary to Nelson.

The town of Nelson was laid out seven years ago; many substantial buildings have since been erected and principal government offices of the district are located there, as well as branches of the Bank of British Columbia and the Bank of Montreal. The population of and tributary to Nelson is probably 1,000 souls.

The largest body of ore yet found in Kootenay is at Blue Bell mine, situated on Kootenay lake about opposite Ainsworth. The tunnel, 1,100 feet in length, entered almost immediately upon stepping off the steamer, is, at the far end, 170 feet below the surface of the hill. Although ore has been taken out in places to a width of over seventy feet, the foot wall has not yet been found, and the vein has been traced for nearly a mile in length. It is composed of bi-sulphide and bi-carbonate of lead, galena and copper, value from \$11 to \$30 per ton. The ore is treated at the smelter at Pilot Bay, some seven miles distant, the mine being owned by the smelter company.

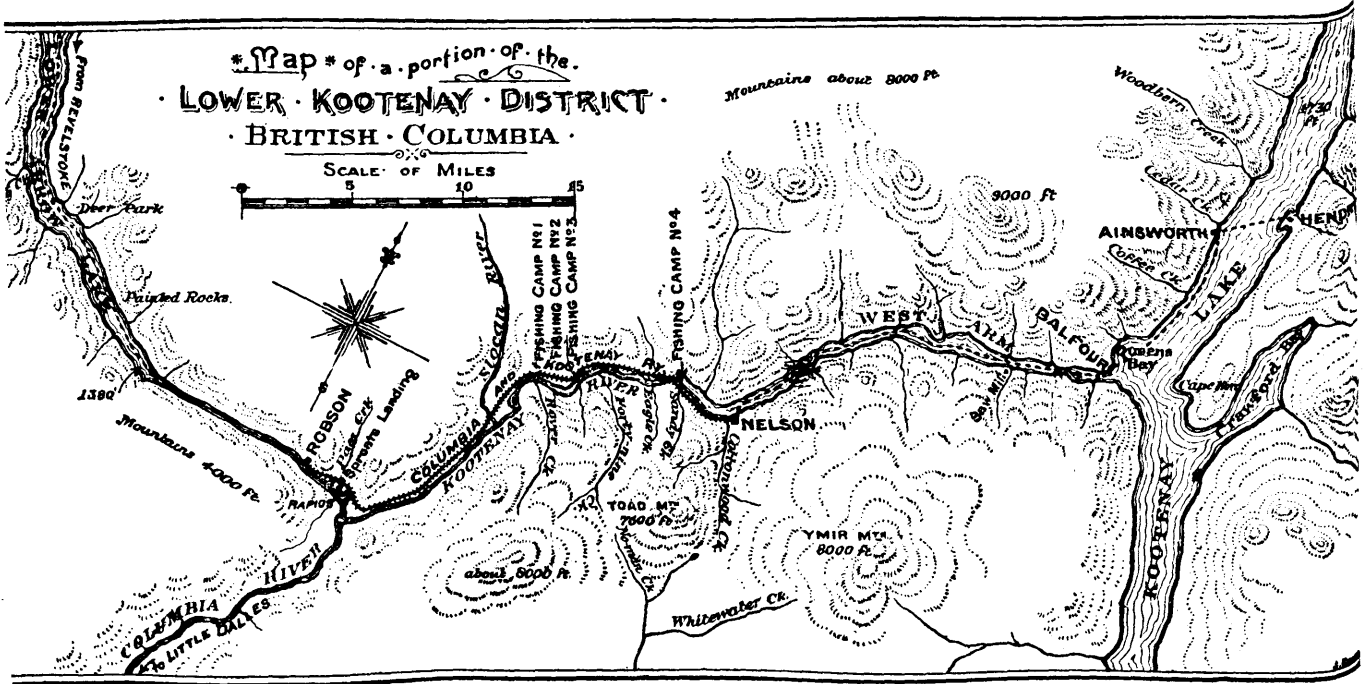
The Pilot Bay smelter is equipped with machinery of the most modern type and the arrangements generally are such that manual labor is reduced to a minimum in every branch. At the time of our visit 100 tons of ore were being treated daily.

Ainsworth, situated on the opposite side of Kootenay lake, is one of the oldest camps in the district. Some mines, tributary thereto, are being worked and produce silver ore proper, known as dry ore.

The town of Kaslo, ten miles north of Ainsworth, is a busy mining centre. It has only been in existence about three years,

also a very promising mine; development, commenced in August 1894, having paid from the start. The tunnels have been driven aggregating in length 300 feet, also an additional level to tap the vein 150 feet below the croppings. The vein stands nearly vertical with an average of nearly twelve inches of solid ore, and carbonates scattered through the ledge up to fourteen feet in width. One hundred and thirty tons of ore shipped gave 175 ounces of silver per ton and 75 per cent. of lead. The last mine visited was the Slocan Star, located on Sandon creek. Croppings in the creek led to its discovery in October, 1891. Extensive development has been carried out and the vein has been exposed to depth of 45 feet; at some points the vein is fifty feet wide, eight feet of which has simply to be broken, sacked and shipped. Three thousand four hundred tons of ore have been shipped from this mine, and averaged 100 ounces of silver per ton and 70 per cent. lead. There remain about 20,000 tons of concentrating ore on the dump. In connection with this mine a concentrating mill is being erected. It also a gravity tramway for transporting the ore from the mine to the mill. The Nakusp & Slocan railway affords several mines in this division the advantage of competitive rates with its rival, the Kaslo & Slocan. Twenty-eight mines have already shipped ore and in nearly every case arrangements are being made to continue shipping on a larger scale; as there is much development work progressing at numerous claims, the outlook of the Slocan division is very promising.

At Three Forks a mining town of very recent origin, there is a



and notwithstanding serious reverses by fire and flood, it stands to-day on a more solid basis than ever. The Kaslo & Slocan railway is now being built from this point to Cody creek, with a branch into Sandon, distance thirty miles. It will probably be ready for traffic at the end of October.

We left the train 15 miles from Kaslo and proceeded to Three Forks by way of the Jackson divide and Sandon. *En route* the Northern Bell was visited, a mine upon which considerable development work has been done. Five hundred tons of ore have been shipped, averaging 90 ounces of silver per ton and 70 per cent. lead, and we found 200 tons more were nearly ready for shipment. The vein of concentrating ore varies from six feet to twenty feet in thickness. The ore vein of the Noble Five, three feet to four feet in width, has been disclosed to a depth of 300 feet, and the bottom is not yet found, nor is the length known. Three thousand feet of tunnels have been driven in and twenty men were continuing the work in day and night shifts. The miners work ten hours per day for which they are paid \$3.50. There have been shipped from this mine 1,800 tons of ore, and we saw several thousands of tons of concentrating ore on the dump, worth probably \$30 per ton. The shipping ore contains an average of 135 ounces of silver per ton and 73 per cent. of lead. The ore is steel, wavy and cube galena, and carbonates. Four-fifths of this mine is still owned by the locators. The Deadman mine adjoins the last named and the ore is of similar character. The vein is four feet wide and has been traced two hundred feet deep. About 300 tons of ore were sacked and ready for shipment, quality being equal to a carload shipped which averaged 150 ounces of silver to the ton and 40 per cent. of lead. The Last Chance, situated on the Noble Five mountain, is

concentrating mill in operation; another concentrator is to be erected immediately at the Washington mine.

Quite apart from the industry of mining proper, West Kootenay offers an excellent field for the investment of capital in concentrators and smelters, the necessity for which is an inevitable consequence of mining development. It cannot be very long before the need of refineries will have to be met.

The trade to the district is already large and rapidly increasing. Through the courtesy of the Canadian Pacific Railway Company, Mr. William Brown, assistant general freight agent, accompanied the party, and we understand will recommend, as occasion may require, the adoption of more advantageous freight rates between Kootenay and other parts of the province.

The route taken by the party lay through magnificent scenery, that on the Columbia river being especially grand. Few of the inconveniences so often met in travelling through a country were experienced and in this respect the tour was particularly enjoyable. The streams afforded excellent fly fishing, and trolling on the lakes can be engaged in with equal success; big game, such as cariboo, bear, sheep and goats is to be obtained on the mountains, indeed the facilities for sport and travel are so great that they have only to become known to attract considerable tourist traffic.

Even if no new discoveries were made it would not be too much to say that the future of West Kootenay is assured. It should, however, be borne in mind that but a very small portion of its area has so far received attention at the hands of prospectors. Scarcely a week passes without news being received of fresh finds, all of a nature to encourage and strengthen the belief that, so far,

the merest fraction of the wealth of the country has been ascertained. Within the limited time and space at our disposal for the compilation of the foregoing report it was impossible to do more than refer briefly to the wonderful resources of the district visited, but we endeavored, above all things, to obtain and lay before you information which may be relied on. This we believe we have accomplished, and would merely add, in conclusion, each member of the party is personally satisfied with the result of his trip, as confirmatory of the existence of the unlimited wealth of West Kootenay.

D. R. KER, *President.*
GUS. LEISER, *Vice-President.*
F. ELWORTHY, *Secretary.*

Victoria, B.C., Sept. 21, 1895.

Trail Creek Mines.

The Trail Creek mining country, of which Rossland is the present mining depot, cannot, in extent of territory, be bounded correctly on the maps, nor in the possibilities of its prospects and ore bodies can it be diagnosed satisfactorily in the chemical laboratories. Trail Creek proper is a minor tributary of the Upper Columbia, which makes a rapid descent to the river from the higher altitudes of the range immediately west, pursuing a course nearly parallel to the international boundary. In six lineal miles of watershed it drains an envionred slope of ridges and gulches comprising thirty square miles, at the upper or western limit of which the highest elevation is about 8,000 feet. Throughout this fairly known region the country rock is similar, and the east and west trend distinctive; while the ores are significantly characteristic.

As to the permanence and qualities of the ore bodies in the Trail Creek district one authority will say they are wonderful; another they are a mystery, and a third and more explicit, that they exist in the richest discovered area of a volcanic mineral belt which plainly traverses the continent from beyond Sudbury, through the copper and iron deposits of Michigan, and on to the western slope of the Cascades. The formation is exceedingly tough; the ores dense. The cost of work averages not less than \$20 a foot. Iron and copper exists in varying percentages, under sulphide conditions, not even regulated in distinctive characteristics by the localities or ledges, with gold for a companion. So notable are the mineral combinations that neither the experience of the crucible nor the optical skill of the profoundest expert can enable one to estimate correctly the value of two samples of ore similar in appearance coming from different strikes, even in the same vicinity. And this is also true of the samples from the same mines, and the smelter returns from the War Eagle shipments, which have largely exceeded the sample calculations. Ordinarily the reverse is the experience in mining.

As the channel of the Columbia is followed toward the lake system, it is noted that the lime agglomerations give way to steadier and more distinct formations. The quartzite belt over which the river pours at Kettle Falls can be traced to Idaho on the east, and west through the Colville reservation. This break seems to mark the point at which should be observed the geological relations extending northward. While to the south the lime country rock contains rich minerals and some paying propositions, the deposits are pockety, and the locations, denominated fissures or veins, run in all directions, having neither continuity nor likeness of conformation. North of the quartzite lime comes in again, but it becomes more uniform in character and is seamed east and west with low grade argentiferous ores. Sandstone, shale and micacious granite alternately parallel to within about ten miles of the international boundary, where two contacts of shale roof and silurian floor enclose immense ledges of glistening white silica, said to accompany each other across the country for forty miles.

Immediately at the boundary sulphide ores, of lower grade than those of Trail Creek, make their appearance in irregular strata of shale and limestone. The trend of these veins is also east and west, occasionally broken by lime "horses," and walled now and again by the diorite which begins to show itself unexpectedly. Large bodies of \$10 and \$12 (gold) sulphide materials are opened at the surface on these finds, while pocket prospecting along the

veins discloses seams of galena, tinted with zinc, which assay high in gold. The galena does not seem to continue with depth of development, but is displaced by sulphides.

Moving north into and upon the mountains the denser metamorphic rocks make permanent appearance, until at length the divide of Sheep and Trail Creek is reached, when the carbonized diorite leviathan of the camp, Red Mountain, honeycombed by mole-like holes, and studded with newmade shaft sheds and cabins, bursts upon the view. On the lower reaches are the War Eagle, Le Roi and Josie mines, all shippers, whose total yields for the last fiscal year were \$468,375.25, of which \$46,372.65 was copper, \$21,802.30 silver, and \$400,200 gold.

Red Mountain, the scene of the original discoveries and the present seat of productive activities, is appropriately named. Almost wholly denuded of timber and the denser shrubberies, the sanguinary color with which it is bedaubed from base to apex the elements have extracted from the mineral in its veins. This distinguishing peculiarity undoubtedly made it the point of first attraction to the earlier prospectors, although its white neighbour to the south, O. K. mountain, was known to contain fine gold quartz ledges. Only three miles separate the two yet in mineral-bearing characteristics they are wholly different.

After the so-called iron croppings of Red mountain were found several years ago, they were prospected in a desultory and half-hearted fashion. Prospectors and practical miners of long experience in the Rocky Mountain camps, and many reputable experts, actually condemned the discoveries. In other sections, notably in Colorado, these pyritic materials were barren, and no one having had any previous trial with like propositions held out the slightest hope for the future of Trail Creek. One after another combination or co-partnership successively tried to determine that Red Mountain was a mountain of mines, and one after another succumbed, until at length the resoluteness and faith of the Spokane operators secured an almost complete control of the valuable properties of the district.

It is not the purpose in this sketch to venture upon any predictions as to what will come of the camp with deeper explorations and a subsidence of the bonding mania. Suffice it that, under every conceivable disadvantage, with imperfect and inadequate machinery, expensive mining, remoteness from smelting markets, wagon hauls and transfers, the mines have paid handsomely, and up to date results have silenced the sceptics. On the other hand, disappointments must terminate the enterprising efforts of many of those who are digging and delving on the innumerable feeders and seams to be found on every side. Capt. Burbridge, who expeted the district when it was comparatively unknown, and who then expressed his confidence in the outcome, is of the opinion that with depth a gradual and persistent expansion of value will be noted. Proof of his theory is yet to be had. The ore seems to have no disposition to arrange itself into pyramidal volumes. According to a practical authority its tendency is, on the contrary, to form in parallelogram beds. Again, I am assured by Mr. Davey a very competent chemist and assayer, that the values rarely show improvement with depth; that where the value is not high above, it does not become so below, unless the mineral conditions change, which rarely occurs. The evolutionary enchainement of the value of the ore with depth is one of the oldest of mining camp beliefs, and will always find willing auditors and firm adherents.

It has been well said of Trail Creek that if three more shipping mines are added to the present list the camp will soon rank with the best. Most of all, a smelter is needed; or the local operation from such process as is used in cheaply treating the sulphide ores of the Little Johnny mine of Leadville.

In the values of the shipments the uniformity is striking. Taking the figures of May, June and July only slight variations of value in the total product are discernable. In May, 1,923 tons of ore returned an average of \$46 per ton; in June, 2,930 tons gave \$48 per ton; and in July, 2,724 tons yield \$46.90 per ton. An approximate 90 per cent. of these values was gold, 7 per cent. cop-

per and 3 per cent. silver. Other mineral values, not by any means inconsiderable, are excluded. These vanish through the alchemy of the smelters.

"Were the Nicaraguan canal completed and had this mineral belt low rates to the Sound ports," said a scientist who has followed the smelting of the Trail Creek ores in a series of careful computations, "it could supply the pig iron market of the world." This may be putting the possibility rather stoutly, but certain it is that, in the great expanse of mining country comprehended in his remark, the stores of iron are beyond estimate. The ores contain an average in the tables he has arranged of 40 per cent. iron, or \$6 worth of pig to the 2½ tons of mineral. Further, the tonnage shows an average of 1 per cent. antimony, worth \$1.00; 25 per cent. of sulphur, worth \$5.00; and \$2 worth of cobalt. These averages, he maintains, prevail throughout the district.—Correspondence of the *Post Intelligencer*.

The Kaslo-Slocan District.

(CONTRIBUTED.)

Never prophecy unless you know, is a maxim worthy of attention by all, especially, perhaps, by the Western journalist, as prognostications unverified are apt to damage the character for veracity and intelligence of the too enthusiastic prophet. I fully appreciate in this article the force of the principle in the above proverb and dare, to a certain extent, the future to falsify my forecast of the ore output of Kaslo-Slocan division of West Kootenay in the coming year.

As might be suspected, therefore, my "prophecy" is in reality not one, but an estimate based upon past experience, present circumstances and future possibilities, and, though it may be thought somewhat extravagant to aver that the output of ore from the Kaslo-Slocan district will be somewhere about, or over, one million dollars in money value in this coming year, or nearly as much as the whole output of West Kootenay for the past season—it can be sustained, and I hope to make it good in the space of this article.

The amount of ore produced in the Kaslo-Slocan last year was some seven thousand tons worth roughly, say, half a million dollars; study the shipments carefully which produced this return and it will at once appear to the most obtuse mind that could but the shipments be made uniformly all the year round, or even nearly so, instead of but for a few months, as at present, the "forecast" here made ceases to be a prophecy and becomes a mere sum or mathematical conclusion.

Can the mines do this, you ask? Let me explain. Heretofore the mining industry in Kaslo-Slocan has had all the disadvantage of improvised transportation in the absence of railways, and it was not until January of this year that a railway running directly into the mines was assured: now what have we? Not only one railway but two, running each other close in competition for the ore traffic. When, therefore, it is remembered that the half a million dollars' worth of ore was produced entirely in the winter, or working season, and hauled out by raw-hide, mule and sled, the assertion that it will next year be a round million, and possibly over, with two railways offering a reduction in freight rates over that of last year by twenty per cent., and keeping the traffic open all the year round, is certainly not a wild one.

Looking at it again from another point of view, that of development, it can be securely proved that this magnificent output will be obtained. The governing principle in the Kaslo-Slocan, with a few notable exceptions, has been to extract the ore in the most productive and least expensive manner, paying but little heed to future development, thus limiting the ore shipments to that body immediately within reach. For this, however, they (mine owners) cannot be blamed, as with a low silver market, excessive freight rates, and no assurance of actual railway building, the shipment of silver ore was largely experimental, and should be of the highest grade to meet the extreme exigencies of the time. Now it is all changed, it has been satisfactorily proved that the Kaslo-Slocan silver properties are

rich and high grade enough to pay a handsome profit over all expenses of mining and shipping, and the advent of railways not only reduces the cost of transportation but adds an assurance of permanency to the country, which will be seized upon by mine owners to develop their properties, opening up consequently new seams of ore which will add materially to the out-put of the coming year. New properties, hitherto unknown, will also enter the lists of shippers, and the working force of the country will be doubled, and in fact, the estimate made when all these features are scanned, seems low rather than high, and must be more than verified.

What is true of the Kaslo-Slocan, is true of the Nelson-Ainsworth, Trail, Rossland, indeed, every section of the District in the line of general progress, and I feel sorely tempted to enact the role of prophet for the entire country; I will not attempt it, however, in this article, but at some future date will establish the case, and prove the reasonableness of the somewhat startling statement of the coming production of West Kootenay and its ultimate success in the attraction of immense sums of foreign capital, and its immense value to the Dominion, which is now, alas, but little recognized by Canadians, and left like dutiful nephews should, I suppose, to our clever Uncle-Sam! Our uncle is too patronising methinks, and the repudiation of the relationship and the struggle for our patrimony, especially in West Kootenay, cannot come too soon, else our birth-right will be lost and nothing may be had from the great mother country, but her blessing.

To awaken the apparent apathy of Canadian and British capital, to bring to their notice the wonderful possibilities of the mining industry of this province, and its opportunities for profitable investment, is, I understand, the aim of this publication and none more worthy or necessary object, and one which may do most for the province, could be readily imagined. I, therefore, urge upon every one in West Kootenay, and I know many there who have felt the need of a publication like this, the necessity of aiding by sympathy and support, the progress and efficiency of this periodical.

A Good Appointment.

The Provincial Government and the Minister of Mines have taken a step in the right direction by offering the position of provincial mineralogist to Mr. A. H. Carlyle. We hope it is the first step towards the organization of the School of Mines, as suggested in our editorial notes.

Mr. Carlyle is at present the lecturer on mineralogy at McGill University, Montreal, and is, therefore, highly qualified to fill the position offered to him in this province.

Much care has been taken to select a thoroughly capable man, and Hon. Col. Baker, Minister of Mines, when on his last visit East, consulted Dr. Dawson upon the subject. Dr. Dawson suggested Professor Carlyle as eminently fitted for the position. Professor Carlyle, who is a nephew of the great Carlyle, was born in Canada some thirty-eight years ago and graduated at McGill. He has had a long and varied experience in practical mining in different parts of the continent and has been connected with some of the most famous mines in the United States. He is very highly recommended by Dr. Dawson, and, by his extensive knowledge of mining and his high scientific attainments, will be a most valuable man to the mining industry, should he accept the appointment. The provincial mineralogist, who is to be under the Minister of Mines, has, broadly speaking, to collect facts relating to the mining industry, to disseminate information, and, by other means, to promote improvements in the mining industry of the province.

Mr. Leo Norman's Visit to British Columbia.

We are pleased to welcome the arrival of Mr. Leo Norman, of L. Norman & Co., Ltd., London, England, as a result of the efforts of Mr. J. H. Hoare, who has been in correspondence with him since the early part of the year, regarding the potentialities

of our province as a rival to the famous gold fields of South Africa. Mr. Norman represents an English syndicate, composed of the most astute financiers in London. Mr. Norman has just come from the Kootenay country, where he was accompanied by his expert, Mr. J. H. Clemes, the well-known English mining engineer, for the purpose of finding out whether there were mines there which the syndicate would find it profitable to take hold of and develop. The syndicate is not "making experiments," as Mr. Norman put it in a late interview. "What they want are mines sufficiently developed to show that they will pay for working. He did not feel justified in saying what he had accomplished in Kootenay, but had no hesitation in stating that he was favorably impressed with what he had seen, and had found much greater development in the mining industry than he had expected when he left England." The syndicate do not propose to confine their attention to any one district, but will extend their operations to any portion of the province, as may be thought advisable. Mr. Clemes is still in the interior continuing his examinations. Mr. Norman will probably visit the Alberni country before leaving for England. The syndicate, Mr. Norman explained, was really the offshoot of a well known financial group in the "city," which was already largely engaged in developing mines in other parts of the world.

The Union Coal Mines.

Experienced capitalists as a rule, do not invest large sums of money in developing and improving their properties without first satisfying themselves that such expenditure is likely to prove profitable. That the Union Colliery Company are this year expending fully \$9,000 per month in improvements, besides \$150,000 for washers and coke ovens, is the best possible evidence of their faith in the Comox coal fields.

The Union mines are situated about eleven miles from Union Bay, where there are large wharves at which ships of the largest size can be conveniently and quickly loaded. A railway carries the coal from the mines to the wharf. The company has no charter for the line and carries passengers free. The travelling public would further appreciate the cheapness of the eleven mile trip, if a car suitable to convey passengers were placed on the line, nothing better than a box car being at present provided.

The mines were first opened in 1888. The output has increased from 300 tons per day to over 1,000. Three slopes are now worked, the most important being No. 4, or Lake mine. There is here a five-foot seam of excellent coal. Experts have declared it to be the best coal on the Pacific Coast for steam purposes. The British admiralty has recommended that it be used by the men-of-war on the Pacific station. The United States navy, after making tests of coal from numerous mines, found it second only to the coal from the Cardiff mines. The mine is at present down about one and a half miles. The machinery is costly and of the latest design. All pumping is done by electricity. There are also electric cutting machines, which have proved very successful in level places, but which do not work so satisfactorily on the steep grades. A Mitchell tippie is used in the dumping of the coal into the cars. The Shepherd washer separates all rock from the nut coal. The fine coal from the washers is caught in tanks and is used for the manufacture of coke. Cunninghame & Co. have built for the company a Luhrig washer at the wharf, which will wash 600 tons per day. A new mine has recently been opened. It is known as No. 5 shaft. The seam is a continuation of No. 4. The shaft is down 610 feet. Some very heavy and expensive machinery has been manufactured and placed in position at this mine by the Albion Iron Works, Victoria.

The principal market for this coal is in San Francisco, about 18,000 tons being shipped there every month. The local trade is steadily increasing, the C.P.R. Co., C.P.N. Co., N.P.R. Co., Australian mail ships, *Empresses*, Victoria Tramway Co., and city electric light being among the principal consumers. The company has now under cultivation a farm of 160 acres. The

ground is being cleared for the building of round houses and repair shops.

Cunninghame & Co. have, in all probability, secured the contract for the building of one hundred coke ovens at the wharf adjacent to the Luhrig washer. These ovens will produce one hundred tons of coke per day. The 2,300 tons of brick to be used in the building of the ovens will shortly arrive from England. The coke already manufactured from Union coal is of an excellent quality, some consumers preferring it to English coke. These ovens should prove a profitable investment, as they consume coal that is suitable for no other purpose.

The manager of the Union Colliery Company, Mr. F. D. Little is kept busy directing these numerous works. In him and the other officers, G. W. Clinton, paymaster; T. W. Russell, underground manager; A. McKnight, chief engineer, and F. B. Smith, surveyor, the company has an efficient staff.

The people are optimistic enough to believe that ere long they will hear the whistle of the locomotive on the line of railway from Victoria. Whether this line will be a portion of the British Pacific or the extension of the E. & N., they care little, so long as they receive more frequent communication with the outside world. At present the district is reached by the *Joan*, a commodious and comfortable passenger steamer built by the Albion Iron Works of Victoria, at a cost of \$75,000.

Union has grown so rapidly that it would not be recognizable were it not for that double row of whitewashed houses that reminds me so forcibly of Union three years ago. The new town, sometimes called Cumberland, is built on a high and healthy site. It contains a number of two-storey business blocks and a number of handsome residences. This rapid growth is caused by the development of the coal mines, on which the prosperity of the town entirely depends. As an indication of its rapid growth the two sawmills of Grant & Mounce are kept busy supplying lumber for the mines and for building purposes. Besides these, the Urquhart Bros. ship a large quantity of lumber from their mill at Courtenay.

The Goldfields Co.

Hon. Mr. Turner, premier of British Columbia, just home from a prolonged visit to England, was asked recently if he had any knowledge of the standing of the men who were the chief stockholders of the Lillooet-Fraser River & Cariboo Gold Co. Mr. Turner stated that, when the company was announced to the public, he made careful inquiries in quarters where the information he sought could be best supplied. He was assured that the gentlemen concerned were among the first in the European financial world and that their names were a sufficient guarantee of the standing of any company with which they were connected. Over half of the stock, £135,000 was taken up by the following well known financiers:

Henri Rosenheim, of the Anglo-French Exploration and the East Rand Exploration Cos, and principal controller of *Societe Generale*, one of the greatest bankers in Europe.

Jules, Baron de Machiels, senior partner of J. de Machiels & Cie., bankers, Paris, with branches in Amsterdam and Berlin.

Gustave, Baron de Rothschild, of Rothschild & Cie, one of the two senior partners.

Baron de Hirsh.

Gabriel Tueni, banker, Bayreuth.

Max Leon, French capitalist.

Henry Marie Leon Say, the millionaire sugar monopolist.

Tursog, Freres, Constantinople.

Wallart, of Wallart & Cie., bankers, Brussels.

J. Scott-Montague & Co.

Goetz & Co., bankers, Berlin.

Hon. Mr. Turner considered these a very formidable array of financial names, and well entitled to the statement, made by Mr. Barnard, that they were among the first financiers of Europe.

Mr. Turner also made inquiries concerning the company represented by Norman & Co., of London, with equally satisfactory results. Mr. Norman is now in British Columbia, investigating its mining fields.

Coal Shipments.

The foreign coal shipments for October had not been completed when the RECORD went to press, but the following are the shipments for September:

| NEW V. C. CO. | | | |
|---------------|-------------------|----------------|--------|
| DATE. | NAME. | WHITHER BOUND. | TONS. |
| Sept. 3 | SS. Wanderer | Port Townsend | 54 |
| " 4 | SS. Peter Jebesen | San Francisco | 4,647 |
| " 4 | Bk. Rufus E. Wood | " | 2,321 |
| " 7 | SS. Pioneer | Port Townsend | 8 |
| " 8 | SS. Willappa | Alaska | 60 |
| " 19 | Bk. G. Fairchild | Dutch Harbor | 2,353 |
| " 0 | SS. Rapid Transit | Seattle | 256 |
| " 11 | SS. Sea Lion | Port Townsend | 56 |
| " 12 | SS. Willapa | " | 26 |
| " 15 | Holyoke | " | 98 |
| " 18 | SS. Tyee | " | 79 |
| " 18 | Pioneer | " | 38 |
| " 20 | SS. Peter Jebesen | San Francisco | 4,620 |
| " 20 | SS. Willappa | Alaska | 49 |
| " 24 | Bk. Wilna | San Francisco | 2,404 |
| " 24 | SS. Chilcat | Alaska | 37 |
| " 26 | Willapa | " | 21 |
| " 26 | SS. Sea Lion | Port Townsend | 72 |
| " 29 | SS. Tyee | " | 31 |
| Total | | | 17,233 |

| WELLINGTON. | | | |
|-------------|-----------------------|----------------|--------|
| DATE. | NAME. | WHITHER BOUND. | TONS. |
| Sept. 3 | Sp. Yosemite | San Francisco | 1,887 |
| " 3 | SS. Angeles | Port Townsend | 25 |
| " 4 | SS. Willamette | Portland | 2,700 |
| " 7 | Bk. Forest Queen | Kahului | 486 |
| " 8 | SS. Discovery | Port Townsend | 27 |
| " 9 | SS. Gabriola | Tacoma | 4 |
| " 13 | SS. Alki | Mary Island | 1,025 |
| " 14 | Bk. Ceylon | Honolulu | 18 |
| " 14 | SS. Tepee | Port Townsend | 250 |
| " 15 | SS. Rapid Transit | " | 122 |
| " 17 | SS. Topeka | " | 4,800 |
| " 18 | Progressist | San Francisco | 3,450 |
| " 21 | Sp. Glory of the Seas | " | 2,350 |
| " 26 | SS. Willamette | " | 2,180 |
| " 27 | Twin Brothers | " | 84 |
| " 27 | Wanderer | " | 34 |
| Total | | | 20,264 |

| UNION. | | | |
|---------|-------------------|----------------|--------|
| DATE. | NAME. | WHITHER BOUND. | TONS. |
| Aug. 31 | SS. Bawnmore | San Francisco | 1,000 |
| " 31 | SS. Queen | " | 1,000 |
| " 31 | SS. Costa Rica | " | 2,650 |
| Sept. 7 | SS. Mineola | Los Angeles | 3,200 |
| " 21 | Rapid Transit | Port Townsend | 23 |
| " 21 | SS. Costa Rica | San Francisco | 2,650 |
| " 21 | SS. Mineola | Los Angeles | 3,200 |
| " 28 | SS. San Mateo | San Francisco | 3,200 |
| " 28 | SS. Rapid Transit | Whatcom | 256 |
| Total | | | 18,179 |

British Columbia Mining Papers.

Inland Sentinel—Kamloops, B.C.; weekly; 7 col. 8 pages; publishes Friday. Circulates in Cariboo, Lillooet, Yale, Kootenay; also in Victoria, Vancouver and New Westminster cities. Subscription, \$2 per year.

The Golden Era—Golden, B.C.; published by the Golden Era Publishing Co. Covers the entire East Kootenay District. Subscription price, \$2 per annum.

The Prospector—Rossland, B.C.; published by W. D. Pratt. Subscription price, \$2 per annum.

The Ledge—New Denver, B.C.; published by R. T. Lowery. Covers the Slocan District, and circulates generally in West Kootenay. Subscription price, \$2 per annum.

The Lardeau Mines.

J. C. Smith, mining expert, who has been superintending development for the Kootenay Gold, Silver & Copper Mining Co., Ltd., on Sable Creek, a tributary of Fish Creek, Lardeau District, West Kootenay, has just returned after an active season, in which considerable good work has been done. It has been a very short one, there not having been more than two months in which to do actual mining, as a trail had to be built, and charcoal secured for the forge, etc. The total development work for the season consists of a cross-cut tunnel, 7x8 feet, driven through a spur of the main mountain, a distance of forty feet, twenty-five of which is in good concentrating ore. The seam consists of a very hard green granite quartzite, through which is thickly disseminated streaks of very fine grey copper galena, chalcopirites, iron pyrites, baryta, or heavy spae calc and black-jack, or blend. These accompaniments are all infallible indications and proofs of the lead being rich in gold, silver and copper. The ground, as yet, is considerably broken by fissures and seams, all filled with very heavy clay, which is also rich in mineral. The claim, as it

stands, is in first-class condition for an active season next year, with high-grade ore enough in sight to keep a fifty-ton concentrator going to full capacity. This mine is one of the group formerly controlled by G. D. Scott, of this city, and known as the Scott group.

The Duty of the Press.

We heartily join the *Nelson Miner* in the following clipped from its columns:

With the prospect of large quantities of money from distant points coming into this country for investment in mines the responsibility of the local press is increased. It becomes their duty to warn the world when any of those nefarious schemes so inseparable from mining countries, are set afloat. But at the same time no journalist is justified in lifting his pen until he has documents in hand to prove what he writes. He must also distinguish between mad speculation and rank swindling. For instance, if a property that is well known to be worthless is being foisted off on a company it is the duty of the press to take care that the previous history of that property is published.

Outlook in British Columbia.

The *Board of Trade Journal*, of London, England, lately published the following from its own correspondent in Victoria:

"Last year British Columbia, in common with the rest of the world, suffered depression in a marked degree. This has been the result, in its case, of the depreciation in real estate, securities, the withholding of outside capital, and the restriction of credits, being the natural reflex effect of the general financial crisis—a sort of tidal backwash. That this is true is shown by the fact that the volume of trade and industry has not diminished; in fact, compared with 1893, there has been an increase, especially gratifying on account of the depression having reached its lowest ebb during 1894. The outlook is promising, and this is of particular interest to the British public, inasmuch as the extraordinary development now taking place in the mining districts will open up a wide field of investment, and indirectly affect trade in a marked degree. A close study of the career of the British investor has remarked the cycle which it presents, one country after another attracting his attention, inflations and depressions following alternately, until he may be said to have almost boxed the compass. It may be predicted that, in view of the mineral wealth in British Columbia, that country will next occupy his attention. The Kootenay district has experienced the first real development that has occurred in that province since the days of the gold excitement in the early sixties, after which mining was spasmodic and uncertain. In 1894 the value of ore shipments, the first in the history of Kootenay, was \$770,000. This was the output of about half a dozen mines, but principally of one or two, and represents simply initial work, rendered possible by the completion, very recently, of several lines of communication, and by which ore is now being shipped regularly. In view of the number of mines being opened up, the rich character of the ores, and the extraordinary extent of the mineral formations, Kootenay district alone expects to vie with South Africa in mineral products within the next five years. A safe estimate for the output in 1895 is \$5,000,000. Two of the largest hydraulicing works on the continent were last year inaugurated in Cariboo, which has yielded \$40,000,000 in gold dust since 1860. The Yale district, near the American boundary is showing some rich gold leads in the course of development. These are the beginning of a mining era, and they are referred to here as to their probable effect in relation to trade. So far the mining properties are in the hands of Americans, who have taken the initiative in development, and who, so far as possible, direct the trade arising out of them into American channels.

Notice.

Space will hereafter be reserved in the B.C. MINING RECORD for the purpose of advertising mining claims for sale. Parties having properties of this description for sale, will thus be able to place them before investors in Eastern Canada, the United States and Great Britain.

A concise description of the claim, with full address of owner, to occupy not more than two inches, single column space, should be sent in, accompanied by \$5, which will ensure its insertion in THE RECORD for three consecutive issues.

Prospectors and miners can have no cheaper or better means of attracting the attention of investors in all parts of the world to their claims, and as the December special number of THE RECORD will have a large and widespread circulation, notices of claims for sale should be sent in without delay, addressed to the

BUSINESS MANAGER, B.C. MINING RECORD,
Room 6 Inns of Court Building, Vancouver, B.C.

Synopsis of British Columbia Mining Laws.

HOW TO LOCATE MINERAL CLAIMS.

Every person over eighteen years of age, and every joint stock company shall be entitled to all the privileges of a free miner, on taking out a free miners' certificate, the cost of which is \$5.00 a year.

Any Gold Commissioner or any Mining Recorder can issue free miners' certificates.

A free miner can locate and hold mineral and placer claims, under the mining laws in force at the time, during the continuance of his certificate, but no longer.

A mineral claim must not exceed 1,500 feet long by 1,500 feet wide, and must be marked by two legal posts, numbered one and two, placed as nearly as possible on the line of the lode or vein, and not more than 1,500 feet apart.

The line from one to two is the location line, and the claim may extend any number of feet to the right and to the left of said location line, provided the total distance on both sides does not exceed 1,500 feet.

A legal post marked "Discovery Post" must also be placed on the lode where it was discovered.

On No. 1 post must be written:

1. "Initial Post."
2. The name of the claim.
3. The name of locator.
4. Date of location.
5. Approximate bearing of No. 2 post.
6. Length and breadth of claim.
7. Number of feet to the right and number of feet to the left of location line.

On No 2 post:

1. Name of claim.
2. Name of locator.
3. Date of location.

The line from one to two must be distinctly marked by blazing trees, cutting underbrush, or planting posts.

RECORDING MINING CLAIMS.

All records must be made at the Mining Recorder's office of the mining division in which the claim is situated.

An affidavit that mineral has been found in place on the claim must be made by the applicant, or someone in his behalf cognizant of the facts, and filed with the Recorder.

A mineral claim must be recorded within fifteen days after location, if within ten miles of the office of the Mining Recorder. One additional day is allowed for every additional ten miles.

The locator must furnish the Mining Recorder with the following particulars, in addition to the affidavit above mentioned, at the time the claim is recorded, paying a fee of \$2.50 for recording claim and 25 cents for filing affidavit:

RECORDING MINING CLAIM.

1. Name of claim.
2. Name of locator.
3. Number of location, Free Miners' Act.
4. Where the mine is situated.
5. Direction or bearing of location line.
6. Length and breadth of claim.
7. Number of feet to the right and number of feet to the left of location line.
8. Date of location.

ANNUAL WORK.

To hold a mineral claim, work to the value of one hundred dollars must be done on the claim each year from date of record.

An affidavit made by the holder, or his agent, giving a detailed statement of the work done must be filed with the Gold Commissioner or Mining Recorder, and a certificate of work obtained from the Gold Commissioner or Mining Recorder, and recorded

(fee \$2.50) before the expiration of each year from the date of record.

The holder of adjoining mineral claims may, subject to filing a notice of his intention with the Gold Commissioner or Mining Recorder, perform on any one or more of such claims all the work required to entitle him to a certificate of work for each claim.

Any money or labor expended in constructing a tunnel to develop a vein or lode will be deemed to have been expended on such vein or lode.

In lieu of the above annual work, the holder of a mineral claim may pay to the Mining Recorder the sum of one hundred dollars, get a receipt and record the same, each year from date of record.

(Placer mining laws and laws in reference to hydraulic gold claims in next issue.)

CERTIFICATE OF IMPROVEMENTS FOR CROWN GRANT.

To obtain a certificate of improvements to a mineral claim the holder must have done work on his claim to the value of \$500; had the claim surveyed and marked out by a provincial land surveyor, whose field notes and plan must be immediately forwarded to the Lands and Works Department; posted notice on claim and in Mining Recorder's office for sixty days; filed copy of surveyor's field notes and plan with Mining Recorder; inserted copy of notice in *British Columbia Gazette* and in some newspaper published in the province and circulated in the district, for sixty days after posting notice on claim; and filed with Mining Recorder affidavit of himself, or his agent, in the required form and to the effect that the above conditions have been complied with.

CROWN GRANTS.

Applications for Crown grants must be made to Gold Commissioner within three months from date of certificate of improvements.

The holder of a certificate of improvements, on making application for Crown grant, must enclose certificate of improvements and the Crown grant fee of \$5.00.

The holder of a certificate of improvements, which has been duly recorded, in respect of a mineral claim *outside* the railway belt, is entitled to a Crown grant of such claim on payment of Crown grant fee, \$5.00, and making application as above; but in respect of a claim within the railway belt, a further payment of \$5.00 an acre is required. Or: Any lawful holder of a mineral claim can obtain a Crown grant by paying to the Government of British Columbia the sum of \$500 in lieu of expenditure on claim, after having complied with all the provisions relating to certificates of improvements except such as have respect solely to work required to be done on the claim.

TABLE OF FEES FOR REFERENCE.

| | |
|---|--------|
| For every free miners' certificate (for each year)..... | \$5 00 |
| Every substituted certificate..... | 1 00 |
| Recording any claim..... | 2 50 |
| Recording every certificate of work..... | 2 50 |
| Recording any "lay over" or every other record required to be in the "Record Book"..... | 2 50 |
| Recording every abandonment, including the memorandum to be written on the record..... | 2 50 |
| For any other record made in the "Record of Abandonments"..... | 2 50 |
| For recording every affidavit, where the same does not exceed three folios of one hundred words..... | 2 50 |
| For every folio over three, thirty cents per folio. | |
| The above rate shall be charged for all records made in the "Records of Affidavits." | |
| For all records made in the "Record of Conveyances," where the same does not exceed three folios..... | 2 50 |
| For every folio over three, a further charge of thirty cents per folio | |
| For all copies or extracts from any record in any of the above-named books, where such copy or extract shall not exceed three folios, per copy..... | 2 50 |
| Where such copies or extracts exceed three folios, thirty cents per folio for every folio over three. | |
| For filing any document..... | 25 |
| For a Crown grant..... | 5 00 |

MINING CENTRES IN BRITISH COLUMBIA.

—AND—

HOW TO REACH THEM.

ALBERNI.

Alberni.—Steamboat communication with Victoria and by stage with Nanaimo.

Barclay Sound.—40 miles from Alberni; communication by steamer with Victoria.

CARIBOO.

Barkerville.—285 miles from Ashcroft; stage from Ashcroft. See stage lines.

Bonaparte.—20 miles from Ashcroft; stage from Ashcroft.

Big Bar.—Stage from Ashcroft.

Clinton.—32 miles from Ashcroft station; stage from Ashcroft.

Fort George.—Nearest post office, Quesnelle, where stage to and from Ashcroft changes.

Horseshy.—Nearest post office, 150-mile House: stage from Ashcroft; change at 150-Mile House.

Lac La Pêche.—100 miles from Ashcroft; stage from Ashcroft and Barkerville.

Lillooet.—Weekly stage from Clinton, where connection is made with stage for Ashcroft.

One Hundred Mile House.—Stage from Ashcroft.

One Hundred and Fifty Mile House.—Stage from Ashcroft.

Quesnelle.—225 miles from Ashcroft; stage from Ashcroft.

Quesnelle Forks.—Stage and pack trail from Ashcroft.

Soda Creek.—Stage from Ashcroft; changing at Soda Creek.

Tatla Lake.—Stage from Ashcroft; changing at Soda Creek.

EAST KOOTENAY.

Cranbrook.—Nearest railway station, Golden. Communication by steamer from Golden to Windermere, thence by stage, also by steamer from Jennings or Great Northern Railway.

Fairmont Springs.—Nearest railway station, Golden. Steamer to Windermere, thence by stage.

Fort Steele.—Steamer and train from Golden. Stage in winter from Golden.

Gabraith Ferry.—Steamer from Golden. Stage in winter.

Galena.—Nearest railway station, Golden; thence by steamer. Stage in winter.

Golden.—On the main line C. P. R., 475 miles from Vancouver.

Perry Creek.—Steamer from Golden to Fort Steele, thence by road.

Thunder Hill.—115 miles from Golden. Steamer in summer, stage in winter.

Windermere.—Steamer from Golden; stage in winter.

WEST KOOTENAY.

Ainsworth.—Twenty-eight miles from Nelson and twelve from Kaslo. Steamer communication.

Albert Canyon.—A station on the C.P.R., 400 miles from Vancouver.

Fort Shepherd.—Nearest post-office, Trail Creek; communication by rail and steamer from Revelstoke.

Three Forks.—Columbia and Kootenay Steam Navigation Co. from Revelstoke.

Illecillewaet.—On the main line C.P.R., 407 miles from Vancouver.

Kaslo City.—35 miles from Nelson; communication by steamer.

Lardeau.—Forty miles from Revelstoke; communication by steamer.

Nakusp.—North-west terminus of Nakusp & Slocan Railway. Fifty miles from Revelstoke. Steamer communication from Revelstoke tri-weekly.

Nelson.—Thirty miles from Robson; is the eastern terminus of Columbia & Kootenay Railway, and also on the Spokane & Northern Railroad; steamer from Revelstoke.

Trail.—Steamer from Robson. Stage from Northport.

Rossland.—Stage from Trail Creek Landing. Stage from Northport.

New Denver.—Steamer and rail from Revelstoke.

Pilot Bay.—Eighteen miles from Kaslo, thence by steamer.

Revelstoke.—On main line C.P.R.; 379 miles from Vancouver.

Spratt's Landing.—160 miles from Revelstoke, and one and a half miles from Robson.

Trout Lake.—Steamer and stage from Revelstoke.

YALE.

Boundary Creek.—Nearest railway station, Vernon.

Fairview Camp.—Communication by boat from Penticton, and by stage.

Granite Creek.—Stage from Spence's Bridge.

Kettle River.—Communication by stage with Kamloops and Vernon.

Lytton.—156 miles from Vancouver on main line C.P.R.

Midway.—140 miles from Okanagan Landing wagon road. Weekly mail.

Nicola Lake.—Stage from Spence's Bridge and Kamloops.

North Bend.—On main line C.P.R., 129 miles from Vancouver.

Okanagan.—Rail from Sicamous Station, on C.P.R.

Okanagan Mission.—Rail from Sicamous to Vernon, thence by stage.

Osoyoos.—Rail and stage to Okanagan Mission, thence by livery. *Rock Creek.*—Rail from Sicamous to Vernon, stage to Mission, thence by livery.

Spallumcheen.—Sicamous to Enderby, and thence 6 miles.

Spence's Bridge.—On main line C.P.R., 178 miles from Vancouver.

Vernon.—Rail from Sicamous.

Yale.—On main line C.P.R., 102 miles from Vancouver.

Provincial Government Agencies.

Alberni—Thos. Fletcher, Alberni.

Cariboo—J. Bowron, Richfield.

Cowichan—H. O. Wellburn, Duncan.

Comox—S. Creech, Comox.

Cassiar—James Porter, P. O. Laketon.

East Kootenay—J. F. Armstrong, Donald.

Fort Simpson—J. Flewin.

Kamloops—G. C. Tunstall, Kamloops.

Kootenay, West—N. Fitzstubs, Nelson.

Lillooet—F. Soues, Clinton.

Nanaimo—M. Bray, Nanaimo.

New Westminster—C. Warwick, New Westminster.

Nicola—John Clapperton, Nicola Lake.

Okanagan—L. Norris, Vernon.

Quesnelle—Wm. Stephenson, Forks, Quesnelle.

Revelstoke—J. D. Graham, Revelstoke.

Yale—W. Dodd, Yale.

Gold Commissioners.

For the Province—W. S. Gore.

Alberni—Thos. Fletcher, Alberni.

Cariboo—John Bowron, Richfield.

Cassiar District—James Porter, Laketon, Cassiar.

Lillooet District—Frederick Soues, Clinton.

East Kootenay District—J. F. Armstrong, Donald.

West Kootenay District—N. Fitzstubs, Nelson.

West Kootenay District—J. D. Graham, Revelstoke.

Yale District—Chas. Lambly, Osoyoos; G. C. Tunstall, Kamloops.

Assayers.

Public Assayer—H. Carmichael, Victoria.

Ed. A. Martin, Barkerville.

W. W. Gibbs, Boundary Creek.

Bucke & Hultain, Kaslo.

W. J. Tretheway, Kaslo.

Wm. McCulloch, New Denver.

Albert Strolsberg, Pilot Bay.

A. H. Holdich, Revelstoke.

R. C. Campbell-Johnston, Vancouver.

W. Pellew-Harvey, Vancouver.

Mahon & Twigg, Vancouver.

NOTICE.

The British Columbia offices of THE MINING RECORD are:

VANCOUVER, B.C.:—

ROOM 6, INNS OF COURT BUILDING.

VICTORIA, B.C.:—

26 STORE STREET.

| | | | | | |
|--------------------|---|---|---|---|----------------|
| EDITOR AND MANAGER | - | - | - | - | Alexander Begg |
| ASSISTANT EDITOR | - | - | - | - | B. R. Aitkins |
| BUSINESS MANAGER | - | - | - | - | D. G. Williams |

All communications relating to the publication of THE RECORD to be addressed to "The Editor," MINING RECORD, Room 6, Inns of Court Building, Vancouver B.C.

All communications of a purely business nature to be addressed to the "Business Manager," MINING RECORD, Room 6, Inns of Court Building, Vancouver, B.C.

Mr. Henry Croft will represent THE MINING RECORD in Victoria, B.C.

By a typographical error in the article on Alberni, the name of the writer appears as Hon. D. H. Higgins; it should, of course, read Hon. D. W. Higgins.

Explanatory.

The Trail Creek *Miner* finds fault with the first number of THE RECORD because Rossland, Trail and Three Forks were inadvertently left out of the mining centre column. The real cause, however, of the *Miner's* outburst seems to be the fact that its name was omitted in the list of mining papers. We are sorry for the *Miner*, and hasten to say that if the proprietor of that paper will extend to us the common courtesy shown by newspapers to each other, and exchange, we will be glad to do the amiable. As for neglecting Rossland, Trail and Three Forks, we own up that they were unintentionally omitted. It was a mistake for which we can only express regret. But, we have this to say, that our object is to deal impartially with all parts of our mining districts in the Province, and the three places mentioned above will have no cause to complain of the efforts THE RECORD will make to advance their interests.

The Clean-up at Cariboo.

By a late mail further advices were received from the Cariboo and Horsefly hydraulic mines. From the latter, under date of October 19th, a letter states that in the recent clean-up at that mine, two cuts were not touched on account of a slide and these would probably have added \$1,500 to the amount realized. The bedrock also was not touched and, therefore, the results obtained

did not show fully what has been done. Hydraulic operations started again on the 20th instant and if the weather should continue favorable there will be another small clean-up before the works shut down for the winter.

From a letter from Quesnelle Forks, dated 20th instant, and written immediately after the fatal accident at the Cariboo mine, some further details are given about the matter. The manager was well aware of the possibility of a cave-in occurring, and all the men were stationed where they would be out of danger. Budden, the man who was killed, was with the rest, when, for some reason, which is unknown, he suddenly went back (probably to get a pipe or some little private article which he had forgotten) and the cave-in occurring almost immediately he started to escape by running down the sluice; he could not, however, get away fast enough and was overwhelmed by the mass of falling gravel. When the mail left he had not been got out, but it was expected that his body would be recovered almost immediately. The coroner's inquest will doubtless show that the unfortunate accident was due to Budden's own recklessness, which, however, does not lessen the regret felt by the manager at the occurrence.

By the letter above mentioned from the Horsefly it is stated that the weight of the gold secured at the clean-up was 1,511½ ounces.

If the mining papers of the province will send us the necessary particulars asked for by mail we will gladly publish them under the heading "British Columbia Mining Papers."

VICTORIA, B.C.

Situated at the southern extremity of Vancouver Island; is a city of nearly 23,000. It is remarkable for its delightful situation and the beauty of its surroundings. In addition to its inner land-locked harbor, extensive docks have been constructed at its entrance, capable of accommodating a large fleet of ocean steamers and sailing vessels. Victoria enjoys a very large wholesale trade with all parts of the Province, and being a favorite resort for tourists who visit the Pacific Coast, considerable retail business is transacted with these visitors, making the general trade of the city very large. Victoria is well laid out, and in the business portion of the city there are numerous handsome business blocks and public buildings. It is the seat of government in British Columbia, and the new Government buildings being erected to take the place of the present structures will be very handsome. Victoria is celebrated for its beautiful parks and drives, and the splendid scenery surrounding it. It has water works, gas and electric light, the streets being lighted by the latter; electric tram-cars run on the principal streets. Victoria is connected by daily steamers with Vancouver, New Westminster and the Puget Sound cities, Seattle and Tacoma. By this means the city is in direct connection with the Canadian Pacific and other roads. The Pacific Coast steamers to San Francisco have their northern headquarters here. It is also the terminus of the Esquimalt & Nanaimo Railway, and there is a regular tramway service to Esquimalt. A large fleet of steamers run between Victoria and all the mainland and island ports. It is the headquarters of the sealing fleet and the cannery interest, most of the trade of the latter being held by Victoria merchants. It is, therefore, an important commercial centre, as well as a favorite tourist resort.

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LOOK OUT FOR

The December Special Number

—OF THE—

BRITISH COLUMBIA MINING RECORD

It will be a Grand Number.

VANCOUVER; B.C.

Vancouver is the Pacific terminus of the Canadian Pacific Railway, and although its existence only dates back a few years, it is already the next city in size and population to Victoria. Its population is estimated at between 17,000 and 20,000. There are many handsome and substantially built blocks along the business streets of Vancouver, and its streets are regularly laid out. It has gas, electric light, water works, and an excellent tramway service. There are quite a number of industries established in the city, amongst which may be mentioned a sugar refinery, foundries and machine shops, tanneries, canneries, soap works, breweries, saw mills, planing and shingle mills, etc., etc. The Canadian Pacific Railway workshops are also stationed here, so that the local trade of Vancouver is large. It enjoys an extensive wholesale trade, and is a strong rival to Victoria in this respect. Daily steamers connect Vancouver with Victoria, Nanaimo and New Westminster, and a large fleet ply between it and the smaller ports of British Columbia. The Canadian Pacific line of steamers to China and Japan has its headquarters here, and this is the port of departure of the Canadian-Australian line for Australia, calling at Honolulu and Suva. Owing to its superior position, Vancouver will undoubtedly become one of the most important commercial and shipping ports on the North Pacific Coast.

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: : and Agents,
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A staff of the most competent Engineers and Experts for Hydraulic and Quartz Mines employed to report on Mining Properties in British Columbia.

Cable Address: Buxton, Vancouver, Can.

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Mining and Real Estate
Brokers.

FINANCIAL AGENTS, ETC.

Hastings St., Vancouver, B.C.

Transportation Companies.

CANADIAN PACIFIC NAVIGATION CO.
(LIMITED.)

TIME TABLE NO. 27.

Taking Effect June 21st, 1895.

VANCOUVER ROUTE.

VICTORIA TO VANCOUVER daily except Monday, at 2 o'clock.
VANCOUVER TO VICTORIA daily except Monday, at 13 o'clock or on arrival C.P. Railway No. 1 Train.

NEW WESTMINSTER ROUTE.

Leave Victoria—For New Westminster, Ladner's Landing and Lulu Island, Sunday at 23 o'clock; Wednesday and Friday at 7 o'clock. Sunday's steamer to New Westminster connects with C.P.R. Train No. 2 going East, Monday.
For PLUMPER PASS—Wednesdays and Fridays at 7 o'clock.

For MORESBY and PENDER ISLANDS—Fridays at 7 o'clock.

Leave NEW WESTMINSTER—For VICTORIA, Monday at 13:15 o'clock. Thursday and Saturday at 7 o'clock.

For PLUMPER PASS—Saturday at 7 o'clock.

For Pender and Moresby Islands—Thursday at 7 o'clock.

FRASER RIVER ROUTE.

Steamer leaves NEW WESTMINSTER for CHILLI-WHACK and way landings every Tuesday, Thursday and Saturday at 7 o'clock during river navigation.

NORTHERN ROUTE.

Steamships of this Company leave Victoria for Fort Simpson via Vancouver and Intermediate ports on the First (1st) and Fifteenth (15th) of each month. If sufficient inducements offer will call at points on the West Coast and Queen Charlotte Islands.

BARCLAY SOUND ROUTE.

Steamer MAUDE leaves Victoria for Alberni and Sound ports the 10th, 20th and 30th of each month. The Company reserves the right of changing this Time Table at any time without notification.

G. A. CARLETON,

GENERAL AGENT.

JOHN IRVING,

MANAGER.

UNION STEAMSHIP CO. B.C.,

LIMITED.

VANCOUVER B.C.

VANCOUVER TO NANAIMO—SS. CUTCH leaves C.P.R. Wharf daily, (Sundays excepted) at 1:15 p.m. Cargo at Union S.S. Co.'s Wharf at 11 a.m.

NANAIMO TO VANCOUVER—SS. CUTCH leaves daily (Sunday excepted) at 8 a.m.

NORTHERN SETTLEMENTS.

SS. COMOX leaves U. SS. Wharf every Monday for Port Neville at 11 a.m., Bute Inlet every six weeks, calling at all way ports. Will proceed to any part of the Coast when inducement offers.

MOODYVILLE AND NORTH VANCOUVER FERRY.

Leave Moodyville—7, 8:30, 11:45 a.m.; 2:30, 5 p.m.

Leave Vancouver—8, 10:15 a.m.; 1:15, 3:30, 6 p.m.

Late trip Saturday and Sunday.

Leave Moodyville—7 p.m. Leave Vancouver 7:30 p.m.

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H. DARLING,

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Telephone 94.

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REVELSTOKE ROUTE—Str. "Nakusp."

LEAVES Revelstoke, southbound, Mondays and Thursdays at 7 p.m., at 1 a.m., for all points in West Kootenay and the south.

LEAVES Robson, northbound, Wednesdays and Saturdays at 8 p.m. for all points east and west via the C.P.R.

NORTHPORT ROUTE—Str. "Nakusp."

LEAVES Robson, southbound, for Trail Creek and Northport Tuesdays and Fridays at 6 p.m.

LEAVES Northport, northbound, Wednesdays and Saturdays at 1 p.m.

Stages run in connection with steamer from Trail Creek Landing to Rossland.

KASLO ROUTE—Str. "Nelson."

LEAVES Nelson for Kaslo: Tuesdays at 5:40 p.m.; Wednesdays at 4 p.m.; Thursdays at 5:40 p.m.; Saturdays at 5:40 p.m.

Connecting on Tuesdays, Thursdays and Saturdays with N. & F. S. Ry., for Kaslo and Lake points.

LEAVES Kaslo for Nelson: Mondays at 4 a.m.; Wednesdays at 4 a.m.; Thursdays at 8 a.m.; Fridays at 4 a.m.

Connecting on Mondays, Wednesdays and Fridays with N. & F. S. Ry., for Spokane.

Close connections with Columbia & Kootenay Railway at Nelson for points north and south.

BONNER'S FERRY ROUTE—Str. "Nelson."

LEAVES Nelson for Bonner's Ferry Mondays and Fridays at 8 a.m.

LEAVES Kaslo for Bonner's Ferry Mondays and Fridays at 4 a.m.

LEAVES Bonner's Ferry for Pilot Bay, Nelson, Ainsworth and Kaslo on Tuesdays and Saturdays at 2 a.m.

Connections with east and westbound trains on the Great Northern Railway.

The right is reserved to change this schedule at any time without notice.

For tickets, rates, etc., apply at Company's office, Nelson.

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SECRETARY.

MANAGER.

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