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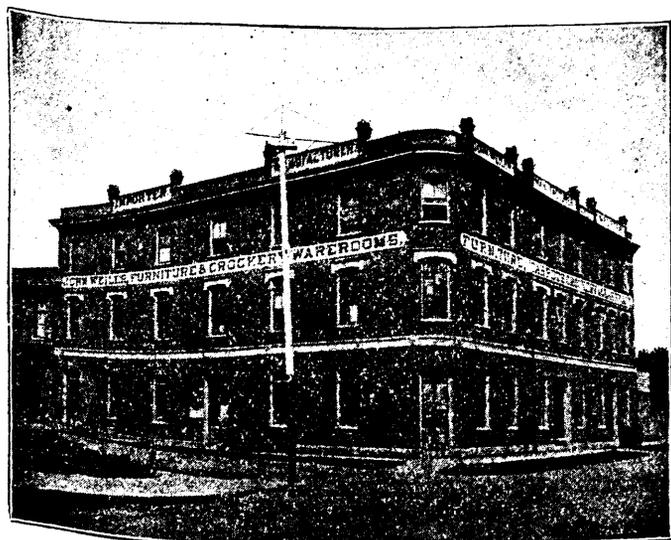
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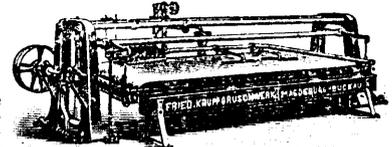
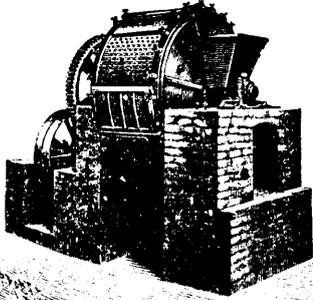
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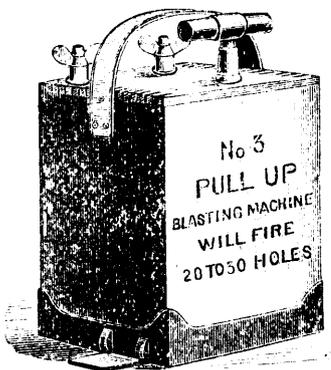
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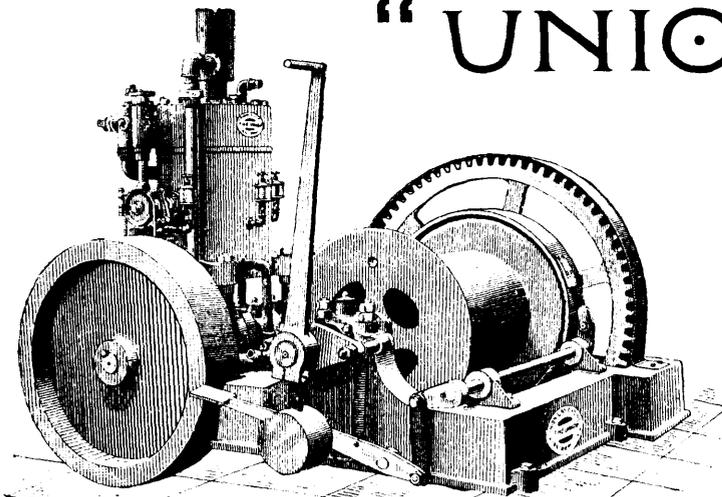
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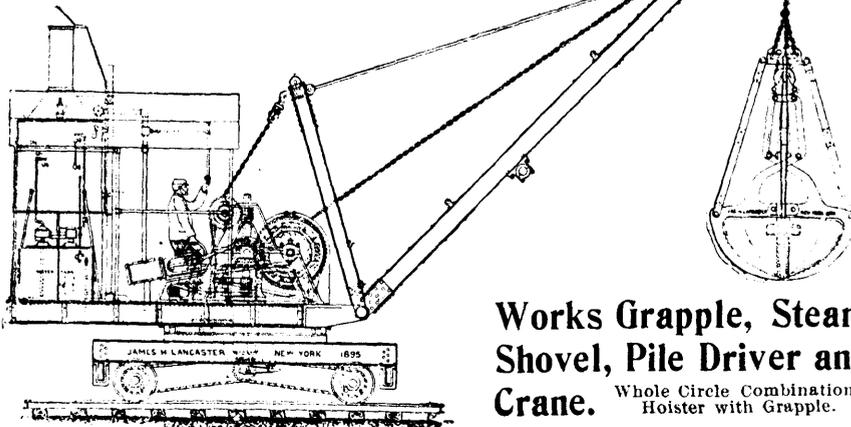
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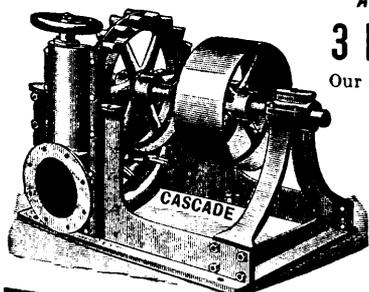
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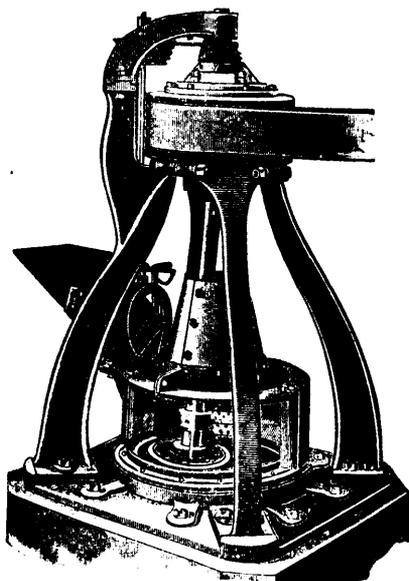
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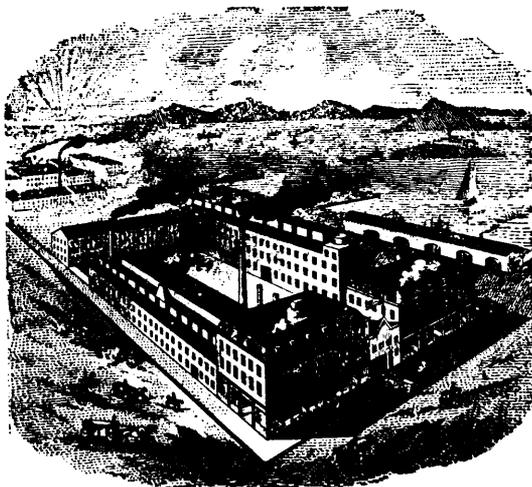
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The Mining Record.

Vol. III.

FEBRUARY, 1897.

No. 2.

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EDITORIAL NOTES.

ALL sorts of railway projects are in the air. Probably a number of them will remain there. But it is a healthy sign to see so much interest being taken in the subject of improved transportation facilities in this province.

While some of the projects now before the public are not likely to materialize at least for years to come, others are so necessary to the immediate development of the country that their accomplishment cannot be delayed for any length of time.

When an era of railway building commences in a country, it usually brings with it a crop of what we may call speculative railway projectors—men who contrive by some means to secure charters which they hold to sell to the highest bidder.

These men are sometimes most useful when they succeed in attracting the attention of capitalists to a

route which, if built, would be of much importance to the country, and we do not grudge them a liberal compensation for their services in such a case. But too often charters are granted by the Government to men who simply hold them at an exorbitant price, and by their greed prevent men of means from taking hold of the project.

Another danger which faces us in the matter of railway construction is that men of no influence in the financial world frequently obtain control of a charter, and through their inability to secure the confidence of moneyed men in the money centres the road remains unbuilt.

It is therefore important that the Government should refuse to grant charters to irresponsible men, or men whom they have reason to think are asking for incorporation merely for speculative purposes. If we were to look through the statutes of the Dominion and of the provinces of Canada we would be surprised at the hundreds of railway charters granted during the past ten years, not one of which materialized. Many of those projects, if they had been in the hands of proper parties, would doubtless have been carried through.

We see a danger at the present moment to British Columbia in the rivalry of charter seekers to secure control of some very necessary railway projects in different parts of the province and we trust the Government will use their power with a firm hand to see that only men of *bona fide* intentions are entrusted with the task of building our railways and stringent conditions in regard to early construction should certainly be imposed.

We are at a stage in the history of this province when energetic and rapid railway construction is absolutely necessary to bring about the proper development of our immense mineral resources and we cannot afford to allow a lot of mere charter speculators to interfere with our progress. It is a time when the Government should display great judgment and discretion in granting letters of incorporation to railway companies.

We were surprised to see objections raised by citizens of Vancouver to the building of a smelter in or near that city. On the question of granting a bonus

to such a concern there is a difference of opinion amongst people in the Terminal City, but there is this to be said about it: There are four cities on the Coast, each one of which is looking forward to having a smelter and it is not unlikely that the one offering the best inducements to the smelter people will carry off the prize.

Vancouver, Victoria, New Westminster and Nanaimo are each possessed of advantages as a site for a smelting plant and that one of these four cities will have works of that description before long is certain. Which one will it be?

The Coast cities are very properly much interested in the building of a direct railway line to the Kootenay and unless this is done simultaneously with the construction of the Crow's Nest Pass Railway the trade of Kootenay will be lost to British Columbia. It will go altogether to Eastern Canada and the United States. This, if allowed, will be a serious affair for the province.

But there is another matter which it seems to us the Coast cities in their desire to secure their share of the inland trade are neglecting.

It is now well known that the coast and islands of British Columbia are exceedingly rich in minerals. Recent investigation has demonstrated the fact that great mines exist at various points and all that is necessary is development to make them profitable producers.

Now here is a field which should engage the earnest attention of the coast cities. The development and operation of these mines will mean a large outlay for supplies amongst the merchants. It will give employment to many men and consequently increase largely the circulation of money. It will be of great benefit to the shipping trade and make it imperative to have large smelting works and other industries at several points along the coast. The people of Vancouver, Victoria, New Westminster and Nanaimo should waken up to the possibilities of the coast mining trade and encourage the opening up of the mines near home.

A ferry for the conveyance of passengers and freight railway cars to and from Nanaimo and the Mainland is to be established, the chief object of which, we understand, is the conveyance of coke from the ovens at Union to the smelters at Kootenay. This is a good move and shows the advantage which smelters on the coast would enjoy by having the necessary fuel close to them.

It is said too that the Canadian Pacific Railway Company is interested in this ferry project and the conveyance of the coke to Kootenay. This is probably

true, and is another sign of the awakening of the railway company to the possibilities of our mining districts. It is even reported that the C.P.R. is going into the smelting business at Trail and other points. We are not quite so sure of this, but we cannot see why they should not own and control smelters as they do hotels.

Not long ago we gave it as our opinion that the C.P.R. people were not quite so indifferent to the trade of Kootenay as some people supposed. Recent events show that we were correct, and if we mistake not the coming summer will show a degree of activity on their part that will be a surprise to those who have allowed themselves to think that the Canadian Pacific Railway Company are behind in this age of progress.

But the activity of the C.P.R. means more than may at first be thought. It means that its two great rivals, the Northern Pacific and Great Northern, are not likely to allow the C.P.R. to have it all its own way. Already we hear of these two great roads seeking independent entrance into the Kootenay, and what these great railway corporations seek for they generally find.

Let anyone pause and think of the great movements now on foot for the development of the vast resources of British Columbia and he will no longer doubt that we are on the eve of wonderful progress and great prosperity.

It is the opinion of influential English journals that British capital is looking toward this province as a field for profitable investment, and that during the present season a large amount of money will find its way here.

This being the case, we may expect a considerable influx of visitors from the other side of the Atlantic during the year to spy out the land, and in this connection we wish to give a word of caution.

We will have to remember the saying that "all is not gold that glitters" when strangers from the other side come amongst us. If we use ordinary care, however, it will not be difficult to detect the spurious article.

We will have men here from England and elsewhere who will pose as the representatives of capital, but who, in reality, will be mere adventurers looking for something that will cost them little or nothing, but which they will expect to sell for a big sum on their return to the Old Country.

Unfortunately, these men are not overscrupulous as to the means they employ to gain their ends. They will not hesitate to exaggerate in order to catch the unwary investor in England, and in this way will

injure the standing of our mines in the money market. They are, as a rule, men of straw on the hunt for purely speculative ventures. Parties here should, therefore, be on their guard against such visitors. We do not wish to see a repetition of the South African bubbles in our case.

The *bona fide* English investor, or agent of capitalists, is easily recognized. The spurious article may also be easily detected if ordinary caution is used. *Bona fide* capitalists, especially from England, are not given to the blowing of trumpets.

We have one of the richest mineral countries in the world. It is as yet in its infancy so far as mining development is concerned. Each day is proving more and more the great value of our mines. All that is needed is money to develop them, and now that English capital is being directed here we do not wish to see the flow turned aside from its legitimate use by stock speculators for their own benefit. We have already suffered, to a limited extent, through the schemes of speculators on this side of the Atlantic. We do not wish to suffer from operations of the same kind, but on a larger scale, in Great Britain.

We pen these lines because, from information received, we understand that we are likely to receive visits from gentry such as we have described, who, finding the South African field played out, are about to turn their attention to British Columbia.

The profession of a mining engineer is an important one in a mining country, and only those properly qualified to act as such should be employed. More than this, steps should be taken to prevent men who have not the necessary qualifications from practising as such.

We understand that there are individuals in this province who pose as mining engineers, and who are acting as such without being properly qualified to do so. This should not be permitted; because, on the opinion of these men, money is often invested, and, if their reports on properties turn out to be worthless, innocent investors suffer loss.

An expert who gives an opinion or advises in regard to a mine should have professional standing, otherwise there is no security that he is capable of giving an opinion or advising. It seems to us that this is a matter for legislation.

The Legislature sits this month, and we commend to the consideration of the Government and members the following subjects relating to the mining districts, which we trust will receive their attention: Liberal appropriations for roads and trails; better police protection; amendments to the law relating to mining incorporations for the better protection of investors

and the checking of over-capitalization of companies; a re-arrangement of mining recorders' offices, so as to give prospectors and others the least amount of trouble in recording claims; amendments to the act relating to the incorporation of towns; a liberal policy towards railway extension and aid to new railways; a strict scrutiny of all applications for railway charters; a liberal appropriation for advertising the mineral resources of the province and the publication of much needed maps of mining districts; abolishing working miners' licenses; an act to compel all mining companies doing business in this province, and incorporated under the laws of the State of Washington or elsewhere, to re-incorporate under the laws of British Columbia.

The idea is to make all foreign companies stand on the same footing as those incorporated in British Columbia, and an act making this plain would be of advantage to investors in mining stocks.

In a few words, we trust that the mining industry of the province and anything affecting its welfare will have the serious consideration of the Legislature during its present session.

We have more than once drawn attention to the necessity for a strict adherence to facts in any statements made in a prospectus. Misleading or exaggerated descriptions of a mining property should be made a serious matter when done for the purpose of inducing people to invest their money in it.

If the truth must be told, there are few prospectuses that do not contain statements that are more or less misleading, and yet no document should be more carefully prepared than one upon the strength of which people are induced to invest money.

We have before us the prospectus of the "War Eagle Gold Mining Company," issued in England. In this prospectus the following paragraph appears: "With the machinery now in use (and the smelter proposed to be erected) the War Eagle mine is believed to be capable of producing 30,000 tons of ore per annum at a net profit of about £160,000—equivalent to a dividend of thirty per cent. on the company's capital."

While we are aware that the War Eagle mine, under certain improved conditions, is capable of producing to a much greater extent than it has done, yet, to draw it mildly we think that the extract taken from the prospectus of the War Eagle Gold Mining Company is somewhat over-coloured. So far we believe the War Eagle has paid altogether about \$187,000 in dividends yet if the English company had secured possession it was to pay an annual dividend of \$800,000. Why didn't they make it a million per annum and have done with it?

It is reported now that a Canadian company has paid \$850,000 for the mine. We cannot vouch for the correctness of the report but if it is true the Canadian people have made a pretty good investment if the statement contained in the prospectus of the English company is any way near the truth.

Misleading statements in prospectuses, whether issued in Canada, England or the United States are liable to do great injury to mining investment in this province and they should be prevented by some means—the only one which we can think of being the strong arm of the law.

The Coming Country.

BY WILLIAM TEAGUE.

BRITISH Columbia, situated in the "Far West," forming the western flank of Canada, is a country which nature seems specially to have destined to take high rank in the states of the world and a conjunction of favourable circumstances to have marked out for a brilliant future. Indeed, it would be difficult to say whether its geographical position or its great resources were of more value. It has almost limitless primæval forests and vast mountain ranges which slope down to a coast line of 600 miles meeting the Pacific Ocean with a broken front of innumerable bays, harbours and inlets.

This vast country, the area of which is 341,305 square miles—nearly seven times that of England—is known as British Columbia, to the majority of Englishmen merely a geographical expression, notwithstanding it is a country of the greatest promise and one which bids fair to rival in the splendor of its mineral resources the great mining States of the south—California, Nevada and Mexico. Its forest lands are of great extent, containing some of the finest timber the earth can produce; the fisheries are probably the richest in the world; the tracts of pasture and arable land are also of a very extensive area, and fruits of the temperate zone grow to perfection in the south and in the mountain valleys of the interior.

It may appear strange that a country with such great resources and such a promising future should not have made greater progress and should have remained so long neglected as a field of investment. The causes are not far to seek. Its position on the American continent is one of extreme remoteness from England and until the opening of the great continental highway, the Canadian Pacific Railway, it was the most inaccessible region of North America. It has lain beyond the great trading highways of the world, and the streams of commercial life have rolled onwards in lower latitudes from the Old World to the New, oblivious of the fact that up in the great North-west almost a virgin field of untold wealth lay awaiting the brawny arms of labour and the directing genius of capital. In the great tide of emigration, which for about half a century has been ceaselessly flowing from Europe to America, Canada has generally been comparatively neglected, farmers and miners being induced, by the superior attractions—a more genial climate, a larger area of cultivable land within easy reach, and better and more accessible markets—to settle in the United States. The causes which led to

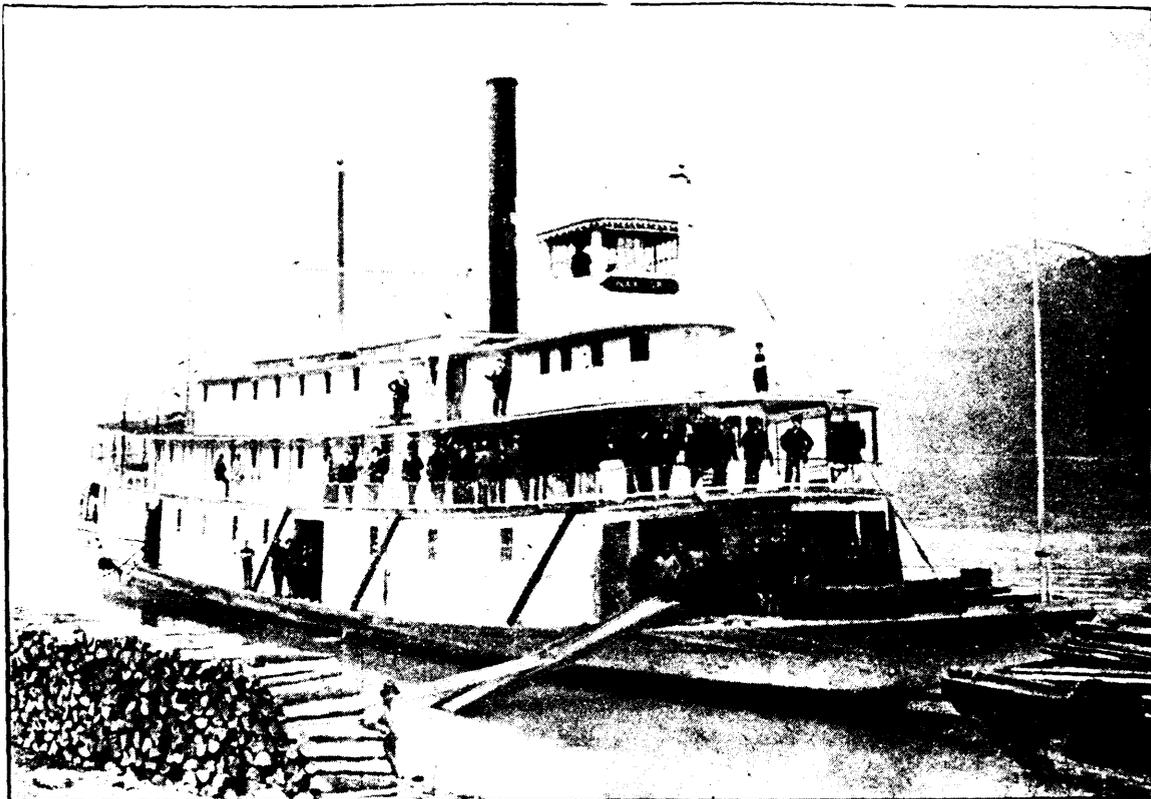
the comparative neglect for so many years of Canada proper, as a field for emigration, naturally operated with greater force in regard to the region of British Columbia.

The rise of the great mining States of America—California, Nevada, Montana, Oregon and Colorado—dates from the discovery of gold in California in 1848-49. A stream of adventurers rushed westward into the Pacific States in quest of the golden ore. The farmer followed the miner and the work of cultivating the lands and settlements in the valleys began to enlarge as the influx of population increased, and the plains kept pace with the sterner and more exciting labours on the mountain ranges. With their larger population, steadily and enormously augmented by a ceaseless tide of emigration, with a people rich in inventive resource and enterprise and, in the case of mining, recruited by constant accessions of the best miners in the world from mother England; with their marvellous growth of railways, the enormous volume of trade progressing by leaps and bounds, the splendid discoveries of mineral and the enlightened policy of the Government, it is not a matter for surprise that the United States should have completely distanced her northern neighbour. At the period when the foundations of the great mining States were being laid North-West Canada generally was a vast unpeopled tract save for the wandering Indians, fur traders and pioneer settlers. The total population of an area equalling all the Pacific States of the Union not exceeding that of one of their larger mining towns.

The successive discoveries of mineral and the consequent great expansion of mining over such vast areas of country, perhaps without a parallel in the world's history, provided a wide field for labour and absorbed an enormous amount of capital. Their available resources of labour, capital and intellect being thus so heavily taxed in the development of those seemingly inexhaustible stores of wealth at home, it is not to be wondered at that the distant fields of British Columbia never looked sufficiently tempting to the Americans until a very recent period. England was too far away and the resources of the province too little known for any help to come from that quarter. This, with the previously enormous physical difficulties which lay in the way, will no doubt account for the spasmodic and desultory character of mining in British Columbia. It is very evident that under the circumstances if the mineral wealth of the country is ever to be opened up it must be by imported capital and a large influx of labour.

The pioneers of mining enterprise in British Columbia laboured under almost incredible disadvantages; they had to push their way through pathless forests and over trackless mountains in their quest after the precious ores with perseverance and determination. The country to a large extent is covered with forests which, while they add to the wealth of the country in another direction, make prospecting for mines much more difficult.

Hundreds of miles from the haunts of civilization have the hardy pioneers gone, plunging into the unknown depths of the immense forests of the interior and penetrating to regions so remote from commercial depots that the cost of the necessaries of life reached almost famine prices, the excessive freighting a few years since exceeding the first cost. Seven and a half, twelve and a half to fifteen cents a pound to freight goods and supplies from Yale to Cariboo, according to the season, a tax on mining enterprise rendering it



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impossible to work any but very high grade ores ; the writer paid \$1.25 per pound for dynamite at Yale in prospecting his claims.

In no quarter of the world has mining been so terribly handicapped in its infancy by all kinds of obstacles. Extreme distance, aggravated in the more northern districts by the savage nature of the country, food at famine prices, and the difficulty of getting into the outlying districts of the country made prospecting hazardous, and the frightful cost of mining material, told seriously against the effects of vigorous mining. That it has struggled and survived through them, and, during a period of little over thirty-five years produced about \$70,000,000 of gold, is a convincing proof of the richness of the deposits and a glowing presage of a glorious future.

The clouds under such difficulties of which we have spoken are, however, passing away. Now the penetrating arm of the Canadian Pacific Railway has spread its iron arms across the continent linking ocean to ocean and bringing the province within ten or eleven days steam of the English ports. Branch lines are being constructed and railway extension is proceeding in all directions. With a Liberal Government, good roads are being made, mountains tunnelled, and valleys and rivers bridged. Places that heretofore were inaccessible on account of their great remoteness or the physical characteristics are now, or soon will be, brought within the reach of labour and cheap supplies. This beneficent work of opening up the country proceeds apace. Already the cost of provisions and mining materials has declined 300 per cent in some of the mining districts. And the laws relating to mining are the most liberal that any Government could devise, an alien being on equal footing with a British subject to locate and record a claim, privileges not granted by the boasted banner of freedom.

If the general occurrence of the precious ores of gold, silver and other metalliferous metals over large areas of the surface of a country is an indication of the general and widespread presence of the coveted minerals deeper in the earth's crust, then this vast country is a veritable El Dorado. At hundreds of points all over the country there have been discoveries of gold and other metalliferous ores ; and to quote Dr. Dawson's remarks, "Gold is known to be almost universally distributed in the province of British Columbia. There is scarcely a stream of any size in any part of the province that cannot wash a few colors, as they say, out of, at the very least, and in 105 localities which I catalogued in 1877 actual mining had been carried on for gold."

The experience of miners, and the data collected during nine or ten years by the geological officers of the Dominion Government, and the exploratory surveys in connection with the Canadian Pacific Railway, have established the existence of gold and extensive zones of other metalliferous-bearing ores over the whole extent of the province—over at least 10° of latitude. And the words are as true to-day as they were when Job wrote, "Surely there is a vein for the silver and a place for the gold where they find it ; iron is taken out of the earth, and brass is molten out of the stone." Gold is traced almost everywhere in the country from the Rocky Mountains to the West Coast of Vancouver Island, and the Olympian Ranges to Alaska, so that it is a common saying that the colour of gold is found on any of the native streams, and considering the limited number of white population, taking the period from the Cariboo dis-

covery of gold in 1860 to the present, would not exceed an average of over 12,000. The gold produced has amounted to about \$70,000,000, which is not a bad showing from the placer deposits of the province, and which have not been worked under favourable circumstances ; owing to the great distances, the roughness of the country, and the high price of everything only the richer deposits would pay to work.

It is the concurrent testimony of travellers, Honourable Ministers of the Canadian Government, geologists, miners and journalists that the mineral resources of British Columbia are the surest guarantee of her future greatness.

The existence of vast deposits of the precious metal and other minerals in this province is placed beyond a doubt, and long-continued success in their exploration may be confidently anticipated after the preliminary difficulties of establishing good access and cheap transit of all necessary material for traffic shall have been overcome.

The experience of the miner thus far has confirmed the inference of the geologist. It was surely only a reasonable and perfectly logical expectation that a similarity of surface configuration and geological structure with the great auriferous deposits of the Pacific States would lead to similar results mineralogically.

Dr. Dawson, F.G.S., remarked : "There is little reason to doubt that the gold-bearing schists of British Columbia are the geological equivalents of the gold-bearing rocks of California."

If reference be made to the map it will be seen that the immense mountain system known as the Rocky Mountains stretch like a huge backbone from near the mouth of the Mackenzie River, in the Arctic Ocean, southward to the Gulf of Mexico, passing the entire length, from north to south, of British Columbia and the adjoining State of Montana, striking Wyoming obliquely, passing through the very heart of Colorado, and under other names traversing Mexico on its western face. Continuing its course it passes through the volcanic little countries between the two continents, which it links and continues for thousands of miles to assert itself on the Pacific shores, and towering to magnificent altitudes as the Andes, finally coming to an end in the northern part of Patagonia. It will be noted as a remarkable fact that all the countries through which this giant range runs are more or less rich in gold and silver—British Columbia, Montana, Colorado and Mexico in the northern continent, and Columbia, Peru, Bolivia and Chili in the southern continent.

Starting from the southern portion of British Columbia, another range, known as the Cascade Range, an off-shoot of the Rocky Mountains, extends through Washington and Oregon, running the entire length of these States from north to south, dividing Nevada from California, and continuing its course as the Sierra Nevada, penetrates California to nearly latitude 35°. Another range, and one that runs parallel to the Sierra Nevada for some distance, extends almost to the extremity of Old California ; this is known as the Coast Range, and is composed of cretaceous rocks, abounding in coal, quicksilver and asphaltum ; some spots are granitic.

The geological formations observed in the Sierra Nevada of California being similar in character to the structure of the corresponding range of mountains in this latitude (British Columbia), it is not unreasonable to suppose that the resemblance will be found to

include auriferous deposits equally as rich and remunerative.

The rapid progress and growth of the mineral production of Rossland are among one of the conspicuous instances of metalliferous mining in British Columbia to-day. Like many other successful mining camps, before their vast subterranean treasures were reached, they experienced their ups and downs and failures before their success was attained—almost suspension of operations was caused by the unproductiveness of the shallow surface croppings of the lodes, but by the indomitable energy and perseverance of the prospector, an unknown mineral producing district equal to any in the world was brought to light. Therefore, there is very little reason to doubt, from the premonitory indications of some of the mining prospects in the vicinity of Yale, showing decidedly encouraging prospects at surface, that as developments are made they are, in my opinion, destined to prove and become valuable paying mines in the near future as any in the province.

Yale, B.C.

Early Days in Kootenay.

EXPERIENCES OF THE PIONEER WRITER IN THAT INTERESTING REGION.

(Written especially for the B.C. MINING RECORD by Randall H. Kemp.)

THE spring of 1889 the writer was located in Spokane, Washington. The inhabitants of that beautiful city of real estate and mortgages were grasping at any straw which would continue the boom in realty then sweeping over the Northwest.

Among the many enterprises suggested was the building of a broad gauge railway from Spokane northward through the Colville Valley, to end—no one knew really where. Finally D. C. Corbin, the present President of the S. F. & N., N. & S., and Red Mountain Railways, was induced to begin the construction of the Spokane Falls & Northern.

The previous year, 1888, quite a number of Cœur d'Alene prospectors and Spokane people had spent some time in the various camps adjacent to Kootenay Lake, and they had all on their return to Spokane spoken enthusiastically regarding the country and its possible future.

Quite a number of prominent people decided to send a reliable person to the country to look it over and report on its status and possibilities. It so happened that the writer was chosen for the mission, and, early in May, equipped with a roll of blankets and a valise, I struck out for my first trip into the then wilds of British Columbia.

The only feasible route in that day was the one I selected, *viz.*, the Northern Pacific Railway from Spokane to Kootenai Station, Idaho, thence by stage thirty-two miles to Bonner's Ferry, from whence the remainder of the trip was by steamer.

Arriving at Kootenai Station I found I was one day too soon for the stage, which only made semi-weekly trips, hence I had one day in which to take in the scenic beauties of what was first appropriately named Mud Slough, but afterward changed to the more euphonious title of Kootenai Station. At that time "The Kootenai Mining & Smelting Company"—the concern owning the Blue Belle mine on Kootenay Lake—had their headquarters at this uninviting place.

During the day I first became acquainted with "Doc" W. A. Hendry, the manager. The well-known

Sam Smith and his wife—since dead—kept the only hotel. Smith and Feather ran the stage line to the ferry.

Bright and early the following morning Mr. Feather—he weighed about 300 pounds—was on hand with the stage, a spring waggon which was rather a frail vehicle in which to make a trip of thirty-two miles over the worst waggon road in America. After a hard day's work jolting over corduroy, splashing through the mud, climbing up hill and gliding down, we reached the Kootenay River, and stopped at the only hotel, kept at that time by the old pioneer Dick Fry. Blanketed siwashs greatly predominated in the population of Bonner's Ferry then, and the possibility of the Great Northern or any other line of railway touching the place was not even a dream.

Early next morning all passengers went aboard the little steamer "Galena," the pioneer passenger boat of Kootenay River and lake. George Hayward, now master of the International Trading Company's beautiful fast steamer, the "International," was the Captain. The Galena in size was, length over all, 84 feet, beam, 16 feet; equipped with twin screws. A small cook's galley and a dining room that would seat nine persons, and a small cabin forward, comprised the accommodations. There were no sleeping berths, and woe to the unfortunate who was not provided with bedding which could be spread on the floor or in the hold.

Soon we were gliding down the beautiful winding river. Several groups of Indians, of both sexes and all ages, appeared on the banks to watch the white man's boat pass by. Very few white people or improvements made by the pale face race were in sight at that early day.

In a few hours we reached the boundary line and our craft was landed at Her Majesty's Customs house, looked after, then as now, by J. C. Rykert. This being the first time I had ever been out of the United States! as I stepped on shore I picked up a hand full of British soil to keep as a souvenir, but alas, when my effects were burned at the great fire which swept the city of Spokane in August of that year, my British soil became part and parcel of Uncle Sam's dirt which was valued at \$1,000 per front foot.

In the afternoon we came out in that beautiful inland sea, Kootenay Lake.

I had viewed some grand scenery in the Rockies, and in other mountains, but never had my eyes rested on such a variety of natural grandeur as was unfolded to the vision at that comparatively primitive time. The broad sheet of green water, white towering mountains, covered with verdure rising from the edges of the lake and with their summits capped with eternal snow. The hundreds of small streams and rivulets, like silver ribbons coursing down the mountain sides, the distant glaciers on the higher ranges, were a part of the grand beauties of nature which, as yet, had scarcely been touched by the vandal hand of man.

By sundown we touched at the principal camp on the lake, Hot Springs, known since that year as Ainsworth. About 200 miners and prospectors were at the landing to greet our steamer, as it was to them a harbinger from the outer civilization. After discharging passengers and freight, the little boat crossed the lake to the Blue Belle Mine as, in the absence of wharves, that was the safest place to tie up for the night. As there were no hotel accommodations at Hot Springs I remained on the boat and the first night on Kootenay Lake slept in my blankets under the dining table at

the cabin of the Blue Belle Mine, which was erected in Hudson's Bay times.

A portion of the next day was spent in looking over the famous and historic Blue Belle Mine. I went through the cross cut which showed a very low grade of 86 feet and nine inches in width, at a depth of 126 feet from the surface.

Evidences of Hudson's Bay mining to secure lead for their flint-lock muskets were to be seen. Also the ruins of an old Scotch hearth furnace which had been erected by Senator George Hearst, of California, about twenty years before, and also the dump on which Thomas Hammil stood in June 1885, when a bullet ended his earthly career. For this killing Robert E. Sproul was hanged at Victoria in 1886. In the evening, accompanied by W. F. McCullough, of Victoria, and another party, I crossed the lake in a row boat to the Hot Springs.

Major G. B. Wright was at that time working the Number One mine under bond. Between the Major, Josiah Fletcher and General John Adair, of Astoria, Oregon, I was royally entertained while in the camp. They had a cook tent presided over by Ernest Harrop, now a prosperous merchant and mine-owner of the Slocan, as *chef*, while for a bed I had a section of the floor of Fletcher & Co's log cabin store, the first mercantile establishment on Kootenay Lake. The store business was attended to by Jim Delany, now of New Denver. Jim had the happy faculty of knowing just where to dig up a bottle of whiskey if a customer was unusually dry, and gave his sacred promise not to say anything about it.

It took me several days to look over the claims in the camp. Many that have since become famous were not discovered then.

In due course of time it became necessary for me to go to Nelson so as to examine the budding bonanzas of Toad Mountain. The Cockle Brothers, at present prominent business men of Kaslo, were endeavouring to lay the foundation of a princely fortune by running a small steam launch called the "*Mud Hen*," which towed a large skiff, between Hot Springs and Nelson. However I ignored their transportation and boarded the *Galena* on one of her down trips, and in a few hours we anchored in sight of the brush, stumps and boulders where the handsome city first called Stanley, then Salisbury, which had just been christened Nelson, stands to-day. There being no wharves passengers and freight were landed per the row-boat process. To size up the town was not a difficult job. As I have intimated, it consisted principally of brush, stumps and rocks. About where the court house now stands, John F. Ward, since of Rosslund, had a huge tent which covered dining room, sleeping apartment and bar. In fact it was the only hotel in this part of West Kootenay. J. Fred. Hume, our present M.P.P., had a small stock of merchandise in a log cabin. E. S. Topping, "the father of Trail," was the clerk, generalissimo and walking encyclopædia of the camp. Mr. Topping was then a U. S. subject, but he had been *ad interim* Recorder pending the arrival of Mr. F. H. Giffin, now Registrar of the County Court. I called on Mr. Giffin, who had but lately arrived, at his office. At this late day I can scarcely recall exactly the first Government house of Southern Kootenay, but the following description is not far wrong. The building was about 10 x 12. Its floor was composed of native dirt, the sides and roof of split cedar shakes and very wide cracks. A hewn plank along one side made a substitute for a desk on which were piled the record books

and archives of this portion of Her Majesty's domain. In one corner was a bed of poles, and the walls were embellished with handcuffs, legirons, etc., as a menace to wouldbe evil doers.

I did not tarry long in Nelson this time. A track through the wilderness had been cut from the Columbia River to Nelson, a distance of twenty-eight miles, which by courtesy was called a trail. Over this rocky and miry thoroughfare Joe Wilson ran a pack train and weary pilgrims "hoofed it" to and from the coming mecca. I struck out along this path, my objective point being the Poorman Gold Mine, six miles below Nelson. I found "Ike" Nail, one of the owners, at the cabin, his partner, P. J. McDougald, was across the river hunting caribou. Ike was well supplied with bedding and "grub" and some admiring friend along the line of the C.P.R. had sent him a case of Canadian club whiskey, which, with myself, were simultaneous arrivals. Heretofore the delicate linings of my stomach had never known the effect of Canadian Club, but during my three day's stay at Ike's cabin it was thoroughly "broke in."

Next steamer day Ike and I went up to Nelson. Among the incoming passengers were James F. Warden and John C. Davenport, both after the Poorman gold mine, but neither aware of the other's intention. When they did find out, however, a game of seven up played on a log, in front of Ward's tent hotel, and won by Davenport, caused him to purchase the claim for something like \$35,000. While staying at the Poorman cabin, Mr. Nail pointed down the river and called my attention to the deepest depression on the north side of the stream, stating a large creek came in there from the north called the Slocan, that an old trapper had told him that twenty or thirty miles up the stream was a lake, but not so large as Kootenay, and he believed mineral in paying quantities would be found there. Little did we imagine that in a few years two railways would be transporting thousands of tons of rich silverlead ores annually from that unknown region.

My trip of inspection to the hoary summit of Toad Mountain required two day's time, and a day and night were spent at the Lizzy C. group, back of Nelson, when arrangements had to be made to return to the outer world.

About the time of my advent in the future capital of Kootenay, there appeared upon the scene the first two real pioneers of their class, but a sample of unfortunates found in all mining camps, two women of a class utterly degenerate and lost to any feeling of decency. These frail sisters of the world had walked over the trail, mentioned above, from the Columbia River. One was young and fair as the lily and a fair sample of the Caucasian race; her companion was aged and of the Afro-America-Canadian style, black as the festive crow.

Mr. Warden, known by all his friends as "Jim," and myself had decided we would visit Hot Springs camp in company, and on a Sunday afternoon were waiting the arrival of the small steam tug *Idaho*, which towed a barge, to come down the outlet and we would take passage on her return trip. Finally the boat arrived. A white engineer and pilot were on the tug, but the scow was manned by a Siwash crew. "Jim" and I went rustling for provisions for the trip and managed to raise a two pound box of soda crackers, a can of Bartlett pears and a quart bottle of Canadian rye. When we went aboard the boat we found the two females, mentioned, and about twenty prospectors

had preceded us. Soon we were steaming up the outlet, "Jim" and I intent on watching an aged Siwash on the rear end of the scow making preparations for supper. When the meal, consisting of bannocks, potatoes, bacon and tea, was ready, the cook picked up the gang plank, over which barefoot Indians and hob nailed miners had been tramping, and placed an end on each guard rail on the sides of the scow. On this were placed the food, tin plates, tin cups and iron knives and forks. We ate our evening meal squatted around this festive board and if we didn't enjoy the edibles we did the novelty of the surroundings.

As there happened to be rough water out on the main lake, Jack Adler, who was purser and master of ceremonies on the scow, decided to land the outfit and camp for the night. Accordingly we made a landing where the townsite of Balfour is now located. On the down trip of the boat a considerable quantity of baled hay had been unloaded here which was destined for Hot Springs camp. Several of these bales were opened and the hay distributed over the floor of the scow for bedding purposes. Among my many experiences of nearly a quarter of a century in the Far West the remembrance of that night spent on Dick Fry's scow will never be effaced; much will never be written but the facts will never be forgotten. It is amusing to even this day to meet one of the whites who was there at the time; they generally say, "You remember that night on Dick Fry's scow."

A few days later I boarded the *Galena* for the home trip. The boat was caught in a violent wind storm on the outlet. One of the tiller ropes snapped as Capt. Hayward was endeavouring to hold the vessel's head to the wind and we lay for a couple of hours in the trough of the sea fearing every moment we would be swamped.

The Queen's birthday I celebrated with J. C. Rykert and wife at the boundary line, they doing everything in their power to make my visit pleasant and one long to be remembered.

Such was South-West Kootenay less than eight years ago. The visitor to this section to-day, where fine floating palaces make fast time on the rivers and lakes, and the network of railways crosses the mountain ranges, would little dream such wonderful changes had been brought about in so short a time.

At the time of which I write many districts in the country which have since become famous the world over were then unknown. There was not even a sawed board in the country unless it had been made by the laborious process of the whoop saw. Everything was primitive and crude.

The changes of eight years have been great; what will eight years more bring?

Kemp's Springs, B.C.

The Origin of Ores.

THE *Mining Journal*, of London, England, has the following to say about the origin of ores:

Concurrently with the decay of metalliferous mining in Great Britain, which the annual volumes of mineral statistics bring out with startling distinctness, there appears to be an equally great falling off in British interest in all concerning the theory of ore deposits. Very little work indeed has been done in this country on the latter subject since the days of Sir Henry de la Beche, who contributed so much to our better understanding of mineral veins about the middle of the present century. Since his time, however, this branch

of geology has been all but neglected, and his name is about the only one amongst those of our prominent geologists that occurs to the mind in connection with such investigations. It was about the middle of the present century, too, that British metal mining was at its zenith, when the value of our output of heavy metals—tin, copper and lead—was many scores of times what it is to-day. Seeing, moreover, how greatly the world's production of these metals has increased within that half century, our share in it has fallen even far more relatively than it has actually. Nevertheless, British mining men are still interested very considerably in the world's production of metals, whether as owners, engineers, or workers of metal mines, both in our colonies and in other parts of the world, and it does not seem to us right that the theory of metalliferous mining should be as completely neglected as it has been in this country.

It is, perhaps, characteristic of ourselves as a nation that, with all the outcry about technical education that is agitating us at the present moment, so few people should see that it is in directions such as these that our efforts should tend. In mining, for instance, no technical instruction is required to teach our miners how to strike a drill or to wield a pick, for in technical skill they can still hold their own against the world. What they do need, however, and what technical education, so-called, ought to, but does not, give them is information about the theories underlying their art, about the mode of occurrence and mode of formation of the ore deposits which they have to exploit, seeing how much fruitless labour and useless expenditure might be saved by a proper understanding of these matters. It is also, perhaps, equally characteristic of the educational bent of America and of Germany that these two great mining nations should have energetically taken up the branch of study that we have so completely abandoned. In Germany the mode of formation of ore deposits has for a very long time indeed been a very favourite subject of speculative inquiry, whilst in America it has been taken up in comparatively more recent times and upon German lines, but with an energy and acumen that seem to be the especial property of the best class of American scientific men, and that promise even more important developments than those which have hitherto been attained.

We are reminded of this phase of American geological enquiry by two admirable papers in the recently published volume of "The Mineral Industry" namely, "The Origin of Ores," by Professor J. F. Kemp, and the "Formation of Eruptive Ore Deposits," by Professor J. H. L. Vogt. It will, perhaps, be remembered by some of our readers that we called attention, at the time, to a paper by the late F. Posepny, on the "Genesis of Ore Deposits," contributed in 1894 to the American Institute of Mining Engineers. We held then, and still hold, that this admirable paper had an even greater value in stimulating the study of ore deposits than in contributing theories of really permanent importance. This is well shown in Professor Kemp's paper, which is in a sense reactionary, inasmuch as it attaches an especial importance to the igneous origin of ores, a method of genesis that Posepny rejected in a somewhat scornful manner. We need hardly say that the modern theory of the igneous origin of ores has but little in common with the theory of the igneous injection of mineral veins that was held by a good many of the earlier geologists a century or so ago. It is, however, curious to note that



SCENE IN ALBERNI, B.C.



ORE DUMP—GOLD EAGLE MINE.

the very old theory of the formation of mineral veins by metallic vapours has practically been revived by Professor Vogt under the new name of "pneumatolysis," and is now meeting with a good deal of acceptance.

Professor Vogt divides ore deposits produced directly as the result of eruptive processes into two main groups—those formed by "magmatic differentiation," and those formed by the just mentioned "pneumatolysis." The ore deposits of the first group he divides into three kinds—oxides, sulphides and native metals. He holds that molten rock matter may and does carry various metals, either as oxides, sulphides, or native metals dissolved in the molten fluid mass, and that these segregate out on cooling, forming, when of sufficient size, ore deposits in the economic sense of that word. He seems to attach considerable weight to Soret's principle that such segregation is likely to take place in the cooler parts of the solution where the dissolved matter will be concentrated, but he does not point out how the action of gravity is to be overcome. Such deposits are common at the upper surfaces of contact of the eruptive rock with the strata penetrated by them, yet, seeing that the specific gravity of gabbro, for instance, is mostly under three, whilst that of the titaniferous iron ore, chiefly associated, according to Professor Vogt, with that rock, is generally well over 4.5, an explanation would seem to be needed to show how the heavier mineral came to occupy the upper part of the deposit. Whether the different melting points of the rock and the ore have anything to do with it, is a fair subject for investigation. The best example given by him is the very constant association of chrome iron ore with olivine rocks, or their serpentinised derivatives. This association is pointed out very clearly, and, indeed, the remarkably uniform manner in which this ore is associated all over the world with rocks of the olivinite or peridotite group is most striking, whilst even secondary minerals, that contain chromic acid as an important constituent, are pretty closely confined to this same class of rocks.

Amongst the sulphidic segregations, Professor Vogt lays particular stress on certain nickel bearing pyrrhotites that are found to occur in or associated with gabbros in various parts of the world, for instance, Ringerikes in Norway, Lancaster Gap in Pennsylvania and Sudbury in Ontario. There is not much doubt but that stable monosulphides such as those of iron, nickel, etc., can be dissolved to a certain extent in basic eruptive magmas, but it is, perhaps, doubtful whether a bisulphide such as iron pyrites, which is decomposed at a red heat, can be similarly dissolved. Professor Vogt does not make it clear whether he would include deposits of cupriferous iron pyrites, such, for instance, as the huge deposits of Huelva, in this group or not. On the one hand there is the difficulty we have just noted about the pyrites, and on the other there is a most striking resemblance between the mode of occurrence of these Huelva deposits and those at Sudbury, so much so that it is almost unavoidable to refer them both to a common mode of origin. Professor Vogt, however, makes out a very strong case, although it has still some weak points, and his views have met with a great deal of acceptance. He is weakest, perhaps, in his last group—that of metallic segregations, in which he includes the nickeliferous Disco iron of Greenland, and various other occurrences of nickeliferous iron, as well as certain of the metals of the platinum group.

In addition to the deposits thus formed by segre-

gation from the molten magmas of eruptive rocks, Vogt considers that another important class of ore deposits is due to the after effects of eruptions, in the form of vapours given off by the cooling mass of erupted rock. He ascribes this mode of origin more especially to the various tinstone deposits of the world, which he considers to have been produced in the manner first indicated by Daubree, namely, by the interaction of water vapour with fluoride or chloride of tin. It is quite certain that crystals of tinstone can be formed in this way, but not so certain that they have been so produced in nature. It is difficult, for instance, to understand how tinstone can have been introduced in this manner into a fissure vein, which at the same time contains, as so many do in Cornwall, copper pyrites, which can hardly have also been produced pneumatolytically. Again, in and near many Cornish tin veins, beautiful pseudomorphs of tinstone after felspar crystals are common. Here the granite must have cooled so completely as to admit of the formation of the felspar crystal, which must subsequently have been dissolved out by the action of meteoric waters, and the cavity thus left have been subsequently exposed by some invisible vent to the action of the vapours of water and of tin fluoride. Such a series of processes would demand oscillations of temperature that can hardly be supposed to have taken place on any intelligible theory of earth movements.

Professor Vogt is also prepared to ascribe a number of apatite deposits to similar pneumatolytic action, but this theory does not seem to fit many cases. Notably, it would be difficult to accommodate it to the observed occurrences on Lake Champlain of masses of magnetite associated with granular apatite.

Professor Kemp takes a wider survey than does Professor Vogt of the mode of formation of ores, but even he does not touch on the very numerous group of deposits that have probably been formed by replacement, as, for instance, the red hæmatite deposits of Lancashire and Cumberland, according to Mr. Kendall, who has studied them carefully, and who is one of a very few Englishmen who have done any work at all on ore deposits, although he has confined himself within very narrow limits. Nor does Professor Kemp say much about those deposits of lead and zinc ores which have probably been formed at shallow depths either by replacement or by filling pre-existing cavities. He almost takes for granted that the so-called "lateral secretion" theory of ore formation, at one time so strenuously advocated by German geologists (and still held by a section of them) is practically untenable, and that the "ascensionist" theory, which found its most recent advocate in Posepny, is alone to be relied on. It is, perhaps, not wise to entirely reject the former theory, and to maintain the latter as the only possible solution of this very complex problem, more especially as he appears to agree with the opinions of C. R. Van Hise, whom he quotes as having calculated that the maximum depth at which water-filled cavities can exist in the earth is 10,000 meters (say 6.1 miles), or about 1-637 of the radius of the earth. This depth is thus so small compared to that of the distance from the surface to the earth, that the present form of the theory loses to a great extent its purely ascensionist aspect, and geologists of all schools may be found to agree with Professor Kemp's opinion that five miles of depth marks the lower limit of the formation of mineral veins, though we think that his upper limit of three miles is much more open to discussion.

Whilst agreeing with many of Professor Vogt's views, Professor Kemp makes a suggestion in which he diverges from them, which certainly deserves careful consideration; he suggests that sulphide deposits connected with eruptive rocks may not be magmatic segregations, but may have been formed pneumatolytically by the action of sulphur vapours. Though scarcely acceptable in its present crude form, this hypothesis may contain in it the germs of the true explanation of the genesis of these deposits, and we hope that further work may be done on it.

In any case we trust we have said enough to stimulate the energies of those of our readers who are engaged in mining ore deposits in various parts of the world, to induce them to make a careful study, not only of the deposits, but of the rocks in which they occur, and to thus contribute somewhat to increase the scanty store of facts upon which geologists are now attempting to found theories of ore formation, in order that this important branch of knowledge may be advanced as it should be in our own country.

Test for Lead, Silver, Gold, Copper and Iron.

BY FRED J. STANTON.

LEAD AND SILVER.

TAKE a piece of the ore to be examined, powder it and pass it through a fine sieve. Take twenty-five grains or thereabouts of the powdered ore, place it on an iron spoon and roast until no smell of sulphur arises. Place the sample in an evaporating dish and add twice the quantity of nitric acid, diluted with a little water. Heat over a lamp until nitrous acid fumes subside, dilute with a little more boiled rain, snow, ice or distilled water and allow it to settle. If cloudy, the solution must be filtered. If clear, carefully pour off the solution from the sediment into a glass or test tube. Divide it into three portions in three different glasses. Add to one portion a few drops of common salt solution or muriatic acid. This will precipitate lead and silver, if any, as a white chloride; add the salt solution until the precipitation ceases. Pour off the solution and wash the precipitate with boiling water; this will dissolve it, if lead, leaving the silver in the residue, pour off the solution from the precipitate and add ammonia to the precipitate, which will dissolve it, if silver. The chloride of silver, if exposed to the sunlight, turns to a darker shade of colour than the chloride of lead, and in that case will not dissolve in ammonia. It should therefore be done quickly and under cover.

GOLD.

To the original undissolved ore add (aqua regia) one part nitric to two parts hydrochloric (muriatic) acid, to cover the ore. Digest for half an hour gently over a lamp, add water until cool, and place it in a glass or test tube. Now add a few drops of chloride of tin solution; if gold, a purple colour will be shown—"The Purple of Cassius." This, on shaking, if too much of the chloride has not been added, will disappear. Add a little sulphate of iron solution, and it will form a brown precipitate, which will not disappear on shaking.

COPPER.

Add ammonia to a portion of the first solution, and if copper is present it will give a blue colour.

IRON.

Add to another portion of the first solution a little

of the ferro cyanide of potassium solution (yellow prussiate of potash). If iron is present, a deep blue colour will be shown (Prussian blue).—*Mining and Electrical Review.*

A Promising Mine.

AS the days and weeks go round the evidence is becoming more and more clear that British Columbia is a gold field destined to attract, at an early moment, the enterprising English investor. It is now quite a superfluous task to keep on insisting upon the remarkable richness of this coming gold field, for this is quickly becoming a matter of general conviction. Throughout the colony there are many exceedingly rich and promising mines at work, respecting one of which we have during the week received private information from a most reliable source. The name of it is the Golden Cache Mine, situated in Lillooet, and it was in connection with this mine that we published some weeks ago a cable announcing a very rich strike. Since then a company has been formed with \$500,000 capital, and already a great deal of development has been done. A drift of 55 feet has been run in on the ledge, which is 18 feet wide, and stripped for 400 feet, showing good ore throughout. This is one of the parallel veins of the company's claims. The quartz is free milling, with a great deal of gold visible, and a promising feature is that with depth this has held its own, and the conservative estimates of ore in sight show up a gross value of precious metal amounting to somewhat about £500,000.

It is not supposed that mining and milling will cost more than 15s. per ton, and as the average value of the stone is likely to run from 2½ ounces to 3 ounces, it will readily be perceived that there is plenty of margin for profit. A 10-stamp battery is under construction and crushing will commence within two or three months. The tailings will be treated by the MacArthur-Forrest cyanide process, which has already treated the ore with success. Mr. J. M. Mackinnon, one of the managing directors of the company, has just arrived in London with a collection of specimens from these mines, which he intends to exhibit both in this city and in Glasgow. We have had the pleasure of inspecting these specimens and we can assure our readers that they are some of the finest we have ever seen. Should ore of this great richness exist throughout the mine, then it will be one of the greatest mines the world has ever seen. But this is not to be expected, though, naturally, Mr. Mackinnon is very sanguine of it. In our experience we have gazed upon hundreds of samples equally as rich and many of the mines have turned out quite average affairs. On the other hand, others have fulfilled the expectations founded upon early evidences, and we sincerely hope the Golden Cache Mine will be one of this number.—*Mining Journal, London, Eng.*

The Omineca Country.

ON the 25th of October, 1878, while Mr. Robert Reilly, of Victoria, was returning with eight other miners from the Omineca country, in coming down the Skeena River in a canoe they upset at Death Rapids, near Kitseguela. Three were drowned, and they lost everything, they each had from \$1,000 to \$2,000 in gold dust. They suffered considerable hardship before getting back to Victoria, as they had neither clothing, blankets nor provisions, and all

explorers and miners know what that means.

In 1888 Mr. William Keynton, of Germansen Creek, "grub-staked" Messrs. Gid. Hathaway and John Robinson to prospect Nation Lake and River District, but they also perished; their skeletons were found the following year where they had camped on their way back to Germansen. It will never be known how they met their death. Some heavy shot gold was found in their effects, and it is known that they went to Fort McLeod to purchase supplies, and paid for them in coarse gold; but they left no record as to where they made the discovery. The writer examined all the records they left, but they contained no guide to the place where the gold was found. The last entry in the diary kept by Hathaway was that Robinson had started for Keynton's. It would appear from this that Hathaway must have been sick or wounded, and that Robinson had started for help; but the skeletons were found side by side.

About twenty years ago a number of prospectors crossing the Frying Pan Pass without a guide were lost, and have never been heard of to this day.

Last year (1896) Ben Wreade, of Vancouver, is supposed to have been lost in the Findlay River region. The writer was talking with Messrs. Nash, Condit and McDermott in October last, on their return from the Findlay River, and they had no hopes of him ever turning up. Still the writer has hopes that he will turn up all right, as he was an old woodsman.

If the writer is ever lost track of, he would ask his friends not to be uneasy for at least two years, unless they know for certain that he has passed in his checks, as it has always been his custom never to set a time for his return when going on a trip to the woods.

The following companies will be operating in the Omineca country next season:

The Forty-Third Milling & Mining Co., Limited Liability, of Ottawa.

The Omineca Prospecting & Development Co., Limited Liability, of Victoria.

The Omineca Consolidated Hydraulic Mining Co., Limited, of Victoria.

The Caledonia General Mining Association, Limited Liability, of Victoria.

The May Flower, not incorporated. This is a partnership which was working last year.

The North Star will be incorporated as soon as expert's report is received. B.

The Issuing of Prospectuses.

WE have pointed out to our readers more than once the danger of trusting altogether to the statements contained in the prospectus of a mining company as a guide to making investments. The aim of a prospectus is of course to induce people to put money into the enterprise represented. If the compilers of these documents would stick strictly to facts people who invested money on the strength of them would have no cause for complaint if losses afterwards occurred. But unfortunately the prospectus usually shows the rosier side of the case and when results do not come up to the expectations raised investors have some just cause to consider themselves deceived. This is bad enough but when the promoters of a company make exaggerated statements which cannot be borne out by fact it looks very much like getting money under false pretences.

The compilers of prospectuses are careful generally to qualify their statements by giving them as opinions

expressed by some unknown party or parties. Carefully guarded reports of experts concerning the property are attached and everything done to create the impression that the scheme will be a profitable one. Figures are given to prove all this but unfortunately the results too often show that calculations of this kind cannot always be relied upon. If a law could be framed compelling promoters to state facts only in their prospectus there would probably be fewer companies floated, but those doing business would possess stability and strength.

It is too much to expect a complete reformation in the matter of the issuing of prospectuses but this we think the law can and should do. It should make a direct mis-statement in a prospectus a punishable offence. It might even go further and check misleading statements made evidently for the purpose of inducing investors to risk their money. Something will have to be done to check this evil.

An Enterprising Company.

IT is something unusual for people to sell a piece of property, for a certain promise to pay at a future date, and then turn round and pay cash for part of the same property, but this has been done in the case of The Omineca Prospecting and Development Company, Limited, which sold the Germansen Creek property to the Caledonia General Mining Association, for a certain number of paid-up shares of that company's stock. The directors of the Caledonia General Mining Association having decided to place a certain number of shares on the market for development during the coming season, the original owners subscribing for over one-half of this stock before the company was incorporated about twenty-four hours before the public knew anything about the matter.

The original owners of the Germansen Creek property have, by resolution of over three-fifths, decided to tie up their portion of the stock received for the property for over one year.

One of the principal aims of The Caledonia General Mining Association will be the exploration and development of the Caledonia District of British North America, as the most of this territory is yet unexplored and little known to the white man, although wherever penetrated by adventurers, gold has been found, but, owing to the want of trails, it has been impossible for individuals to prosecute the search.

This territory is bounded on the north by the Arctic Ocean, on the east by the 120th deg. of west longitude, on the south by the 54th parallel of north latitude, and on the west by the Alaskan boundary and the Pacific Ocean.

The company will have ample capital to engage in the enterprise and carry it out.

Hydraulic Mining in British Columbia.

TO those engaged in Hydraulic Mining in this Province, the result of the work done in the face of obstacles caused by the difficulty of transportation and an unusually dry season, is, to say the least, encouraging. Taking in the first place the Fraser river we find that work has been successfully carried on from the benches of its lower cañons to the deposits in its northern tributaries. So far only a few mines have shown what results, with further equipment, may be confidently expected. Of these mines the Cariboo Hydraulic has turned out during the past season, after many interruptions caused by want of

water and the fighting of bush fires, \$127,740.00; the Horsefly Hydraulic has turned out \$42,670.00. Of the other large mines some few are near the productive stage. The Horsefly Gold Mining Company, on the Horsefly River, the Cariboo Gold Fields near Barkerville, the Victoria Consolidated Hydraulic Mining Company and the Columbia Hydraulic Mining Company being amongst the number. I also understand that equipment will commence in the Spring on the property belonging to the Montreal and British Columbia Prospecting Company, the Beaver Mouth Company, the Maud Hydraulic Mining Company, the Fishback Hydraulic Mining Company. The Maud Hydraulic Mining Company has lately been bonded to a large American Syndicate. The first portion of the bond has already been paid, viz: \$5,000.00, the balance \$95,000.00 is due within six months. I also hear that \$75,000.00 has been offered for the Fishback property but I do not know if this amount will be accepted. These figures being cash amounts, tend to show that at last the outside world is beginning to believe in the immense riches in the deep deposits of Cariboo, deposits which we have known of for several years, but which we in British Columbia could not work with satisfactory results owing to our want of money, and want of knowledge of conducting hydraulic enterprises on a large scale. Further north, during the past season, in the Omineca country and in Cassiar, work has been commenced on a large scale on gravel which as far as I can gather is exceedingly rich; on the other hand however the cost of transportation is exceedingly high. While on this subject I wish, Mr. Editor, you would bring your influence to bear on the powers that be with regard to the construction, not only of railways but even waggon roads in the Northern portion of this province. In the East Kootenay district hydraulic mining was commenced at the beginning of last year apparently with very satisfactory results. Of the mines in this district the Invicta is one of the few (I believe only two) hydraulic properties owned by Companies registered in London, England. The Nip and Tuck Gold Hydraulic Mining Company also has been working with very satisfactory results. From late reports it is understood that the large concessions owned by the Findlay Creek Hydraulic Company will be, during the coming season, energetically worked.

There is also another branch of mining which, though perhaps not strictly coming under the head of hydraulic mining, is so nearly allied to it that attention might legitimately be directed thereto. In hydraulic mining proper we endeavour to recover the gold from gravel above the water; in the branch to which I now allude attempts are being made to recover the gold from the gravel under the water. This end is achieved either by dredgers or by damming the streams and rivers. Nearly the whole of the Fraser and many of its tributaries have been leased for the purpose of obtaining the gold lying in the beds by these means. Several plants employing different methods have been and are in operation, and have met with varying successes; but on one point all are agreed, viz.: that the riches at the bottoms of these streams are very great. I understand twenty miles of the main Quesnelle have been bonded to an American corporation, which intends to put on several dredgers having different methods of working. With regard to the damming of the rivers, the most notable example is that set by the Golden River Quesnelle Company, which at this present time has from 200 to 250 men erecting a dam to hold back the waters of the Quesnelle Lake so that the

entire bed of the South Fork of the Quesnelle may be exposed.

I cannot conclude this without most heartily endorsing the opinion expressed by your correspondent "S." in your last number. He could with perfect truth have made his case far stronger probably had he so chosen, in pointing out the utter absurdity of the mines in Cariboo injuring the farming districts of the Lower Fraser. His suggestion that a delegation of farmers should be sent to Cariboo is an excellent one. After their return we should hear no more of the injury done by hydraulic mining in Cariboo to the Lower Fraser valleys, and like men of sense the members of the delegation would be quick to perceive that the men employed on these mines in Cariboo would provide them with their most profitable market.

To sum up, therefore, from the work which has been done during the past three or four years, and in view of the gigantic preparations now being made for the coming season's operations, I cannot but believe that the world is awakening to a fact which has been known to all men living in Cariboo, Omineca, Cassiar and East Kootenay, and to many other British Columbians, that the output of gold from the gravel deposits of this province will be almost phenomenal.

J. M. BUXTON.

A Rival of Rossland.

CAMP FAIRVIEW—ITS HISTORY, PRESENT CONDITION AND FUTURE.

IT is probably correct to say that to a large majority of the people of Eastern Canada and England interested in mining affairs in British Columbia, Rossland is thought to be the head and centre of the gold mining excitement in this province. With no desire to detract in any way from the importance of Rossland as a mining district, it is but fair to state (what is known to all who are at all acquainted with the vast mineral resources of British Columbia) that it is the essence of absurdity to conclude that Rossland possesses the richest gold mines in the province. The entire country is apparently one vast bed of minerals, and with the great amount of development work now being prosecuted in nearly every direction it has been conclusively shown that within a very short time Rossland will be rivalled by a number of localities in which gold-bearing ore has been discovered in great quantities.

Chief among the rivals of Rossland, which are now looming up on the horizon, is Camp Fairview, a district which is certain in the very near future to be the scene of an unprecedented mining excitement; and an attempt to convey to the readers of the MINING RECORD, at this time, something of the history and present condition of this camp, will not come amiss.

Fairview, perhaps the most prettily situated mining camp in British Columbia, easy of access and favoured with a climate enabling mining operations to be carried on uninterruptedly the year round, is situated in the foothills of the range of mountains on the west side of Okanagan river, some thirty miles from Penticton. Credit for the discovery of minerals in the vicinity must be given to Messrs. Sheehan and Gwatkin, who in 1888 left Camp McKinney and located the now well-known Stemwinder claim, although the first locations were made in 1887 by Messrs. Reed and Weller, the sight of whose log cabin is now occupied by the Strathyre Company's mill. The prospects on the Stemwinder, located, as has been said, by Messrs. Sheehan and Gwatkin, were so promising that the

new camp, as it was then called, became a rival of the older one at McKinney, from which it lies due west about twenty-five miles. The Brown Bear, Silver Crown, Morning Star and other of the early locations on the main lode, in addition to the Stemwinder, are now considered most valuable properties.

It was not until 1892, however, that development work was vigorously undertaken, the Strathyre Company in that year purchasing the Brown Bear, Wynn M., Ontario, Butcher and Wide West claims, and erecting a fully equipped ten-stamp mill. A short time previously Messrs. Dutton, Carr and Mankin put up a five-stamp mill on their claim—the Rattler.

The determined manner in which the Strathyre Company commenced the work of development on their claims led to anticipations of a speedy inauguration of "boom times" in Fairview; but sanguine ones were doomed to disappointment. Under the superintendence of Messrs. Atwood and Reynolds the work was vigorously but, it now seems, unwisely pushed; too much money was spent upon the top of the ground, and funds running short just at the time most needed the work of development was suddenly stopped.

The closing of the Strathyre Company's works was quite a blow to the camp, which would undoubtedly have experienced a serious set-back but for the energy displayed by Messrs. Mangott and McEachen, the owners of the Morning Star, who, having the utmost confidence in the value of their property, leased the Strathyre Company's mill at a heavy rental to run their ore through, and it is pleasing to record with the most satisfactory results, as something like \$60,000 was the reward of their enterprise.

Not, however, until last summer did Fairview as a mining camp begin to "look up" in earnest. Early in the spring a company was formed by Messrs. Dier and Davidson (now Dier, Davidson and Russell), of Victoria, and a number of the most valuable claims in the camp were acquired. These gentlemen seem to have inspired confidence in the investing public by their operations in Fairview, for shortly after their purchases were made, a number of "deals" were consummated. Mr. Thomas Elliott, the pioneer merchant of Fairview, disposed of his property, the Smuggler, on which a 100-foot shaft had been sunk on the vein. Lord Sudely and associates began to evince a great interest in the locality, and shortly acquired the Joe Dandy, another valuable property, from Mr. T. Davis. The old Stemwinder is another of the claims recently disposed of.

Most of the development work at Fairview has been done on claims situated up a gulch on a bench to the north-west, extending from the foot-hills at the Columbia claim. Here are three parallel ledges which are traceable for nearly three miles. The Morning Star was located on the main lead, and at a depth of 70 feet was found to be 7 feet 6 inches wide. The other ledges vary from 3 to 7 feet in width dipping to the eastward. The principal claims on these ledges are the Morning Star, Silver Crown, Brown Bear, Stemwinder, Comet and Wynn M. On the Silver Crown there is a cross-cut tunnel which taps the main ledge at a depth of about 50 feet; the Stemwinder is also well developed, and judging from the ore which has been taken out carrying native gold, will prove a very valuable mine. The Morning Star has already yielded \$50,000 worth of bullion. The Wide West, owned by the Strathyre Mining Company, is said to have paid \$16,000 when practically undeveloped. Other rich properties are the Smuggler, Joe Dandy,

Revenue, Last Chance, Mayflower, Occidental, Bootblack, Mammoth, Comstock and Black Diamond.

The Occidental Company's claims are the Mayflower, Occidental and Bootblack. On the Mayflower a shaft has been sunk between 30 and 40 feet on the larger ledge. Four tons of ore from this shaft gave a return of \$60 in gold per ton. The shaft on the Occidental is down 30 feet; the ore carries free gold, assays of average rock running between \$30 and \$50. The ledge is five feet wide. Comparatively little work has been done on the Bootblack.

Upwards of forty claims have been secured by Messrs. Dier, Davidson & Russell, mining brokers, with headquarters at Victoria; some of the richest and most promising properties being among the number. The same concern is laying out a townsite, consisting of about 300 acres, and it will soon be thrown upon the market. They have also invested in Fairview properties on an extremely large scale, and were the people of that locality dependant locations on the same lode quickly followed, and the upon the operations of this concern alone during the next few years, they would be justified in looking forward to very good times. Prominent among the claims owned by these gentlemen are the Tin Horn, Silver Bow, Highland Chief, Comstock, Gold Hill, Winchester, Elmore and Randolph, on all of which development work will be actively pushed.

Messrs. Dier, Davidson and Russell have excellent business connections in Eastern Canada and in England, have ample capital at their disposal, and it can be depended on that the claims of Fairview, to rank high as a gold-producing district, will be made widely known through their efforts. It is their intention to at once erect and put in operation a twenty-five-stamp mill upon their property.

Thus it will be seen that the year 1897 opens most auspiciously for Fairview; at no time in the history of the camp was the outlook so promising as at present. Nearly all the original and most valuable locations are either sold or bonded to reputable mining companies; development work is being carried on extensively, about 200 men being at present employed on the various claims; and the probability of railway communication being secured with the coast in the near future all tend to the conclusion that the time is not far distant when Fairview will have attained a world-wide reputation for its mineral richness.

It may not be out of place to touch upon, in conclusion, a point regarding Fairview likely to be of interest to those far away who may become interested in this soon-to-be-famous district, viz., its climate and topographical features. The climate is remarkably salubrious, but very little snow, compared with other sections of the province, falling in winter, and the rainy season is exceedingly short. The district is not so mountainous as other portions of the province, resembling, in fact, one huge park of gently rolling hills, well wooded; the water is good, and there is an abundant supply.

Vernon Mining News.

MINING operations in the surrounding camps are being rapidly pushed forward, and already much activity is to be found in mining circles in this part of the country. Of course the advent of spring cannot fail to give a new impetus to Vernon and vicinity in view of the fact that several rich strikes and many fine-looking prospects have been uncovered since last fall.

The test smelter installed at the head of the Morning Glory shaft did not reach the sanguine expectations of its promoter, owing to the fact that this mine is entirely a free milling proposition. What will ultimately be done with the smelter is not now known, but your correspondent has heard that it will be established by the owner somewhere in the neighbourhood of Vernon.

Probably the finest looking piece of rock ever brought into the city was placed on exhibition in the *News* office. This fine specimen came from the Gladstone claim, Camp Hewitt, situated some forty-five miles south of this city on Okanagan Lake. This valuable property is one of twelve claims owned by the Camp Hewitt Mining & Development Company, recently incorporated, and it must indeed be said that when we consider that the ore in question was taken out at a depth of eight feet, the showing was indeed wonderful, to say the least. This piece of rock, which weighed about 135 pounds, is said to very much resemble the ore taken from the famous Rossland mines. The ledge from which it is taken is a solid mass of ore, about three feet wide, and is particularly rich in copper, with a considerable quantity of gold and silver. The average assays so far obtained from this claim go \$56.32 per ton in these metals. Besides the claims owned by this company there are numerous other locations, on all of which more or less development work has been done during the past few months. The Camp Hewitt Company expects to begin shipping ore to Tacoma in the course of a month or so.

Work on the Morning Glory mine has been suspended for a couple of months, or until such time as a stamp mill can be put on the property. The Morning Glory Company have received a very favourable offer from outside parties for all their ore, but the directors have deemed it more prudent to install a stamp mill of their own, which fact clearly shows that they have every faith in their property, and that they expect to realize handsomely on their holdings.

The only company in the neighbourhood which is disposing of its shares at the par value of \$1 is the Bon Diable Mining Co. The reason for so doing, so the company claims, is to avoid the possibilities of the stock being assessable, but whether this is any inducement for the prospective investor it is indeed an open question, if we may judge from what legal authorities say on the subject, some claiming that a mining company's shares are non-assessable no matter at what price they are sold. One thing is quite evident, however, and that is the fact that a 10 cent. share will sell a great deal more readily than a \$1 share. Of course, with a smaller capitalization, as is the case with the Bon Diable Co., practically the same opportunities are presented for realization in the way of dividends. As for the matter of speculation, of course the 10 cent. on the dollar shares would always get the preference. The much disputed point as to whether stockholders can be assessed or not by a company has been easily overcome by the Camp Hewitt M. & D. Co., who have incorporated in their charter a clause to the effect that the directors can not contract for any work, machinery, etc., unless the necessary funds to pay for the same are in the treasury, which seems to have the effect desired. The Camp Hewitt Co., as is the case with all the others in this neighbourhood, with the exception of the Bon Diable Co., are selling stock at 10 cents per share, par value \$1.

One claim which deserves especial mention—and

unintentionally omitted in your correspondent's budget for last month—is the Ruby, situated on the west side of Okanagan Lake, near the Morning Glory mine, and owned by Messrs. Sparling, Henderson, Underwood, Bond and Highman. This claim is an exceptionally good one, judging from the quality of the ore already taken out. The ore itself very much resembles that taken from the Morning Glory, largely carrying gold, with iron pyrites, also small quantities of silver and copper. A shaft to the depth of ten feet has been sunk, disclosing a ledge twelve feet wide. The surface croppings are also excellent, it being an easy matter to trace a ledge about eight feet wide for a distance of some 700 or 800 feet across the claim. Good solid walls, clearly cut and well defined, are a few good points in favour of the Ruby claim, and although no assays of the ore have as yet been made, it is confidently expected that when a thorough test is made the results will be more than satisfactory to the owners. Work will be resumed on this claim in the course of a few days.

A party of miners from the Silver Star, located on the top of the mountain in the rear of the B. X Ranch, about 13 miles north-east from Vernon, returned last week for supplies, and reports having struck some very fine-looking galena, with the walls well in place and a ledge eight feet wide. This claim is located at an altitude of about 6,000 feet above sea level, and owing to the fallen trees, the dense underbrush, the depth of the snow, and the absence of any trails in that part of the country, this may be said to be mining under difficulties. However, the richness of the ore taken out already leaves no doubt in the minds of the directors of the Silver Star Company that it will pay to "raw-hide" to Vernon for shipment.

The Morning Glory Company have acquired the Jumbo, Evening Star, and Daisy claims for a nominal monetary consideration.

An offer of \$5,000 was made during the past week by Mr. W. A. Dyer, who represents a Victoria syndicate, for part of the Silver Star claim, and was refused.

For some time past considerable dissensions have been taking place amongst the directors of the Morning Glory Company, and on Wednesday night things reached somewhat of a crisis when five of the directors sent in their resignations and retired entirely from the company. The trouble seems to have occurred over the amount of stock held by the original owners of the claim, a majority of the directors claiming that sufficient stock had not been handed over for development purposes. From what can be learned on the subject, it appears a settlement was made by the dissenting directors taking the Ruby claim in full payment for the stock held by them in the Morning Glory Company.

Your correspondent was shown some exceptionally fine-looking ore during the past week, that was found within three miles of the city. The specimens submitted contained free gold in large quantities, the yellow metal being visible to the naked eye, and assays running as high as \$1,000 a ton were obtained. The owner of this claim does not desire to make public its location until he has found out whether or not this rich specimen is a piece of "float."

The Vernon mines do not require a flow of words from the boomster to laud them to the skies and sing their praises. They will speak for themselves during the coming summer.

W. J. POOLE.

The Mining Report.

IN one of the recommendations contained in the report of the Mining Committee of the British Columbia Board of Trade, we think it discriminates against mining companies as compared with other corporations. The fees recommended to be charged virtually mean a tax on capital and to single out mining companies to be taxed would be an act of injustice. If a certain schedule of fees is to be put in force, let all incorporations be subject to it. Why should a mining company have to pay a larger fee than a lumber concern? The product of the mine is already subject to a provincial tax. Is it not rather too much of a good thing to tax the capital employed in the mining of that product?

The object of the fee recommended is we take it to check over-capitalization, but if so we do not think it would produce the desired effect. If the promoters of a company desire to incorporate with a million dollars of capital instead of five hundred thousand the payment of a thousand dollar fee is not likely to stand in the way. We have on more than one occasion expressed ourselves as not favourable to the idea of taxing capital employed in the development of the country, at least not at this stage. The government or a municipality may tax the property in which the capital is invested, but to also tax the capital itself would, we think, have a tendency to keep capital away from us.

That the over-capitalization of mining companies ought to be checked is without doubt, but there are other ways to accomplish this than by the imposition of a large fee, which virtually means a tax on capital. We have more than once pointed out several of these ways, and we are glad to see that the Mining Committee is in accord with us on some of them. Clause No. 7 of the report is a very important recommendation, and we hope the Government will accept and act upon it. In addition to this, parties seeking letters of incorporation should be obliged to give details of what they are incorporating on and for, and as a check upon irresponsible individuals seeking charters it might, if possible, be made imperative that the principals be obliged to show a considerable portion of the capital subscribed and paid for by themselves in cash or *bona fide* equivalent before letters of incorporation are granted. If this portion is made sufficiently large, it would go a long way to check over-capitalization.

Overdoing It.

IN our Editorial Notes we made passing mention of the War Eagle Gold Mining Company prospectus, issued recently in London, England; but on looking it over carefully we think it deserves a more extended notice. We observe by it that the vendors were to receive £500,000, or in round numbers two million five hundred thousand dollars for the property. We have understood all along that the price placed on the mine was one million dollars, and since the English deal on which we are now commenting fell through, a sale of the property has been made to Canadian capitalists for even less than that amount. If this is the case, what explanation can be offered for asking such a large price from the English company? Was the over-coloured statement as to the profits of the mine, to which we referred in our Editorial Notes, an attempt on the part of the pro-

motors to justify the large price to be paid to the vendors? It looks very much like it. If the real facts in regard to the returns from the mine up to this time had been placed before the investing public of England, the price to be paid to the vendors would have appeared excessive.

There is a delightful indefiniteness in a number of the statements made in this prospectus. For instance it says, in speaking of the mine: "Its present capacity for production *is put* (the italics are ours) at over 100 tons per day, or from 30,000 to 40,000 tons per annum, worth over £9 per ton, and giving a net profit of from £140,000 (\$700,000) to £170,000 (\$850,000) per annum." If this is a correct statement, the Canadian purchasers of the property will about get their money back in one year—that is if the price they have agreed to pay has been correctly reported.

Notwithstanding, however, the tempting bait prepared and laid before the public in the prospectus of the War Eagle Gold Mining Company of London, England, we understand the whole thing fell through, and that the vendors have now sold out to a Canadian company for less than half what they were to get from the English concern. How did this happen when the vendors were to receive a handsome price for the property and the investing public an annual 30 per cent. dividend on their investment? Were English investors better informed than the promoters of the company expected?

Turning from the War Eagle prospectus, we have before us another—the Galena Mines, Limited—also capitalized at £550,000, or about two million seven hundred and fifty thousand dollars. There is nothing small about these prospectuses—in figures at least. This company is formed for the purpose of taking over the Galena Farm or Currie Group of mines in the Slocan, and the price to be paid the vendors is the same as in the case of the War Eagle, £500,000, or about two and a half million dollars. But when we look at the net profit which according to the prospectus the Currie Group will pay—no less a sum than £250,000, or about one million two hundred and fifty thousand dollars per annum—we think the promoters of the Galena Farms, Limited, have been very modest in the capitalization of their company. The Slocan Star mine, which is looked upon as the pride of the Slocan district, is not in it with the Currie Group at this rate of calculation.

Our space will not allow us to go further into other details regarding these two prospectuses, but we wish to point out that exaggerated statements about our mines, such as they contain, must be checked, or before the end of the present year British Columbia mining investments will be in bad repute in the money markets of Great Britain and Europe.

A man may ask a billion dollars for his mine if he wishes to, but when he endeavours by extravagant figures to prove that it will pay handsome dividends on a billion when in reality it will do nothing of the sort, it looks very much like an attempt to deceive the public.

In each of the cases we have quoted the public are asked to subscribe for only a small amount, but the capitalization of the company being large, something had to be said to show that the earning capacity of the property would pay handsome dividends on the whole. In our opinion, the promoters in both cases over-did it.

From Rossland.

THE principal subject of interest during the last few weeks has been the impending sale of the War Eagle to an Eastern Canadian Syndicate, among whom the Gooderhams of Toronto are reported to occupy the foremost position. The War Eagle mine as is well known has returned to its present owners, up to date, the sum of \$187,000 in dividends, and it is generally credited with being able to double that sum during the current year if worked to its full capacity. For the last six or eight months a constant series of rumours have been afloat as to the property being under bond or option first to this party and then to that. Once or twice, according to the newspapers, it has actually been sold in London and it is certain that the mine has at different times undergone thorough examination by several well known experts. The prevalence of such rumours has undoubtedly had the effect of keeping down the price of stock which at about \$1.60 on a capitalization of \$500,000—\$1.00 shares was considered a cheap and most conservative investment by many who knew this camp accurately and thoroughly. To such persons, and they are numerous, has come as a somewhat unpleasant surprise, the latest report that the majority of the shareholders have arranged to sell the mine to the Gooderham Syndicate at a price averaging somewhere about \$1.43 per share. The details of this transaction are not as yet generally known and it is no doubt only fair and wise not to attempt to pronounce judgment until all the facts are published. But the fact remains that a very great deal of uneasy feeling and dissatisfaction has been created in the West by certain hints which have leaped out as to the proposed sale in the East.

It has been openly stated in the papers that the commissions paid to various parties who have been connected with the deal are extortionately high, and that the price per share at which the mine is to be sold is correspondingly low, and certain figures have been published which, if correct, certainly require explanation. In the meantime a general meeting of the company has been called for the 20th January at Spokane, where it is to be hoped the whole affair will be fully threshed out. It is not only the small scattered stockholders who are crying out, but several large holders of stock are, it is said, exceedingly indignant, and propose to give vent to their anger at the meeting. So that lively scenes may be anticipated, which it is to be hoped will be accurately reproduced in the Press for the information of the outside public. The reputation of the War Eagle mine stands so high in Rossland that the announcement of its sale has quite overshadowed the fact that the present holders of Crown Point stock are also to be bought out at about 37 cents or thereabouts, so that the Crown Point, with several adjacent claims, may be formed into a combination with the War Eagle, a group of silver claims in the Slocan having been also added to the list. The Gooderhams, as will be recollected, are already large holders of Crown Point stock, having bought a heavy interest in that mine last summer, and the consolidation of the above-mentioned properties may be taken as additional testimony of their thorough confidence in this mining district. Shares in the new combination, whose name by-the-by has escaped our notice or memory, have been freely taken up in Montreal and Toronto at 80 cents, but none, to the best of our belief have been offered in this market, from which it is not uncharitable to conclude that it

was deliberately intended to keep the organization as far as possible in Eastern hands. Complaints in cases of this kind, where they cannot possibly have any effect, are worse than useless. At the same time it seems a trifle hard that the present shareholders of War Eagle and Crown Point should not have had a chance of coming into the new organization. The next few weeks will probably throw much new light on this whole transaction, and it will be possible also to form some estimate as to the outlook to the new company and the possibilities of its future.

Passing from this subject to the general news of the camp, it may be said that the honours of the month have certainly been borne off by the Colonna mine on Monte Christo Mountain. The controlling interest in this claim was purchased last October by a number of well-known Montreal men, who have since then been actively developing the property under the management of Mr. George Pfunder, of Rossland, who is himself a large shareholder in the company. Surface assays ran very high on this claim, and the expectations raised by them were fully realized a few days ago when a body 40 inches in width of clean shipping ore was broken into in the face of the tunnel. Assays from this gave \$24.00 in gold and 9 per cent. copper, so that it is apparent that the Colonna has struck a chute of pay ore from which, even at the present moment without machinery, from 5 to 10 tons a day can be shipped. In addition to this ore body in the tunnel, they have from 2 to 3 feet of mixed ore in the shaft, which is being sunk about 600 feet from the tunnel on the same lead from which the above-mentioned results have been obtained. The Colonna lies immediately north of the Monte Christo claim, being shown on the map as the Buckeye No. 2. On the Monte Christo very satisfactory results have recently been obtained, an ore body of from \$12.00 to \$17.00 value having been shown up in the upper tunnel and again in the lower. The compressor plant which was erected some months ago is working well and has much facilitated the development work of the company.

A claim in this neighbourhood which deserves special mention in your columns is the Rossland Red Mountain, upon which twenty-five men are at present working, with the assistance of a compressor plant, total capacity seven drills, of which only one or two are as yet in use. They have a paystreak of about two feet in width, and are now shipping about 20 tons or one carload of ore a week, carrying an average value of about \$25. This may certainly be hailed as a satisfactory result of a little less than one year's work, and of work which in the nature of things is of a prospecting and exploratory kind.

A very rich strike in the O. K. mine of ore running up to very high values, and a strike in the adjoining claim, the Golden Drip, of several feet of ore running up to at least \$30, complete the list of the principal performances of the camp during the last month.

Stocks have remained inactive on the whole until the strike on the Colonna caused considerable excitement, and sent up the price of that stock from eight to ten points in a few days. A number of new incorporations on the Salmon River and nearer home have more or less monopolized the attention of local investors, who seem to have a never assuaged appetite for cheap promoters' shares.

At the last minute a report is going the rounds of a new smelter which, it is said, is to be erected on one of the levels above the Columbia River near Trail. The



VAN ANDA MINE, TEXADA ISLAND, B.C.



HALL MINES TRAMWAY CENTRE STATION.

Gooderhams are reported to be the prime movers in the project, but it is impossible to know whether such rumours have any foundation or not. R.

Kamloops Mining District.

THERE are good grounds for the prediction that the time is not far distant when Kamloops will be as important a mining camp as any in British Columbia.

Precious minerals have been discovered in all parts of the district of which Kamloops is the centre, but it is to the strike of gold-copper ore on Coal Hill, three-and-a-half miles south of the town, that we look to the making of Kamloops rich and famous.

In August of last year the first discovery was made, and before December 31st over two hundred claims had been recorded. Coal Hill is an ideal location for mining operations. Easy of access; ample means of transportation for machinery, supplies and ore; abundant wood and water near by, and surrounded by a splendid stock-raising and farming country.

The Coal Hill ore resembles very much that of Trail Creek. In fact, recent specimens from the Iron Mask have been mistaken for Rosslund rock. So far, of course, there has not been sufficient work done on any of the Coal Hill properties to justify positive statements; but the outlook at present is in every way encouraging. The Iron Mask, the one property being entirely developed under skilled management, has been visited lately by mining men from all parts of Kootenay, and the unanimous verdict is that if there be any quantity of the kind of ore now being turned out from that mine, Coal Hill will be as great, if not a greater, wealth producer than Red Mountain.

The indications are that there is an immense body of rich gold-copper ore at the back of Kamloops; what is needed is the capital to prove definitely its existence. Granted the presence of ore in sufficient quantities and of a paying character, no better mining camp than Kamloops could be desired from a Canadian point of view.

Kamloops is so situated that its trade must be confined to Canada; it cannot well be dreamed of by Americans, however enterprising. This is a fact that the Coast merchants should make a note of. Let them assist in proving Coal Hill, they will be amply repaid.

In spite of the lack of capital, there is a great deal of work in progress on Coal Hill, and by the spring fully a score of properties will be fairly well opened up. Though so little notice has been given to Kamloops as a mining centre by the provincial and Eastern press, the fact that it has great possibilities has not escaped the attention of mining men and investors.

During the past few weeks Coal Hill has been visited by experts and representatives of capital from England, Toronto, Montreal and Vancouver. Several deals have been made, the last a cash offer of \$10,000 by English parties for a single undeveloped claim.

But Kamloops does not depend entirely upon Coal Hill for its future as a mining camp. East, west and north, rich strikes have been made, and with the spring the greatest activity will prevail all around the town. At Nangville, some six or seven miles west, are very promising hydraulic works, for the operation of which a company has just been formed, whose intention it is to put in an extensive plant as soon as the season opens. Further west are the well-known Cinnabar mines. To the north, along the Thompson River, free gold bearing quartz has been discovered eastward on the Glenn Van mines.

With the inrush of future seekers during the coming spring and summer months, Kamloops will certainly attract its share of competent miners with capital at their backs. Then the rich resources of this district will be made known, and those who have struggled so persistently in the past to secure for Kamloops the recognition it deserves will reap their reward. It is to be hoped that the merchants of Vancouver and Victoria will not suffer the prize to be again snatched from their hands, as in the case of West Kootenay; for though American competition is not greatly to be feared here, the enterprising business men of Winnipeg and Toronto have to be considered. D.

B.C. Mining Companies Incorporated in England.

(Taken from the *Mining Journal*, London, England.)

B.C. Exploring Syndicate, £20,000.
 Big Valley Creek Gold Mines, £125,000.
 Bozedown Silver, £3,000.
 British Columbia Agency, £100,000.
 British Columbian Exploration Syndicate £25,200.
 British Columbia Finance and Mining, £500.
 British Columbia Gold Discovery, £100,000.
 British Columbia Gold Syndicate, £5,000.
 British Columbia Land, Exploration and Development, £250,000.
 British Columbia Mining, £20,000.
 British Columbia Proprietary, £6,000.
 British Columbia Prospectors, £10,000.
 British Columbia Venture Syndicate, £1,000.
 British Queen Gold Mines, £350,000.
 Consolidated Goldfields of Canada and British Columbia, £100.
 Cottonwood River (B.C.) Alluvial Gold, £65,000.
 Dawson's Development Syndicate of British Columbia, £6,000.
 Dominion & British Columbia Mineral Syndicate, £3,000.
 Galena Mines, £550,000.
 Gold, Exploration and Development Syndicate of British Columbia, £12,000.
 Golden River Quesnelle, £350,000.
 Goldfields of British Columbia, £1,000.
 Hall Exploration of British Columbia, £150,000.
 Incorporated Gold Mines of British Columbia, £300,000.
 International Development Corporation of British Columbia, £300,000.
 Island Mountain Gold Mines, £120,000.
 Kootenay and Cariboo Mining Syndicate, £5,000.
 Kootenay Goldfields Syndicate, £20,000.
 Kootenay Ore Company, £25,000.
 London and British Columbia Goldfields, £200,000.
 Mines Trust of British Columbia, £10,000.
 Mining and Exploration of British Columbia, £25,000.
 New Goldfields of British Columbia, £100.
 Oriole Syndicate, £2,000.
 Pioneer Development and Exploration of British Columbia, £150,000.
 Vancouver and British Columbia General Exploration, £25,000.
 War Eagle Gold, £2,000.
 Wintrop Syndicate, £2,000.

Notice.

Messrs. Yerex, Wheeler & Co., Inns of Court Building, Vancouver, B.C., have accepted a general agency for the BRITISH COLUMBIA MINING RECORD and are authorized to contract for advertisements and solicit subscriptions for this journal and other publications issued by this company. ALEX. BEGG.

Hand-Book of B.C. Mining Laws.

WE have received copies of the Hand-Book of British Columbia Mining Laws, which will prove to be a most useful publication for mining men. It contains a carefully prepared digest of the laws regarding mineral and placer claims, with copies of the various documents necessary to be filed in relation to same. The book is published in handy form to be carried in the pocket, and the mining man will therefore find it of great service to possess a copy.

Alberni Mines.

MR. DAN MCKINNON, of Alberni, reports that the Alberni Consolidated Stamp Mill is now working every day, and that it is running so satisfactorily that a double shift will probably be put on before the end of the week. No work has been started in the old shaft of the mine, but a new shaft for working purposes is to be started on the lead immediately.

Mr. F. B. Pemberton is taking an interest in the district, and has bonded and purchased several properties. Two claims situated on the Alberni Canal have been purchased outright by Mr. Pemberton, and he will at once let a big contract for development work. Mr. Pemberton has also bonded six claims in the King Solomon Basin and two on the Cowichan trail.

The Minnesota group, the property of the owners of the Duke of York hydraulic claim, is being worked by three shifts of men. A tunnel is being driven to strike the ledge at 175 feet, and had almost reached that distance yesterday.

The Regina group is looking better every day, and it is expected that it will ship another trial lot to the Tacoma smelter in a few days.

A property owned by Mr. William Lindsay on the Cowichan road, about two miles from Alberni, has a good prospect, and the tunnel now being driven is expected to show something good.

On the Duke of York claim a 50- or 60-foot face of gravel has now been secured, and a large number of men are at work on it. The clean up, which may be made in a few weeks now, is expected to be an ample return for the money that has been expended on it.

Smelting in British Columbia.

THERE is a movement, we believe, to bring about an export tax on ore in order to encourage smelting within the boundaries of the province. We would recommend our legislators to go slow in that direction until such time as we are in a better position than at present to smelt our ores at home. We must be careful not to place any obstacle in the way of making our mines producers and dividend payers, and while later on it may be well to give home smelters an advantage over those outside British Columbia so as to keep smelting as much as possible within the province, we doubt very much if the time is ripe at present for such a step as exacting an export duty on ore. No one has advocated home smelters more strongly than the BRITISH COLUMBIA MINING RECORD, but we are in favour of going cautiously to work and giving every step the fullest and most careful consideration before passing any legislation affecting our mining industry.

Hall Mines Smelter—A Year's Output.

THE statement of the ore smelted by the Hall Mines smelter during 1896; the matte and metallics produced and its component parts are as follows:

Silver King ore, lbs.....	59,720,335
Outside ores, lbs.....	542,070
Total lbs.....	60,262,405

Producing 4,775,335 pounds of matte and metallics containing 628,124.89 ounces of silver; 575.20 ounces of gold and 2,247,192 pounds of copper.

The valuations of these productions are as follows: Calculating silver at an average of 67 cents, \$420,843; gold at \$20 per ounce, \$11,604 and copper at 10 cents per pound, \$22,471, making a total of \$454,918.

Bowen Island—Howe Sound.

BOWEN ISLAND, situated about ten miles from Vancouver, is well watered and timbered, and recently has been found to be rich in minerals. The proximity to the sea, and the fact that mining operations can be carried on all the year round are important points in this new mining camp. Amongst other claims lately discovered on the island, the "Neptune" is worthy of mention, as already considerable development work has been done on it. The lode is fully 120 feet in width, and consists principally of a bluish quartz, having a specific gravity of 3.2 and over, which is indicative of its auriferous nature, and it is densely impregnated with fine particles of iron and copper pyrites. In the middle of the lode is a well defined lead or vein of rusty white and copper stained quartz, which, when tapped by the cross-cut tunnel, at a depth of about 60 feet, assayed as high as \$110 in gold.

Estimating the body of ore in sight from sea level at 120 ft. wide by 60 ft. deep for the full length of claim would give an immense body of ore, largely free milling in nature, that can be literally quarried out into scows for shipment, or milled on the spot. The lode is iron-capped, and it is the experience of all the best camps in British Columbia that these require only depth to bring forth good values, and everything goes to show that it is a true fissure of vast extent.

A company is being formed to carry on the development and operating of this claim, and the prospects are that it will turn out to be a valuable one. Assays taken so far run all the way from \$3 to \$110 in gold, according to the depth at which the samples were taken. The Bowen Island discovery is only one more instance of the mineral wealth which lies along our coast and on our islands awaiting development.

The Coast Railway to Kootenay.

THE enthusiastic meeting held in Victoria in favour of a direct line from the coast to Kootenay shows that the people of British Columbia are in earnest and will present a united front to bring about this much needed work. Once more we would point out to the Dominion Government how unfair to this province it would be to neglect making provision for the simultaneous construction of the direct coast line with that of the Crow's Nest Pass Railway, and in affording assistance to the latter we trust this view of the case will be considered and acted upon. We want the Crow's Nest Pass Railway. In fact its construction at an early day is absolutely necessary to the proper development of our mining districts, but at the same time the building of the direct line from the coast is equally imperative.

A New Mining Paper.

THE first number of the Revelstoke *Herald* is to hand. It is a well conducted, carefully edited paper, and the publishers are to be congratulated on its excellent typographical appearance. The news columns contain much valuable information regarding the rich mining districts tributary to Revelstoke, and we hail with pleasure the advent of this journalistic venture, which will, we feel sure, do much to attract attention to one of the most important mining regions of British Columbia.

Golden Cache.

ON the 21st of last month the annual meeting of the shareholders of the Golden Cache Mines Co., Ltd. took place in the Board of Trade rooms, Vancouver. There were about fifty shareholders present, and the reports of the directors and statement of the financial condition of the company were heartily approved without a dissenting voice. Mr. G. R. Maxwell, M.P., on moving the adoption of the directors' report, spoke as follows :

I think it is hardly necessary for me to expatiate at any length on the excellent report which has been submitted to us. To me it seems satisfactory in every particular. I think the directors have used their time and the company's money to very great advantage, and they deserve very great commendation for the manner in which they have acted for the best interests of the shareholders. We, as shareholders, have every reason to be proud and thankful that we are connected with so valuable a property as that owned by the Golden Cache Company, and while we may not all get rich in the immediate future, yet I am sure we have something here which will develop into a very rich thing in a very short time. Not only do I regard the Golden Cache Mines Company as being something which should afford satisfaction to the shareholders by reason of its immediately productive results, but also as a property which will prove to the outside world that here we have something of which the province as a whole has reason to be proud. Such a showing as we have here will result not only in profit to us but to the whole of the province of British Columbia, I have therefore very much pleasure in moving the adoption of the report. (Applause.)

Mr. J. R. Seymour, the seconder, then made the following remarks :

I have much pleasure in seconding that motion. The statement you have made of the manner in which the whole property has been managed since the property came into the possession of the company appears to me to be beyond the possibility of question. It could not have been more satisfactory, and I am satisfied that as soon as the statement goes out to the world and to the shareholders living out of the city, we will find a handsome addition to the value of our shares.

Mr. Wm. McCraney, in moving a vote of thanks to the chairman of the meeting, said :

If there is nothing else before the meeting I would take great pleasure in moving a vote of thanks to you, sir, for the able manner in which you have fulfilled the duties of president of this company, and I am sure that each one of the shareholders in this company have great reason to congratulate themselves upon the straightforward report that has been presented to us. We have great reason to congratulate ourselves upon the fact that we have gentlemen who will devote their time and their energies to the affairs of the Golden Cache who are so well qualified to conduct them so successfully and well, and I have no doubt in my own mind that the future will be as successful as the past. Certainly I think, with all my experience in mining—and I have had over forty years of it—I have never known a case where such wonderful success has been achieved, and I was especially pleased in reading this morning's paper to read the report of the Dominion Mining & Developing Company, which showed such good results. It all proves that we have here something which British Columbia has not had before. It is a great source of pleasure to us as shareholders; and not only that, it is a pleasure for British Columbia as a whole to have it go forth that we have such a magnificent mining proposition in the province, and I have no doubt we have many more equally as good as the Golden Cache. And while there are many that have been floated which are "wild-cats," yet this showing of the Golden Cache is enough to prove that we have in the province a mineral district which is the best in the Dominion, if not in the world—I think in the world. I have very much pleasure in moving a vote of thanks to the chairman.

Several matters connected with the company having been discussed, and the old board re-elected with Mr. Stein as auditor, the meeting was brought to a close by the president delivering the following very short speech :

I have never made a speech in my life, and I am not going to try and make one now; but I hope the next opportunity I

will have of meeting you here will be at an extraordinary meeting to declare a dividend.

Accompanying the directors' report was the following statement of the financial condition of the company :

STATEMENT

SHOWING NUMBER OF SHARES SOLD BY J. T. CARROLL, ESQ., M.D., TRUSTEE.

1896.	DR.	SHARES.
August 4.—Number of shares received from the Golden Eagle Syndicate, to be held by me and sold in terms of prospectus of the Golden Cache Mines Company, Limited		100,000
1897.	CR.	
Jan. 10.—Number of shares sold to date under authority from Directors Golden Cache Mines Company, Limited ..		31,786
Balance unsold		68,214

CASH EXPENDITURE TO 10TH JANUARY, 1897.
COST OF DEVELOPING PROPERTY.

Wages	\$ 2,589 00
Mining Supplies	1,100 10
Buildings	490 50
Transportation	19 20
Horse Feed	62 40
Ore Bags	56 65
Assays	26 00
Office Expenses and Management	957 75
Travelling Expenses	185 00
Interest and Discount	5 20
Surveying	1,330 70
Road to Claim	1,000 00
Trail	311 25
Ore Bin	326 00
	<u>\$ 8,459 75</u>

Preliminary Expenses—		
Law Costs	\$ 108 25	
Commission	1,493 50	
		<u>1,601 75</u>
		<u>\$10,061 50</u>

BALANCE SHEET, AS AT 10TH JANUARY, 1897.

LIABILITIES.	ASSETS.
I.—Capital Account—	I.—Property Account... \$500,000 00
500,000 shares of \$1.00 (fully paid)	Five Claims purchased from the Golden Eagle Syndicate, and three "Fractions" taken up by the Company
\$500,000 00	Less proceeds of 31,786 shares, sold in terms of agreement with vendors.....
II.—Expenditure from 1st to 10th January, 1897 (say).....	31,786 00
500 00	<u>\$468,214 00</u>
Contingent Liabilities—	Add—
Balance unpaid on Road Contract	Expenditure as above... \$10,061 50
\$3,000 00	Value of work done from 1st to 10th Jan., 1897
Stamp Mill, Saw Mill, Planer and Steam Plant	500 00
\$9,280 00	<u>10,561 50</u>
Contingent Assets—	II.—Bal. in Bank B.N.A.
Balance of shares (68,214) in hands of Dr. Carroll, Trustee, held under agreement between the Golden Eagle Syndicate and this Company, as set forth in the prospectus	\$478,775 50
\$500,500 00	<u>21,724 50</u>
	<u>\$500,500 00</u>

A. GRANT, Secretary. J. M. MACKINNON, President.

VANCOUVER, B.C., 20th January, 1897.

Having audited the books of the Golden Cache Mines Company, Limited Liability, from the date of incorporation to 10th January, 1897, I hereby certify that they are correctly stated and sufficiently vouched and instructed, and that the above balance sheet is a full and true statement of the financial position of the Company as at 10th January, 1897.

Assignments of the mineral claims in favour of the Company have been exhibited to me, and are duly recorded. "Certificates of Work" for each of the five claims originally purchased by the Company have been issued preliminary to obtaining Crown grants.

WILLIAM T. STEIN, Chartered Accountant, Auditor.

We call the attention of the directors of the "Golden Cache" to one point which we trust will receive consideration before the next annual meeting of shareholders takes place. It is this: The statement of the company's affairs should be in the hands of shareholders at least one week before the meeting, so as to allow time for an examination of its contents. This,

we understand, is the rule in the Old Country, and should be made so in British Columbia. All incorporated companies, mining or otherwise, should be expected to render a statement of affairs to each shareholder at least one week before the meeting convened to consider the same. With this slight exception, the annual meeting of the "Golden Cache" was highly satisfactory in every respect, and the shareholders are to be congratulated thereon.

Among Largest Shippers.

THE Gates Iron Works, of Chicago, who are now paying their attention to British Columbia, are large shippers of mining machinery to South Africa. On the 6th of January the two steamers *Lady Furness* and *Kurdistan* sailed from New York direct for South African ports, Cape Town, East London, Natal, etc. These steamers belong to the Union Clan and American and African lines, both English companies, and the lines have been established with regular monthly and semi-monthly sailings for the past three years.

Among the largest shippers from the United States to South Africa is the Gates Iron Works of Chicago. On the two steamers above named the Gates Iron Works shipped fourteen carloads of mining machinery consigned to Johannesburg. The total shipments weighed over 600,000 pounds.

As illustrating the ease with which foreign shipments are made, it is instructive to note that the various railroad freight lines all contract the through shipments and give through bills of lading, so that the shipping is done to that remote part of the world as easily as to any domestic point.

The Gates Iron Works has had a shipment on every steamer leaving New York for South African ports for over three years, and their trade is constantly increasing in that direction.

Bewick, Moreing & Co.

This firm has changed their headquarters from Nelson to Vancouver, we would direct the attention of prospectors and mining men to their advertisement on page five.

Received too Late for Publication.

As we go to press the report and statement of the Horsefly Gold Mining Company is to hand, but too late, we regret to say, for publication in this issue. It will appear in the next number.

Mining Notes From the Mining Camps.

The Le Roi has declared another dividend of \$25,000, which brings the total up to \$300,000.

The Standard Oil Company is reported to have bonded several claims on Canyon Creek, on the south end of the west side of Trout Lake.

Mons. Gire, the representative of the French syndicate, is pushing development work in Central Camp, Boundary Creek.

The Fishback Hydraulic Mining Company, operating in Cariboo, are said to have refused an offer of \$75,000 cash for their property.

D. Bauman, from Denver, Col., is looking after zinc properties in the Slocan.

The Sunset Gold & Silver Mining Company are energetically at work on their claims in the Whitewater basin.

The Goodenough mine is credited with the highest assay ever obtained from ore in the Slocan—13,142 ounces of silver to the ton.

The Whitewater mine, near Kaslo, is increasing in value with every foot of development.

Little is heard of the dividends being paid by Slocan mines, but if a complete list was published it would astonish the investing public.

The tunnel on the Silver King is now 700 feet long.

The Payne mine, near Sandon, is shipping forty tons of high grade ore per day.

The new concentrator of the Noble Five, in the Slocan, has started work.

The Kootenay mine at Rossland has its tunnel in over 400 feet and opened up an eight foot body of rich ore.

The new owners of the War Eagle are to be congratulated on the rich character of the ore they are mining in No. 2 tunnel, assays running as high as \$290.

Rossland can now boast of nine shipping mines in its vicinity.

The output of the Slocan Star mill averages thirty-two tons of concentrates daily.

Quartz claims are being developed near Barkerville in the Cariboo by an English Syndicate.

Large bodies of quartz have also been located on the Thompson River.

More than a dozen quartz claims have been staked about three miles back of Agassiz.

Major McGillivray, of the Eastern Development Company operating in British Columbia, is reported to have stated that the prospects of Coal Hill, near Kamloops, were the best he had seen.

A rich strike of free milling ore has been made at the Norway mine near Trail.

The drift in the Jumbo at Rossland is now nine feet wide of rich ore.

The Colonna tunnel is in solid ore assaying \$26 in gold and ten per cent. copper.

The free milling ore of the O.K. near Rossland is exceedingly rich, some of it being of such value that it is sacked and must go through the office. The mill at the mine is pounding out about twenty-five tons of rock per day.

A company has been organized to develop some mining claims at Jervis Inlet about seventy-five miles from Vancouver.

The main tunnel of the Centre Star at Rossland is now in over 1,400 feet.

The Cliff mine is shipping ore from Rossland to Nelson to the Hall smelter.

The upper tunnel of the Monte Cristo shows a solid face of the best ore yet found in the mine.

The Jo-Jo mine on the north fork of Carpenter Creek recently shipped fourteen tons of ore to the Hall smelter at Nelson.

The Montezuma mine in the Slocan struck a vein of eighteen inches of clean galena averaging 119 ounces to the ton.

The Big Three Company's Mascot tunnel is in over 155 feet with a full face of ore.

The ore being taken from the Mayflower mine, near Rossland is valued at \$60 per ton.

Hon. T. M. Daly, late Minister of Interior, and a party of Canadian capitalists have bonded the Calumet claim in Boundary Creek.

Modern Mining Plant of Canadian Manufacture.

AS an illustration of the fact that mining machinery of the latest and most economic types can be obtained in our own country, may be held up the large Le Roi compressor, which has this summer been built in the shops of the Canadian Rand Drill Company in Sherbrooke, and which has recently been shipped. This compressor is the largest which has ever been manufactured in Canada, and on both steam and air ends possesses the most economical features.

On the steam end the engine is of the Corliss type, made in the form of a cross compound condensing machine. The high pressure cylinder is 22 inches in diameter by 48 inches stroke, taking steam through a pipe 6 inches in diameter. The low pressure cylinder on the opposite side of the machine is 40 inches in diameter by 48 inches stroke. As we said above, both cylinders are fitted with the Corliss liberating type valve with vacuum dash pot, and with a sensitive governor operating on the releasing gear of the steam valves, controlled by the air pressure, enabling the compressor to be operated automatically from six or eight revolutions to the maximum number of revolutions per minute.

The main shaft is 14 inches in diameter by 13 feet long, weighing about 5,500 pounds. The shaft is fitted with cranks pressed on under immense pressure. The connecting rod forgings and piston rod forgings are carefully finished, and without flaw.

The air end of the machine is fitted tandem with the steam cylinders, and is also compounded, the high pressure air cylinder being 22 inches in diameter by 48 inches stroke, the low pressure cylinder being 34 inches in diameter by 48 inches stroke. The valve motion supplying these cylinders is Rand's most economical type, being in the form of mechanical valves. By this means the cylinder is insured being filled with air at atmospheric pressure, which fact largely affects the efficiency of the machine, for were the cylinder either not completely filled, or were the air hot and expanded, in just such a ratio would the efficiency be decreased.

Between the high and low pressure cylinders is an intercooler of the latest type. Through this intercooler the air passes over a system of water circulating pipes, and is cooled in the process. This intercooler is, as is seen by the cut, a very elaborate affair, being about 20 inches in diameter, and weighing about 8000 lbs.

On the main shaft is fitted a fly wheel 16 feet in diameter, 40 inches face, weighing about 28,000 lbs, which insures the steady running of the machine. The machine is fitted with a very complete set of patent oilers for all bearings, and, taken as a whole, is a piece of work which would do credit to any shop in any country.

The machine weighs about 240,000 lbs, and was shipped in six full car-loads to the Le Roi Mining Co., at Rossland, going forward over the Northern Pacific road in one solid train. This is the second compressor of this type which The Canadian Rand Drill Co. have turned out of their Sherbrooke shops, the other one they installed at the War Eagle mine last year, and since installation it has been working to the utmost satisfaction. The object of entering into such a full description of this machine is to try and put such facts before the Canadian mine manager as will convince him that he can procure up to date machines in Canada, and of Canadian manufacture.

Omineca Consolidated Hydraulic Mining Co., Ltd.

Statement of capital stock, \$100,000 :—

ASSETS.	
Mining properties	\$ 38,640 00
Bills receivable, owing by Shareholders	8,156 51
Stock unsold.....	49,591 00
Supplies	4,006 00
Sawmill and electric light plant	970 20
Plant, cash, gold dust, buildings, etc.....	5,051 00
	\$106,414 71
LIABILITIES, PROFIT AND LOSS.	
Wages	\$ 2,487 60
Transportation	2,230 00
Supplies	752 63
Expenses—law, Government fees, printing, etc ..	287 30
Commissions	42 50
Discounts	2 10
Bills payable	4,466 60
	\$ 10,268 73

NOTICE TO SUBSCRIBERS AND OTHERS.

Parties who wish to obtain bound copies of Volumes No. 1 and 2 of the British Columbia Mining Record may now do so, as the publishers have a limited supply on hand. The price, handsomely bound, is \$4. Remit by Post-Office order, addressed Manager

British Columbia Mining Record
P. O. Drawer 57, Victoria, B.C.

Apply early, as there are only a few copies of the bound volumes on hand.

Notes.

M. Beatty & Sons, Welland, Ont., shipped to Rat Portage, December 30th, a mine hoisting engine and boiler, with wire ropes and sheaves, for the shaft head, for the Mikado Gold Mining Company, to be used on their gold mine, about forty miles from Rat Portage.

M. Beatty & Sons, Welland, Ont., shipped to the Grand Trunk Railway Company at Montreal a hoisting engine and boiler for use in the engineering department. The Grand Trunk Railway have several of M. Beatty & Sons' engines in use.

M. Beatty & Sons, Welland, Ont., have the order for a hoisting engine and boiler from the Dominion Bridge Company, Montreal, to be used on a special self-propelling derrick car for use in erecting a new steel bridge on the Canadian Pacific Railway at Surprise Creek.

In the field of electrical work in Canada, the Canadian General Electric Co., Ltd., of Toronto, Ont., are easily the leaders. This company has a capital of \$2,000,000, of which \$1,200,000 are paid up, and is composed of leading Canadian business men who are known throughout the Dominion, as the names on the directorate will show.

The company have their head offices at Toronto, and have also branch agencies at Halifax, N.S., Montreal, Que., Winnipeg, Man., Vancouver, B.C., and in the past year have opened an office at Nelson, B.C., with a view of giving attention to the business opening up in the Kootenay district through the rapid development of the mining resources of the province. The warehouse at Toronto is a large department where is carried an immense stock of all lines of electrical supplies. At the several branches stocks are also carried with variety enough to supply all local demands.

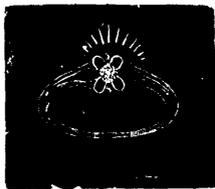
The factories of the company are located at Peterboro, Ont., within a few hours' ride of Toronto. These works are admitted to be equipped in all points equal to any on the continent, and are said to be the largest works for the manufacture of electrical apparatus of any under the British Crown. At these works is carried on the large manufacturing interests of the company. Generators for lighting and power of all systems, whether alternating, direct current, arc, railway, or long distance three-phase systems. Stationary motors of all kinds. Street railway motors of the most modern design, and also the cars themselves of every style and finish. Also electric locomotives for the haulage of freight; one of forty tons having recently been supplied to the Hull & Alymer branch of the C.P.R. All lines of wires of every class of insulation, flexible cords, cables, transformers, recording Watt-meters, arc and incandescent lamps, porcelain goods, carbons and, in fact, every branch of electrical manufacturing is here carried on.

The Canadian General Electric Company have a record to be proud of, and it speaks well for them when they are able to say that they have done the larger percentage of the electrical business in Canada in lighting, power and railway work.

The three-phase system of electrical transmission which is controlled by this company is conceded to be the best of all for the transmission of electric energy over long distances, and can be successfully operated up to distances of fifty miles. This system with Synchronous induction motors is rapidly taking the lead, and so far has never been equalled by any other system, either for its commercial efficiency, successful operation or in the number of orders secured for this class of apparatus.

Those who are contemplating the use of electricity in any form would do well to correspond with the Canadian General Electric Co., either to the nearest branch office or to the head office at Toronto, direct.

In the advertisement of the Omineca Consolidated Hydraulic Mining company on page thirty-six a printer's error appears. The advertisement reads "The company's property comprises 720 acres of placer ground and two-thirds interest of the same on Manson Creek." It should have read "The company's property comprises 720 acres of placer ground and also two-thirds interest in an additional eighty acres, all on Manson Creek."



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and
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Mining © Map

—OF—

Kootenay

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Having correspondents in all sections of British Columbia we are placed in an exceptionally favored position to obtain information regarding any Mines or Stocks in the Province.

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Mining Stocks.

Prepared by A. W. More & Co., Mining Brokers, Victoria, B.C.

Companies.	No. of Shares.	Par Value.	Price.
TRAIL CREEK.			
Alberta.....	1,000,000	\$ 1 00	\$0 10
B.C. Gold King.....	1,000,000	1 00	0 10
Beaver.....	750,000	1 00	0 10
Big Three.....	3,500,000	1 00	0 12½
Bluebird.....	600,000	1 00	0 10
Butte.....	1,000,000	1 00	0 05½
Caledonia Con.....	500,000	1 00	0 10
California.....	2,500,000	1 00	
C. & C.....	500,000	1 00	
Celtic Queen.....	750,000	1 00	0 04½
Centre Star.....	500,000	1 00	
Colonna.....	1,000,000	1 00	0 25
Commander.....	500,000	1 00	0 22
Crown Point.....	1,000,000	1 00	0 43
Deer Park.....	1,000,000	1 00	0 24
Della Colla.....	1,000,000	1 00	0 04½
Eastern Star.....	500,000	1 00	0 20
Enterprise.....	1,000,000	1 00	0 20
Eric.....	1,000,000	1 00	0 10
Evening Star.....	1,000,000	1 00	0 15
Georgia.....	1,000,000	1 00	0 17
Gertrude.....	500,000	1 00	0 15
Golden Drip.....	500,000	1 00	0 15
Golden Queen.....	1,000,000	1 00	
Great Western.....	1,000,000	1 00	0 17
Hattie Brown.....	1,000,000	1 00	0 07½
Helen.....	600,000	1 00	0 06
High Ore.....	500,000	1 00	0 07½
Homestake.....	1,000,000	1 00	0 17½
Idaho.....	500,000	1 00	
Imperial.....	1,000,000	1 00	0 05½
Iron Horse.....	1,000,000	1 00	0 20
Iron Mask.....	500,000	1 00	0 55
L.X.L.....	1,000,000	1 00	0 15
Josie.....	700,000	1 00	0 55
Jumbo.....	500,000	1 00	0 60
Knight Templar.....	500,000	1 00	0 05
Kootenay-London.....	1,000,000	1 00	0 10
Le Roi.....	500,000	5 00	7 75
Lilly May.....	1,000,000	1 00	0 20
Mayflower.....	1,000,000	1 00	0 15
Monita.....	750,000	1 00	0 25
Monte Cristo.....	1,000,000	1 00	0 16
Morning Star.....	1,000,000	1 00	0 10
Nest Egg.....	500,000	1 00	0 10
Northern Belle.....	1,000,000	1 00	0 15
Novelty.....	1,000,000	1 00	0 10
O. K.....	1,000,000	1 00	0 28
Palo Alto.....	1,000,000	1 00	0 10
Phoenix.....	500,000	1 00	0 15
Poorman.....	500,000	1 00	0 09
R. E. Lee.....	2,000,000	1 00	0 15
Red Mountain View.....	1,000,000	1 00	0 12
Rossland, Red Mountain.....	1,000,000	1 00	0 25
St. Elmo.....	1,000,000	1 00	0 12½
St. Paul.....	1,000,000	1 00	0 12½
Silverine.....	500,000	1 00	0 11
Southern Cross & W. Con.....	500,000	1 00	0 20
Trail Mining Co.....	2,500	100 00	
Union.....	600,000	1 00	
Virginia.....	500,000	1 00	0 19
War Eaglet.....	500,000	1 00	1 55
West Le Roi.....	500,000	1 00	0 15
White Bear.....	2,000,000	1 00	0 10
AINSWORTH, NELSON AND SLOCAN.			
Alamo.....	500,000	1 00	
Cumberland.....	50,000	10 00	
Dardanelles.....	1,000,000	1 00	0 15
Dellie.....	750,000	1 00	0 12½
Grey Eagle.....	750,000	1 00	
Hall Mines.....	300,000	£1	
Idler.....	1,000,000	1 00	0 10
Kootenay-Columbia.....	400	100 00	
London.....	600,000	25	0 25
Minnesota.....	1,000,000	1 00	
Noble Five Con.....	1,200,000	1 00	0 60
Rambler Con.....	1,000,000	1 00	0 40
Reco.....	1,000,000	1 00	1 25
Slocan Start.....	1,000,000	50	2 50
Sunshine.....	50,000	10 00	
Washington.....	1,000,000	1 00	0 25
Wonderful.....	1,000,000	1 00	0 12

Companies.	No. of Shares.	Par Value.	Price.
BOUNDARY.			
Old Ironsides.....	1,000,000	1 00	0 15
CAMP MCKINNEY.			
Cariboo.....	800,000	1 00	0 50
REVELSTOKE.			
Orphan Boy.....	700,000	1 00	0 15
TEXADA ISLAND.			
Van Anda.....	5,000,000	1 00	0 11
ALBERNI DISTRICT.			
Victoria-Texada.....	600,000	0 25	0 25
CARIBOO.			
Alberni Mountain Rose.....	250,000	1 00	0 10
Consolidated Alberni.....	1,000,000	1 00	0 27½
Mineral Creek.....	500,000	1 00	0 05½
Mineral Hill.....	750,000	1 00	
Quadra.....	500,000	1 00	0 10
LILLOOET DISTRICT.			
Cariboo Gold Fields Ld.....	£100,000		
Cariboo Hydraulic.....	300,000		
Horsefly Hydraulic.....	200,000		
Horsefly Gold Mining Co.....	100,000	10 00	1 50
Slough Creek.....	500,000	1 00	0 50
GOLDEN CACHE.			
Golden Cache.....	500,000	1 00	1 50

† Dividends paid to date are as follows: Le Roi, \$275,000; War Eagle, \$187,000; Cariboo, \$112,000; Slocan Star, \$300,000. Alamo, Cumberland, Reco and Noble Five have also paid dividends.

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The following firms will receive subscriptions for the B.O. MINING RECORD, at \$1.00 per annum, and single copies may be had of them at 10 cents each and foreign at 6s. 6d.

Geo. Street & Co.....	London, Eng
Gordon & Gotch, St. Bride Street.....	" "
Clarke & Stuart.....	Vancouver, B.C
Bailey Bros.....	" "
Norman, Caple & Co.....	" "
Thompson Bros.....	" "
E. Galloway & Co.....	" "
Biddell & Co.....	" "
Hotel Vancouver News Stand.....	" "
T. N. Hibben & Co.....	Victoria, "
Geo. Marsden.....	" "
R. Jamieson & Co.....	" "
Cashmore's Bookstore.....	" "
Pimbury & Co.....	Nanaimo, "
J. F. Shaw.....	Wellington, "
H. Morey & Co.....	New Westminster, "
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S. W. Brown, Post Office.....	Trail, "
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S. B. Shaw.....	Rossland, "
J. E. Saucier, Post Office.....	" "
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M. W. Simpson.....	" "
H. G. Parson.....	Golden, "
P. H. Kellegher.....	Nakusp, "
M. Skojeski.....	Sicamous, "
Slocan News Co.....	Slocan City, "
G. L. Eastabrooks.....	New Denver, "
H. B. Munroe.....	Greenwood City, "
Wm. M. Shaw & Co.....	Spokane, Wash
Shaw-Borden Co.....	" "
E.A. Thomas & Co.....	" "
J. W. Graham & Co.....	" "
Robt. Duncan & Co.....	Hamilton, Ont.
John P. McKenna.....	Toronto, Ont
G. B. Salmund.....	" "
Windsor Hotel.....	Montreal, Que
K. T. Takahashi.....	" "
San Francisco News Co.....	San Francisco, Cal

Mining Papers on File.

The following papers are kept on file at the offices of the B.O. MINING RECORD for the use of visitors who may wish to consult their columns:

Mining and Scientific Press.....	San Francisco, Cal
Mining and Electrical Review.....	" "

Mining and Metallurgical Journal.....	Los Angeles, Cal
Miner and Electrician.....	Spokane, Wash
Mining.....	" "
Spokesman Review.....	" "
Western Mining World.....	Butte, Montana
Mine, Quarry and Metallurgical Journal.....	Chicago, Ill
Engineering and Mining Journal.....	New York
Mining Journal.....	London, Eng
Shareholder.....	" "
The Colonies and India.....	" "
Canadian Gazette.....	" "
Australian Mining Standard.....	Sydney, N.S.W
Standard and Diggers' News.....	Johannesburg, South Africa
Canadian Engineer.....	Toronto, Ont
Electrical News.....	" "
Industrial Canada.....	" "
Canada Lumberman.....	" "
Monetary Times.....	" "
Toronto World.....	" "
Toronto Globe.....	" "
Mining Review.....	Ottawa
Mining News.....	Montreal
Edmonton Herald.....	Edmonton, N.W.T
Rosslander.....	Rossland, B.C
Rossland Miner.....	" "
Weekly Record.....	" "
Kootenaian.....	Kaslo, "
Miner.....	Nelson, "
Trail Creek News.....	Trail, "
Boundary Creek Times.....	Greenwood City, "
Slocan City News.....	Slocan City, "
Grand Forks Miner.....	Grand Forks, "
Ledge.....	New Denver, "
Golden Era.....	Golden, "
Vernon News.....	Vernon, "
Paystreak.....	Sandon, "
Advance.....	Midway, "
Prospector.....	Fort Steele, "
Inland Sentinel.....	Kamloops, "
B.C. Mining Journal.....	Ashcroft, "
Nanaimo Free Press.....	Nanaimo, "
The Province.....	Victoria, "

Catalogues of Mining Machinery and Supplies.

We will be pleased to forward to any subscriber or reader catalogues and printed matter from the following firms:

Joshua Hendy, Machine Works, San Francisco, Cal. Mining machinery of all kinds.
 The Giant Powder Co., San Francisco, Cal. Explosives.
 The Pelton Water Wheel Co., San Francisco, Cal. Water wheels.
 California Wire Works, San Francisco, Cal. Hallidie ropeway, etc.
 John Taylor & Co., San Francisco, Cal. Mine and mill supplies, chemicals, etc.
 Canadian Rand Drill Co., Montreal and Rossland. Mining machinery.
 Montreal Rolling Mills Co., Montreal. Mining supplies.
 Fried. Krupp Grusonwerk, Magdeburg-Buckau, Germany, and Montreal, Mining and Milling Machinery of every description.
 Hamilton Powder Co., Montreal and Victoria. Explosives.
 M. Beatty & Sons, Welland. Dredgers, ditchers, etc.
 Theodor Lexow, New York. Carbons, diamond drills, etc.
 James H. Lancaster, New York. Steam shovels, etc., etc.
 James Macbeth & Co., New York. Electric blasting supplies.
 Bradley Pulverizer Co., Boston. Griffin mill.
 The Reliance Oil & Grease Co., Cleveland, O. Valve-olein.
 Northey Co., Ltd., Toronto. Pumps for mining.
 H. W. Petrie, Toronto. Second-hand machinery.
 Colorado Iron Works, Denver, Col. Milling and smelting plants, etc.
 John Boyd & Co., Machinery and Supplies, Vancouver.
 Jas. Leffel & Co., Water Wheels, Springfield, Ohio.
 Girard Water Wheel, San Francisco.
 Electrical Engineering Co., San Francisco.
 Geo. W. Pennington & Sons, " "
 Union Gas Engine Co., " "

Province of British Columbia.

Minister of Mines—Hon. Col. James Baker.
 Provincial Mineralogist—W. A. Carlyle.
 Public Assayer—H. Carmichael.

Provincial Government Agencies.

Alberni—Thos. Fletcher, Alberni.
 Cariboo—J. Bowron, Barkerville.
 Cassiar—James Porter, P.O. Laketon.
 Cowichan—H. O. Wellburn, Duncan.
 Comox—W. B. Anderson, Comox.
 Fort Simpson—J. Flewin.
 Kamloops—G. C. Tunstall, Kamloops.
 Kootenay East—J. F. Armstrong, Donald.
 Kootenay West—Northern portion, J. D. Graham, Revelstoke.
 Kootenay West—Southern portion, N. Fitzstubs, Nelson.
 Lillooet—F. Soues, Clinton.
 Nanaimo—M. Bray, Nanaimo.
 New Westminster—D. Robson, New Westminster.
 Nicola—John Clapperton, Nicola Lake.
 Okanagan—L. Norris, Vernon.
 Quesnelle—Wm. Stephenson, Quesnelle Forks.
 Yale—W. Dodd, Yale.

Mining Recorders.

DISTRICT.	OFFICE.
NANAIMO.—M. Bray.....	Nanaimo
NEW WESTMINSTER.—D. Robson.....	New Westminster
EAST KOOTENAY.—J. Stirret.....	Donald
F. C. Lang.....	Golden
G. Goldie.....	Windermere
C. M. Edwards.....	Fort Steele
M. Phillips.....	Tobacco Plains
WEST KOOTENAY.—J. D. Graham.....	Revelstoke
Cory Menhenick.....	Lardeau
A. Sproat.....	New Denver
John Keen.....	Kaslo
J. H. Rashdall.....	Nelson
J. Kirkup.....	Rossland
J. C. Rykert.....	Rykert's
Thomas Taylor.....	Trout Lake
Walter Scott.....	Illecillewae
F. G. Fauquier.....	Nakuap
CARIBOO.—W. Stephenson.....	Quesnelle Forks
J. Bowron.....	Barkerville
YALE.—W. Dodd.....	Yale
L. Norris.....	Vernon
C. A. R. Lambly.....	Osoyoos
W. McMynn.....	Midway
H. Hunter.....	Granite Creek
G. C. Tunstall.....	Kamloops
LILLOOET.—C. A. Phair.....	Lillooet
F. Soues.....	Olinton
CASSIAR.—Ezra Evans.....	Manson Creek Omineca
Jas. Porter.....	Laketon
ALBERNI.—Thos. Fletcher.....	Alberni
VICTORIA.—W. S. Gore.....	Victoria

Gold Commissioners.

For the Province.—W. S. Gore, Victoria.
 Alberni.—Thos. Fletcher, Alberni.
 Cariboo.—John Bowron, Richfield.
 Cassiar District.—James Porter, Laketon, Cassiar.
 Lillooet District.—Frederick Soues, Clinton.
 Nanaimo—M. Bray, Nanaimo.
 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 in the Province of British Columbia.

Public Assayer, H. Carmichael, Victoria.
 W. J. R. Cowell, Victoria.
 W. Pellew Harvey, Vancouver.
 J. A. MacFarlane, Vancouver.
 Frank Dick, assayer, Brandon, B.C.
 Robbins & Long, Rossland.
 C. M. Wilson, Sandon.
 Hill & Co., Sandon.
 Wm. J. Trethewey, Kaslo.
 Howard West, New Denver.
 Boundary Creek Engineering & Assaying Co., Greenwood City, B.C.

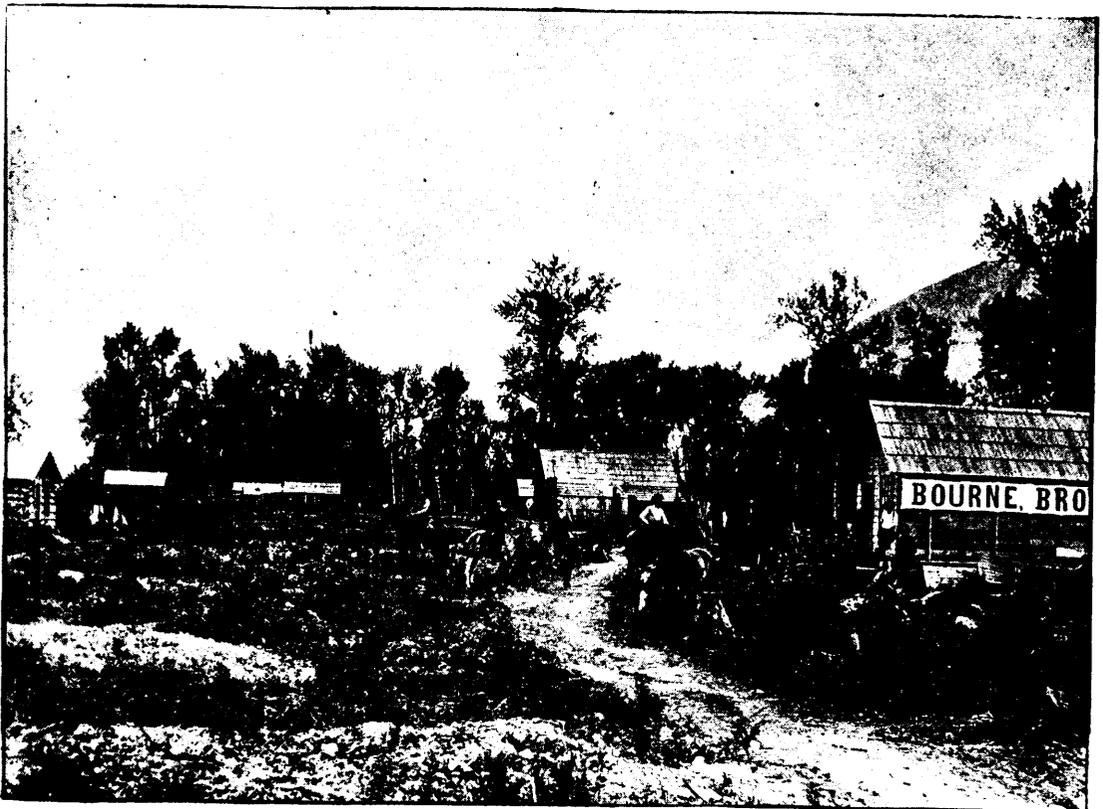
Mining Centres in B.C. and How to Reach Them.

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

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



PARK AVENUE, BRANDON, B.C.



NEW MINING CAMP, CARIBOO CREEK, BURTON CITY, B.C.

CARTBOO.

Barkerville.—Two hundred and eighty-five miles from Ashcroft; stage from Ashcroft. See stage lines.

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

Big Bar.—Stage from Ashcroft.

Clinton.—Thirty-two miles from Ashcroft station; stage from Ashcroft.

Fort George.—Nearest post office, Quesnelle.

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

Lac La Hache.—One hundred miles from Ashcroft on stage line from Ashcroft to Barkerville.

Lilloet.—Weekly stage from Ashcroft.

Lightning Creek.—Between Quesnelle and Barkerville, by stage to Stanley.

One Hundred Mile House.—Stage from Ashcroft.

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

Quesnelle.—Two hundred and twenty-five miles from Ashcroft; stage from Ashcroft.

Quesnelle Forks.—Stage road from Ashcroft.

Soda Creek.—Stage from Ashcroft.

Stanley.—Stage from Ashcroft.

Slough Creek.—Stage from Ashcroft.

Tatta Lake.—Stage from Ashcroft, changing at Soda Creek.

Willow River.—Stage from Ashcroft.

Williams Creek.—At Barkerville.

CASSIAR.—*Drase Creek.*—*McDame Creek.*—

COAL CENTRES.—*Crow's Nest Pass.*—

Nanaimo.—From Victoria, all rail, 73 miles. Steamer from Vancouver.

Union.—

Wellington.—From Victoria, all rail, 83 miles. Steamer and rail from Vancouver.

EAST KOOTENAY.

Cranbrook.—Nearest railway station, Golden. Communication by steamer from Golden to Windermere, thence by stage.

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

Fort Steele.—Steamer and road from Golden. Steamer from Jennings, Montana, G.N.R.R.

Galbraith 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.

Moyie River.—From Fort Steele, 25 miles.

McMurdo District.—Steamer and trail from Golden, 35 miles.

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

St. Mary's.—From Fort Steele, 20 miles trail.

Thunder Hill.—One hundred and fifteen miles from Golden. Steamer in summer, stage in winter.

Windermere.—Steamer from Golden. Stage in winter.

Wild Horse Creek.—From Fort Steele, two miles trail to Kootenay River.

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.

Big Bend District.—Fifty miles from Revelstoke by trail and boat.

Cariboo Creek.—Steamer from Nakusp, ten miles.

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

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

Kaslo City.—Thirty-five miles from Nelson; communication by steamer.

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

Lardo-Duncan.—Steamer from Kaslo to head of lake, thence river trail 40 miles.

Nakusp.—North-west terminus of Nakusp & Slocan Railway, 50 miles from Revelstoke. Steamer communication from Revelstoke tri-weekly.

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

New Denver.—Steamer from Revelstoke and rail from Nakusp; all rail from Kaslo. Distant from Revelstoke, 73 miles; from Kaslo, 28 miles.

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

Revelstoke.—On main line C.P.R., 389 miles from Vancouver.

Rossland.—Seven miles from Trail Creek by road or stage.

Sproat's Landing.—One hundred and sixty miles from Revelstoke, and one and a half miles from Robson.

Springer Creek and South Slocan Camps.—From New Denver by steamer, twenty miles.

Sandon and Cody Creek.—All rail from Kaslo, 29 miles. Steamer and rail from Revelstoke via Nakusp and Three Forks. Distant from Three Forks, four and a half miles.

St. Mary's Country.—Steamer from Kaslo or Nelson to Davie Townsite, thence trail.

Three Forks.—Steamer from Revelstoke to Nakusp, thence rail; from Kaslo, all rail. Distant from Revelstoke, 82 miles; from Kaslo, 24 miles.

Trail.—Rail from Spokane to Northport, thence steamer. All steamer from Revelstoke, or steamer and rail via Nelson; from Revelstoke, 150 miles; from Nelson, 50 miles.

Trout Lake City.—Steamer and stage from Revelstoke.

LILLOOET.—*Bridge River, Cayuse Creek, Fraser River.*

YALE.

Boundary Creek.—Nearest railway station on the S. and O. R., Okanagan Landing, thence by steamer to Penticton and on by stage to Midway.

Fairview Camp.—Communication by boat from Okanagan Landing to Penticton, thence by stage.

Kettle River.—Steamer from Okanagan Landing to Penticton, thence by stage.

Midway.—Rail from Sicamous to Okanagan Landing, steamer Penticton and on by stage.

Okanagan Mission.—Rail from Sicamous to Vernon, thence by stage or by steamer from Okanagan Landing to Kelowna, thence by livery.

Osoyoos.—Rail to Okanagan Landing, steamer to Penticton, and thence by stage.

Rock Creek.—Rail to Okanagan Landing, steamer to Penticton, and thence by stage.

Yale.—Nicola Lake Stage from Spence's Bridge and Kamloops, 50 miles.

Any of these points may be reached by rail from Spokane to Marcus, and thence by stage twice a week.

Mail stage leaves Penticton for Midway every Thursday morning.

IN PRESS AND WILL
BE ISSUED SHORTLY

The Directory of Mines.

The work will be corrected and issued quarterly, so as to "keep it up to date." It will give the fullest particulars obtainable of all mines in course of development or being operated, as well as other information regarding the mining districts, and it will be the aim of the publishers to make this work reliable as a means of reference. It will be invaluable to all who are interested in mining in British Columbia, and will be one of the best mediums for investors and others to gain a correct idea of the mining development going on in the province. It is intended at first to issue only a neatly bound subscription edition of the Directory, and as it will necessarily be limited, parties who desire to receive it should send in their names, accompanied by the subscription price, without delay, addressed to the

Business Manager "B.C. Mining Record."

P.O. Drawer 57, Victoria, B.C.

Subscription price \$2 per annum for the four quarterly editions, published in January, April, July and October.

MINING SCENES IN BRITISH COLUMBIA. ©

THE Publishers of the B.C. MINING RECORD have in press a very handsome volume of **Scenes in the Mining Districts of British Columbia**, accompanied by letter-press descriptions of the various localities. This work, handsomely bound, will be sent to the principal hotels, steamboat lines and railways in Canada, the United States and Great Britain for the use of the travelling public. The publication of this work will be one of the best advertisements for the Province ever undertaken.

The OMINECA Prospecting & Development Co., Ltd.

INCORPORATED UNDER THE "COMPANIES ACT, 1862," (IMPERIAL.)

President, THOS. B. HALL,

Treasurer, DR. G. L. MILNE.

NO SHARES FOR SALE IN THIS COMPANY.

The objects for which this Company is formed are: To prospect and acquire mineral-bearing property, and to sell, lease or otherwise dispose of the same. Parties having good mining properties to dispose of will do well to communicate with the Company's Office, No. 30 Broad Street. (Opposite Driard Hotel.) Cash will be paid for approved property.

The Omineca Consolidated Hydraulic Mining Company, Limited.

INCORPORATED UNDER THE "COMPANIES ACT, 1862," (IMPERIAL.)

CAPITAL, \$100,000.

SHARES (PAR VALUE) \$1.00 EACH,

payable in installments of 10 per cent. at intervals of 60 days.

PRESIDENT, M. MCGREGOR.

SECRETARY-TREASURER, J. T. BETHUNE.

MANAGER, C. N. BLACK, C.E.

OFFICES: 30 BROAD STREET, VICTORIA, B. C.

Only \$10,000 of this Stock for Sale.—The companies property comprises 720 acres of placer ground and two-thirds interest of the same on Manson Creek, Omineca District, and possesses a water grant of 4,600 inches. Ditch nearly completed last season. Will commence operations early in May next.

The Caledonia General Mining Association, Limited Liability.

INCORPORATED UNDER COMPANIES ACT, 1890. AND AMENDING ACTS.

CAPITAL. \$1,500,000. IN SHARES OF \$100 EACH.

PRESIDENT, A. J. WEAVER BRIDGEMAN.

Head Office, Williams' Building, Victoria, B. C.

SECRETARY-TREASURER, R. T. WILLIAMS.

The Company has purchased the following properties in Germansen Creek, Omineca District: 640 acres of rich placer ground known as the Toboggan, Black Jack and Maggie Wills; also two thirds interest in the Golden Hill claim of 80 acres. The Company has acquired water grants to these properties of 6,600 inches, and has a right to place a dam across the outlet of Germansen Lake (this Lake is twelve miles long by one mile wide), thus ensuring an unlimited supply of water. A limited number of vendors shares will be offered from time to time at such prices as the directors may determine upon; 700,000 shares are reserved for the purchase and development of other properties to be, from time to time, acquired by the Company. These shares cannot be sold below par.

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3. Thousands of testimonials testify its merits, in fact pronounced a "Perfect Boon." Lasts years.
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PROSPECTOR open for engagement to a Syndicate or Company desirous of securing mineral claims in British Columbia the coming season. Is well up in the geology and general conditions prevailing in the various mining districts. The past season located a number of valuable properties for his employers.

Address "INITIAL POST," Care of this Journal.

The Omineca Prospecting and Development Co.

Incorporated under Companies Act, 1862, Imperial.

OFFICERS :

President, THOS. B. HALL, (Victoria Roller, Flour and Rice Mills)

Secretary, J. T. BETHUNE.

Treasurer, DR. G. L. MILNE.

Manager, C. N. BLACK, C.E.

The objects for which the Company is established are:

To prospect and acquire mineral bearing property and to sell, lease or otherwise dispose of the same.

To promote and form other Companies for all mining purposes in the Dominion of Canada, Great Britain or any foreign countries.

This Company owns all the water rights and 720 acres of rich placer ground on Jamieson Creek, Omineca District, and has promoted the Omineca Consolidated Mining Co., now in successful operation at Manson Creek.

Parties having good placer ground to dispose of will do well to communicate with the Company's office, No. 30, Broad St., Victoria, B.C. (opposite Driard Hotel.) Cash will be paid for approved property.

[L. S.]

E. DEWDNEY.

CANADA.

PROVINCE OF BRITISH COLUMBIA.

VICTORIA, by the Grace of God, of the United Kingdom of Great Britain and Ireland, QUEEN, Defender of the Faith, &c., &c., &c.

To Our faithful the Members elected to serve in the Legislative Assembly of Our Province of British Columbia at Our City of Victoria—GREETING:

D. M. EBERTS, } WHEREAS WE are desirous and re-
 Attorney-General, } solved, as soon as may be, to meet
 Our people of Our Province of British Columbia, and to have
 their advice in Our Legislature:

NOW KNOW YE, that for divers causes and considerations, and taking into consideration the ease and convenience of Our loving subjects, We have thought fit, by and with the advice of Our Executive Council of the Province of British Columbia, to hereby convoke, and by these presents enjoin you, and each of you, that on Monday, the Eighth day of the month of February, one thousand eight hundred and ninety-seven, you meet Us in Our said Legislature or Parliament of Our said Province, at Our City of Victoria, FOR THE DISPATCH OF BUSINESS, to treat, do, act, and conclude upon those things which Our Legislature of the Province of British Columbia, by the Common Council of Our said Province may, by the favour of God, be ordained.

IN TESTIMONY WHEREOF, We have caused these Our Letters to be made Patent, and the Great Seal of the said Province to be hereunto affixed: WITNESS, the Honourable EDGAR DEWDNEY, Lieutenant-Governor of Our said Province of British Columbia, in Our City of Victoria, in Our said Province, this twenty-ninth day of December, in the year of Our Lord one thousand eight hundred and ninety-six, and in the sixtieth year of Our Reign.

By Command.

JAMES BAKER,

Provincial Secretary.

HENRY O'HARA.

H. R. O'HARA.

H. O'HARA & CO.

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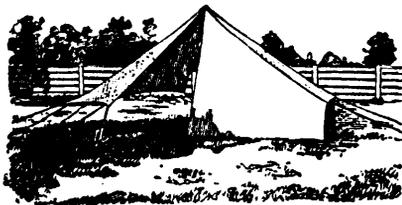
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Corner of Yates and Government Streets, VICTORIA, B.C.
Agent for the B.C. Mining Record.
FINE TOBACCOS AND CHOICE CIGARS

TRANSPORTATION COMPANIES.

Canadian Pacific Navigation Co., Ltd.

TIME TABLE NO. 28.

(Taking effect December 28th, 1896.)

VANCOUVER ROUTE.

VICTORIA TO VANCOUVER daily except Monday at 1 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 Chilliwack 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 and Fifteenth of each month. If sufficient inducements offer, will call at points on the West Coast and Queen Charlotte Islands.

BARCLAY SOUND ROUTE.

Steamer "Tees" leaves Victoria for Alberni and Sound ports the 10th, 20th and 30th of each month.
The Company reserve 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., LD.

—HEAD OFFICE AND WHARF—
VANCOUVER, B.C.

NORTHERN SETTLEMENTS—SS. Comox sails from Company's wharf every Tuesday at 9 a.m. for Bowen Island, Howe Sound, Sechelt, Jervis Inlet, Froeck, Texada Island, Lund, Hernando Island, Cortez Island, Read Island, Valdez Island, Shoal Bay, Phillips Arm, Frederick Arm, Thurlow Island, Loughborough Inlet, Salmon River, Port Neville; and sails every Friday at 11 a.m. for way ports and Shoal Bay, calling at Bute Inlet every six weeks.

MOODYVILLE & NORTH VANCOUVER FERRY.

LEAVES MOODYVILLE—8, 9.15, 10.45, 12 noon, 2, 4, and 5.45 p.m.
LEAVES VANCOUVER—8.35, 10, 11.20, 1.15 p.m., 3.15, 5.15, and 6.20. Calling at North Vancouver each way, excepting the noon trip.

Freight steamers SS. Capilano, and SS. Coquitlam; capacity, 300 tons d.w.
Tugs and scows always available for towing and freighting business. Large storage accommodation on Company's wharf.

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Telephone 94. P.O. Box 771

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Mining Engineer, Analytical Chemist and Assayer.

Properties examined and reported on for intending purchasers.
Assay Office and Chemical Laboratory.

Bellevue Ave., NEW DENVER, B.C.

The Columbia & Kootenay Steam Navigation Co., Ltd.

TIME TABLE NO. 10.

In effect June 8th, 1896.

ARROWHEAD-TRAIL ROUTE, STEAMER "NAKUSP."

South bound; read down.	North bound; read up.
Mon. Wed. Fri. 7 p.m. De ARROWHEAD	Ar 11.30 a.m. Wed. Fri. Sun.
" " " 11 p.m. Ar NAKUSP	{ De 7.30 a.m. " " "
" " " 12 m. De	{ Ar 6 a.m. " " "
Tues. Thurs. Sat. 9 a.m. Ar ROBSON	{ De 8.30 p.m. Tues. Thurs. Sat.
" " " 12 noon De	{ Ar 8 p.m. " " "
" " " 2 p.m. Ar TRAIL	{ De 4.30 p.m. " " "

Connections at Arrowhead with C.P.R. to and from Revelstoke and all points east and west; at Nakusp with Nakusp & Slocan R. to and from Slocan points; at Robson with C. & K. R. to and from Nelson and Kootenay Lake points; at Trail with C. & W. R. to and from Rossland; at Trail with Str. "Trail" to and from Waneta, Northport and Spokane.

TRAIL-NORTHPORT ROUTE, STEAMER "TRAIL."

Daily except Sun. 8 a.m. De TRAIL	Ar 4.30 p.m.	{ Daily except Sun.
" " " 9 a.m. Ar WANETA	De 3 p.m.	{
" " " 10 a.m. Ar NORTHPORT	De 1 p.m.	{

Connections at Northport with S.F. & N.R. to and from Spokane and way points; at Trail with C. & W. R. to and from Rossland, and with Str. "Nakusp" to and from Robson, Nakusp and Revelstoke.

KOOTENAY LAKE ROUTE, STEAMER "KOKANEE."

Daily except Sun. 4.00 p.m. De NELSON	Ar 9.30 a.m.	{ Daily except Sun.
" " " 8 p.m. Ar KASLO	De 5.30 a.m.	{

Saturday, June 6th and every second Saturday following, steamer leaves Kaslo at 10 p.m. for Bonner's Ferry; returning leaves Bonner's Ferry Sun. at noon. Connections at Nelson with C. & K. R. to and from Robson, Trail, Rossland, Nakusp, Revelstoke and C.P.R. points; at Nelson with N. & F.S. R. to and from Spokane and way points; at Kaslo with K. & S. R. to and from Slocan points; at Bonner's Ferry with G.N.R.

The right is reserved to change this schedule at any time without notice.
For tickets, rates, etc., apply at Company's office, Nelson.

T. ALLAN, SECRETARY. J. W. TROUP, MANAGER, Nelson, B.C.

Columbia & Western Railway Co.

Time Table No. 3, in effect July 4th, 1897.

EASTBOUND.

No. 4 Passenger, daily except Sunday; leaves Rossland 5 p.m., arrives Trail 6 p.m.
No. 2 Passenger (Tuesdays, Thursdays and Saturdays) leaves Rossland 7 a.m., arrives Trail 8 a.m.

WESTBOUND.

No. 3 Passenger, daily except Sunday; leaves Trail 8.30 a.m., arrives Rossland 9.40 a.m.
No. 1 Passenger (Tuesdays, Thursdays and Saturdays) leaves Trail 6.30 p.m., arrives Rossland 7.40 p.m.

Connections made with all boats arriving and departing from Trail.

GENERAL OFFICES: TRAIL, B.C. F. P. GUTELIUS, General Superintendent.

KASLO & SLOCAN RAILWAY.

TIME CARD NO. 1.

To take effect Wednesday, Nov. 20, 1896. Trains run on Pacific standard time.

Going west.	Daily.	Going east.
Leave 8.00 a.m. Kaslo	Arrive 3.50 p.m.	
" 8.36 " South Fork	" 3.15 "	
" 9.36 " Sprule's	" 2.15 "	
" 9.51 " Whitewater	" 2.00 "	
" 10.03 " Bear Lake	" 1.48 "	
" 10.18 " McGuigan	" 1.33 "	
" 10.30 " Bailey's	" 1.21 "	
" 10.39 " Junction	" 1.12 "	
Arrive 10.50 Sandon	Leave 1.00 "	

For rates and information, apply at Company's offices.

ROBT. IRVING, Traffic Manager. R. W. BRYAN, Superintendent.

SPOKANE FALLS & NORTHERN RAILWAY.
NELSON & FORT SHEPPARD RAILWAY.

Daily (except Sunday) between Spokane and Nelson, B.C.
Leave 8.40 a.m. Nelson Arrive 5.00 p.m.
" 7.00 a.m. Spokane " 6.15 p.m.
Passengers for Rossland and the Trail Creek mines connect at Northport with stages and steamer daily.
Close connection at Nelson with steamers for Kaslo and all Kootenay Lake points.
Passengers for Kettle River and Boundary Creek connect at Marcus with stage daily.

THOS. HORNBY, Pioneer Stables, KAMLOOPS, B.C.

Freight, Express and Teaming of every description promptly attended to. Dealer in Coal and Wood.
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