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# THE B. C. MINING EXCHANGE AND INVESTOR'S GUIDE

## And Mining Tit-Bits.

VOL. I.—VANCOUVER, B. C., DECEMBER, 1899—No. 12.

### REVIEW OF 1899.

During the year a new impetus has been given to several branches of mining, more particularly in Copper mining. In 1898 copper rose considerably in value, owing to the immense increase in demand for electrical purposes. Early in this year the great mines of America amalgamated, with, as a consequence, an immense rise in prices; Lake coppers going up to 19 cents per

some demand for properties in B. C., but as there has been no market heretofore the prospector has passed it by as useless. The same applies to antimony, which is very largely used in the manufacture of type, and as a means of hardening other metals. Some excellent properties have been located lately in the Yale district, containing extensive veins averaging over 40 per cent. of this mineral. Japan has hitherto been meeting



ROSSLAND, B. C.

found, and throughout the year the demand has been considerably in excess of the output. Owing to the working of the combine there was a decrease in October to  $17\frac{1}{2}$  cents and from then till now has fluctuated between that figure and 18.50 cents. The natural result of this immense demand and rise in value has been the opening up of whole new districts, more specially in British Columbia: in the Smilkameen, East Kootenay, Boundary Camp, Rossland and Revelstoke Division and Lardeau, and as far as indications go, and from what can be ascertained from work done, the supply is almost inexhaustible.

Molybdenum has come largely into use and is increasing in value, as the mineral is rarely encountered in any considerable bodies. There has been

the demand in this line. There is only one company handling the reductions of the ore; this is operating at San Francisco and New York.

Within the year, ores, containing what has hitherto been a deleterious quality of zinc, are being bought up for treatment at Manchester, England, by a company that has brought out a process by which the zinc is saved. As the demand is at present, and likely to be, far above the supply, mining for zinc itself is likely soon to become extensive in the Province, and as there are few of our ores which do not contain it in considerable quantities, it may be expected that reduction plants will be erected in the Province.

Discoveries of other minerals, of more or less value, have been reported: as instanced in the Soda Lakes,

near Ashcroft, tests of the deposit proving it to be equal to the best manufactured washing powders. The area of this deposit is very considerable.

Gypsum has also been discovered in several places in large bodies, and alum in the East Kootenay and on Bute Inlet on the Coast.

Although the ore shipments have fallen off considerably during the year, owing principally to the lockout in the Slocan, general development has progressed with enormous strides. New camps have opened on every side, and with railroads branching out in all directions, the coming year should be one of great prosperity. Amongst the most noteworthy events of the year have been the legislation on alien labour and working hours in mines; neither have had a beneficial effect on the country, and the eight hour law has raised dissent between labour and capital which did not exist formerly. Great hopes are entertained that an agreement will shortly be arrived at, and the working of the Slocan Camps be resumed. The immense developments in the Greenwood, and generally, in the Boundary Camps are worthy of special note. A year ago the district was practically unknown; to day, hundreds of properties are making considerable output and only awaiting the completion of a smelter being built in the locality to ship. A number of prominent mines have changed hands and management, and many improvements have been made on them. The use of electricity in connection with mining operations has made great strides and promises still greater ones during the coming year, as many charters are being granted for new companies to operate in different districts.

## MINERAL BELTS OF BRITISH COLUMBIA.

BY C. R. GRAVES, M.E., F.I.M.

The Quartz mining regions of the interior of British Columbia, in which any great extent of development has been done, are the East and West Kootenays and the South Eastern portion of the Yale District. The minerals in these districts are contained in three distinct belts, that round Rossland, Trail and a portion of the Eastern Boundary of Yale District being contained in an eruptive series of dioritic rocks. From these points toward the westward, passing outwards, northward on the Rossland side and westward on the Yale side, the valuable mineral belts are contained in a series of crystalline metamorphic formation and are many miles in thickness, consisting of layers of schists (mostly talcose and graphitic), limes, carbonaceous slates and siliceous shales overlaid again with a belt of lime of great thickness interlaid with belts of quartzites and dioritic and porphyritic intrusive rock and some dykes of the same nature, that in a northerly direction passes through the Slocan and bending to the westward runs through the Lardeau district and on, always trending more to the westward, through the Revelstoke division, and on to Shushwap Lake in the Kamloops division of the Yale District, where it becomes almost lost being broken up by a series of intrusions of trap, which form a mineral belt apart. The same series of crystalline rocks are encountered again on the south side of the district and occur in the Okanagan district and connect with those mentioned as passing westward from the border of the Yale and Trail Creek districts. It will be seen from this that they form a circle, irregular in outline, which is broken through at two nearly opposite points by two very extensive intrusions; *i. e.*, that at Rossland and

Kamloops, the centre of this irregular circle is composed of intrusive granitoid and syenitic rocks, these again have in places, such as in the Slocan and at Revelstoke broken through the crystalline rocks but have not displaced them for any very extensive areas. The centre of this circle will be at a point not far west from the head of the Upper Arrow Lake. The dip of the crystalline rocks is, generally speaking, away from the centre of the circle, and the reason for this can be very simply demonstrated by closing ones fist and passing the knuckles through a sheet of news paper allowing the paper to hang down, the knuckle representing the intrusion of the granites and the paper the crystalline formation. The East Kootenay mineral belt lies in the same formations but, is mostly due to more recent disturbances, which show themselves in the manner of porphyritic and felsic dykes, of great extent. A series of these run at almost straight lines, slightly diverging in a south-easterly direction, and forming the ranges of mountains lying between the Columbia and Kootenay Rivers, and West Kootenay dividing line, the most northerly of them, cutting over into the Rockies for some distance beyond the Windermere Lakes, these dykes occur mostly through Fort Steele, Golden and Donald division. The formations being much folded and tilted by the intrusions and carried up by dykes with great alterations in their structure and consequent fissuring. It has been found also that in the Rocky Mountains, running nearly through the centre of the range, there is another series of similar dykes of about the same age and apparently creating another mineral belt, but there has not been sufficient exploration as yet to fully determine this. The other mineral belts throughout B. C. are consequent on distinct and separate volcanic waves which apparently occurred at the same period but only in places found their way through the earth's crust. This description will clearly demonstrate that the ores of the country have their origin from the mineral charged gases emanating from the interior below the earth's crust, filling the fissures, consequent on the cooling of the rocks heated by intrusion, and that, therefore, they are of necessity primarily and essentially of a composite nature.

## HISTORY OF MINING IN B. C.

The discovery of the mineral resources of British Columbia has been known for many years—more than what is generally supposed—and dates back to the early occupation of Canada by the British. The older French occupants, being pushed out, immigrated west, crossing the Rockies, in search of new hunting and trapping fields; they reported the using of gold for ornamentation by the Indians, with whom they had come in contact, when bartering furs. Later, the missionaries of the Roman Church and their emissaries discovered gold beyond the great range of mountains, but their finds were too far afield in those days to cause any excitement. Somewhere about the same time, the Spaniards discovered gold along the coast line of B. C. and worked the same for some time, with what result is not known, though the evidence of their workings still exist amongst the islands of the Gulf of Georgia. Later again, the pioneer traders of the Hudson's Bay Co., in the forties, discovered placer mines in many of the rivers of the interior, and also reported the existence of extensive deposits of lead and copper and went, in some cases, as far as sinking prospect holes. In 1856, the miners of California and Montana, following the mineral belts of those countries, in search of new fields for alluvial

gold, crossed the border, and penetrated the wilds of British Columbia, with the result of the gold excitement of the early days, in the Smilkameen, in the Big Bend of the Columbia, and later, in 1864, the unprecedented gold rush of the Cariboo. The old placers are too well known to need our dilating on them at length. Little or no thought was given in those days to the industry of quartz mining, nor till a much later date. About 1875, the Dominion Government had exploring parties out in British Columbia making general reports on the country. Mr. Moberley, C.E., who has resided of late years in Vancouver, was one of these explorers, and about 1878 discovered galena in what is now known as the Slocan district. In his report to the Government he mentioned these, and in consequence some small amount of work was done in the ensuing year by the Government. In the Smilkameen Camp, some work was done about the same time, or a few years later, on a copper ledge, but

#### DEVELOPMENT COMPANIES.

A great want is felt just now of good substantial development companies, to take hold of the many undeveloped prospects in the Province.

The average prospector is a very poor man, who cannot afford to do much of this class of work himself, and the average British Columbian did not come out here because he was overburdened with wealth and wanted a change of air, but are of the "Young-man-go-west" sort, and there is not capital available here which can be put out for two or three years without being missed. To make a success, a company should obtain, at least, twelve claims to work on, and these should be chosen with the greatest care, and obtained on the lowest terms possible. I do not mean that the prospector, who has gone to considerable expense and risk, should be squeezed; but that fair valuation be made of the property, in comparison with similar ones



LITTLE BILLY, TEXADA ISLAND, B. C.

in those days, there was no means of getting the ore out, and it was not until Joe Buchoir, staked the Le Roi Mine, in 1890, that anything but placer mining obtained any prominence, and only within the past seven years has any amount of development been done along this line, and, until four years ago, the difficulties of getting the ore from the mines to railroad communication, and the distance to smelting points, were so great, as almost to preclude their working on anything like a paying basis. Now, however, the Canadian Pacific and Great Northern have pushed their lines into the principal centres, and, as new ones crop up and show signs of value and permanency, lines are being run in. The Government of the Province has, within the past three years, been opening up connection with these from the individual camps and trails to the various claims. Smelters are being erected at central points and the country is in a position to interest capital. The mineral resources are indubitable and almost everywhere, where man has penetrated. Those belts which are of real and permanent value have now been more or less determined and proved.

which are developed in the neighborhood, and that no more cash should be paid than will compensate the man for his risks and expenditure until sufficient be done, in some degree, to prove the property. Deposits should be made to cover all engagements, and everything done to give the prospector (who is naturally of a suspicious nature, having been considerably "had" in the past) faith in the people he is dealing with, and he should be given an option to work on the property himself, when at all competent to do so, and no properties should be tied up or bonded on which it is not fully intended to do work. Large groups should not be taken hold of in one vicinity. There have been many Development Companies in British Columbia, and there are still a few in existence, whose main aim and object seems to have been, either to get hold of properties on bond, at nominally very high figures, really paying only small sums for them, and float them for still larger ones on the London market or else to carry on business on the following lines:—

1. To open up big and elaborate offices;
2. To gather together as many as possible of their friends and relations, who know nothing at all about mining, or

any other business connected therewith, and give them billets with big salaries attached, and to pay the prospector as much as possible for claims. 3. To get as poor prospects as they possibly could, in the most unlikely positions. 4. To do the work on them where there was least possibility of finding anything, and to do the same in the worst possible manner, and generally to carry on what is known here as "gophering," or sinking pot holes all over the surface, picking out little pockets of surface ore. 5. To throw up at once any that looked the least bit promising, and hold on to those which were no good. 6. To expend the balance of their capital in the erection of residences, and utterly inadequate plants on these properties, and then wind up their business and circulate reports that British Columbia was no good. We don't want any more of these. What we want are good, strong men with business principles, men who have money enough to allow them to put some of it aside for these uses, and to be in a position to wait for a few years for a return, and men with sense enough in them to know what they are going into, and to choose competent, experienced workmen to do the work, and capable men to look after their interests here, and who do not have to go out to sell their shares to storemen, poor clerks, and servant girls to make up their capital. In many cases good promising properties can be had on easy terms, and often the prospector will be found willing to turn over a half-interest in his property, for the sake of getting sufficient work done to Crown-grant it, holding his remaining half-interest at a moderate figure, with the option of receiving payment, either in part or as a whole, in stock. He will be generally found willing and wishing to have option to work himself, on the property, and often wanting to be paid at a valuation for work he may already have done. Such terms as these should be reasonable enough to induce some expenditure on the part of capital. But the cry is: "We want developed properties," for which you pay far more than you would by judicious expenditure along the lines above laid down, and by which you should, with reasonable judgment, obtain an ever increasing return for your primary expenditure. It does not require any very large amount of capital to undertake such an enterprise as this. A syndicate with \$100,000 should be able to make an almost sure success, using \$75,000 for a working capital, and holding the balance in reserve. They need not employ a whole regiment of officials and clerks. One competent business man with a clerk, an engineer and assistant and a good working superintendent for each claim worked on, are all the officers required for the first couple of years until the properties are sorted down and larger gangs of men are set to work on one or more of the claims, when it would of course be necessary to have officers at such mines in order to look after the camp economies. Such few officers should be carefully chosen men of experience in this country, men who have worked in it and know it, and they should be well paid. It would cost in this way, \$13,000 to Crown-grant the properties, leaving a balance of \$62,000, say four claims might be found of the twelve which were looking promising, \$20,000 might be expended to further prove these, and a balance of \$42,000 would be left to place any such work which might have proved good, and in a fit condition for flotation of subsidiary companies.

## NOTES FROM THE OMENICA AND PEACE RIVER COUNTRIES.

BY J. B. ROWLEY.

I have been working in the Omenica country and round between there and Nation for the last six years. My partner and I have a section of land on Eight Mile Creek, near the B. C. boundary. I left home on the 17th day of March this year, and in my perigrinations, crosscut British Columbia from the Eastern boundary on the Peace River to the Coast, reaching Port Essington about the middle of October. My partner and myself, during the last six years, have made on an average \$1400 per year out of the diggings in this region. The cost of living has been about \$1 per day. The bulk of our supplies we obtained at Fort St. John and Fort Fraser, Hudson's Bay stations, and were very expensive, sugar costing us as high as 65 cents per pound and other things mostly in proportion.

Quite a few companies are working up there, but most are very badly managed and might do much better than they are doing. The miners doing work on their own hook are mostly doing pretty well, averaging all round \$4 to \$5 per day. The opening of the season varies a great deal according to the height at which claims are situated, the lower ones being workable from April, whilst some higher up are not workable till nearly a month later and can be worked till November. The country is a good one, and in the lower valleys vegetables can be grown; horses and cattle can winter out there. The principal pay area extends from Lake McLeod, on the S.E., and Stewart Lake, on the S.W. to the Big Canyon on Finlay River, on the N.E., and Thutage Lake, on the N.W. is 250 miles long and 100 miles wide, consisting of two belts of slates, in all about 40 miles in width, and a belt of granite, 10 miles in width, the latter lying between the two slate belts and a series of schist. On the McCoy Bros.' bar, which is 300 feet long by 50 feet wide, values average 1½ cents to the pan, \$4 a day, under favorable conditions. On Fort St. John Bar, 300 feet by 100 feet, with about 12 feet of pay dirt, an average of ½ cent to the pan is obtained; the ground is easy to handle and from \$3 to \$6 a day is being made. In the slough the ground is very rich but owing to amount of water cannot be worked by hand. Gold is to be found in paying quantities on all the bars from Fort St. John to Hudson's Hope and will average from \$2 to \$8 per day; the gold is generally small but can be saved without quicksilver, just with blankets. Several good bars are being worked between Custs' House and Findlay yielding from \$3 to \$12 per day per man, there is lots of ground and deep wash, 20 to 30 feet.

Findlay River and Gold River are about the same as the main river—Peace; from the mouth of Big Canyon gold is found on all, every bar carrying from \$1 to \$50 per day in shallow diggings. On Ingenica River gold is not found in paying quantities for 15 miles from the mouth; it is very fine, but from this point values are got from ½ cent to 5 cents per pan, \$4 to \$10 per day, the richer the wash the stickier and harder it is to work. All the paying bars are, curious to say, on the north side of the river. Gold is not found in paying quantities around 1st North Forks as this is in the granite belt, nor for nearly 20 miles above, at this point pay came in again in slate wash.

The deposits of the Omenica are similar to those of Ingenica River, but have been worked to a greater extent; mostly the creeks between Germansens and New

Hogan and the north side of the river itself have proved to be good. There are many bars that carry good coarse gold, but the country is full of windfalls and dead standing timber, logs piled up in every shape and from 3 to 10 feet high, at the farthest point I reached I got \$6.25 out of 9 or 10 shovel fulls of wash from near bed-rock. The gold was about the size of sago, slightly flattened. High water and want of provisions, however, drove me out. I had a very hard time here, and had to kill my horse for grub, and later, even my dog to enable me to get out. There were no supplies to be had in the country, the Hudson's Bay people having run out, and the people working on Manson Creek, would not sell me any, Colonel Johnson Wright was particularly conspicuous in this way.

The Parsnip River is much the same as regards auriferous deposits, but the surface wash carrying values is very shallow, only from six to twelve inches, and as a rule occurs on top in the bars.

Colonel Jonhua Wright, on Manson Creek, has put in an elevator, and is vainly endeavoring to force 16-in. boulders through a 12-in. pipe. He is working on Kildare Gulch. The ground had not been tested at all and they are working utterly in the dark. The shareholders need not look for a return. Right across from him, on Black Jack Gulch, Mr. Black, manager of another company, has got the best ground in the country; it will average over \$1.00 per yard. Most of their water, however, is going to waste in the ditch which, for about a mile, runs through chicken-feed gravel, and they are only getting about 60 inches in consequence and only working about 30 to 40 yards of dirt. There is a sawmill just below the ditch, and plenty of timber. The property is a valuable one, and the company should most certainly construct a flume in place of their defective ditch. They are working ten men. It ought, if properly handled, to be a paying concern.



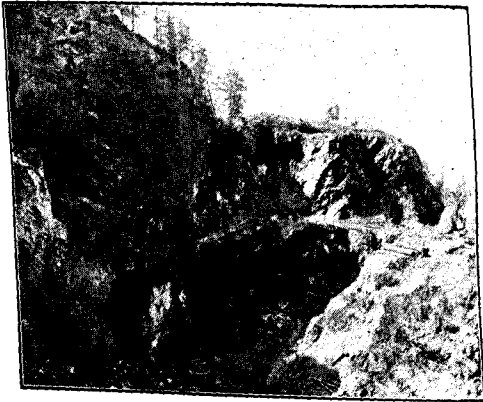
VAN ANDA SMELTER, TEXADA ISLAND.

Nation river is its longest tributary, and runs in from the west, and carries much heavier gold than the Omenica, averaging from \$2 to \$10 and \$15 per day, on bars. The workings have only been in surface wash (locally called skimmings), on any of the creeks, as the gravel is loose and deep workings have had to be abandoned on account of water, until such time as pumps can be got in, or drainage tunnels run in to drain the lower levels to bedrock. Coarse gold is found on the following creeks: Robinson, Ruby, Twelve-Mile and East Log. The high cost of transportation is a great drawback and has precluded the doing of all dead work, such as deep drifting, etc. A few hydraulic companies are doing a little desultory work on Germansens creek. The St. Anthony Co., of California, are, however, going in extensively and are likely to make a success. They have thoroughly tested their ground by drifts, the ground averaging about 30c. per yard. They are getting their water from Germansens Lake, about 12 miles distant, and are obtaining 5,000 miners' inches of water. Some of their ground goes as high as \$100 per yard in the paystreaks, which are pretty extensive.

The Indians have run the Chinamen out of this section of the country, as the latter were interfering with the natural state of happiness in their domestic affairs.

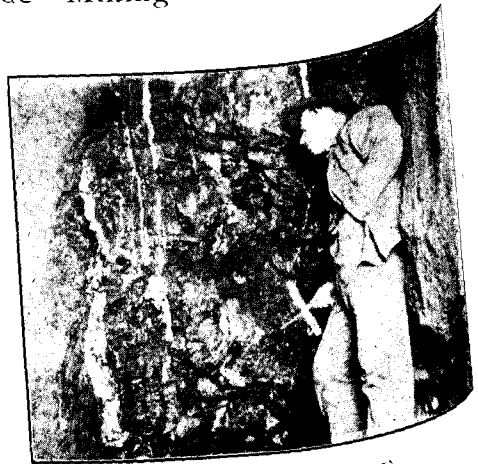
Decomposed shales are being worked by Charles McKinnon on Lost Creek. In one week, while I was there, he took out \$147.00; in three days, the week before, \$65.00. The creek is small, with just sufficient water for sluicing, and the gold is very coarse.

The formations I met with in coming through to the Coast were: commencing at the eastern slope of the Rocky Mountains, extensive coalfields, seams averaging from 14 ft. to 20 ft. in thickness; and from here on lime belts, lime shales, schists and gneises, slates, with granite intrusions, slates again, shales and conglomerates predominating from here on till the Coast range was encountered. I also saw several minor coal areas in Parsnip River district. There are numerous very extensive quartz veins, of great width and considerable mineral showing, in many parts of the country, but of what value these would be I am unable to tell you as I have no knowledge of quartz mining; but I have heard those who seem to know say



OPEN CUT AND TUNNEL, BLUE BELL MINE.

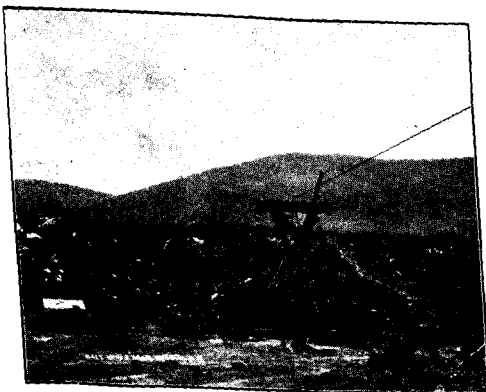
# MINING.



SLOPE ON RUTH MINE.



CONCENTRATOR PLANT, NOBLE FIVE.

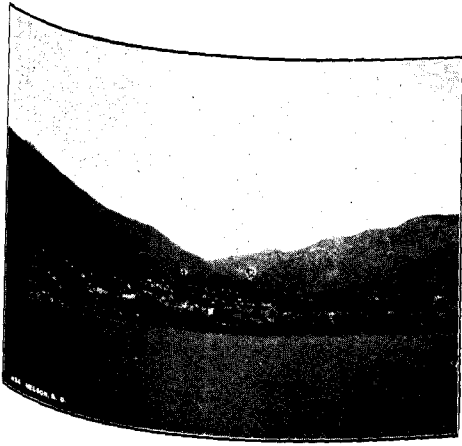


HALL MINES TRAM.

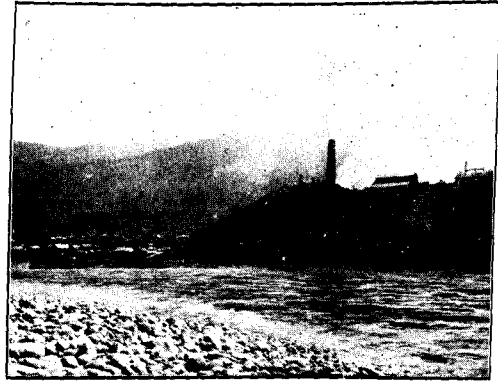


RAW-HIDING ORE FROM RECO MINE.

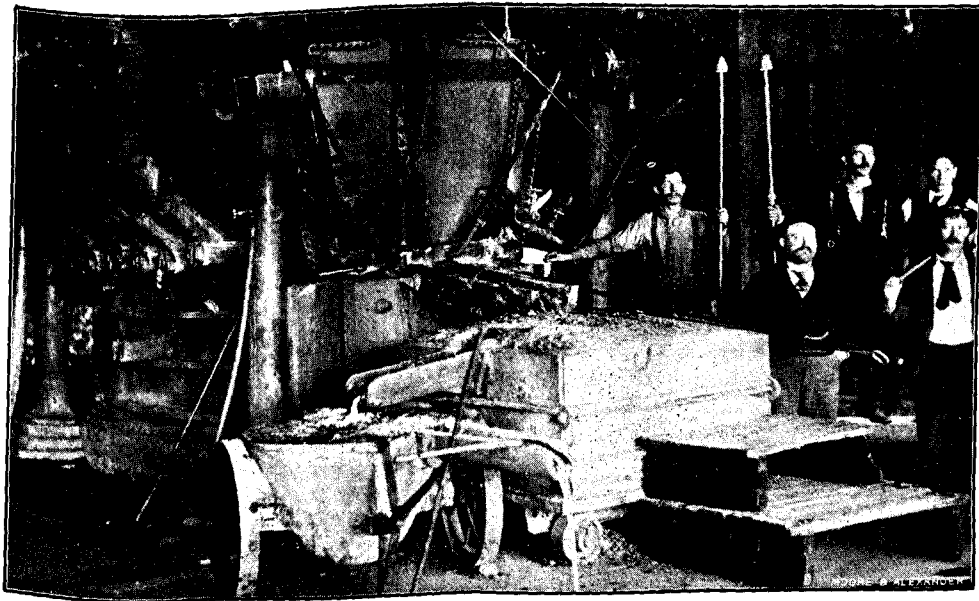
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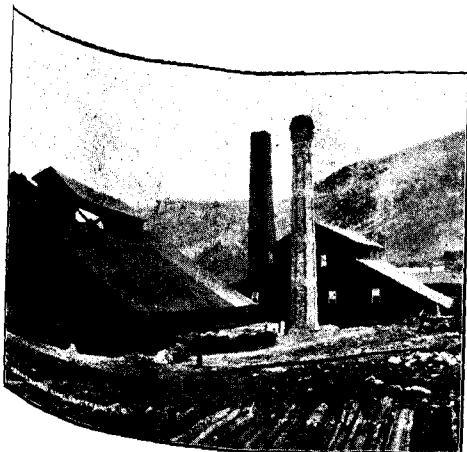
NELSON, B. C.



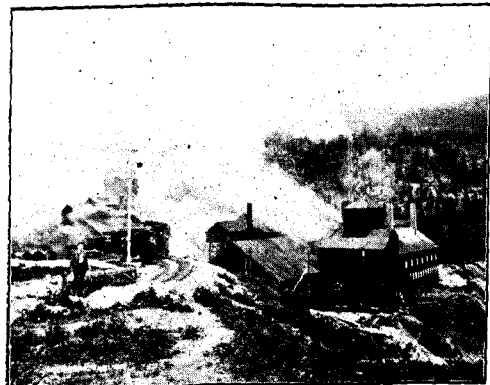
TRAIL, B. C.



HALL MINES SMELTER—INTERIOR.



TRAIL, SAWMILL.



TRAIL, SMELTER.



that they are very valuable. One very large vein on Selwyn Mountain is now being worked by Chicago people; the values are small, about \$4 to \$8 in gold. They have taken in an extensive plant by way of Edmonton, at very much greater cost than it could have been got in for via Quesnelle and Nation River.

The country would be a very easy one to open up if the Government would construct a road from the coast, as all the rivers are navigable for over a hundred miles from their mouths for light-draught steamers, and once in, on to Tom or Manson Creeks, the whole country can be reached by means of its waterways. The creeks are peculiarly well adapted to dredging.

I left Manson Creek for the Coast about the middle of October and reached Hazelton in ten days, packing my stuff on my back, and thence by canoe to Port Essington, where Mr. Cunningham informed me that they were going to reduce the charges on freight to Hazelton from 3c. to 2c. Packers are now taking stuff in from there to Manson for 7c., or half what they were charging last year and the year before.

From Hazelton to Tom Creek, the head of navigation, is 108 miles, and an excellent road can be made over the route at comparatively small cost. The grade to the summit, between 5,000 to 6,000 feet above sea level, is very gradual and hauling would be easy. It is about time something was done. The route from Quesnelle mouth would be 360 miles, and would also, I believe, open up a good country.

I am going back in the spring and intend making arrangements for working on a larger scale. There is a great deal of difficulty about staking claims and it is mostly left undone, owing to the great distance to be gone over to reach the only Gold Commissioner at Manson.

### CHOOSING PROSPECTS FOR DEVELOPMENT.

In the choosing of prospects for development, in order to make it a success, greater care is needed than in the ordinary mine where development has been carried on and the property to some extent proved. In the latter case one has something definite to work on, and can judge approximately of the amount of ore, extent of chutes and the nature of the walls. In taking hold of a prospect one need not necessarily "buy a pig in a poke."

In the first place, particular attention should be paid to the general geological formation of the country or district in which the property is located, and whether, generally throughout, its veins are traceable and extensive; then, should a good-looking traceable vein, showing signs of the outcropping of ore chutes, be found to exist on the property, a cause should be looked for: for the existence of the vein itself and its relation to the various formations through which it passes (should it appear to be a true fissure), and those with which it is in relation, should it appear to be a contact, and if in contact with volcanic rocks or dykes; whether its dip conforms to the general formation or cut the same. These points should be thoroughly investigated.

Having thus inspected the property and ascertained that it is properly staked and that the mining laws have been complied with, it will be necessary to spend some little time going over the adjoining properties in order to ascertain whether the same conditions exist there; to examine other mines in the vicinity and find out if veins, having similar conditions to that on the

property you have been examining, are proving permanent and carrying values to any extent; of what nature the generality of the ore is and in what manner it is distributed in the veins; if the conditions on the surface are similar to those on yours; if the conditions below, with some work on the others, indicate signs of improvement and permanency, and the results proved satisfactory. Should these conditions exist you may safely expend a little money to test that which you have examined. High surface assays should be viewed suspiciously; rather look for low values with extensive traceable veins. There are scarcely two camps in British Columbia where the conditions or the nature of the ore are the same; and it is only after extensive experience in the country that one can know the various conditions under which veins of real worth exist and the nature of the ones to choose.

Hitherto it has been customary for would-be investors in properties to send into this country men (many fresh from college), with numerous initials attached to their names, who when they came here were utterly at sea. Hardly a mining engineer came into the Province and visited the Rossland Camp who did not condemn it, yet the work there proved their judgment to be astray. To-day men come in here from South Africa and other places where conditions are completely at variance with ours, and—with the exception of a few of the German school and men from the Montana, Idaho and Colorado camps, which have nearly similar conditions—either go away and run the country down, because they do not understand it, or else pick out utterly worthless properties because they are like those they have been accustomed to. Then again, many are sent here who have, by some means or other, obtained membership of mining associations and who have no knowledge of the merest rudiments of mining. For instance, one was sent into the Cariboo by an English syndicate, to examine some placer properties there, who did not even know the meaning of the terms "bed-rock" and "rim-rock." who, when he was informed that bed-rock was very deep in most cases in that district, remarked, "I thought bed-rock was where the gold was found, and surely if it is deep there ought to be all the more gold in it." Not dreaming that "deep" meant covered with a heavy deposit of waste.

When such men are sent out here with authority it is surely not surprising that we have failures, and that capital comes in so slowly. There are many competent mining engineers of good schools, of some years experience in British Columbia and many more in similar camps, who have now the exigencies and conditions of the various districts at their finger-ends. They are reliable and can give authentic information, and it is only right to recommend that the advice of such should be sought before investment, more particularly when properties of a prospective nature are to be chosen.

### THE BOER CAMPAIGN.

"The Soldiers of the Queen" are attacking a quantity in the Cape which, as we anticipated, are proving our men to be of the same sterling quality that has built and will maintain the glories of an Empire which stands unrivalled in the history of nations. The reverses encountered will only tend to strengthen our brave fellows in the determination to carry forward, to victory, the flag that has "braved a thousand years the battle and the breeze!" and which represents to humanity at large all that has made

life worth living. The same British pluck and stolid endurance will carry the Soldiers of the Empire through the chequered shade of reverses to the bright sunshine of glory and success.

Our great fault, which experience has not remedied, has been too little care in forearming against contingencies such as these, and which to any other nation would be of an overwhelming character. The Anglo-Saxon history, tradition and characteristics will not, however, admit of defeat in the cause of good government. Britons have never fought but under difficulties and at great odds, hence we must expect initial setbacks.

We have, however, the same spirit dominating our soldiers as in the days of David Gam, whom Henry, prior to the battle of Agincourt, sent to reconnoitre the enemy, and on being asked concerning the number of the French, answered, "An't please you my liege; there's enough to be killed, enough to run away and enough to be taken prisoners." The whole history of our struggles compose a galaxy of such heroes as Gam, which stand out the most brilliant settings in the golden circlet of British renown. We are confident that this crisis will produce the men equal, nay, superior to the occasion. Our earnest hope being that the Home Government, will grasp the situation and act decisively. The Empire is with them. God save the Queen and the Soldiers of the Queen and deliver us from an overdose of red tape, which has proved so disastrous in the past.

#### CHINAMEN IN MINES.

Agitation has been going on for some years to obtain legislation against employment of Chinamen in the coal mines. It has always been contended that they were a great source of danger to others, both from ignorance and carelessness. Within the past few months the matter has been placed before arbitrators and a very large number of representative miners and mine bosses were examined on the subject. The bulk of the evidence adduced went to show that the Chinaman was not a detrimental, but rather the reverse. It is curious to note that many of those who gave testimony had not known of cases of accidents caused by Chinamen, and that they were not careless, and these were men who had been red hot agitators to abolish them. The truth of the matter is, that the miner has himself become an employer of cheap labor and would not like now to do without him. No decision has been reached as yet by the arbitrators, though the evidence is all in.

#### DAWSON, N. W. T.

##### THE CHIEF TOWN OF THE NORTHERN EL DORADO.

This now well-known goldfield is part of the North-West Territories, lying west of the Mackenzie River and covers a distance of about 650 miles along the river from the coast range of mountains. The Hudson's Bay Company were the first to penetrate into the Yukon in their search for fur-bearing animals about 1840.

In 1847 they established Fort Yukon at the mouth of the Porcupine. In 1848 Fort Selkirk was opened at the junction of the Pelly and Lewis Rivers. In 1887 an expedition to explore this region was organised by the Canadian Government, which was entrusted to the late Dr. G. M. Dawson and Wm Ogilvie.



DAWSON CITY, N.W.T.

This work occupied some two years and covered the country adjacent to the 141st meridian of longitude, designated as the Boundary line, from Mount St. Elias to the Arctic Ocean, between Alaska and the British possessions.

The explorers found that close to the Boundary line, there existed extensive and valuable placer gold diggings, where even at that time some, three hundred miners were at work. The number of persons engaged in placer mining has increased year by year till it assumed the character of a rush in 1897-8; men from all parts of the world were attracted by the reports of the wonderful wealth of the district.

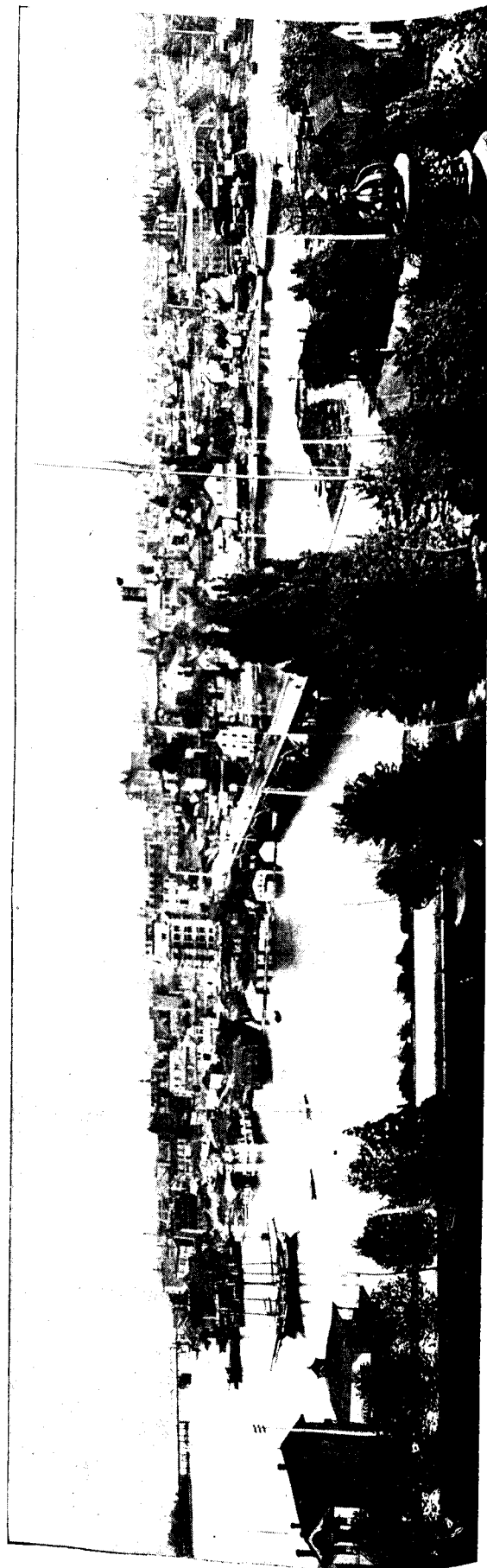
The transcontinental lines were taxed to their utmost to contend with the traffic, which a railway rate-war intensified for the time, trains leaving Montreal daily in three and four sections, so numerous were the seekers after gold. Vancouver, the terminus of the C. P. R. and the shipping and outfitting centre for the goldfields, jumped immediately from a state of stagnancy to that of extreme activity. In fact, a prosperous period set in, it may be said for the Pacific Coast centres generally, and continues. Since the lasting qualities of the diggings are fairly ascertained, there is little doubt but that an era of prosperity will result, governed by the annual output of the clean-up of the diggings. In 1894, the value of the output for that season was some \$300,000, which, considering the short time the ground could have been worked and the difficulties to be overcome, was considered a large sum,

In 1898, some \$10,000,000 of the precious metal was taken out and this season it is estimated that at least double this amount was produced.

Dawson is an example of the growth a mining town. Just over two years since it was nonexistent, and now it has a population of between twenty and thirty thousand. The townsite covers an area of 160 acres, and is situated at the confluence of the Klondike and Yukon rivers. It contains three chartered banks, three newspapers, sawmills, churches, hotels and a large number of general stores, post office, telegraph and money order offices.

The Yukon and White Pass Railway is at present terminal at Bennet, but is pushing on during the present winter to Cariboo Crossing and Lewis River, some forty miles beyond Bennet. The company expects to have this completed and in operation during August, 1900. The developments of the past two years have broken the back of the difficulties which the pioneers had to encounter. One can jump into the corridor trains at Euston or St. Pancras for Liverpool and journey through to the diggings in luxury. Twenty-knot saloon vessels leave Vancouver every other day during the season for Skagway and thence you journey by rail to Bennet, again boarding saloon steamers to Dawson.

The immense interest centered in the district today assures the value of the ground, as these associations would have been impossible had not the character of the diggings been proved, and this fact secured the connections which will result in satisfactory development during the future. We are in a position to state that some of the African magnates have secured large properties on some of the principal creeks, after thorough examination by experts, who were more than satisfied with the tests they made. Hence we may look for considerable activity in "Klondikes" on the London market in the near future.



VICTORIA.

Victoria, the capital of the Province, is the oldest city, having had its origin in the Hudson's Bay fort in 1843. It has now grown to be a city of great importance, with a population of between 20,000 and 30,000, and ranks as the fourth port in the Dominion. It is the seat of the Legislature, and the Parliament buildings are amongst the handsomest in America. Shipping, manufacturing and trading interests are steadily increasing. The opening up of the mining industries on the west coast and interior of the Island will necessarily largely increase its trade, as the sealing fleet outfits here, and a large proportion of the Klondike Goldfields trade is being supplied by Victoria merchants. It is the military headquarters for the Province. Esquimalt, adjoining, is naval headquarters of the North Pacific Squadron. The natural beauties of the surrounding country are too well known to need mention here.

THE BRITISH COLUMBIA BOARD OF TRADE,

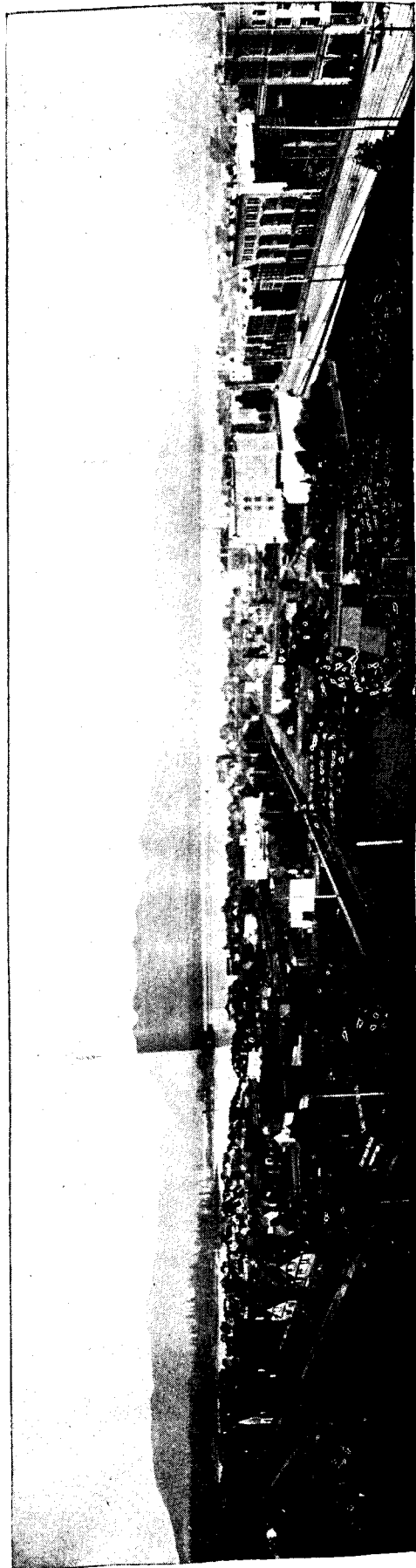
With offices in the Board of Trade Building, Victoria, is amongst the oldest institutions in the Province, having been in existence since 1863, and incorporated in 1890. The officers for 1899 to 1900 are—President: L. G. McQuade, secretary: G. Ward, president; F. Elworthy, secretary. Council: G. A. Kirk, S. Luser, A. G. McCandless, H. Herschell Cohen, D. R. Kerr, F. C. Davidge, C. A. Holland, C. E. Reed, J. J. Shallcross, C. F. Todd, J. G. Erskine, Jas. Thompson. Board of Arbitration: D. R. Kerr, A. G. McCandless, T. W. Patterson, L. G. McQuade, H. M. Graham, J. G. Cox, C. Davidge, C. Haywood, G. Gillespie, C. G. Prior, C. F. Todd. The membership roll contains 162 names of prominent business men.

We are in receipt of the Twentieth Annual Report of the Board, containing a resume of the business of the Province from July 1st, 1898, to June 30th, 1899, and goes at length into the progress of the various industries of the Province for the year. With regard to the Mining industry we quote the following:—

Whilst the increase in the output of gold mines, valued at only \$4,000 in 1890, and amounting to \$6,529,420 in 1898, is an excellent result, disappointment has been expressed in consequence of the output of last year being slightly under that of 1897. One of the conditions which caused this decrease was the price of silver, which was unusually low towards the end of 1897 and early in 1898. This allowing an increase in the duty on lead ore treated, deterred some mine owners from continuing operations, and some contemplated new ventures were effectually stopped. The price of silver increased late in 1898, but not until too late for mine owners to profit by the changed conditions. The result of the foregoing is a decrease in the silver output of \$6,959, and the output of lead shows a falling off of \$312,936 compared with that of the previous year.

The output of the copper-gold mines has increased, whilst work on many projects was confined to development and looking out new ore bodies.

It is unfortunate that the mining industry should now be disturbed by a recent Act of the Legislature reducing the



CITY OF VANCOUVER, B. C.

time of miners working underground in metalliferous mines from 10 hours to 8 hours per day. It is too early to even forecast the ultimate result of the new regulations, but at present a most undesirable sense of uncertainty is experienced, not only in the mining districts, but also effecting the coast supply centres."

VANCOUVER ISLAND.

The principal Mining Industries on the Island heretofore have been coal mining and some placer mining, considerable quantities of gold having been taken out of some of its rivers. Of late years, however, considerable quartz prospecting has been carried on and some properties have been opened up which are proving mines. There was a great deal of excitement some years ago when gold-bearing ledges were struck in the Alberni districts, and a good deal of development was done on a number of claims, and, although no results worthy of note have so far been obtained from that point directly, yet it led to the further prospecting of the Island, and the finding of properties of great apparent value, a number of which are now being worked, so far in many cases with good results.

The supposed rights of the E. & N. R. Co. over the minerals have prevented any systematic prospecting in the Railway belt. As a result of what little has been done, we have the Mount Sicker and Tyee Mines, near Duncans, in the Victoria district. Both these properties are turning out well and have now developed considerable good ore. The values are in copper and gold. On the West Coast a number of properties, mostly copper, have been developing this year, and in most cases the results of work done have been satisfactory.

The great drawback to development has been the scant capital invested, and heretofore the improper management of the mines. Now, however, several good strong companies have taken hold of properties and some good results may be looked for.

The proximity to the water-front and the facilities of shipping directly by water from the mines—with only, in most cases, the necessity of putting down short tramways to the shore—to the smelters at Van Anda, Tacoma, or Everett, and consequent low freight charges, should induce the expenditure of considerable capital in proving these mines. With proper and systematic development there can be no doubt that they will turn out to be good paying mines.

The Coalfields of the southern half of Vancouver Island are of great dimension, extending from near Chemanius to beyond Comox, a distance of 75 miles, and average many miles in width, stretching out under the Gulf of Georgia to an extent as yet not ascertained. The belt is apparently unbroken, at least to any great extent. Several seams exist of from 3 ft. to 10 ft. in thickness. The coal is bituminous and of good quality. These fields were first prospected and worked by the Hudson's Bay Company, at Fort Nanaimo, during the fifties, and were purchased by the old Vancouver Coal Company in 1862. Later the new Vancouver Coal Company was formed, and now owns these mines together with a large area since acquired, in all about 30,000 acres of coal lands. Their output is over 500,000 tons yearly, and about 1,200 men are employed. The same company is working five pits, Mr. Samuel

CITY OF VICTORIA, B. C.

M. Robins is the manager. The Wellington Colliery is owned by Robert Dunsmuir & Sons. They were first discovered by Mr. Robert Dunsmuir, who obtained a large tract of land from the Government, north of the New Vancouver and East Wellington Colliery lands, about twenty-eight years ago. In 1891 permanent work was started and has been carried on continuously since.

The Union Colliery, originally the property of the Baynes Sound Coal Co., is now owned by the Union Colliery Company, and is situated about 12 miles from Union Bay, Baynes Sound, and about 58 miles from Nanaimo. A coal washing plant and 200 coke ovens are being operated at Union Bay, and first-class coke is being turned out. The wharf is nearly half a mile long and is provided with the latest equipments for the handling and shipping of coal. The coke is largely used in the smelters and other industries. A new shaft has been opened up and coal

#### MINING ON VANCOUVER ISLAND.

Wm. Brewer, a conservative authority on mining matters, relative to the west coast of Vancouver Island development during the past year, says in the "Colliery" —

Near the wharf at San Juan Harbor, and on the Gordon River, which empties into San Juan, there has probably been about \$2,000 expended in some shallow work on prospects.

At the W. W. W. a force of miners have been working since early in the Spring. About 30 tons of rich ore has been stoped down and packed 10 miles to the beach, whence it was shipped to the Tacoma smelter.

On the Golden Eagle a force of men have been working the entire year.

On the Consolidated Alberni a test run was made in the Spring under a lease, after which the mine was closed down.

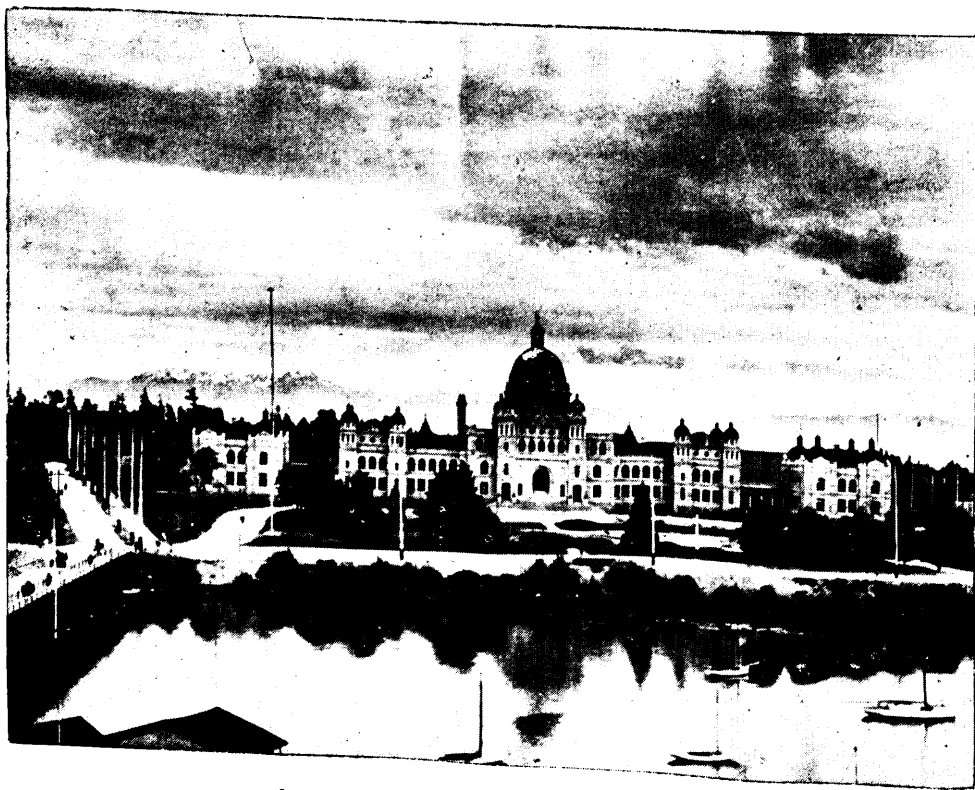
Considerable prospecting has been done on Granite Creek near the W. W. W. group, more especially on the Golden Slipper, owned by H. S. Law and others of Alberni.

The owners of the Thistle group near Alberni were engaged in further prospecting that property.

Near Uchuchleset quite a little stir was made relative to the discovery of gold in black sand, and several offers were made to work the same and save the values.

Around Clayoquot Sound more extensive development work has been carried on than in any other camp on the west coast. On Trout river the Helga Mining Company has been working a force of men under contract, continuously.

The Castle group of mineral claims on Bear river, near the head of Bedwell Sound, and the New York group in the same vicinity, have had forces of men employed continuously since February last, performing development work.



PARLIAMENT BUILDINGS, VICTORIA, B. C.

of very good quality has been got out. The company also have prospectors out searching for copper, some very fine float having been found in the vicinity of the Union Waterworks. The Union Colliery Co. have opened up new mines at Extension and Alexandra, and have put in extensive wharves and bunkers at Oyster Bay. Considerable caving occurred during the early part of the year and a portion of the town was destroyed. In many of the old workings the seams have been worked out and the workings closed down.

The yearly output of coal from Wellington is about 400,000 tons, that from Union Colliery about 300,000 tons.

A small force of men were engaged during a portion of the Summer, prospecting the Blue Bell group, near Snug Basin, Uchuchleset Harbor.

although the test gave fairly satisfactory results.

At the Regina the owners were engaged in prospecting work for several months.

At the Lake Shore group, on Anderson Lake, about \$1,500 was expended in development work during the Summer, and it is proposed to resume operations shortly.

On the Hanson group, adjoining the Hayes mine, a force of men have been engaged prospecting during the Fall, and are still at work.

On Sprout Lake several mineral claims were located during the year.

A small force of men were employed prospecting a group of claims in the same vicinity owned by a Nanaimo Syndicate, and locally known as the Stark group.

A small force of men were working during a portion of the year on the Pansy Blossom mineral claim, near the new townsite of Alberni.

On the Satanita group, in the same camp, some development work was done during the fall.

Prospectors have also been performing their assessment work on other claims near the Bear river, and some exploration of the upper river to a point about 23 miles above salt water was attempted during the summer. In that locality some rich quartz outcroppings were discovered carrying free gold, but reported as being the outcroppings of very narrow veins, the value of which is quite problematical.

On Deer creek, at the head of Tofino Inlet, the Jumbo mineral claim has been undergoing development work since last March.

Assessment work has generally been done on other mineral claims on Deer Creek.

On Tranquille Creek, which empties into Tofino Inlet, a force of men have

been employed on development work on a group of claims known as the General Ashton property.

On Kennedy Lake the Rose Marie Mining Company has been vigorously prosecuting development work, and has also installed a concentrating plant, having, after a great deal of difficulty, succeeded in transporting the machinery up the rapids between salt water and the lake.

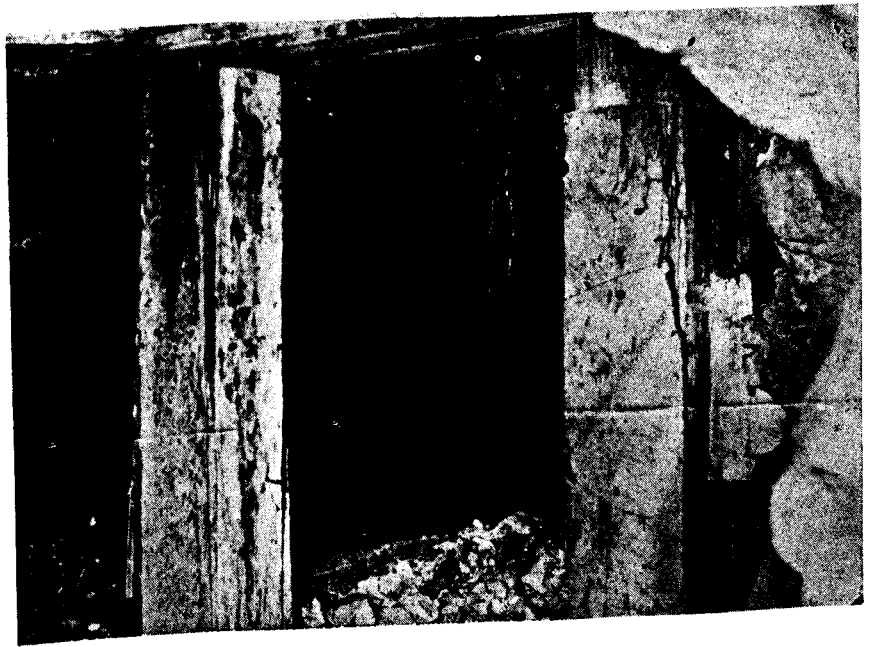
Late in the Fall an English syndicate bonded the Jones and Kincaid property on Sydney Inlet, and it is reported that a Scotch syndicate has purchased the Anaconda group, in the same district.

On Quatsino Sound a San Francisco company has been carrying on development work in opening up coal seams. Some of this coal has been tested for steaming purposes on the steamers of the C. P. N. Co., but the results were not perfectly satisfactory, because the coal and had considerable slate and foreign material mixed with it. It was reported late in the fall that further work had opened up seams carrying coal of a superior quality.

Not far from the workings of these coal seams a Spokane syndicate has been developing some copper propositions. A trial shipment of some twelve tons of ore was made from these properties during the summer.

At Sechart, or Anderson camp, near the entrance to Barclay Sound, a force of men have been employed nearly all the year on development work.

On Copper Island, in Barclay Sound, some further prospecting and development work has been done during the fall.



STATION IN SHAFT, MARBLE BAY MINE.

Texada Island has been making great progress during the year. A smelting plant has been erected at Van Anda, with a capacity of 50 tons per day. It is now proposed to increase this to 100 tons. Development is producing good results on the Copper Queen, Marble Bay, Little Billy and others in that group.

Iron ore for flux is being obtained from the Raven, in the course of development of that property. Near the latter is the Dexter group, owned by Vancouver men. This has lately been bonded to Eastern parties on a partly stock basis. On the west side of the Island the iron mines are being worked by a U. S. company.

Mr. Nowells is down from Princess Royal Island, in the Queen Charlotte group, and reports considerable development there, mostly on copper properties, of which there are about twenty. Veins run all the way from 1 foot to 20 feet in width, the percentage of mineral is good and values high. As far as development has gone the results have been very satisfactory. Work is being carried on, on some of the properties, during the winter.

The plant of the Rose Marie mine, on the west coast of Vancouver Island, is now working satisfactorily and the company will ship from this on.

#### THE TRANSVAAL'S WEALTH.

The following figures, taken from the London Stock Exchange Year Book show the dividends, by percentage, on the capital stock, declared by some of the mining companies operating on the Transvaal, South Africa, during the year 1898:—

Mines.	Per Cent.
City and Suburban	15
May Consolidated	15
Windsor	20
Riefontein	22 1/2
Driefontein	25
Glencairn	25
Knights	30
Rose Deep	40

Griesberg	40
Rodeport United	40
Langlaate Estate	45
Angelo	50
Crown Deep	50
Primrose	55
Village Main Reef	60
Meyer and Charlton	60
Worcester	60
Geldenhuis Deep	75
Durban Rodeport	80
Jumpers	80
Bonanza	100
Jubilee	100
Heriot	100
Henry Nourse	125
Gelenhuis Estate	147 1/2
Wemmer	150
Crown Reef	240
Ferreira	300
Joannesburg Pioneer	675

It is well, however, to state that this list does not include all of the big companies operating in the Transvaal, and which have paid profits to their owners. Some of the very largest producers are not mentioned. As for instance: the Simmer and Jack, which is, by long odds the biggest gold producer in South Africa, its output for last August having been no less than 22,460 ounces, equal in value to about \$403,680, or at the rate of about five million dollars a year.

Besides the Simmer and Jack there are the Ferreira Deep, Glen Deep, Robinson Gold, Robinson Deep, and many others, all of which are producing from \$200,000 to \$350,000 a month in gold. Nevertheless what are mentioned above are sufficient to furnish some idea of the vast amount of wealth the gold mines of South Africa are adding to the wealth of the world and all of which is the result of investment of British capital. The Boers never invested a dollar in mines in South Africa, nor would there be any mines there to day if it had depended on them. Yet these same Boers have grown fat, greasy and wealthy from them through the enormous taxes they have imposed upon the mines and owners of them.

#### MAINLAND COAST PROPERTIES.

At Philips Arm, the Dorothy, for some reason which we find it impossible to ascertain, has been shut down and the mill taken out.

The Van Anda Company are working the Monte Cristo mine, which is a copper proposition, and is a promising property. The Douglas Pine is being floated in London, and it is expected that work will be resumed in January or February.

Development work is being carried on the Coblesdick property on Frederick Arm. Properties formerly owned by the same company, on Stuart Island, are being worked by others with favorable results.

Several properties have been developed to some extent on Howe Sound, near Vancouver. One, apparently of great worth, has recently been bonded for \$200,000; it is situated on the west side of the Inlet, near the mouth. The values are in copper and gold. In line with this ledge, right opposite Vancouver, and from four to six miles from the water-copper ledge. About a year ago a group on this line of claims, on Lynn Creek, was bonded and work pushed. The bonds have been taken up and the property purchased outright. The company also bonded other claims adjoining. At present they are erecting a new and more commodious camp, and are making application for a charter to construct a narrow-gauge line from the mine to a point on the waterfront of Burrard Inlet. Between Lynn and Capilano Creeks, development work is being done on a property owned by local parties. The lights from their camp can be seen at night from the city.



# The B. C. Mining Exchange and Investor's Guide.

is published monthly as a Guide to Investors generally, to whose interests it devotes itself.

MANAGING EDITOR . . . T. R. HARDIMAN.

**CORRESPONDENTS.**—All correspondence should be addressed to the Editor, B. C. Mining Exchange, and any correspondents desiring advice or information in reference to investments, we will reply to, free of charge, provided they are annual subscribers.

**REMITTANCES** should be made by P. O. Order or certified check, and addressed, British Columbia Mining Exchange and Investors' Guide, 612 Cordova Street, Vancouver, B. C.

**AGENTS** in Montreal—Gray & Co., St. James Street.

**ADVERTISING RATES** on application to Business Manager, 612 Cordova Street, Vancouver, B. C.

A Merry Christmas and a Happy New Year.

## A SUCCESSFUL COMPANY.

Grand Forks of Bonanza, Limited, will issue no further stock under 50 cents per share. This should be good news for the stockholders, and is an exemplification of what a local company can do when conducted in a capable manner.

The Gold Fields of British Columbia, are, on the other hand, an example of the management of a London company (one of several unfortunately) which have done so very much to damage British Columbia as a field for investment, by either incompetent representatives, or unfortunate selection. The B. C. Review says, "The Tangier Mine is again reported to be in difficulties." Though for that matter we fear the unfortunate company has never been entirely free from embarrassments of some sort or another, after spending probably several thousand pounds "in gophering," or "being suspended." The directors, recognized upon wrong lines, and, as the Gold Fields of B. C. give no sign, this implied failure has done much harm to mining in British Columbia.

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## From the Camps.

### GREENWOOD.

We have the following, from Mr. Jay P. Graves, of the Granby Consolidated Mining and Smelting Co., Ltd., of Grand Forks and Phoenix, B. C.: "The mines that I am interested in as manager are the Old Ironsides, Knob Hill, The Victoria, Phoenix, Aetna, Gray Eagle, and Fourth of July, all located in Greenwood Camp; the town of Phoenix being located on a part of these claims. In White's camp, south of Greenwood about six miles, now called Central camp, we are interested in the City of Paris, Oregon, and Montreal. We have compressor plants in operation in these two camps, hoists and necessary machinery, and the properties are being worked. Our smelter, to treat the ores from these mines, is being located at Grand Forks and should be in operation by the first of March.

### CARIBOO PLACERS.

The Cariboo Hydraulic Co. have this year been benching off again, thence they have been washing down to the sluices over gravel, consequently only a portion of the gold reaching the sluices, the balance being held back in the gravels intervening. When they commence to work off to bedrock a great increase in their output may confidently be looked for. The output for the year, as far as can be ascertained, is \$110,000.00.

The Cobble-dredge is not yet constructed, Mr. Satchell Clarke, who came here from New Zealand to construct the same, has gone to the United States to take charge of the dredging properties there. It is reported that his connection with the Cobble-dredge Syndicate has been severed.

The Horsefly Gold Mining Co. (Ward's) is an hydraulic elevator proposition, a Miller & Evans elevator being used. Gravel raised 40 feet. Ground very rich in places. Output this year \$80,000; very promising property.

Miocene Company, Senator Campbell, manager, has a 5 x 15 foot triple compartment shaft down 475 feet in an old channel, 1,000 feet wide or more. The shaft has been carrying a little fine gold all the way down. Mr. Campbell hopes to strike good pay at the bottom and he thinks he is near the bottom now. Much interest is manifested in the property and good work is being done.

### GOLDEN NOTES.

Several important mining transactions have taken place in this district within the last few months.

The Certainty Gold and Mining Company, Ltd., took up their option for \$8000 cash on the Porphyry and Iron Hill Mine on Canyon Creek and development work had been actively pushed on for over a month prior to taking up the option. The result of this work was to develop a pay-chute of shipping ore, four feet in width. The new owners have 300 tons of shipping ore blocked out and have built a road ten miles in length from Golden to the mine, by means of which it is intended to ship ore from this property during the winter months, an arrangement having been made with the Hall Mines Smelter for the treatment of the ore.

The Certainty Company have also a winter camp at work on their property on 15 Mile Creek where the results of the season's development have been very satisfactory.

A sensation was recently created at Windermere by the discovery of a large body of sand carbonate ore on Spring Creek, a tributary of Horse-Thief Creek. W. G. Mitchell-Innes manager of the new Golden British Columbia, examined the property with the result that his examination and the assays were very satisfactory. An option was arranged with Mr. A. C. Mitchell-Innes, of Cornhill, London, for the large sum of \$150,000. The development work is being pushed on, and if satisfactory Mr. Mitchell-Innes is confident of being able to handle this property to advantage on the London market.

Mr. E. F. de Varennes, managing director of the Certainty Company, took an option for \$30,000 on a copper property on Vermont Creek, and if the examination and reports are satisfactory, arrangements have been made to take up the option.

E. A. HAGGEN, M.E.

### ANTIMONY.

Many valuable discoveries of antimony have been made between Ashcroft and Lytton. The ore is stibnite, averaging in many cases 50 per cent antimony. From all accounts there would seem to be a warranty, with some further development for the installation of a reduction plant in British Columbia. Other districts contain large amounts of the mineral also, as for instance, the East Kootenay. There is at present, as far as we can ascertain, only one antimony reduction company working on the continent, viz., The Chapman Smelting Works, with branches in New York and San Francisco.

### ROSSLAND.

Work has been commenced on the Paris Belle. The claim is well within the city limits at the east end.

The output reached high-water mark last week, over 6,000 tons having been sent down to the smelters during the past seven days.

Appended is the detailed statement, approximately, of the camp's output for the week ending November 4th, and the year to date:—

Mine	Week.	Year.
Le Roi .....	2,336	76,680
War Eagle .....	2,550	51,788
Iron Mask .....	270	4,551
Evening Star.....	—	1,088
Deer Park .....	—	18
Centre Star.....	930	1,362
Columbia-Kootenay...	—	111
Virginia .....	20	100
Mountain Trail.....	—	20
I X L .....	—	50
Coxey .....	—	20
Total.....	6,106	135,788

### BRIDGE RIVER AND LILLOOET DISTRICTS.

Mr. R. T. Ward, is taking in a ten Stamp Mill on the Lorne Croup, in Bridge River District. This is a free milling property on which considerable development work has been done, which so far has gone to prove the permanent free milling nature of the rock and also an increase of values with depth. An arastra has been working on the property and the last clean up for ten days was \$8000. The Brett Bros. have also been working on McGilveray Creek with similar results. We understand that Mr. R. T. Ward is putting in the mill for a one-third interest in the property. Several other properties are reported as showing up well, as far as work goes. The great drawback to the district is the want of proper roads, and a petition is being made to the government in this respect. We hope Colonel Rives will be successful in his working of the Golden Cache property with cyanide treatment, it certainly will considerably help the district should he do so.

The Bend d'Or is turning out well, and at a recent meeting of the Company, the following statements were made public:

To cost of mining, from Aug. 23rd., to Oct. 31st, inclusive; \$2843.50; To cost of milling 1082 tons, and expenses in mill, from Aug. 23rd. to Oct. 31st, inclusive, \$1326.00; Powder, fuse, caps, etc., \$170.00 Estimate of charcoal used, in time, @ 9.2 bus. per diem, \$34.00; Balance profits for term ending Oct. 31st. \$16,868.00. Total. \$21,241.78.



By proceeds of clean-up, Sept. 6th. \$6,358.00; Oct. 5th. \$7,692.40; Oct. 30th. \$7,191.38; Total. \$21,241.78. This speaks for itself.

November. Ten stamps, twenty-four days and thirty-five minutes, 455 tons, 277.83 oz. gold. This was the trial of a new vein struck on Oct. 30th, average \$10 per ton. The vein is double the width of that originally worked on.

#### ATHABASCA GOLD MINING COMPANY, LTD.

The secretary has forwarded to us the particulars of the November mill run, as follows:—

Number of days run	29 and 3 hours.
Tons crushed,	378.
Value of bullion recovered	.....\$9,203 03
Gross value of concentrates	..... 2,385 25
	\$11,588 28
Value of bullion recovered per ton of ore crushed	..... 25 72
Gross value of concentrates per ton of ore crushed	..... 6 00
Total values recovered per ton of ore crushed	..... 29 86

E. NELSON FELL, Manager.

Slocan shipments over the Kaslo and Slocan Railway for November were—544,220 lbs. of silver-lead, valued at \$18,561, exported from Kaslo.

#### KLONDIKE.

Mr. Williams, owner of 35 Hunker Creek, below Discovery, informs us that he is working his Hunker Creek property very successfully. He has taken out as high as 95 oz. per day, 30 oz. being the lowest. Major Laing, in company with other experts, panned out during a day on 35 an average of \$1.95 per dish, of course this was on the paystreak. Mr. Williams has bought some residential property in Vancouver and returns to the Klondike in the spring. He has the highest opinion of the diggings and thinks that when machines are more generally used the output will be enormously increased. In the past men have gone in inadequately supplied with cash and have thus handicapped results, and in numbers of instances men totally unsuited to conditions there, both as regards physique and character—the "ne'er-do-wells" of all countries—consequently these men have found their level and the district is benefitted by their absence. Men willing to make themselves useful there are always in demand at from a dollar per hour. These men generally have brains, which they apply to the benefit of themselves and to the country. These are the factors that are wanted in the Yukon and they do well—better, in fact, than elsewhere.

#### Finance.

LONDON, Dec., 1899

A most important new company was floated here last month under the name of the Egyptian Salt and Soda Co., Limited. It is a creation of Chadwick & Co., and is a result of the conquest of the dervishes, a conquest which has opened a wonderful territory to British commercial enterprise. The new issue acquires most or all of the salt and soda producing agencies in

Egypt, and has a capital of \$1,500,000. It will greatly extend and develop the industry, and has been received with enthusiasm by home investors.

\* \* \*

The largest recently limited liability issue is R. White & Sons, Ltd., the famous manufacturer of summer and winter non-intoxicating beverages. Besides turning out the well-known lemonade, ginger beer, etc. Whites make a large number of peculiar patent drinks; Kola, Kops ale, Hop ale, etc., which have a very wide sale amongst the working and lower middle classes. The profits for last year were \$555,745. The capital of the new company is four million dollars. This firm has been and is a most gigantic advertiser, and it has found publicity pay even in a trade with new and peculiar drinks.

\* \* \*

Numerous other new issues are out, and altogether the promoting world is as busy as it enjoys being. For a long time there has been a depression in connection with the flotation of new joint stock enterprises, but the war amongst others of its curious results seems to have set things moving briskly and prosperously. No doubt a lot lies in the enthusiasm and confidence evoked by the determined "hands off everybody" sort of expression about the Government's action.

\* \* \*

Canadian Pacific is practically unchanged, closing to-day at the same figure as last week, namely 95. The fluctuations in the stock have been very narrow, and a most unusual occurrence was the absence yesterday of the stock from the list of sales, not one transaction having taken place during the day.

C. P. R. net profits for October were announced yesterday, and show an increase as compared with the same month of last year of \$155,170. The increase in the net profits for the ten months of this year to the end of October is \$1,456,196, or at the rate of over 2½ per cent. per annum on the common stock more than was earned last year.

\* \* \*

Trade is booming in spite of the war. As compared with October of last year our exports show an increase of 17 per cent., and imports 14¼ per cent. Of course, the South African trade is contracted, but everywhere else there is expansion.

\* \* \*

Banking business is evidently flourishing, and the policy of expansion is being pushed on all sides. The London City and Midland Bank is opening four or five more local branches, and the London and South Western is following suit; another example of banking prosperity is Lloyd's Bank, Limited. In 1839 it held 82½ million dollars of the public money; to-day it holds over 206 millions. Lloyds is one of the oldest banks existing. It dates right back to one Humphrey Stocks, who, in 1677, occupied a shop in Lombard street, made plate for Samuel Pepys, and handed down his sign, a black horse, to the bank. A curious point is that just where one of the bank's entrances now stands stood old Edward Lloyds' coffee house, from whence sprang Lloyds' underwriter.

An interesting marginal note to the Transvaal war is in connection with the rise in the shares of the land companies located over the Vaal. For example, Oceanas have risen within a couple of weeks from par to over 1¼. These are the shares that some years ago ran at last up to 27 before the boom broke—this prodigious rise being consequent upon a mad idea that got round that the Oceanas Company's land covered three or four new Rands.

\* \* \*

The principal public flotation in London during the past week has been the Colt Gun and Carriage Company, Ltd. The Lancashire Finance Company are putting this particularly up-to-date concern on the market, and the proposed capital is \$2,500,000 in \$5 shares. The object of the issue is to purchase and work fifty-two patents covering the use of the Colt automatic gun in Europe, and also the use of the Earl of Dundonald's gun and ammunition carriage. Sir Seymour Blane and Admiral Leicester Keppel are on the directorate, and bring with them a guarantee of the efficiency of the articles patented. The United States used the Colt gun on Spain, and England is to use it against the Boers.

\* \* \*

Another big venture, but this time one concerned with the peaceful paths of industry, is the new combine of manufacturers of machinery for washing, carding, combing, spinning and other textile purposes. Covering a large portion of the West Riding of Yorkshire, the trust has a share capital of \$850,000, and an issue of 4 per cent. debenture stock equal to another \$600,000. The North of England industries are rapidly concentrating into fewer and fewer hands, especially as regards management.

\* \* \*

The intensified trading in copper which has been the result for the best part of a year now of the attempt to corner the world's supply on the part of American operators is the chief reason of the issue of an important little book on the history and territorial location of copper. Nicoll Brown and C. C. Turnbull, have collaborated in the authorship. They tell us that from 1801 to 1850 the price of the metal went down, ending by being about \$440 per ton for "tough" that is, practically pure copper. It had been nearly double this price when the country opened. This alteration in price had been accompanied by a greatly accelerated production rising from nine thousand tons per year at first to twenty-nine thousand about 1850.

\* \* \*

The second half of the century right down to 1898 witnessed a further decrease in price to just under \$250 per ton, and an increase in production to nearly four hundred thousand tons in the last year. A temporary check to the decline in price was exercised whilst the Associated Copper Smelters of Swansea were able to monopolize the smelting. This monopoly of smelting was broken by the introduction of smelting at the mines and the A. C. S. disappeared. The Secretan corner later was a failure. The present attempt at cornering is only an embarrassing sort of success so far.

RECENT REGISTRATIONS.

The Scots-Canadian Mining and Developing Syndicate (Glasgow).  
 Objects: to acquire and work a group of mineral claims in British Columbia. Capital, £15,000, in shares of £1 each.

LOCAL STOCK MARKET.

	PAR VALUE.	PRICE
Alberni Con .....	1 00	5½
Alberni Mountain Rose..	1 00	5½
Athabasca .....	1 00	35
Big Three.....	1 00	09
Cariboo Hydraulic .....	5 00	\$1.00
Cariboo McKinney .....	1 00	1.05
Canadian Goldfields.....	—	08
Crow's Nest Coal.....	25 00	32 00
Dardanelles.....	1 00	11½
Deer Park .....	1 00	2½
Evening Star .....	1 00	9
Grand Forks of Bonanza	50	50
Hall Mines.....	1 00	—
Iron Colt .....	1 00	10
Iron Horse .....	1 00	8½
Iron Mask .....	1 00	62
Knob Hill .....	1 00	86
Le Roi .....	£5	£6¾
Mineral Hill .....	1 00	95
Minnehaha .....	1 00	14½
Monte Christo.....	1 00	7
Montreal Goldfields.....	1 00	8
Morrison .....	—	15
Noble Five .....	1 00	18
Novelty .....	1 00	03
Old Ironsides .....	1 00	1 08
Payne .....	1 00	1 05
Rambler Cariboo .....	1 00	58
Rathmullen .....	1 00	07½
Slocan Star .....	50	1 25
St. Elmo .....	1 00	67
Van Anda.....	1 00	5½
Victory-Triumph .....	1 00	05
Virginia .....	1 00	08
Waterloo .....	10	13
War Eagle .....	1 00	2 55
Whit Bear .....	1 00	4
Winnipeg .....	1 00	30

LATEST POINTS.—Bank Rate, 6 per cent. Open market rate three months bank bills, 5½ per cent. Silver, 27½d. per oz., (bar) standard. Copper, £74. per ton. Pig iron, 69s. 7d. Tin, £126. Lead, £17. 15s. Consols, 10¾. Canada, Three-and-a Half per Cent., 106. British Columbia Three per Cent., inscribed sock, 95. Canada Pacific Railway shares, 97½. Bank of British Columbia, 17½. Bank of British North America, 61. Bank of Montreal, 52½. Hudson's Bay, 21¼.

LATEST FINANCIAL NOTES.

NEW YORK, Dec. 18.  
 Panic conditions developed on the Stock Exchange to-day, with the imperative need of money caused by the violent contraction of values. Stocks were thrown over without the slightest regard to the prices they would bring, and at a distressing sacrifice of values. No end to the helplessness of the situation seemed in sight, when in the last half-hour of the market, some \$10,000,000 was offered the Stock Exchange, by the concerted action of Clearing House banks to force prices arbitrarily down to 6 per cent. without regard to the distracted bidding at higher rates, which was being done by other brokers for distressed operations. The collapse in the money rate checked the decline and drove the "bears" to cover. Before the concerted relief by the Clearing House banks, the money rate

leaped to 50. 70, 100, and, according to the official records, 125 per cent. Credible reports assert that 186 per cent. was paid for money during the day. The official record of such a transaction was lost in the excitement.

Money on call 8 to 125 per cent. Prime mercantile paper, 5½ to 6 per cent.

MONTREAL, Dec. 18.

While there was nothing approaching the proportions of a panic in the stock market this morning, the lowest range of values during the year attained in London, depressed Canadian Pacific, while New York did the same for others, and many local brokers, involved in Wall St. were compelled to sacrifice some local stocks to make good their losses there. Montreal Street Railway dropped twenty points to 290; Toronto Street Railway dropped to 102, and Royal Electric slumped 6 points, while in the mining Payne dropped to 97 cents, War Eagle to \$2.50 and Republic to 95 cents.

The Metal Market.

SILVER.—The market has been steady and dull, showing only small fractional changes during the week and closing at 26¾d, in London.

COPPER.—Prices remain unchanged from those quoted last week. Lake copper, 18½c. Electrolytic in cakes, wirebars and ingots, 17 @ 17½c. Cathode, 16¾ @ 16¾d. Casting copper, 17c. nominal. The foreign market is still dominated by the difficulties between England and Transvaal. London is quoted, English tough, £78 15s. @ £79 5s. Best selected, £80 5s. @ £80 15s. India sheets, £83 @ £83 10s.

LEAD continues in good demand and no change in prices. New York being quoted at 4.55c. @ 4.60c. The foreign market has been irregular but the tendency is upwards. Spot is quoted at £15 17s. @ 16l. 2s. 6d. for Spanish. and £16 5s. @ 16l. 7s. 6d. for English, while futures are at a discount of 5s. to 10s.

SPETER.—The disquieting news from the ore-fields stirred up consumers and a good business has resulted at stiffening prices, New York is quoted at 5.45 @ 5.50. The foreign market is also firmer, higher good qualities being quoted at 22l. 12s. 6d. Specials 22l. 17s. 6d.

AVERAGE PRICE OF METALS.

In New York per 100 lbs. from January 1st. 1899:—

Month	Copper	Tin	Lead
January .....	14.75	22.48	4.18
February.....	18.50	24.20	4.49
March.....	17.54	23.82	4.37
April.....	18.03	24.98	4.31
May.....	18.25	25.76	4.44
June.....	17.93	25.85	4.42½
July.....	18.33	29.63	4.52
August.....	18.50	31.53	4.57
September.....	18.46	32.74	4.58
October.....	18.50	.....	.....
November.....	18.00	.....	4.60
December.....	17.00	.....	4.60

Answers to Correspondents.

JOHNSTON, LEEDS.—Cannot advise you to put a penny in. The basis of the proposition is entirely at variance with known facts.

SOUTON,—Yes; Klondike has given an impetus to Vancouver. We cannot say

On the Stock Exchange, everything points to another boom in Rhodesians. Operators are migrating from the other markets, especially the Westralian. The Kaffir market is also flourishing, Rand Mines, for instance standing at 43¼, the highest point reached for the past month. It is reckoned now that the Witwatersrand reefs and deep levels will yield \$3,500,000,000.

LONDON STOCK EXCHANGE.

FROM B. C. REVIEW.

A rise in the Bank rate to 6 per cent. recalls the Baring crisis of nine years ago, but happily the present situation contains none of the dangerous elements that rendered that crisis so memorable. Dear money is forced now upon the markets, because trade and commerce are employing the resources usually available in another direction. Certainly our metallic reserves have been reduced to a level when greater caution is necessary than usual, but the outflow of gold has been natural and it is now possible that the high rates now obtainable in London will attract the precious metal. The war in South Africa, while stopping remittances from that quarter, has undoubtedly aggravated the present situation, but if lower prices are the rule, the Stock Exchange is taking events philosophically, and American and Canadian Railroads at least manifest great staying power. A remarkable advance in part to extensive buying by the Vanderbilts and James Hill, in conjunction with interests in the Pennsylvania Com-

A fall in Le Roi is the feature of the B. C. department. Selling of these shares can only be explained as a sympathetic movement with other London and Globe interests. The last weekly output showed a little contraction, but this is not a point, we think, to which the public would attach importance, considering how much larger than before the output seems likely to become. The tendency generally has been weak, but nearly all the other principal descriptions have kept within fractions of their former figures. Hall mines have, however, been offered at 5s., and the quotation for Ben-net Lakes remain nominal.

B. C. AND KLONDIKE QUOTATIONS.

- Alaska Goldfields, 1.
- Athabaska ¾.
- Bennett Lake and KlondikeNav. 2s. 6d.
- British America Corporation. 19s. 6d.
- B. C. Development Assoct. 1¼
- B. C. and New Find Goldfields, ¾
- Dominion Mining Development and Agency ¾.
- Duncan Mines, 1 and ½
- Hall Mines, 5s.
- Klondike Bonanza, ¾
- Klondike Mining, Trading, &c. ¾
- Le Roi 5 and ¾.
- Lillooet, Fraser R. & Cariboo 6s.
- London and B. C. Goldfields, 1¼.
- McDonald's Bonanza, 1.
- New Goldfields of B. C., 1 and ½.
- Queen Bess Proprietary, 1.
- Vancouver and B. C., Gen. Ex. 12s. 6d.
- Velvet, 1½
- Whitewater Mines, ¾
- Yukon Goldfields, 1 and ½.
- Ymir Gold Mines. 1 and 7-16

that its inhabitants generally show the elements necessary to success as a mining people. They lack the enterprise which is indispensable under the conditions existing. The fact is, that, with one or two exceptions, the so-called representative business men are men of straw, carried either by eastern firms, or the banks. Hence you will understand the position and why it is that outside capital can be utilized to advantage in the right direction and in the right hands.

STOCK.—(1) The share market is limited. (2) 3-16 about.

J. WHITE, Eng.—(1) We will endeavor to let you have particulars. (2) Why not call at the London office and ascertain.

AFRICAN.—(1) Some sixteen years residence in B. C. should enable us to speak with authority re the matter you refer to. (2) You are probably correct and we can bear you out, no matter what the agency you quote avers to the contrary. (3) Yes, In England it would be decidedly actionable and heavy damages would result.

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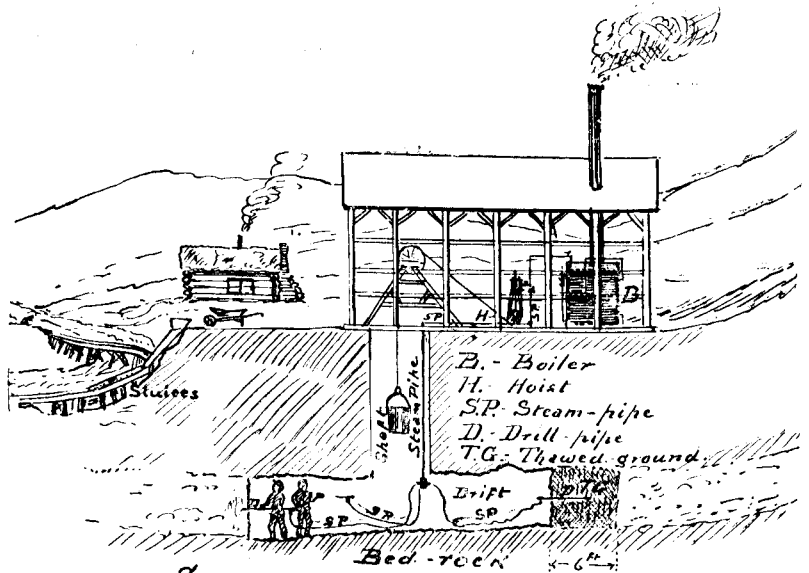
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Sketch showing mode of working frozen ground with thawing machines.

Drill used 1/2 inch Gas-pipe.

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