

The Mining Record

VOL. XI.

MARCH, 1904.

No. 3

BRITISH COLUMBIA MINING RECORD

Devoted to the Mining Interests of the Pacific Northwest.

PUBLISHED BY

THE BRITISH COLUMBIA RECORD, LIMITED

H. MORTIMER LAMB, Managing Editor.

Victoria, B. C., Office, Province Building.
Vancouver, P. W. Charleson, Hastings St.
London Office: 24 Coleman Street, E. C.
Denver, Col.: National Advertising Co.
San Francisco: Dake's Agency.

SUBSCRIPTION TERMS:

Canada and the United States, one year - - \$2.00
Great Britain and Foreign, one year - - - \$2.50

Advertising Rates on Application.

Address all communications to

THE MANAGING EDITOR, B. C. RECORD, LTD.,
P. O. Drawer 645, Victoria, B. C.

THE MINING CONVENTION.

WE devote a great deal of space in this month's issue to publishing a somewhat full report of the proceedings of the Second Annual Convention of the Provincial Mining Association. This report should serve as an advertisement not only of the Provincial Mining Association, but of British Columbia as well. It should be clear now that the Mining Association while having the utmost confidence in the future of the mining industry of the country, recognizes that its progress has been and is retarded by quite removable disabilities, and the organization's whole aim and mission is therefore the removal of those disabilities. That the Association has already accomplished much in this direction will, we think, be very willingly and cheerfully conceded, and had it not been for circumstances over which it has had no control its last year's record of work successfully accomplished would have been even more satisfactory. It was hardly to be expected meanwhile that, in a country of great distances such as this is, organization should have been absolutely perfected within the short period of one year, but it can nevertheless be stated that the Association is a thoroughly representative body, so far as classes and interests are concerned, although it may take some little time before branch organizations are established in some of the more remote mining districts and localities. Referring now to the recent Convention, perhaps its most gratifying feat-

ures were the harmony that prevailed and the absence of anything like acrimony in the debates. Since the first Convention was held a year ago, the suspicion that certain individuals who had taken a prominent part in promoting the movement were actuated chiefly by selfish motives has ceased to exist, and it is now generally admitted that the remedial legislation recommended by last year's Convention and re-affirmed at the recent meeting would if adopted by the Legislature, assist very materially in improving the conditions of mining in the Province and in stimulating and promoting the investment of capital in this industry. We are unfortunately prohibited by reason of space limitations, from commenting as we should have wished on the business considered and dealt with at the Convention of 1904, but after all, comment here is superfluous, when neither criticism nor objection are its excuse. It is satisfactory to note, however, that the Government has given assurance of a friendly disposition towards the Mining Association and now no longer regards that organization—as without any sufficient reason was the case—with covert distrust and antagonism in the assumption that it was in political opposition to the present administration, and it is to be hoped that it will now be clearly understood that in politics the Mining Association as an organization is absolutely and distinctly non-partisan.

In conclusion, we offer the Association our congratulations on securing the services of a thoroughly representative and efficient Executive Committee, including as it does some of the most eminent and influential men now engaged in developing the mineral resources of the Province. In re-electing Mr. John Keen, President of the Association, the delegates showed that they appreciated the work and worth of a disinterested man who has sacrificed both time and money to further their interests. It is not too much to say, in fact, that but for Mr. Keen there would have been no Convention this year, possibly the Association itself would have ceased to exist. He is nominally President, but when it was necessary he combined with that office, and performed the duties, of all others—secretary, treasurer, organizer. The Association has also secured the services of a most capable, energetic and painstaking secretary in Mr. E. Jacobs.

THE REHABILITATION OF ROSSLAND.

IT is not difficult to prophesy the rapid rehabilitation of the Rossland camp. During the last three or four years Rossland has suffered very severely. The causes which led to the crippling of Rossland's industry and destruction of its credit have been various, and people in accounting for the hard times there have mostly seized upon the most obvious causes and not

always upon the most operative. The first check which Rossland received was due to the melancholy conviction that its productive mining area was very limited. How far that conviction may be justified by eventual development it is impossible to say. But certainly, had shoots of pay ore been discovered in many of the really enormous ledges round Rossland, it would have been a very remarkable gold and copper camp. It was not to be, however, and Rossland's first and severe check came from the realization that it was not to be. The second check to Rossland's prosperity came from ruthless stock speculation which left investors as cold and cynical as to any good things in it, as they had previously been enthusiastic that everything was good. This wave of speculation led to the burdening of the mines with excessive capital, and that led to reckless mining in the hope of profit, and that led the mines into debt and difficulty of all kinds. Then came labour troubles which paralyzed the efforts put forward towards recuperation by the sound concerns. But probably the most insidiously operative cause of all Rossland's troubles was that the opinion was gaining ground that average values were not maintained with depth and that the mines had nothing to look forward to save diminishing profits and eventual abandonment. Every other cause of difficulty would in the course of time work itself out. But the failure of the rock to carry metal in payable quantities struck at the very roots of Rossland's existence. Some very hopeful circumstances are now visible which require that an unduly pessimistic attitude as to the profit earning capacity of the Rossland mines should be abandoned. Three of the big mines of Rossland have had a successful year. The Centre Star mine during its past financial year earned a net profit of \$265,000 out of 88,387 tons of ore, or \$3 per ton, which paid off the debt on the property and left a balance to the good of \$70,000. The Le Roi and Le Roi No. 2 have also had a successful year, if success is measured by the capabilities of the properties and not by the grotesque amount of capital upon which they were expected to pay dividends. For a few months of last year the Le Roi appeared to make losses. But those losses were more apparent than real. They were due to a large expenditure upon development for which it now appears the shareholders are to be fully reimbursed. Under its original American management the Le Roi mine was worked for immediate profits and only ore that paid well was sent to the smelter. After it became the property of the present company, the attempt was made to work the vein without any selection at all, because only the enormous gross tonnage thus produced could justify the capital placed upon, we cannot say invested in the mine. After this plan of extracting dividends from country rock was abandoned, the mine has proved itself capable of producing a large tonnage of ore at a profit over all. But the uncomfortable fear remained that all the time this was becoming more difficult and that as the mine went deeper the ore bodies were becoming lower grade. Even upon actual returns of a satisfactory nature this fear remained like a black cloud upon the mine's horizon. So far as returns go the Le Roi No. 2 has pos-

sibly had the best year of the three mines whose reports are published. It has made £15,471 upon 17,550 tons of ore, a rate of profit which is exceedingly satisfactory, and out of which a crumb has been thrown to the hitherto unfortunate shareholders. The first feature about Rossland then which increases confidence in the camp is the satisfactory position of three of the most important companies there. The second feature is that the milling problem appears to be in course of successful solution. The Le Roi No. 2 and the Centre Star companies are both convinced that they have adapted the cost of production to meet a range of lower grade ores. If they have they have widened Rossland's productive area, lengthened its life, and greatly enhanced the value of their own properties. Upon the assurances of the directors of both companies that their experiments in the direction of concentration have been completely successful, we may take it for granted that one of the greatest obstacles to Rossland's prosperity has been overcome. Equally important is the matter to which special attention has been drawn during the last month or so, namely, the discovery of rich ore in the 1350-foot level of the Le Roi mine. Upon the extent to which this affects the prospects of the Le Roi mine itself is, of course, too early to speculate. But it may be taken even now as evidence that there is no progressive diminution in the value of the ore as depth is attained, but simply a variation in the value of the ore in the different strata of the ore body with which distance for the surface of Red Mountain has nothing whatever to do. We have never been able to understand why mere distance from an arbitrary surface should have any effect one way or the other upon the grade of ore. Grade changes for reasons science has never penetrated. Some mines grow poorer, some grow richer as depth is attained. But we are quite positive that if it were possible to mine up into the air, as well as down into the ground, precisely the same phenomenon would be visible. This, of course, does not affect an accumulation of gold through surface oxidation and subsequent detrition in the gossan of a vein, nor does it affect the existence of ore or its non-existence in an overlying formation. But there is no reason why a sulphide ore occurring in a uniform formation should be any richer or any poorer upon the 1000-foot level of a mine than it was on the surface simply because it is the 1000-foot level and not the surface. The converse is equally true. This discovery of rich ore in the deep levels of the Le Roi must certainly, however, increase confidence in the Rossland camp and may lead to a more vigorous prospecting of mines whose surface croppings happen to approximate more closely to some of the barren levels of the Le Roi than they do to the ore found near the surface in that mine. There can be no doubt that the outlook for Rossland has undergone a wonderful and cheering change during the last six months, a change which will have its effects in increasing confidence in the mining industry all through British Columbia.

The gross production of coal from the collieries of the Crow's Nest Pass Coal Company, in the Crow's

Nest district, East Kootenay, has now reached an aggregate of about 2,000,000 tons. Commencing in 1898, when the output was only 8,986 tons, the railroad having only been completed to the Coal Creek mines in August of that year, there was a substantial increase each succeeding year until the total for 1902 of 661,118 tons was reached. The output of 1902 was seriously interfered with by an explosion which wrecked two of the most productive mines at the Coal Creek colliery, and labour troubles stopped all production during two months of 1903. These setbacks notwithstanding, much progress has been made, until today the combined producing capacity of the three collieries—Coal Creek, Michel, and Morrissey—is about 4,000 tons per diem, with development work proceeding that will provide facilities for adding to the daily production whenever there shall be a demand for it. At Coal Creek the company is working six mines on four separate seams of coal; at Michel, eight mines on as many seams, and at Morrissey, five mines, each on a distinct seam. The larger seams are generally soft coal; some of the smaller are hard. Together the collieries produce superior steam, coking, blacksmith and domestic coal, the numerous seams between them affording a variety of coals all of generally excellent quality. The mines have been opened and the collieries equipped with plant and machinery on a scale looking to a large and increasing output. All the difficulties attendant upon bringing the collieries to a stage of production far beyond the present requirements of the home market have been overcome and the chief problem now to be solved is that of securing an adequate and thoroughly dependable market for the comparatively large production of these collieries. The outlook is more promising with direct railway communication established between the Morrissey colliery and the transcontinental line of the Great Northern Railway at Jennings, Montana, but the situation is not so satisfactory as regards the Coal Creek and Michel collieries, which are as yet without communication with the Montana market by means of a railroad under one control only. This obstacle will be overcome eventually, when the Crow's Nest Southern Railway shall have been completed *via* Fernie to Michel, but meanwhile these two collieries will be at a disadvantage as compared with the Morrissey mines.

It has been customary to make an outcry against encouraging the export of coal and coke from the Crow's Nest collieries, but now that they are equal to producing a larger quantity than the home market can possibly take, the alternative of restricting production is to secure a market south of the international boundary. Nearly half the 2,000,000 tons mentioned above as the total output of coal to date has been made into coke. The Crow's Nest Pass Coal Company now has 1,128 coke ovens—984 completed and in use and 144 in course of completion. With all these in operation it will be possible to produce 1,400 to 1,500 tons of coke a day. The six smelters—Nelson, Trail, Northport, Grand Forks, Greenwood and Boundary Falls—treating Kootenay and Boundary ores together do not require much more than half that quantity, and there

is the prospect of the largest user of coke (the Granby Company's smelter at Grand Forks, with its six furnaces) having its own independent supply by the close of the current year. It should be evident that the chief hope of any considerable further development of the immense coal resources of the south-eastern portion of the Province lies in the opening up of dependable markets across the line for large quantities of coal and coke.

In this connection a correspondent asks whether under the circumstances it would not be well to look closely into the situation as regards coal lands still unalienated? Apart from the advanced position reached by the Crow's Nest Pass Coal Company in regard to development and equipment of its collieries and the transportation facilities it now has to enable it to market its products, there is the fact that already so many coal enterprises have been launched that few men with capital are inclined to put money into more similar ventures in southeast Kootenay or southwest Alberta. The Canadian Pacific Railway Company has for some time past had men at work opening up coal mines in the Crow's Nest Region: the Canadian-American Company has been operating a colliery at Frank for several years; the West Canadian Collieries Company has lately consolidated several groups of coal lands, two at least of which have been shipping coal; the International Company is opening up mines and erecting coke ovens, primarily to supply the Granby Company's requirements; the North-West Coal & Coke Company lately announced that it had secured \$1,500,000 of English money for the purpose of developing its coal holdings; and other ventures have been floated. It would appear that the supply of coal and coke bids fair to greatly exceed the demand for some time to come, and if this be so where is the advantage to the Province in encouraging speculation in coal lands with no reasonable prospect of their being made productive for years. All through some of the mining sections of the Province there are mineral lands lying unworked, in most cases held by men who either have no money or no inclination to work them themselves or to make anything like reasonable terms with others disposed to do so. Is it not likely that a similar situation will follow the turning over to men without means or to speculators large areas of the East Kootenay coal lands? This view of the question is certainly worthy of careful consideration.

The Seventh Annual Report of the Crow's Nest Pass Coal Company adds another to the series of remarkable reports which serve to show the progress of the mining industry in British Columbia. The business done by the Crow's Nest Pass Coal Company is particularly gratifying for the reason that it is an indication of prosperity throughout the metalliferous mining industry. During the year 1903, in spite of a complete suspension of operations from February 11 to April 1, and partial suspensions later, the company produced 661,118 tons of coal. Of this amount 279,334 tons were sent to the coke ovens, producing 167,989 tons of coke, while 381,784 tons were otherwise disposed of as

merchantable coal. The report does not state how much coal and coke was sold in the Province, but we know that the main market for this company's products is among the railways, mines and smelters of the Province, so that the company both serves and is supported by home industry, which makes its increasing prosperity an indication of fundamental progress and development. The output for 1903 was larger than that for 1902 by 49.83 per cent., and that the output continues to grow is best illustrated by the fact that the December output exceeded that of the previous January by 58.72 per cent. The net profit made by the company during 1903 was \$310,492.28, of which the sum of \$303,717.36 was distributed in dividends. This might seem a large distribution out of the amount earned for a coal company to pay, a company subject to serious risks which while they may be minimized, can never be eliminated from the calculations. But there are circumstances in connection with the company's finances which make the distribution of all its profits quite compatible with sound business. During the year the company credited \$2,174,530.49 to profit and loss, this including \$950,511.96 brought forward from 1902, \$913,526.25 portion of premium on new stock issued and the profits on the operations for 1903 as above. The balance now at the credit of profit and loss is \$1,870,813.13. Much money has been spent in the development and equipment of the company's property, an aggregate of \$5,418,435.51 in actual cash having been expended in development, plant, machinery, buildings, etc. About one million dollars was spent in this direction during 1903.

The prospects of the company are exceedingly bright. One of its main difficulties, that of dissatisfaction among its employees, has been overcome under an agreement for three years, which seems to be working satisfactorily. Its market for coal and coke is increasing quite as rapidly as its ability to supply that market. The company has 982 coke ovens now in operation, and when present building contracts shall be completed, will have 1,128 in all. Its mines also are now in excellent condition, the effects of early mismanagement and of the lamentable disaster of 1902 having been overcome.

In dealing with the present position of the Crow's Nest Coal Company it is well to make the comparison which it illustrates between the outlook before the Province now as compared with that of a year ago. The mining industry of British Columbia has successfully survived a period of exceptional stress and strain. Conditions as regards labour and production have undoubtedly improved and may be fairly regarded as having reached an equilibrium not to be easily disturbed. The mining industry is now upon a foundation of production and profits instead of a basis of speculation. This must lead to a restoration of confidence in British Columbia and to that further development which is a necessary condition of prosperity to the people who are living in British Columbia. For some few years it has been customary among certain people to decry the mining industry of the Province, and there has been some apparent justification for a gloomy view of its prospects. But it is now being demonstrated that

the failures upon which so much emphasis has been laid, have been a mere pruning and cutting out of rotten branches, leaving a sound body of enterprise which is now bearing fruit. We expect to see a greater growth in 1904 than during any previous year, and this expectation is based upon the plentiful evidences of success which it is our pleasant duty to chronicle from month to month.

The mining industry of Canada has suffered a serious loss in the sudden and untimely death which occurred in February of Mr. B. T. A. Bell, editor of the *Canadian Mining Journal* and Secretary of the Canadian Mining Institute. Mr. Bell was essentially a strong man. As a journalist he was fearless, independent, impartial. The Canadian Mining Institute owes its present satisfactory position to his skill as an organizer, and to his executive ability. It is said that every man's place in this world can be filled, nevertheless Mr. Bell's successor will have no easy task in maintaining an equally successful standard.

The conditions under which it is proposed Chinese shall be permitted to work in South African mines, namely, a fixed term of service, predetermination of the class of work at which they shall be employed, stipulated hours of labour, a prohibition against Chinese engaging in trade or acquiring land or vested property, and their compulsory return to China at the expiration of the term of service, are sufficiently arduous, but not too arduous if it is desired to guard against evils which other countries have experienced from an unrestricted Chinese coolie immigration. While cheap labour may be necessary for the successful working of the South African mines, the mongolian should be regarded as a machine merely, and in no way be given an opportunity of becoming a social factor. If in Canada some such stringent regulations as those proposed for South Africa had been imposed instead of the head tax alternative of restricting Chinese immigration the former would have proved a far more effective measure.

The annual reports of the Alaska-Treadwell company are invariably interesting. That for 1903 is no exception to the rule, the information therein afforded being most complete. At the Alaska Mexican mine, the value of the ore per ton is placed at \$2,969, upon which a profit of \$1.095 was realized, cost being divided as follows: Development, 0.647; stoping, \$0.658; milling, \$0.276; sulphuret expense D.I. \$0.014; general expense D.I., \$0.029; estimated freight and treatment charges, \$0.161; expended on construction account \$0.069; estimated London, Paris, San Francisco offices and consulting engineers' expenses, \$0.020. At the Ready Bullion mine, the value of the ore per ton is given as \$1.665, the year's operations, however, resulting at a loss of \$0.0233 per ton, 202,881 tons of ore having been mined. Costs in this case were Development, \$0.849; stoping, \$0.8702; milling, \$0.3803; sulphurets expense D.I., \$0.0178; general expense, \$0.0242; estimated freight and treatment charges,

\$0,1528; expended on construction account, \$0.0350; office and consulting engineers' expenses, \$0.0231; total expenditure, \$1.6885 per ton.

THE NEW GOLD DREDGE AT LILLOOET.

(Specially Contributed.)

A DREDGE, the largest of the kind in Canada, is being built by the Wm. Hamilton Manufacturing Co., of Peterboro, Ont., for the Iowa Lillooet Gold Mining Company to operate on the Fraser

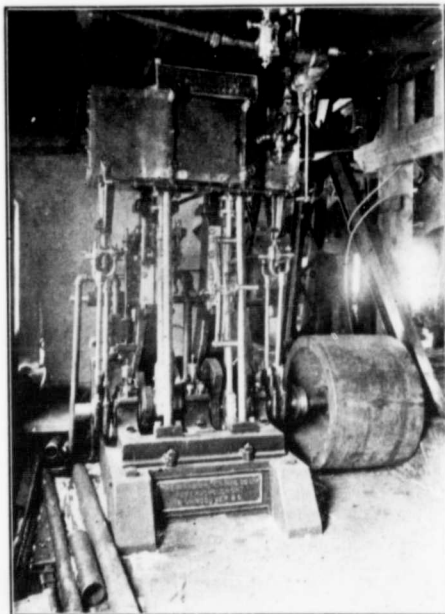


Dredge About Completed.

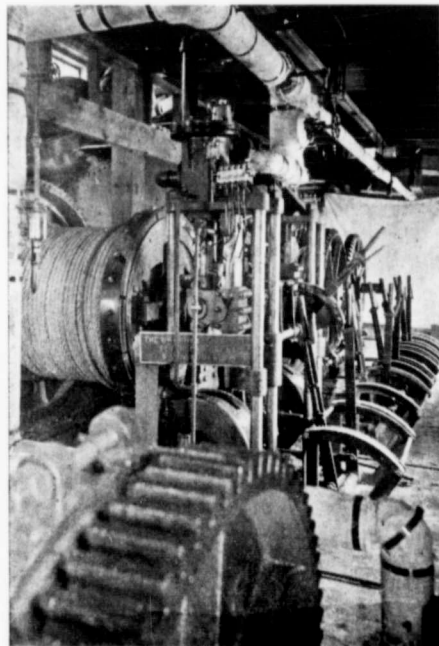


Dredge Being Launched.

River at Lillooet. The dredge is a centre bucket type, has been designed to withstand the most severe strain, all parts are made extra heavy. The hull is 100 feet long, 34 feet wide, is built of Douglas fir; the bow



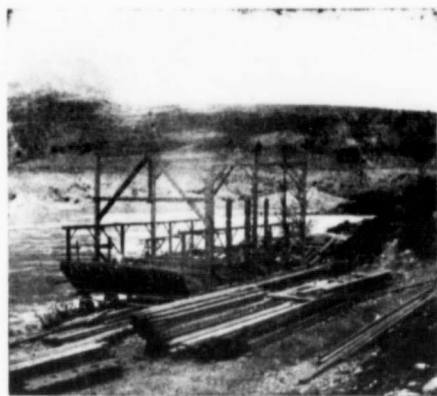
Main Power Engine.



Line or Warping Engine. is covered with steel plate; the main ladder grating is constructed of steel girders; the ladder is made of

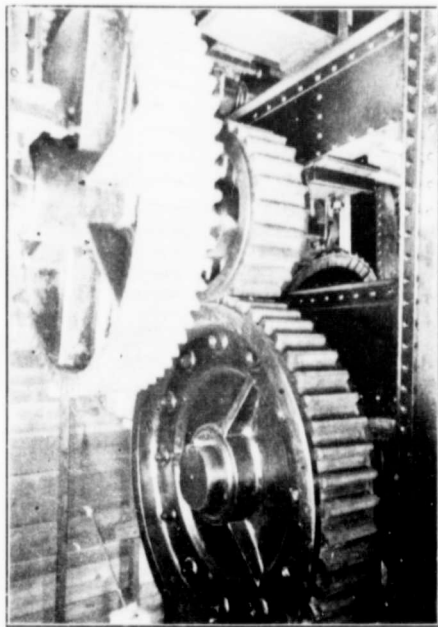
steel, is 72 feet long, weighs 90,000 lbs., and has a continuous chain of buckets, each of which has a capacity of 6 cubic feet of gravel, the speed being 15

of 3,500 gallons per minute, and all fine material passes through the screen to tables. The large material is, however, delivered at the end of the screen to the



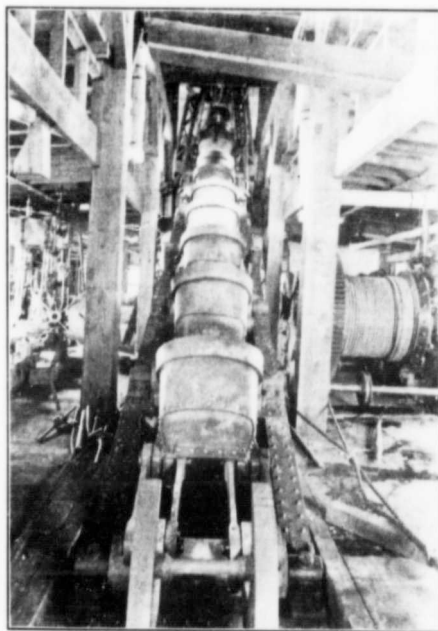
Showing Frame Work of Dredge.

buckets per minute. These buckets are made of homogeneous steel plate, with a lip 1 inch thick, 7 inches wide. The bushings and pins connecting the buckets are of manganese steel. The gravel is discharged



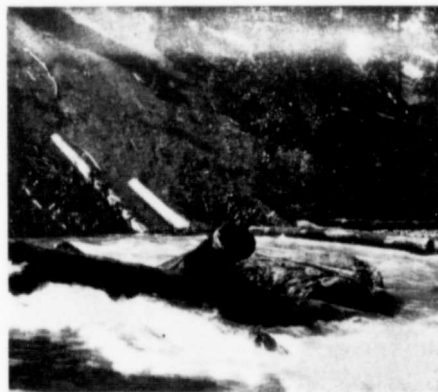
Heavy Gearing for Operating Buckets.

from the buckets into a revolving screen 5 feet diameter, 24 feet long, made of steel plate perforated with holes. The gravel passes through the screen, is washed, the water being pumped into the screen at the rate



Interior of Dredge, Showing Buckets, Main Engine, Warping Engine, Etc.

stacker, which discharges it 40 feet from the stern of the dredge and stacks it 25 feet above the water line.



Taking out Timber for Dredge at Anderson Lake.

The gold-saving tables are designed to make a close saving of the values in the gravel and have a fanning motion. All material after passing over the table passes through an undercurrent and quicksilver traps.

The dredge itself is to be operated by five engines,

steam being supplied by one large marine type internal fired boiler, while a main engine operating the buckets, is directly connected to the pump of 35 I.H.P. The ladder hoist engine is a 30 I.H.P. line engine or wash-



Revolving Screen in Transportation.



Boiler in Transportation.

screen and gold tables is of the marine type compound condensing 116 I.H.P. centrifugal pump engine and ing engine 40 I.H.P., and is also directly connected. The dynamo engine is of 6 I.H.P. capacity. The

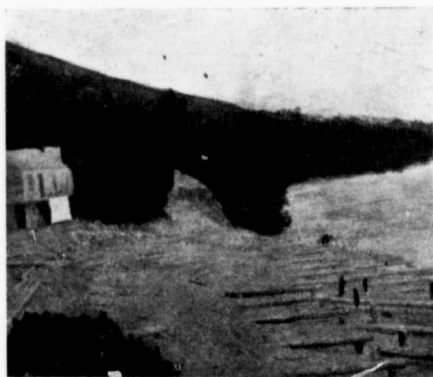
main working engine operates four side lines one inch in diameter and two lead line one and one quarter



Timber for Dredge in Boom in Seaton Lake, B.C.



Road "from Lytton Road" to Dredge Site.

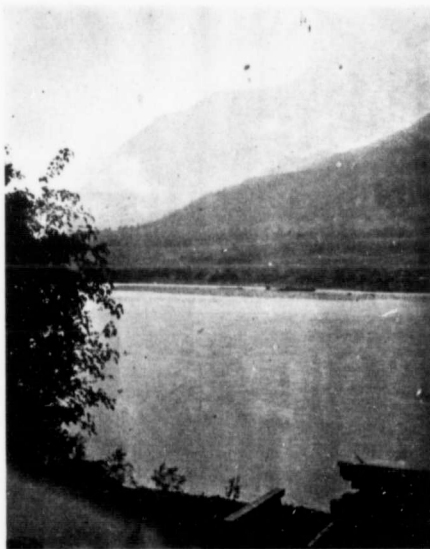


Site where Dredge was built, and Boarding Camp.
inches diameter steel cables, and is used for moving

and holding the dredge in place. The total weight of the machinery is 230 tons.

The dredge will be in operation by the first of March of this year. All the machinery was hauled by waggon from Ashcroft to the dredge site near Lillooet, a distance of 67 miles, without any accident whatever.

We have received a copy of a prospectus of "The Lucky Jack Mining Company, of Seattle, capital stock \$1,500,000, incorporated under the laws of the State of Washington." This makes it appear that the company owns valuable mineral claims adjoining the well-known Lucky Jack property, one of which is called the Lucky Jack No. 2; further, that rich float and very promising quartz ledges have been discovered, rich quartz being everywhere in evidence. These statements have been challenged by newspapers published in the Kootenays and resident prospectors claim that the promoters of the



Bar Where Dredge Will Operate.

Lucky Jack Mining Company have not even a proper title to some of the ground they allege they own. It will therefore be well that those who may be disposed to take shares in this venture first fully satisfy themselves as to the bona fides of the concern and its right to the mineral claims it states it owns. The daily press of Seattle will do a public service if it directs attention to the nature of this promotion, since it is in Seattle that the promoters appear to be mainly operating in their endeavours to induce people to take up shares. In strong contrast to this questionable attempt to obtain money, supposedly for development work in the Poplar Creek district, is another flotation under the name of the Spy Glass Mining & Development Company, Ltd., capital \$500,000 of which the greater part is treasury stock, the promoters not exhibiting the greed, so often displayed by men floating mining companies, in the direction of retaining by far the larger proportion of the stock and leaving an entirely inadequate treasury for development and equipment purposes. The Spy Glass property is one of known merit, as shown by a comparatively large amount of development work done, by the good mineral showings it has, and by its reasonable capitalization and adequate treasury.

SECOND ANNUAL CONVENTION OF THE
PROVINCIAL MINING ASSOCIATION.

FIRST DAY.

ON Monday morning, Feb. 22, 1904, the delegates to the Second Annual Convention of the Provincial Mining Association of British Columbia assembled in the City Hall, Victoria.

The chair was taken by the President, who called the meeting to order at 10:30 a.m.

Mr. H. Mortimer Lamb acted as honorary secretary.

After a brief address of welcome to the visitors had been delivered by the Mayor, a Credential Committee was appointed.

A letter addressed to the Secretary of the Victoria Board of Trade from the Assistant Commissioner of the Department of Customs stating that the matter of admitting oils for use in the Elmore process of concentration was engaging the attention of the minister.

SECOND DAY, FEB. 23, 1904.

The meeting was called to order at 10:15 a.m.

The Credential Committee presented a report by which the following delegates were seated, some of them holding proxies for absent delegates. The committee asked leave to sit again to report others on the way.

Atlin—J. H. Brownlee, John Fountain, Chas. Jones and J. Lipscombe.

Ashcroft—J. Lehman.

Bullion—W. N. Bissett, W. W. Bissett, J. B. Hobson, G. J. Hoffmeister and W. H. Weiler.

Chemainus—P. J. Pearson.

Clinton—Thos. Barton.

Nelson—H. E. Croasdaile, E. Jacobs, L. K. Larsen, G. W. McBride, J. G. Nelson, W. B. Poole and T. G. Proctor.

Nicola—Aspen Grove, A. E. Howse and J. E. Bate. Coulter, J. W. Collis.

Keithley—J. Hunter.

Quesnelle Lake—J. Moore.

Rossland—B. Duke, A. C. Galt, J. James, K. Martin, A. McMillan, A. Pendray, M. E. Purcell, T. H. Reed, D. Thomas, D. R. Thomas, G. Tippet, H. Seaman and F. R. Blockerger, E. B. Kirby, Smith Curtis.

Soda Creek—W. Adams.

Stanley—M. Bailey and J. D. Peebles.

Trail—N. Binns and D. Moore.

Vancouver—A. B. Clabon, J. Findlay, C. F. Jackson, H. T. Lockyer, R. P. McLennan, T. J. Smith, G. Hilliard, J. McAdam, F. Richards and George Walkem.

Victoria—A. F. Gwinn, J. R. Beckwith, C. H. Lagrin, J. W. Bolden, A. E. McEachern, J. C. Mapleton, R. Machin, H. C. Newton, A. A. Sparks, A. R. Sherk, A. J. Morley, J. Paterson, D. W. Higgins, Dr. T. J. Jones, Hon. E. Dewdney, F. I. Clarke, H. B. Thompson, F. Higgins, H. C. Bellinger and H. J. Scott.

Barkerville—John Hopp.

Salt Spring—Clive Phillipps-Wolley.

The President then presented his report reviewing the work of the year, as follows:—

"GENTLEMEN,—The policy of the Association has

been to endeavour to aid the Government to promote the mining industry, and we recognize it to be our duty to provide them with all data at our disposal, and all information within our reach for the attainment of the best possible conditions for the promotion, encouragement and highest development of the mining industry in the Province, and to assist the members on both sides of the House by transmitting to them copies of the resolutions passed by the last Convention, as amplified by your committee; and we have been at the service of the Government whenever they chose to call upon us.

Our first work, as outlined by the Convention, was to do all that we could to ameliorate the industrial conditions which existed at the time we last met in this room; and the first committee appointed by you for that purpose did their work on those lines in the settlement of the Fernie strike during the entire month of March last.

The report of that committee has been laid before you, on page 602 of the Proceedings of the last Convention to which I beg to refer you.

As to the amount of remedial legislation we have been able to accomplish, it is only necessary to remind you that no government since we became an association has been in a really strong enough position to do very much in the way of thorough and complete investigation of our suggestions; but we have reason to hope that relief may be obtained at no very distant date.

"Two recommendations made at the last Convention, however, were put into effect by the late Government, viz.:

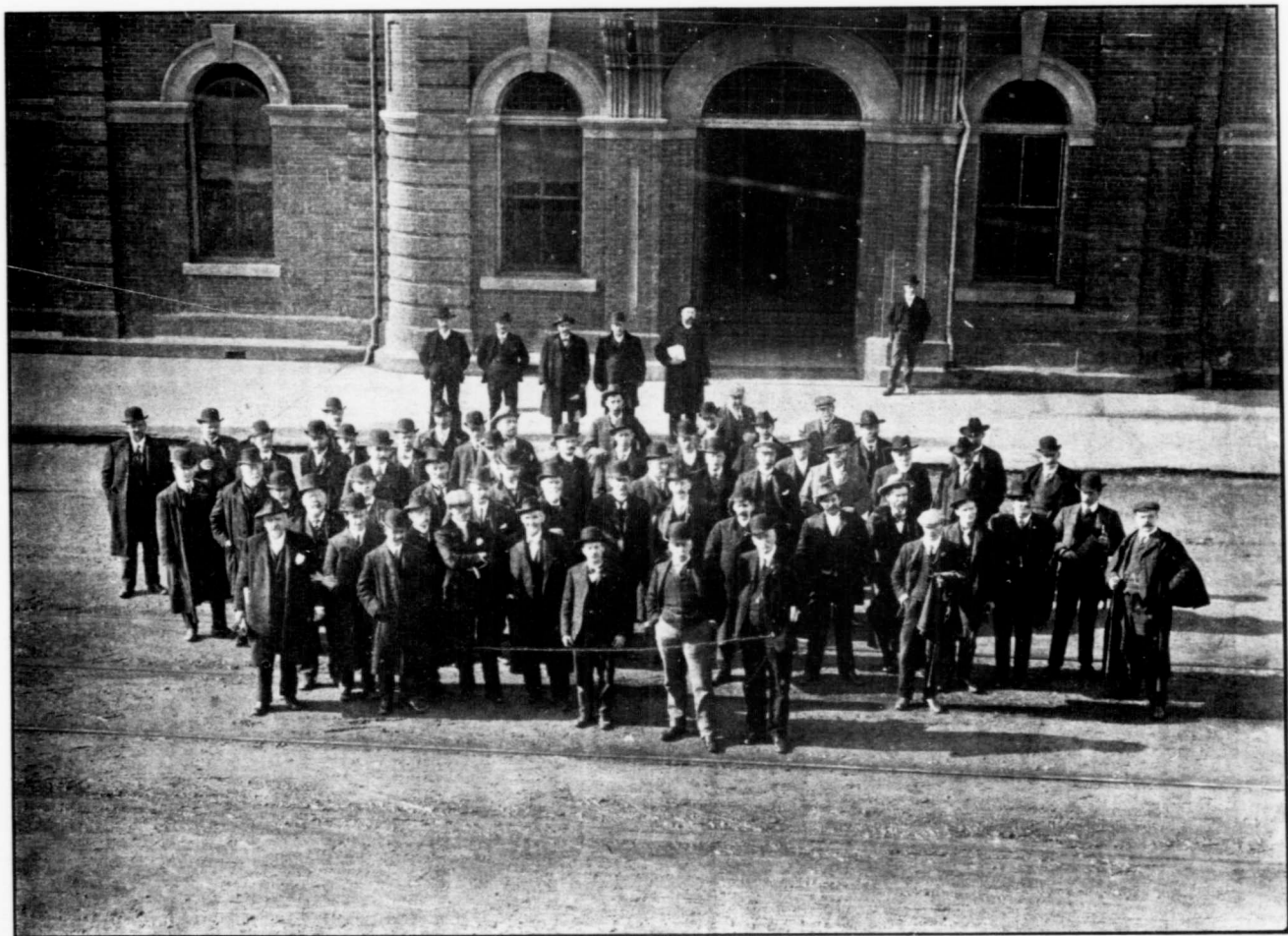
"1. The sale of Crown-granted mineral claims for delinquent taxes (which was then about to take place) when the lands would have been sold without the right of redemption, was postponed and the law was so altered as to provide time (eight months) for the unfortunate owners to redeem what they had temporarily lost; and

"2. The grouping of the same class of claims for the purpose of work, whereby a man can now spend sixteen hundred dollars upon one claim and do some telling work, to represent eight claims, instead of spending \$200 on each of the eight claims and accomplishing nothing, or practically nothing.

"The executive of our association attempted to secure another reform, viz.: The rescinding of the power given to registered attorneys, acting for the numerous foreign companies in this country, to sell and issue stock and transfer property. We regret to say that, although the Companies' Act was amended in other respects, this reform was not carried out.

"During the past year we have held four meetings of the Executive; one meeting was held in Victoria, one at Vancouver, one at Rossland, and one at Kamloops, each of which meetings occupied the members for periods of from three to eight days.

"We sent to each local organization particulars of the meetings which we proposed to hold, together with a list of the subjects which we proposed to take up, and asked for expressions of opinion.



A Group of Delegates, Photographed in front of the City Hall, Victoria.

"At the Victoria meeting we waited upon the Government of the day, and as a result we got the amendments before referred to. Other reforms might have been taken up, but the members of that government were called to other duties in other spheres of life.

"You will notice that we have applied to the Government with suggestions for recouping the depleted provincial treasury and to compensate them for the loss of revenue which might ensue if they modified the two per cent. tax. These you will find on page 6 of the Recommendations, article 19.

"The two per cent. tax has been proved to be a brake on the wheels of the mining industry, and as such it is our duty to do what we can for the persons who provide the cash for the development of our mines, and change the form of taxation which has caused such friction.

The department at Ottawa wrote to me to aid them in the collection of specimens, and on your behalf I at once took the matter up and obtained for them a magnificent series of samples weighing many tons, of the finest ores ever put on exhibition, each sample weighing about 400 pounds. These were, of course, silver-lead ores.

The clerical work of the Association has recently been carried on by Mr. A. M. Jones, who consented to act until the Convention, but owing to certain conditions occurring, he was compelled to resign, and it will, therefore, be the duty of your new executive to fill the position with an able, industrious young man of good, hard-working habits.

The Treasurer, Mr. Mortimer-Lamb, has consented to act as our "honorary" treasurer, and will present to you his statement of account, which has been duly audited.

"As to our critics, we can only say that when such criticisms are honestly made, and in the true interest of the province, we are always glad to hear them, but when made in any other spirit we simply regard them as ordinary mosquitoes of life and pass them by, as we cannot, in passing through a malarious atmosphere, avoid them.

"Your committee, having considered that it was advisable to incorporate this institution, hereby recommend that this be done, and will present to you a resolution thereon. We feel that this will consolidate the institution and preserve it and its usefulness to posterity. We shall then be a responsible body with corporate powers, and shall be able to deal with others, and they will be able to deal with us, as under our present status they could and will not.

"In addition to other resolutions that will be presented to you in pamphlet form, I may perhaps be permitted to add the following viz.:

"A resolution to amend section 2 of article 4, by adding a sub-section (a) providing for the formation of a 'general branch,' which can be joined by persons who are not residents of any town where an association is in existence, as in many small camps, to admit mining men and others whose duties compel them to travel; this branch to be managed from the head office.

"The necessity for such a branch has been felt dur-

ing the year last past; and, subject to your approval, one is ready to be formed at once.

"In conclusion, I would suggest that you thoroughly discuss the question of proxies.

"Your executive have considered the question, but prefer that it should take a wider range of discussion, so that the whole of the Province may be represented in the reasonings adduced in support of, and in opposition to, the proposal. It is a matter upon which there is a great deal of feeling in the far-distant regions, where the expense of travelling—without considering the time involved therein—is very considerable indeed; for it will be clear to you that at the lowest possible estimate it costs at least \$100 for each delegate, or \$10,000 per 100 delegates—which number we have in our midst to-day.

"All of which is respectfully submitted on behalf of the Executive Committee.

(Signed) "JOHN KEEN, *President.*"

In response to a call from the Convention, Mr. J. B. Hobson, 1st vice-president, said:—

"A year has passed, and we meet again in general conference for mutual consultation and suggestion, that we may the better aid in the development of the mining industry upon which the future prosperity of our Province in a great measure depends.

"We are here once more to urge upon the Government and Legislature with enthusiastic energy and co-operative determination the necessity for adopting the remedial legislation asked for by the Provincial Mining Association to relieve the mining industry of many of the unjust and heavy burdens imposed upon it under the existing laws and regulations and to encourage the more rapid development of the vast mineral and placer mining resources of our Province.

"The work of the Association on behalf of remedial legislation shows clearly the fact that the chief work of this Association is an educational one, and it demonstrates that when public recognition is accorded to the validity of our position on mining questions success becomes attainable. Persistence and organization, with a good cause, make an invincible combination, and no association could have a nobler cause than ours. We stand for the rapid development of our vast mineral resources; for the converting of our Province into the greatest gold, silver, copper, lead and coal mining country in the world.

"No department of government could have a higher purpose than this, and that the Provincial Mining Association will in time prove of inestimable value in the upbuilding of the Province there can be no doubt.

"The future of this Association depends upon the co-operative enthusiasm of its members. Working together as to all propositions affecting our mutual interests, the power of this Association will be invincible so long as we ask for that which is right.

"I am confident that by united effort we shall succeed, and that the Mining Association cannot fail to have a beneficent influence on the mining industry, and will be an important factor in hastening the development of the vast mineral resources of the Province."

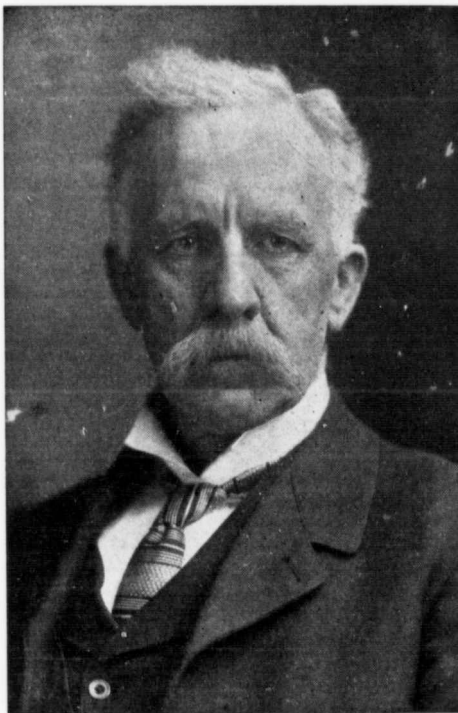
Mr. D. W. Higgins, 2nd vice-president, also delivered a brief address.

The President's report having been adopted, Mr. Galt, seconded by Mr. Phillipps-Wolley, moved the following resolution:—

"Resolved, That the Provincial Mining Association of British Columbia, in general convention assembled, desires to record its deep sorrow at the untimely loss of Captain Livingstone Thompson, one of the most useful and highly valued members of the Association, who met his death at the wreck of the Clallam, while

ing tribute to the deceased and referred to his usefulness as a member of the Association.

Mr. Phillipps-Wolley in seconding Mr. Galt's resolution, claimed the dead man as a personal friend and pointed out that the gallantry of our fellow-member's death was almost the only bright spot in the gloom of the Clallam disaster. Like the typical Irishman he was, it had been shown that Captain Livingstone Thompson fought his last fight to a finish, and dying with a smile on his lips, robbed Death of its victory. If the speaker could, as he believed he could, transmit



Mr. John Keen, re-elected President of the Provincial Mining Association.

with characteristic courage and energy endeavouring to keep the ship afloat;

"And be it further resolved, That this Association extends to the bereaved widow of the late Captain Livingstone Thompson its unanimous sympathy in the irreparable loss she has sustained;

"And be it further resolved, That the resolution be spread upon the minutes of this Association, and that a copy thereof be transmitted by the secretary to Mrs. Livingstone Thompson."

In speaking to the resolution, Mr. Galt paid a touch-

his own message to the place where his friend now stood beyond the bounds of the Known, that message would be one, not of condolence, but of congratulation and envy.

On motion of Mr. Lamb, seconded by Mr. Hobson, a similar resolution conveying the sympathy of the Association to the relatives of the late Mr. N. P. Shaw was also passed.

Mr. Martin (Rossland), seconded by Mr. Duke (Rossland), moved that the use of proxies be not allowed at the Conventions.

Mr. Higgins, seconded by Mr. Croasdaile, moved in amendment that proxies be and are allowed.

The debate was adjourned.

AFTERNOON SESSION—SECOND DAY.

The Convention was called to order at 2:20 p.m.

It was moved by Mr. Croasdaile (Nelson), seconded by Mr. Howse (Nicola):—

"That a committee from this Convention be appointed to wait upon the Government and endeavour to secure from them some assurance of remedial legislation, as recommended by this Association; and also to respectfully request the Government to give to the executive of this Association an opportunity from time to time to discuss with them the particulars of all intended legislation affecting the mining industry of this Province."

In moving the adoption of the resolution Mr. Croasdaile said it was necessary to obtain the sympathy of the Government if the Association wished to accomplish anything. If the Association could obtain the views of the Government on many important matters it would very materially assist the Association in arriving at conclusions which would be acceptable to the Government. He thought that the amount paid to the Government was not as much as it ought to be, viz., \$78,000. The mining community was quite willing to be taxed providing it was done in a fair and equitable manner.

The resolution carried unanimously.

On motion the President nominated the following committee to wait on the Government: The Hon. E. Dewdney (Victoria), Messrs. Brown (Revelstoke), D. W. Moore (Trail), E. Jacobs (Nelson), and H. Seaman (Rossland).

It was then moved by Mr. J. W. Collis, seconded by Mr. A. E. Howse, "That whereas at a meeting of the executive of the Provincial Mining Association at Rossland a resolution was passed recommending the Provincial Government to formulate without delay a policy for the opening up and development of all coal lands.

"And whereas, the Nicola and Similkameen coal fields are so situated as to be of great value to the smelting industry of Southern British Columbia.

"And whereas, by the opening up of the aforesaid coal fields an alternative source of supply of coal and coke would be created.

"And whereas, lack of transportation facilities is the sole reason that the said coal areas cannot be utilized for the benefit of the Province.

"Therefore, be it resolved, That this meeting of the Association respectfully urges upon the Provincial and Dominion Government to aid the construction of a railroad which will assist in the development and utilization of the said coal lands."

This motion was carried unanimously.

The amendments proposed by the Executive Committee to the Constitution and By-laws were then considered and passed with some further additions.

It was moved by Mr. Mortimer-Lamb, seconded by Mr. Croasdaile:

"That this Association hereby endorses the resolution recently adopted by the Associated Silver-Lead Mines of British Columbia, asking the Dominion Government to employ a zinc specialist to examine and make a careful study of the zinc resources of the Province as to ores suitable for spelter production and the best methods for their development and utilization together with recommendations as to available markets; and that the secretary be instructed to forward a copy of this resolution to the proper authorities."

The resolution was carried unanimously.

The following special resolutions of the Executive Committee were adopted as amended:—

"Resolved, That the Government and Legislature of British Columbia be respectfully requested to amend and modify the tariff fees chargeable on the incorporation, registration or licensing of companies, and for companies' free miners' certificates, in order to encourage the formation of companies having among their objects the development of the natural products of this Province."

"That this Association emphatically condemns the practice now in vogue of permitting appropriations for roads, trails and bridges to be under the patronage of the members of the various districts, and recommends that all such appropriations be submitted to the approval of the Government engineer or road superintendents in the various districts, who will always be subject to criticism in the Legislature."

"That whereas under Section 9 of the Mineral Act it is provided, among other things, that 'subject to the proviso thereafter stated, no person or joint stock company shall be recognized as having any right or interest in or to any mineral claim or . . . water right . . . unless he or it shall have a free miners' certificate unexpired. And that on the expiration of a free miner's certificate the owner thereof shall absolutely forfeit all his rights and interests in or to any mineral claim . . . and water right which may be held or claimed by such owner of such expired free miner's certificate, unless such power shall, on or before the day following the expiration of such certificate, obtain a new free miner's certificate:

"Provided that this section shall not apply to mineral claims for which a Crown grant has been issued":

"And whereas the above proviso fails to clearly protect the owners of water rights on Crown granted mineral claims, without the necessity of keeping up a free miner's certificate, which, in the case of a company, costs \$100.00 per year:

"And whereas the said proviso ought to be amended so as to protect the said water rights on Crown-granted mineral claims, as well as the mineral claim itself:

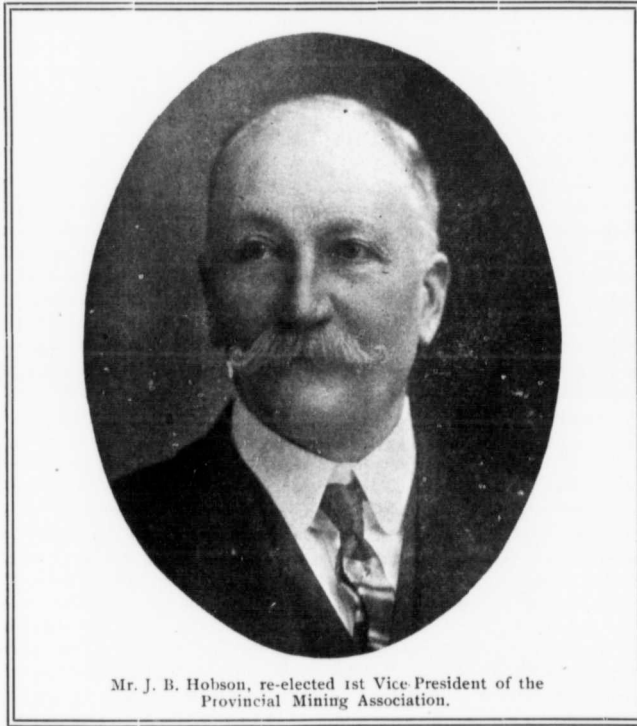
"Be it resolved by the Executive Committee of the Provincial Mining Association of British Columbia, assembled at Rossland by special call of the President, that the said proviso in Section 9 of the Mineral Act ought to be amended by adding thereto the words: 'Nor to any water rights or record, mining ditch, drain, tunnel or flume, held or used or intended to be held or used upon or in connection with the development of any such claim.'"

"Resolved, That the Government be urged to repeal all of Clause D of Section 127 after the word 'Notices,' in the seventh line of the said section, and all of Clause D in Section 133 after the word 'Notices,' in the seventh line, of the Companies Act, of 1897, Chapter 44; and all of Section 140."

"Whereas under the provisions of the Assessment Act Amendment Act, 1903, a tax of 25 cents for every acre and fractional part of an acre of land conveyed by a Crown grant of a mineral claim is directed to be levied, payable on the 30th day of June, immediately after the date of the Crown grant, and thereafter on the 30th day of June in each year. And whereas under the terms of this statute taxes for a whole year at the rate aforesaid are leviable and must be paid, even in

Act should be promptly enquired into by the Government, so as to provide full information to be laid before the Legislature at its next session, in accordance with the recommendation of this association at its convention in February, 1903."

"Resolved that the executive of the Provincial Mining Association of British Columbia urge such government as may be in power after the pending Provincial elections to formulate without delay a policy for the opening up and development of all coal lands: And further resolved that this executive suggests that, with respect to coal lands in Southeast Kootenay (not affected by any valid existing legal claim or right of any person or company), the Government retain the title to all such lands, and develop the coal measures



Mr. J. B. Hobson, re-elected 1st Vice President of the Provincial Mining Association.

cases where the Crown grant has issued only a day or two before the said 30th of June in any year and without taking into account the assessment work (or fees in lieu thereof) performed or paid. And whereas the said provision inflicts a great hardship upon prospectors and others interested in the development of mineral claims and in obtaining title thereto: Therefore, be it resolved that the said statute ought to be so amended as to make the said tax apportionable, and that no person should be taxed for any period of time prior to the date of the Crown grant."

"Resolved that the dissatisfaction experienced by the owners and operators of boilers by reason of the provisions of the Boiler Inspection Act render it highly advisable that the working of the said

therein contained by a system of leasing to actual operators; such leases to contain stringent conditions for proper equipment, development and continuous operation and for the full protection of the British Columbia consumers of coal and coke as to supply and price. And further resolved that the policy above suggested be extended to all coal and petroleum lands of the Province."

"In view of the embarrassed state of the finances of the Province, and the objections which have been raised upon this ground towards measures for the relief of the mining industry, and the fact that all demands for such relief during the past two years have been met by a counter-demand on the part of the Government then in power for a substitute whereby the

revenues of the Province would not suffer loss. Be it therefore resolved that this Association desires to re-assert that it has no wish that the mining industry be relieved at the expense of other industries, but, on the contrary, is now, and has always been, ready to pay its fair and equitable share of the taxation necessary for the economical and businesslike conduct of provincial affairs. In the opinion of this Association, natural resources of the Province, and not industry, should bear the chief burden of taxation. The enormous areas of valuable land now held under a taxation which is practically insignificant should be made to pay its proper share of the burden, and thus relieve industry. This Association therefore respectfully recommends to the Government the advisability of enquiring into and adopting the Australasian or some other equitable and uniform system of taxation on land, including mining lands, that will tend to increase the revenue, foster the settlement of the lands of the Province and encourage the development of its great mineral and other resources. In view of the vast areas of land held in this Province it is believed that the revenues from such a system of taxation will more than meet the annual deficit of the Province, and will materially relieve the mining industry."

"That whereas the Water Clauses Consolidation Act, 1897 (R. S. B. C. Chap. 190) has been found to be ambiguous, defective, and inequitable in many respects, and requires amendment speedily in the following particulars:

"(a.) To remove the ambiguity created by the definition of 'unrecorded water' in Section 2, when read in connection with Section 18:

"(b.) To repeal Section 11, Sub-section 2 (b), when the applicant is the owner of a Crown-granted mineral claim and the water is to be used to develop such claim:

"(c.) To require applicants for water to advertise their applications in some local newspaper in addition to posting the notices required by the Act:

"(d.) To abolish the existing dual jurisdiction conferred upon gold commissioners and assistant land commissioners, and to vest the sole jurisdiction in the gold commissioner of each district:

"(e.) To provide for payment of the costs of the successful party or parties in disputed cases, by the unsuccessful party or parties:

"(f.) A provision enabling the prospector, mineral or placer miner to secure the quantity of water required to operate his mineral or placer claim by simply recording the same, instead of being compelled to pay the high rates now charged for water privileges, which charges are entirely beyond his means; and entitling him to hold said water rights."

"(g.) To amend the provisions of the Act relating to power companies so as to remove several doubts which exist under the existing provisions of the Act:

"Be it therefore resolved by the Executive Committee of the Provincial Mining Association of British Columbia, that the said Water Clauses Consolidation Act, 1897, and amending Acts require careful revision and amendment, and that the said Act ought to be

promptly amended in the particulars above set forth."

The Convention then adjourned until 10 o'clock on Wednesday morning.

THIRD DAY—WEDNESDAY, FEB. 24, 1904.

The Convention was called to order at 10:15 a.m.

Mr. Morley, seconded by Mr. Howse, moved as follows in amendment to a previous motion.

"That the following by-law be added under the head of 'Proxies,' 'A delegate may appoint a personal proxy being a member of the same branch. He shall represent one vote only. No other form of proxy shall be admissible.'"

After some discussion the amendment carried.

Mr. J. Hunter, superintendent of the E. & N Railway, offered to provide a special train for delegates desiring to visit the Mount Sicker mines.

On motion of Mr. Hobson, the offer was accepted and a vote of thanks tendered the railway company by the Convention.

A committee of five, consisting of Messrs. Hopp, Crossdaile, Gwin, Duke and Weir, was then nominated by the chair to investigate and report on Resolution No. 20 of the Executive Committee.

Mr. McMillan moved and Mr. Smith Curtis seconded the following resolution:

"That whereas the customs duties upon crude oils suitable for the concentration of low-grade ores, constitute a serious charge upon industry:

"Whereas suitable oils for the said purpose are not produced and cannot be obtained in Canada:

"Therefore be it resolved, that this Association respectfully urges the Dominion Government to take immediate steps to allow the free importation of such oils for a period of five years, or until such oils are produced in Canada."

The motion was carried.

Mr. Kirby then moved, seconded by Mr. Duke, as follows:

"Resolved, that all mining machinery and mine supplies be admitted free of duty in all cases, except where an article of quality equal to the imported article is made and sold in Canada at the same price at which the foreign article is sold to the foreign home consumer."

Speaking to the motion, the mover said the duty on mining machinery constituted one of the heaviest burdens imposed on the mining industry of the Province.

Mr. Findlay said that the words "of quality equal" were subject to many interpretations, and they might lead to discrimination against Canadian goods.

Mr. Phillipps-Wolley enquired whether the phrase "mining supplies" included farm produce. The miner wanted the farmer's support. If he got it he must pay for it by supporting the farmer. The farmer was a little afraid that the miner wanted the taxes taken off his industry without much caring who shouldered them. The farmer already bore a larger share of taxation in proportion to his profits than anyone else, and the speaker objected to any measure which would tend to deprive Canadian producers of their fair share of the markets created by Canadian mining industries.

Mr. Hobson said he found he could get all the supplies he wanted in British Columbia.

Mr. Lockyer said there was a provision in the Dominion statutes which allowed for the refund of duty paid on mining machinery which could not be, and was not, manufactured in Canada.

Mr. Hopp, of Cariboo, stated an instance where he had been unable to secure such a refund.

Mr. Donald G. Forbes remarked that a substantial refund had been made in the case of the Silver Cup mine.

Smith Curtis said he did not think it would be a difficult matter for the Government to decide the question of quality. If the Government did err, he thought they would err on the side of the Canadian manufac-

view with the Hon. the Premier, Hon. R. G. Tatlow and the Hon. R. F. Green, who met them in a most friendly spirit and expressed their interest and cordial sympathy with the work of the Provincial Mining Association. The Government said they would be always willing to give their earnest consideration to all recommendations made to them by the Association.

"Realizing the great importance of the question of replacing the 2 per cent. mineral tax and the Crown-granting of placer claims, your committee feel that they are justified in asking that they be made a permanent committee with a view to obtaining full information relative to these matters and to their ascertaining whether it is practicable to submit proposals in this connection that will be acceptable to both the Executive Committee of this Association and the Government, the latter having clearly stated its readiness to carefully consider any alternative to the mineral tax.

"The Hon. the Premier desired that this Convention be informed that whilst the Government fully appreciates the kind thoughtfulness shown in inviting them to be present at the meetings of the Convention, they thought it would be better that they do not attend, so that the Convention may be free to discuss without reserve all matters coming before it.

"E. DEWDNEY, *Chairman.*"

The report was received, the motion to adopt being defeated.

The Rules having been, on motion, suspended to permit of the election of officers,

Mr. Hobson said: "Mr. Chairman and gentlemen: I rise to place in nomination for the office of president of this Association a gentleman whose name is in the thoughts and on the lips of every delegate in this Convention; a man who will never tell you to swap horses in the middle of the stream; a man who has served you earnestly and faithfully for the past year. His name I give as president of this Association and on your behalf pledge to him your love, your respect, your admiration and your unflinching support. I place in nomination for the office of president of this Association the name of John Keen, of Kaslo." (Cheers.)

Mr. Keen left the chair, requesting Mr. D. W. Higgins to take his place. Nominations for the presidency being declared closed, Mr. Keen was elected amid great applause.

Mr. Brownlee nominated Mr. John Hobson for 1st vice-president, and Mr. Hobson was elected by acclamation amid great applause.

Mr. Rowland Machin was elected 2nd vice-president by acclamation.

The following were elected members of the Executive Committee representing electoral districts: Atlin, J. H. Brownlee; Cariboo, John Hopp; Cowichan, P. J. Pearson; Grand Forks, George W. Romberger; Nelson, Leslie Hill; Rossland, E. B. Kirby; Revelstoke, W. M. Brown; Vancouver, R. P. McLennan; Victoria, Hon. Edgar Dewdney; Yale, A. E. Howse, and Ymir, D. W. Moore.

The following resolution was then moved by Mr. Smith Curtis, seconded by Mr. A. J. McMillan and carried:



Mr. Rowland Machin, elected 2nd Vice-President of the Provincial Mining Association.

turer. British Columbia, in addition to importing far more per head than the other parts of Canada, paid a higher tax by 50 per cent. He thought the words "mining supplies" might be changed to "explosives," as there was a monopoly in the powder business in the Province.

On motion a committee of three—Messrs. Kirby, Forbes and Hopp—was appointed by the Chair to ascertain and report on the status of the tariff in regard to mining machinery.

AFTERNOON SESSION.

After re-convening at 2:15 p.m. the committee appointed to interview the Provincial Government presented the following report:

"Your committee beg to report having had an inter-

"Resolved, That this Convention is in favour of the Dominion Government appointing to the cabinet a Minister of Mines in view of the fact that the annual mineral output of the Pacific Coast of Canada is now over \$30,000,000, and is rapidly increasing, and it respectfully suggests that the Minister of Mines be a representative from the Pacific Coast of Canada."

Mr. Smith Curtis moved, and Mr. McMillan seconded the following resolution:

"Whereas there is general complaint of wholly unnecessary and prolonged delay in the issue of Crown grants for mineral claims after proper application therefor has been made, whereby great inconvenience and often loss are suffered by intending sellers and buyers of mining properties.

"Therefore be it resolved, that the Provincial Government be requested to insist upon its officials issuing and forwarding Crown grants for mineral claims within fifteen days after proper applications therefore have been received at Victoria."

The resolution carried.

It was moved by Mr. Machin and seconded by Mr. Findlay:

"That as steamship companies in British Columbia at present are prohibited by law from carrying explosives on passenger steamers; that as on every steamship route in British Columbia there are no exclusive freight carriers, and that as this condition of the law as at present acts as a severe hardship to mine operators and prospectors, who must use explosives in their work;

"Resolved, that in the opinion of this Convention the law should be amended so as to allow of the carriage of explosives under reasonable restrictions and that we believe could be done by the provision of a properly safeguarded magazine."

This resolution was read bearing a note of the Committee on Resolutions saying: "We advise that this resolution be laid on the table."

Mr. Machin spoke in favor of this resolution saying that it was intended to remedy a great hardship to the prospectors. Hunters, sportsmen, etc., were allowed to carry all the explosives they required, but the prospector was prohibited.

Mr. Findlay supported the motion.

Mr. Sheldon Williams also strongly supported the resolution. The motion was carried.

Mr. Smith (Vancouver) moved the rules be suspended and the Convention proceed to name the place for holding the next Convention.

Mr. Findlay seconded the resolution.

Mr. Hobson, seconded by Mr. Machin, moved that the next Convention be held at Vancouver.

Mr. Machin was strongly in accord with the motion.

Mr. Murray said the Convention should be held in Victoria for business reasons in order to conveniently meet the members of the Legislature.

Mr. Lockyer supported the motion and said he had a very cordial invitation from the Mayor and the Tourist Association of Vancouver promising the Association a hearty reception.

Mr. Findlay supported the motion.

Mr. Phillips-Wolley opposed the resolution on the ground that it stultified a previous one. It had been resolved that the Convention should meet whilst the House was in session. It was now proposed that the Convention should meet at the time the House sat in a place where the House was not sitting. As the Association's prime object was the transaction of business, this was absurd.

Mr. Sheldon Williams supported the motion on the grounds that the Association was an educative one. Vancouver had a population of 35,000 people and he believed 32,000 did not have any idea of the value of the mining industry to the Province.

Mr. W. Adams (Soda Creek) moved an amendment that the next Convention be held in Victoria. He had moved an amendment to the Constitution for the Convention to sit during the meeting of the Legislature.

Mr. Smith spoke to the motion and said it was purely for business reasons he asked that the next Convention be held in Vancouver.

The original motion carried.

A motion to hold a mid-summer Convention in Nelson was defeated.

FOURTH DAY—FEBRUARY 25, 1904.

MORNING SESSION.

The Secretary read the following letter, which was ordered to be filed and spread on the minutes:

"76 Cook Street,
"Victoria, Feb. 24th, 1904.

"The Hon. Secretary, The Provincial Mining Association of British Columbia.

"Dear Sir: Will you kindly convey to the members of the Provincial Mining Association of B. C. my heartfelt thanks for their kind message of sympathy.

"It is a great comfort to me in my sorrow to know that my dear husband is so universally mourned, especially by the Association in which he had always taken such a keen interest.

"He was indeed a brave, good man, and his death was in keeping with his whole life. I am proud of the privilege of bearing his noble name.

"Yours sincerely,

"EDITH LIVINGSTONE THOMPSON."

The committee appointed to report on the status of the tariff in respect to free entry of mining machinery and supplies presented the following report:

"The special clause of the tariff affecting mining is 555 was designed to accomplish this end;

"Whereas it was the evident intention of the framers of the tariff to specially protect and favour the pioneer and infant industry of mining, and the above par. 555 was designated to accomplish this end;

"And since an over rigid construction of this clause by the Department of Customs has nullified this intended relief and thus imposed severe burdens upon the mining industry in British Columbia;

"Therefore the Government at Ottawa is respectfully requested to introduce such changes in the law as will permit the free import of all machinery not obtainable of equal quality in Canada, and imported exclusively for the mining, smelting and reduction of ores, coals and other mineral products."

The chairman of the committee appointed to report on Resolution No. 20 of the Executive Committee reported as follows:

"I beg to report on behalf of your committee appointed to report to the Convention concerning the charge of inefficiency made against the Bureau of Mines, that we do not find that the severe condemnation of the Bureau of Mines contained in clause 20 of the special resolutions passed by the Executive Committee is at all justified by any evidence that came before us.

"We do find that the Provincial Mineralogist has too large an area to cover to always secure a full and proper investigation of new districts."

Mr. Higgins asked the President to read the clause 20 referred to. The President read:

"Whereas there has long been an increasing dissatisfaction with the relation of the Provincial Bureau of Mines to the mining industry, the complaints most prevalent being to the effect that the conditions and resources of various districts have not been fairly or properly presented, and that all efforts made hitherto by mining men towards the betterment of mining conditions have met with opposition instead of assistance from this office, and that moreover, it is complained that the work of the Bureau has apparently been restricted to the collection of statistics, while the industry has not received that assistance in the way of expert scientific study and reports on mineral districts which was expected from the office, and which was the main object of its creation, as set out in Section 7 of the Bureau of Mines Act, 1897.

"And whereas it appears to this Association that the co-operation which should exist between the Bureau and the mining community is now entirely wanting, and that the main object of its creation has been thus defeated.

"Be it therefore resolved, that, in the opinion of this Association, a radical change should be effected in the constitution and conduct of the said Bureau."

Mr. Croasdaile, seconded by Mr. Hobson, moved the adoption of the report.

It was moved in amendment by Mr. Kirby, seconded by Mr. Collis, that the report be merely received.

Mr. Kirby, speaking to the amendment, said that he was sorry that this question had come up. It was a disagreeable thing for him to enter into a discussion which might be construed into a personal attack. He was sorry that the friends of the Department of Mines had forced this discussion upon the Association. The report inferred that the committee had fully investigated the whole question. He had, however, been informed that there had been no such investigation. He had never appeared before the committee, as no notice has been given as had been promised. The Execu-

tive Committee, by the original resolution, simply stated that the Bureau of Mines had failed in the object for which it was created. There was no criticism offered concerning this Government or any other Government. The attention of the Government was called to a widespread dissatisfaction. The men in the scattered mining districts looked to the Association to do this for them. It was an unpleasant duty to have to perform, but in the Executive Committee the matter was carefully considered, or as they say in the churches it was even prayerfully considered. To adopt this report meant that the committee had since yesterday afternoon fully investigated the matter, and that the Executive Committee of last year was wrong.

Mr. Hobson said that when the matter came before the Executive Committee it came as a personal attack upon the Provincial Mineralogist. He and two other members of the committee, Messrs. Lamb and Hill, had opposed it. The Provincial Mineralogist might have made mistakes. He might have pursued the wrong policy, and he did not deny that the wrong policy had been pursued. But the Provincial Mineralogist was responsible to the Minister of Mines. The Provincial Mineralogist should confine his attention entirely to reporting on physical features. He instanced the benefit which would result from this policy as evidenced by Dr. Dawson's reports.

Mr. Sheldon Williams said that there was no attack upon personal grounds. He was in favor of recommending the adoption of the system in vogue in California and Ontario. There experts were employed to report on special districts when occasion arose.

Mr. Collis said he had gone fully into the matter. He did not speak in any spirit of animosity. He had not met a man who regarded the report of the Provincial Mineralogist as a guide in the field or for information. The mission of the official was to carefully investigate from a scientific standpoint and then record the result. But the present Provincial Mineralogist had gone outside of this and made pessimistic reports which worked to the detriment of various camps. He quoted examples of this regarding the Aspen Grove camp, Nicola district, and compared them with reports upon mines made by a mining engineer from Butte.

M. E. Jacobs thought the resolution was altogether too sweeping. While not an engineer nor a practical mining man, yet he had made a very careful study of the mining industry in the Interior from a news standpoint. He had found Mr. Robertson very obliging in furnishing information. Mr. Jacobs reported instances in which attempts had been made to mislead the Provincial Mineralogist.

Mr. Mortimer-Lamb said that the discussion was getting away from the point. The question was whether or not the Bureau of Mines was efficiently conducted. It was certainly not efficiently conducted. Reports which came out six months after they were due were useless. He favoured the system adopted by Mr. Carlyle in issuing bulletins. Mr. Robertson took too much the attitude of a consulting engineer rather than that of a practical geologist. For example, Mr. Carlyle's report upon Trail Creek had done much

to attract capital to that district. The Association was attacking a system and not an individual.

Mr. A. B. Clabon thought the discussion had done good, and he suggested that the resolution be amended so as to recommend that the reports in future be altered, and made similar to those of the Dominion.

His Honour the Lieut.-Governor here entered, and was received with loud applause on taking a seat on the platform.

Frank Weir referred to the fairness of the report of Mr. Robertson on the Atlin district. The miners had looked for some "booming." They did not get it. The report of the Provincial Mineralogist differed a little from that of the Dominion, but the former had more nearly described actual conditions.

Mr. Galt went into the history of the matter as brought before the Executive Committee. When it first came up at a meeting in Victoria in April, 1903, the various members referred to the objections. The Executive Committee was then making representations to the Government. It was said that the Provincial Mineralogist was spreading the report that these recommendations were absurd and impractical. The Executive Committee waited upon the Premier and the Provincial Mineralogist as the only expert adviser of the Government. They plainly made known that they wished to ascertain Mr. Robertson's attitude on the recommendations. One of the instances given at that time was this reference to Aspen Grove, as given by Mr. Collis. It was pointed out that a sweeping statement as to a district or a few claims examined was unfair. In the early days of Rossland, had Mr. Robertson examined Columbia and Kootenay Mountain only he would have condemned the whole camp.

Referring to the fact that later in the report he held out that Nicola district was a good field for prospectors, Mr. Galt pointed out that Mr. Robertson's references to what was in sight did not warrant this inducement being held out. He went into the matter as it came up, afterwards at the meetings of the executive. When the Poplar Creek matter came up the Provincial Mineralogist was commended for his attitude there in not booming it, and in consequence the resolution was considerably modified. He had been assured by prospectors and others that our mining districts always dreaded a visit from the Provincial Mineralogist.

Mr. Howse said he was responsible for the recommendation, and the charge that it was a personal attack was erroneous. It was not the man but his methods, and the gentleman who had stated that he was opposed to the resolution was the seconder of it. It took over half a day to discuss. There was never a complaint made to the Province on the reports of Mr. Carlyle. He had intended giving his views before the committee, but he had no word when or where they were going to meet. He then referred to the report on a claim on Kennedy Mountain by Mr. Robertson, which was entirely wrong and he spoke of his own personal knowledge. Let the reports be of the class that will induce people to come to British Columbia and see for themselves. Reforms in the Bureau were absolutely necessary.

Mr. Smith Curtis thought the Association should have the courage of its convictions. The Bureau of Mines was organized to promote the mining industry in British Columbia. It was to help the prospector and the mine owner, and should induce capital to come in. He would like to know if one dollar had been brought into the country by the Bureau of Mines. He asked if a single prospector had derived any benefit by reason of the Bureau. In the report of Mr. Miller for Ontario, the prospector was given direct instructions as to where the mineral should be looked for in a formation. There has been no such information given in British Columbia unless it might be in Cariboo. When Atlin was covered the residents objected to the report. The Mineralogist never went into a district and made a careful study geologically of it. If he could not cover the province the Provincial Mineralogist should do thoroughly the district he did examine. But at present the Mineralogist's services are not in demand in any locality, but rather the various mining communities would prefer that he should stay away. The presence of "ifs" and "buts" in the reports always worked against them. In Rossland camp they needed a thorough examination of the ground. This could be done in the winter, as there were miles of underground work. The speaker referred to the way in which the Ontario Bureau of Mines was worked, where experts were sent into new fields and the facts published broadcast to the world. Why did the Bureau of Mines not investigate the smelting conditions? Very few miners go to the Provincial Bureau of Mines for information. He considered that a new system should be devised. The Bureau of Mines must be reorganized and the staff increased. The reports should come out earlier. The government statistician, Mr. Gosnell, should gather the statistics and thus relieve the Provincial Mineralogist of that duty.

Col. Prior said that as there was no member of the Government present and having been Minister of Mines he might afford some information. He said he agreed with what Mr. Hobson had remarked. Without money the Department of Mines could not render the services required. Mr. Robertson was the right man in the right place. The Minister was responsible for the acts of his subordinates. It was the system which was wrong. When he took office he found Mr. Robertson doing a clerk's work. He had a deputy minister appointed to take this office work off his shoulders and allow Mr. Robertson to go into the field. There should be half a dozen Provincial Mineralogists in the Province. He thought that the Mineralogist should confine his reports to formations and physical conditions. It was nearly impossible to get monthly bulletins issued. There were those who opposed it also as the returns were so small compared with those of Australia and other countries. He had personally been highly pleased when an Association like this was formed of expert men from whom information could be obtained. Any member of a government would be a fool who would not appreciate the benefit to be derived from this Association.

Mr. C. F. Jackson spoke and advised caution. In

his opinion the Bureau of Mines was not established in order to "boom" mines. (Hear, hear.)

Mr. Kirby then moved the following amendment to the resolution, which was seconded by Mr. Hobson:

"Resolved, That the Government of British Columbia respectfully be requested to consider the question of improving the efficiency of the Bureau of Mines and bringing it into closer touch with the mining industry, and particularly to so improve the nature of its operations and its reports as to assist the mining industry by scientific and geological information, and to avoid anything which may be misconstrued as affecting the commercial prospects and claims of mining districts."

His Honour the Lieut.-Governor, who on rising was greeted with cheers, briefly addressed the Convention. He said he had read the reports of the previous day's proceedings with interest. He was particularly struck with the kind feeling displayed to the East of Canada by the Association in this debate on tariff. He considered such conventions were well calculated to educate the Eastern people just as he considered the Western people could learn many useful matters from the East. He hoped the proceedings would be widely read there and do the good they deserved to. He closed by hoping that Providence will bless their work.

The Lieut.-Governor's remarks were received with cheers.

AFTERNOON SESSION, THURSDAY, FEB. 25TH.

The Convention was called to order at 2.30 p.m.

The Honorary Treasurer presented his report and the financial statement, as follows:—

"Victoria, B.C., 24th February, 1904.

"To the Second Convention of the Provincial Mining Association.—"

"Gentlemen:—Herewith I beg to hand you a statement of your accounts which have passed through my hands since the last Convention.

"I have taken the trouble to give them fully in detail, so as to show the direct source from which the cash was received and every channel through which it was disbursed, the vouchers of which have all been passed through the book of your Audit Committee. The vouchers and receipts are all on file in your office.

"The books have been balanced and ruled off in conformity with this statement.

"You will observe that the large items of expenditure were practically incurred for the benefit of the last Convention and in salaries up to August last, since which time the total cost of carrying on the business of the Association has been under four hundred (\$400) dollars, or less than seventy (\$70) dollars per month; this including all expenses and the cost of calling you together to this Convention.

"I estimate that the cost of conducting your business in future on a sound and satisfactory basis will not exceed one hundred (\$100) dollars per month.

"All of which is respectfully submitted.

"H. MORTIMER-LAMB."

BALANCE SHEET MADE UP TO 24TH FEBRUARY, 1904.

RECEIPTS.

To loan, Bank of Montreal.	\$1,000 00
Less paid off	150 00
	\$ 850 00
T. R. Cusack, Bal. Con. Proceedings.	358 92
Donations—	
Brit. Am. Dredging Co.	\$ 100 00
B. C. Warnick & Co.	100 00
Provis. Executive, Victoria.	142 35
War Eagle, Rossland	25 00
Centre Star, Rossland	25 00
Cariboo Hyd., Bullion	100 00
Granby Smelter.	250 00
Aspen Grove Branch.	10 00
Coutlee Branch	14 00
Camp McKinney Branch	30 00
Stanley Branch.	15 00
H. Mortimer-Lamb	100 00
Rossland Branch	174 00
Ashcroft Branch	32 50
Col. Meinecke, Victoria	10 00
Revelstoke Branch, per W. M. Brown	40 00
	\$1,167 85
Emblem account.	14 75
C. P. R. telegrams	116 50
Local Organizations, Annual Dues—	
Ashcroft.	\$ 61 50
Atlin	11 00
Bullion	117 00
Barkerville	16 48
Camp McKinney	20 50
Chemainus.	21 00
Fairview	27 50
Golden	40 50
Islands	11 00
Ladysmith	10 00
Kaslo	18 50
Nelson	72 50
Nicola—Aspen Grove	26 00
Nicola—Coutlee	14 00
150-Mile House	10 50
Olalla	5 00
Poplar	9 00
Phoenix	18 00
Quesnel Forks	4 50
Quesnel Lake	10 00
Rossland	150 00
Soda Creek	17 00
Stanley	12 50
Trail.	17 50
Trout Lake	26 50
Vancouver	153 00
Vancouver Clearing House.	3 50
Vernon.	16 50
Victoria	327 50
Gen. membership.	4 00
	\$1,252 48
Sundry accounts payable	293 55
	\$4,054 05

EXPENDITURE.	
By officers' bonds	\$ 30 00
Exchange on cheques	6 75
Distribution of Convention proceedings	211 03
Janitor	80 95
Office expenses	222 33
Printing	236 75
Stenography and typewriting	340 60
Stationery	390 60
Stamps	67 58
Telegrams and messengers	125 43
Honorarium, H. Mortimer-Lamb, for work, provis. organization	150 00
Salaries—	
A. L. Belyea, secretary	410 83
R. E. Brett, secretary	216 67
Mostyn Williams, assist. secretary	225 00
A. M. Jones	220 00
H. Mortimer-Lamb, treasurer	150 00
Travelling Expenses—	
A. M. Jones, secretary	91 50
Cash in Bank of Montreal, Victoria	878 03
	<u>\$4,054 05</u>

"Victoria, B.C., Feb. 25th, 1904.

"I have examined the above accounts and find them correct.

(Signed) HENRY B. THOMPSON,
Audit Committee.

ASSETS.	
Office furniture	\$ 75 00
One new Remington typewriter	120 00
8,000 copies Con. Proceedings at 5c., if they can be dealt with by the Convention	400 00
Cash on hand	878 03
Balance of liabilities over assets	262 29
	<u>\$1,735 32</u>

LIABILITIES.	
Bank of Montreal, loan	\$ 850 00
Interest accrued (estimated)	100 00
T. R. Cusack, balance Con. Pro.	358 92
C. P. R. telegraphs	116 50
Office rent	45 00
Times P. & P. Co.	20 00
H. P. McDowell	75
Kamloops Standard	4 00
A. M. Jones, salary, 5½ months at \$40.	220 00
A. M. Jones, office supplies and for notices of Convention	39 95
	<u>\$1,735 32</u>

DISTRIBUTION OF CONVENTION PROCEEDINGS (DETAILS).

To cost of printing (Cusack)	\$1,608 92
To express charges	26 46

To shipping tags	65
To commissions on advtg. (Potts)	30 00
	<u>\$1,666 03</u>
By sale, 5,000 copies to Prov. Gov	\$1,250 00
By sale, 50 copies to J. B. Hobson	5 00
By Advertisements:—	
Granby Con.	25 00
Hamilton Powder Co.	50 00
Schaw-Batcher Co.	25 00
J. Hendy Machine Works	100 00
Balance, 8,000 copies on hand	211 03
	<u>\$1,666 03</u>

It was reported that two contributions had been received since the accounts were audited, \$50 from Mr. Hobson and \$50 from Mr. Kirby.

The report was adopted.

The resolutions passed by the Convention last year were then re-affirmed with the following amendments:

The two per cent. mineral tax—It was moved by Mr. Hobson, seconded by Mr. Sherk: "After the word 'capital,' in the last line, to add the following: 'That the Executive Committee be instructed to consider and recommend to the Government some alternative tax in lieu of the two per cent. tax.'"

It was moved by Mr. Hobson, seconded by Mr. Brown, "That the resolution relating to Crown grants of placer claims be re-affirmed and amended as follows: By striking out the word 'serious' on line 14 and substituting therefor the word 'prompt,' and by striking out the words 'above mentioned,' on line 15."

Mr. James Moore addressed the Convention at some length, as a prospector of nearly fifty years standing and a pioneer miner of the country, on the subject of gold mining in Cariboo. His remarks were attentively listened to and most enthusiastically received, the delegates after giving three cheers for the speaker, singing "For he's a jolly good fellow."

The proposed amendments to the Placer Mining Act were then confirmed with one change suggesting that the tax per acre on Crown-granted claims be placed at the rate of 75 cents instead of 50 cents per acre, a remission of one-half being given when work to the equivalent of \$500 is shown to have been spent on such claim in any one year.

It was moved by Mr. F. I. Clark and seconded by Mr. Machin, that,

"Whereas the geological reports of the Department of the Interior include much valuable matter pertaining to the mineral resources of British Columbia;

"And whereas said reports are not so generally distributed as their importance would warrant;

"Therefore be it resolved, That the Provincial Department of Mines be urged to take such action as may be necessary to place the said reports or a summary of the same at the disposal of the prospectors of British Columbia."

The resolution carried.

It was moved by Mr. Clark and seconded by Mr. Machin:

"Resolved, That this Convention would respectfully urge upon the Government of the Dominion of Canada the desirability of hastening the establishment of the national mint, an appropriation for which has been made by parliament, in order to further stimulate and encourage the production of refined gold and silver in Canada.

"And be it further resolved, That copies of this resolution be forwarded to the members of the Dominion cabinet and British Columbia representatives in Parliament."

Mr. Clark explained that the agitation three years ago for the establishment of a mint began in this province. He thought steps should be taken to establish such an institution now.

Mr. Hobson supported the resolution. It was hardly fair that the gold produced in the country should be minted elsewhere.

Mr. Sherk thought that the mint should be established in British Columbia.

Mr. Smith Curtis did not care so much where the mint was so long as the Government made provision that the gold should be taken at its full value where it was refined.

The resolution carried.

Senator Templeman then addressed the Convention and said he was thoroughly in accord with the idea that Canada should have a mint. He had said so before the last election, and was one who believed in living up to pre-election promises. The Dominion Government had not changed its policy at all in this matter. There had been some difficulty of obtaining a site in the city of Ottawa. The mint, however, would be built in Ottawa. From a commercial standpoint there was no profit in coining our own gold and silver, but on a broader ground it would pay Canada to have a mint, and have its own \$20 gold pieces. With reference to the geological reports mentioned in the former resolution, he had learned from officials that there were many volumes of back numbers at Ottawa. He did not know why these should not be distributed among the people who most needed them. If a compendium was required of these reports, he would relieve the local Government of the task of preparing it. He would assure them that if this was required he would have it done at Ottawa, thus relieving the Province of the Work.

A vote of thanks was tendered Senator Templeman, a resolution being also passed requesting him to carry out the undertaking he had made in reference to the geological reports at as early a date as possible and that the Executive Committee prepare a list of documents required and communicate with the department.

A resolution was also passed instructing the Executive Committee to take the necessary steps to incorporate the Association.

Votes of thanks were tendered the Mayor and Corporation of the City of Victoria and the Executive Committee serving during last year.

After the singing of the National Anthem the Convention adjourned *sine die*.

At a meeting on the 26th of February of the members of the Executive Committee representing electoral districts, the following were added to the committee representing classes:—

Class I.—Prospectors, Miners and Smelter Workmen.—H. G. Seaman, prospector and miner, Rossland; Jos. Moore, prospector and miner, Cariboo; Kenneth Martin, miner, Rossland; J. W. Collis, prospector, Nicola; H. Heidman, miner, Phoenix.

Class II.—Mine Managers and Superintendents of Mines.—S. F. Parrish, general manager Le Roi mine, Rossland; H. E. Newton, manager Godman Syndicate, West Coast Vancouver Island; C. H. Dickie, manager Richard III. mine, Mount Sicker; C. Livingston, general manager Tyee Copper Co., Mount Sicker; T. J. Smith, Nicola Coal Co., Vancouver.

Class III.—Mining Engineers and Smelter Managers.—A. C. Flumerfelt, Granby Co., Grand Forks; J. J. Campbell, Hall Mining & Smelting Co., Nelson; F. Keffer, B. C. Copper Co., Greenwood; T. Kiddie, Tyee Copper Co., Ladysmith; H. C. Bellinger, Northwestern Smelting & Refining Co., Crofton.

Class IV.—Business and Professional Men.—A. C. Galt, barrister, Rossland; Geo. Taylor, bank manager, Victoria; Campbell Sweeny, bank manager, Vancouver; H. B. Thomson, manager Turner Beeton & Co., Victoria; Smith Curtis, barrister, Rossland.

Class V.—Farmers and Others.—C. Phillipps-Wolley, North Saanich; the Hon. Sentaor Reid, Barkerville, Cariboo; H. E. Croasdaile, Nelson; C. F. Jackson, Vancouver; Martin Burrill, Grand Forks.

Mr. H. Mortimer-Lamb was re-elected honorary treasurer, and Mr. E. Jacobs was elected secretary for the ensuing year.

CORRESPONDENCE.

(We are not responsible for the views of our correspondents.)

THE DE KEYSER PROCESS.

TO THE EDITOR:—Kindly allow me space in your esteemed paper to reply to an article upon electro-cyanide process in your paper, also to refer to prospectus received. Allow me to say that I have had many years' experience in cyanide treatment of battery ores in different countries and understand thoroughly the profession of a cyanide assayer, etc. Some three years ago I was called in by friends in Vancouver to see a model of a machine invented by Mr. DeKeyser to save fine gold. At the very first sight I condemned this machine, as I know by sad experience gravel, etc., cannot be passed through quicksilver. To my surprise I read Mr. DeKeyser had now acknowledged that he had made a failure of that machine, but had invented an electric cyanide process. Well, I did not scoff at this idea until I read from your article in the last RECORD and also re-

ceived a prospectus. To my surprise in this prospectus I notice that Mr. DeKeyser prints exactly a counterpart of letters received from his other undertaking, and leads innocent people to believe that these gentlemen who gave these testimonials, etc., three years ago for a totally different machine, are really testimonials for a machine that has had as yet no practical test and has only reached the experimental stage as the prospectus says the machine is only now ready to receive supplies of ore. Mr. Editor, are people in Vancouver mad that they cannot see for themselves that testimonials and recommendations received over three years ago cannot possibly have anything to do with the present promotion. How do the directors or Mr. DeKeyser explain this. I am positive in my assertion that the machine invented by Mr. DeKeyser years ago and which he put upon the dredge at Quessel had nothing to do with cyanide or the present process.

To discuss the present process, in my experience of cyanide as a dissolvent of gold, I learn that cyanide is a slow dissolvent of gold, and especially so when gold is usually associated with sulphides in battery or any other crusher sand. Of course I acknowledge that gold leaf can be dissolved in a testube in a very short time when agitated, but in my experience of years of testing, the least time I ever got perfect exaction by leaching even with agitation and burning was about twenty hours. Electricity does not hasten dissolving of gold but agitation does, owing to the fact that by agitation oxygen is introduced which hastens the action of cyanide upon gold. Now, Mr. DeKeyser wishes us to believe that he can dissolve the gold during the time that the battery would crush it in the mortars and discharge it through his ridiculous cylindrical amalgamation. I say it will not and can prove it by his own machine at any time.

Cyanide has been known to be a dissolvent of gold for a century or so, but the difficulty was to find a commercial process of precipitation. The McArthur Forrest Company solved this difficulty by introducing the zinc shaving process. They patented their process all over the world and extracted a 10 per cent. royalty upon gross output of all plants using the zinc shaving process. Chemists then set to work to overcome this unjust tax and charcoal and electric cyanide precipitation was introduced, neither process ever reaching perfection, and in my opinion, never will. I have met several dismal failures in the cyanide amalgamating process, and you have not got to go far to see it, as the process was tried at the Fern mine near Nelson and proved a dismal failure, and they have had tanks erected to leach the ore and did not try to leach in the short time Mr. DeKeyser might try to make us believe he can extract.

Dozens of companies in South Africa, New Zealand, America and Austria tried the plan of adding solutions to battery mortars, but the plan, owing to heavy loss of cyanide, was proved not so effective as adding to tanks after the water from the battery was drawn off. It is a proved fact beyond a doubt that the more cyanide is agitated the more consumption takes

place and the fact of the time gained by extraction does not counteract the loss of cyanide.

Mr. DeKeyser says that he can crush with his small plant now erected ten ton of quartz per day. If he can allow me to suggest to him that he patent his ball crusher and leave the cyanide alone, because no ball crusher as yet has proved to be superior to a battery.

In your article and in the prospectus the cyanide is fed into the pulp and then passes through a cylindrical silver-plated revolving drum, which revolves at the rate of ten revolutions per minute. What a grand scouring machine has been invented. Does it not strike any sensible man that an affair of that description (especially when coated with quicksilver) would be completely scoured out to the copper in less than 6 hours. Do the people of British Columbia remember the Gold King Amalgamator invented in California? I was instructed to erect one of these cylindrical revolving affairs upon ten stamps of a battery. I did so much against my own judgment and in one week we lost 98 pounds of quick and got one ounce of amalgam and if we had run it another week we would have had no copper plates in it. It worked on exactly the same principle as the affair above mentioned. Will not any old woman tell you that sand moved around in any metal vessel will scour that vessel better than any other material that could be added? I unhesitatingly say, without fear of contradiction, that there will not be one ounce of silver left in my ridiculous revolving electro-plated amalgamator.

Three years ago, when visiting Mr. DeKeyser, he gave me prospectuses containing similar recommendations that are in this prospectus. Now, I respectfully ask the directors of this proposed electro-cyanide process what that machine has to do with the present proposed company. I will guarantee the machine I saw in February, 1900, had no cyanide about it at all. This latest scheme of Mr. DeKeyser's was not thought of then. I unhesitatingly state that a recommendation about cyanide from the civil engineer of Cape Nome Hydraulic Company is worthless and can only be added thereto to deceive the public. Then we have the letter of J. F. Wardner, who states that he is agreeably surprised at cyanide amalgamation and goes on to state that he is agreeably surprised to find that the process shortens up his sluice boxes and consequently lengthens his dump. This makes me smile. This estimable gentleman then is going to nozzle his cyanide solution into face and sluice it over tables, into sluice boxes and then onto dump. How does this tally with the ridiculous statement of Mr. DeKeyser that he is going to use filter bags in his treatment? Here we have a man who is going to dissolve the gold whilst sluicing over tables and then dumps his solutions and material over a dump.

Mr. Editor and fellow men of this fair Province, does this strike you as the idea of a sane man? Allow me to say that any man who states that cyanide can be adapted to a dredge or a sluicing proposition is either knave or fool. I myself lost hundreds of dollars trying to apply cyanide to black sand (beach). In five days' treatment I certainly dissolved out three

dollars to the ton (four dollars being assay value), but I failed to precipitate upon zinc shavings owing to the cyanide dissolving and containing iron. My plant failed and I got experience. To gravel and to a dredge I have got more sense than try to apply cyanide.

In your article you state that solutions passes through machine and solution is pumped back to crusher to be used over again and that any solution remaining in sand is filtered out through filter bags. Look at the ridiculousness of this. Fancy a battery crushing 100 tons a day or say 50, and all the sand has to be filtered. How much calico would Mr. DeKeyser have to use to this and how much space would be required to hold filter bags, etc.? Mr. DeKeyser, allow me to suggest to you that you consult someone who knows a little about cyanide and he will tell you that that old filter bag system has been done away with six years ago. But Mr. DeKeyser, surely you are not going to ask a cyanider to believe that you could filter 50 tons of sand through filter bags, etc. Now, of course, in ordinary cyaniding of ore we require about five tons of strong solution and five tons of weak and two tons of water to get back our cyanide. This taking us three to five days to do so, will you explain, Mr. DeKeyser, how are you going to prevent the terrible loss of cyanide which is bound to take place when you do not even use weak solution or even water? Is your electric current in amalgamator going to precipitate the cyanide in the amalgamator or what? I must acknowledge and do so, that I tried to put cyanide gold on quick but I did not succeed and I very much doubt Mr. DeKeyser being able to do. The assertion that slimes in Mr. DeKeyser's process requires special treatment is another ridiculous affair, because, let me tell anyone interested that the gold in slimes would be the first to be dissolved, because of its fineness and not being allowed to settle, so slime would, need no special treatment. If he put the affair the other way about and told us the slimes would be the easiest treated I might think there was a little in it.

In conclusion let me ask all the investing public to carefully look into this affair. Get the unbiased opinion of people who have worked the cyanide process. There are no better cyaniders in the world than some of the Americans, so submit the scheme to them, and if it is proved that Mr. DeKeyser's process is a practical one, then I will humbly apologize and retire into my shell. I make my living and have always done so out of the mining industry and consider with practical management British Columbia has no superior, but in my travels I regret to see too much friendship and little sense connected with it. This will regulate itself in time.

Thanking you in anticipation, I am,

Yours truly,

E. C. KINGSWELL.

Lillooet, B.C.

EXPLOSIVES ON PASSENGER STEAMERS.

TO THE EDITOR:—I see a paragraph in your journal for February, also a letter from Mr. Rowland Machin, referring to the non-carriage of explosives on the passenger steamers plying between the Coast cities and Northern mining camps. Both from the tenor of the paragraph and the letter of Mr. Machin, there seems to be a misunderstanding as to the circumstances.

Whatever endeavour has been made, up to the present date, to arrange this carriage of explosives on a safe and working basis has been made by myself. I am therefore in a position to place the facts before the readers of your journal as they are.

For some ten years, at various times, I had correspondence with the Department of Marine at Ottawa, with a view to some arrangements being made in regard to the carriage of explosives. Finally in April, 1901, such definite instructions were given as allowed me to issue "permits" for such explosives to be carried, in properly certified and equipped magazines on board one steamer for each route, viz., the West Coast of Vancouver Island, Skagway route, and B. C. East Coast points. These being steamers of the C. P. R. coast fleet. Permit was also granted to the steamer Boscowitz as an alternative on the B. C. northern coast route, and to the steamer Iroquois for the Gulf Islands.

Some months ago, however, special orders came from the head office, Montreal, that none of the C. P. R. steamers were to carry any such explosives or gasoline. But this is no restriction imposed by the Dominion Government, but by the owners of these steamers at their own discretion. This leaves the steamer Boscowitz the only boat on the B. C. northern coast route that is prepared to carry such explosives. She, however, seems to carry all that is offered, as I have her reports, in terms of the permit every voyage, and I know there is not an average of three cases a trip.

If Mr. Machin knows of a route where there is no vessel with a permit, and no other means of such explosives being easily carried, it can be arranged for, if the public interest will be served. We had an Indian's hand blown off, just scraping the deck, where the congealed oil that had dropped out of a case of dynamite had fallen, on the steamer Grappler, that used to run on the Northern route. So the question is not so simple as it may appear. One must always, especially where the public are carried, be careful of the fool killer. If Mr. Machin had any experience in trying to get pursers and masters of steamers to take proper care of a magazine, he would soon see, that it would not be a feasible proposition, in the interest of human life, that every small steamer that might have a license to carry a few passengers should be permitted to carry explosives.

Any tug or freight boat (not being licensed to carry passengers) can carry all the explosives they have a mind to, without leave or hindrance, and as some of that class of boats are frequently going up the Coast, it should not be very difficult to get any quantity taken up.

When Mr. Machin speaks of explosives being carried on trains across the continent, and on steamers across the Atlantic, it must be noted that such are neither passenger trains nor passenger steamboats.

I hope that your correspondent will appreciate that this question has received every consideration from the Dominion Government, the convenience of prospectors and others well considered. While the safety of the public has been guarded as much as human foresight can do without requiring needless restrictions to hamper the prospector, or miner, from providing himself at the remotest part of our sea coast that which is a necessity of his calling. But the Dominion Government can not compel a steamboat to carry any such freight if they decline to do so.

J. A. THOMPSON,
Steamboat Inspector, Victoria, B.C.

THE EUROPEAN MARKET FOR ZINC.

TO THE EDITOR:—You will no doubt be interested in knowing that this week we have closed a contract for the zinc output of the Payne Mine up until 1905, with Aron Hirsch & Sohn, of Halberstadt, Germany, through their New York agent, Mr. L. Vogelstein, shipments to commence on March 1st at the rate of 200 to 300 tons per month. The shipments will go to Antwerp in bulk *via* the Canadian Pacific, to which point the railway company has recently made a rate of \$13 per ton. We have in this way opened a new market for the zinc products of British Columbia, in addition to the present outlet we have to the United States. The European market promises to be of great benefit in view of the fact that Europe is always short of zinc ores, while the demand for spelter is constantly growing. The closer saving of silver values by the European methods will also benefit British Columbia materially, inasmuch as nearly all the zinc ores carry silver values, and the limit for iron and lead contents is not penalized to the same degree as it is with United States smelters. Before the expiration of this new contract to Antwerp I hope that reduction works will be established in British Columbia that will still offer better advantages to the new zinc industry, and it would seem that with the promising future of large tonnage there should be a splendid field for capital to invest in a reduction plant at home. Nearly all the lead mines of British Columbia carry more or less zinc and in some instances the prospects are remarkable. The London price of spelter has been very encouraging during the past year and promises well for the future.

ALFRED C. GARDE,
Manager Payne Mine, Sandon.
Sandon, B.C., February 11, 1904.

THE PROVINCIAL MINING ASSOCIATION AND ITS WORK.

TO THE EDITOR:—In your issue for January last you publish a letter from Mr. Leslie Hill to Mr. J. B. Hobson, criticizing the Provincial Mining Association and its Executive Committee in

respect of several matters transacted during the past year.

The Association and its Executive have always welcomed fair and reasonable criticism of their proceedings; but I am sorry to see a supposed friend and well-wisher of the Association indulging in an unfair and unreasonable attack upon it. As an instance of the unfairness to which Mr. Leslie Hill has lent himself, take the first count of his indictment, relating to the two per cent. tax.

Addressing Mr. Hobson, he says: "You, sir, advocated a fair taxation on all the resources of the Province alike, *including mines*, but this could not be entertained by the committee; nothing would do but to shift the whole burden on to some other shoulders, and that by means of an admittedly unfair taxation, the one great recommendation of which that it *would not cost votes*."

Now look at the resolution which was actually passed by the Executive Committee:

"In view of the embarrassed state of the finances of the Province, and the objections which have been raised upon this ground towards measures for the relief of the mining industry, and the fact that all demands for such relief during the past two years have been met by a counter-demand on the part of the Government then in power for a substitute whereby the revenues of the Province would not suffer loss:

"Be it therefore resolved that this Association desires to re-assert that it has no wish that the mining industry be relieved at the expense of other industries, but, on the contrary is now, and has always been, ready to pay its fair and equitable share of the taxation necessary for the economical and businesslike conduct of Provincial affairs.

"In the opinion of this Association, natural resources of the Province, and not industry, should bear the chief burden of taxation. The enormous areas of valuable land now held under a taxation which is practically insignificant should be made to pay its proper share of the burden, and thus relieve industry.

"This Association therefore respectfully recommends to the Government the advisability of enquiring into and adopting the Australasian or some other equitable and uniform system of taxation on land, *including mining lands*, that will tend to increase the revenue, foster the settlement of the lands of the Province, and encourage the development of its great mineral and other resources.

"In view of the vast areas of land held in this Province, it is believed that the revenues from such a system of taxation will more than meet the annual deficit of the Province, and will enable it to materially relieve the mining industry."

Mr. Leslie Hill was present when this resolution was passed, and he offered no objection to it. His letter contains other instances of unfair, unjustifiable statements similar to the above, but I deem it needless to enumerate them. If his intention, in publishing such charges, was to "knife" the Association, he could not have selected a more opportune moment, when the apathy of its members and of the Government had

weakened the organization, and when our Annual Convention was about to be held.

Fortunately the attack has proved futile, and the Association has emerged from its Convention stronger and better equipped than before, to carry on its campaign for remedial legislation; and the charge that "we are now a body without influence, whose resolutions are ignored, and which is treated with good natured indifference," has proved to be a boomerang, returning swiftly, after missing its mark, against the individual who flung it.

A. C. GALT.

Victoria, Feb. 29th, 1904.

THE ZINC QUESTION.

(By A. C. Garde.)

IN regard to a recent resolution passed by the Associated Silver-Lead Mines of British Columbia, the intention of that organization was to ask the Dominion Government for financial assistance for the purpose of exploring the fields of British Columbia as to their value in zinc ores. We do not think that this would involve any considerable amount, and in doing so we express the desire of at least two-thirds of the silver-lead miners of the country. This is not a matter of local interest alone, but of national import. If we have in Canada large deposits of zinc ores, which we in British Columbia are assured we have, and knowing as all practical mining men do, the diverse nature of different zinc ores and what treatment is applicable to each class of zinc ores might be totally inapplicable to other trades, the importance to the whole of Canada of a thorough research of the nature, extent, commercial importance, and practicability of treatment of zinc ores, must strike any one who will study the question as one of vital importance.

We are asking the Associated Board of Trade to back us in our resolution, and I have no doubt that these bodies will respond heartily as they always have done in matters of general interest. We admit that the selection of the specialist to examine our zinc resources in British Columbia is one of the essential features, and having therefore suggested Professor Walter Renton Ingalls, of Boston, whom everybody justly considers eminent in his profession. Our idea is that he should make a general study of the zinc resources of British Columbia as to the grade of ores for spelter production, etc., and to give his opinion as to the best methods for development of the industry in general. In short, we want a report that includes the commercial features as well, and will be useful in furthering the zinc mining and metallurgical industry of British Columbia. It will not alone aid the new zinc industry, but also the present silver-lead industry. These minerals are so closely associated that there is no distinct line between them, and development of zinc fields will undoubtedly lead to new discoveries of silver-lead ores at the same time.

It is possible that objections will be raised by Canadians towards employing American talent for the investigation of Canadian resources, and indeed it would be most fortunate if any of our engineers in Canada

could fill the want, but the zinc question is a specialty where an intimate knowledge and study is required, and it would therefore be to the benefit of Canada to employ the very best authority in preference to any one who would be only fairly well familiar with the subject, but not a specialist on same.

That the resources of the country as to zinc-bearing ores are very extensive, I have no hesitancy in stating. That the ores as to their physical features in the different districts, vary a great deal, is also beyond question. If we can solve this zinc problem it will undoubtedly add a new field for prosperity and investment, but we realize that we cannot do this alone. Capital will be required for investment, both for developing the zinc mines and for treatment of the ores. British Columbia offers in many respects a most excellent opportunity for reduction works. The demand for spelter on the Coast and in the Orient is growing very rapidly indeed. The question of fuel, labour, freight rates, and many other points that are to be considered in smelting enterprises are favourable. I have gone into the matter quite extensively during the past two years and it would seem to me as a business enterprise it offers an excellent opportunity for capital to invest.

BRITISH COLUMBIA IN LONDON.

(From our Special Correspondent.)

WITH the shadow of war hanging over the Stock Markets, it is not surprising that little or no inclination has been shown on the part of the public to extend its interests in mining shares. Throughout 1903 investors displayed absolute apathy with regard to all classes of mining descriptions and so far in 1904 they have had little or no encouragement to exhibit a more lively interest in the Mining Market. The conditions as a whole are satisfactory, but with Russia and Japan ready to fly at one another's throats there is a natural inclination to adopt the most cautious attitude in view of the grave possibilities which such a conflict might entail. And while this crisis lasts there is little likelihood of any material recovery in the Mining Market. What would happen if a peaceful settlement of the Far Eastern Question was achieved, it is difficult to say, but it is probable that there would be a very pronounced recovery in prices all down the list, and a material increase in the volume of business. Undoubtedly the country is still suffering from the after effects of the prolonged South Africa war, and it will be several years before it can fully recover from the strain upon its resources caused by that costly struggle, but the tension during this elongated political crisis has been so acute that its termination would certainly be the signal for a more generous support to all classes of public securities. Mines have been so severely deprecated—often quite unwarrantably—that they would probably show proportionately the greatest resiliency. How far British Columbians would recover from such changed market conditions it is difficult to say. Certainly they could not well be more disappointing than they have been of

late. Since I last wrote there has been little in the way of incident to disturb the serene appearance of this section. Now and again the Le Rois feebly flicker on the receipt of information from Rossland, but changes in prices are infrequent, and quotations are often quite nominal. The Snowshoe circular with regard to the proposed amalgamation with the B. C. Copper Co. attracted some attention, as did also a statement that application had been made by the debenture holders of the Kettle River Power Company for the appointment of a receiver, but the doings of the London & B. C. Goldfields group have been so disappointing of late that even this development caused little or no interest outside the very small circle concerned in this concern. The cablegram received by Mr. Turner, giving the salient points contained in the bulletin recently issued by the Government Bureau of Information, was published by all the leading papers and frequently commented upon favourably, and should prove an excellent advertisement for the Province.

Your daily contemporaries will of course have dealt fully with the Whitaker Wright trial. The group of companies controlled by Mr. Whitaker Wright was ruthlessly exposed by the prosecuting counsel, and the jury had little difficulty in arriving at a verdict of guilty; but no one was prepared for the sensational denouement which followed the sentence of seven years imprisonment passed upon the manipulator of other people's money. In dealing with the misdeeds of Mr. Whitaker Wright you will remember that I have never hesitated to state that his malpractices had brought him within reach of the law, and that he would be convicted if only he could be brought to trial. Well, it is all over now, and he has even at the end defeated that justice which he has so long defied. Thousands have suffered from his financial legerdemain, and B. C. has only cause for regret that he ever turned his attention to it. The downfall of the British America Corporation, and the disrepute into which the two Le Rois and the rest of the group have fallen have done more to divert attention from the mining possibilities of the Province than anything else that has yet happened in its history. But rehabilitation must come. A country that is able to produce practically \$20,000,000 a year from its mines "notwithstanding strikes which paralyzed the industry in the early part of the year," and that will assuredly improve upon these figures in succeeding years, will win on its merits. Hitherto it has been the sport of unscrupulous promoters. Let us hope that it will ere long prove by results its claim to rank amongst the world's greatest producers of both the baser and precious metals.

"The Mining Year Book" for 1904, which has just been published by the proprietors, "The Financial Times," Ltd., has been further improved, if that was possible—and now forms one of the most useful reference books dealing with mining companies, their history, personnel and operations. The scope of the book is comprehensive in a superlative degree, and its method of arrangement excellent in every respect. As a rule books of this kind are sectionized to such an extent that it is often a difficult matter to quickly

turn up any particular company. In the Mining Year Book this drawback is obviated by the arrangement of all the companies dealt with in simple alphabetical order, irrespective of their field of operations. The whole aim of the editor has been to enable a rapid reference to any one of the 4,000 odd companies dealt with in the present edition, and from a careful examination of its pages. I am more than satisfied that Mr. Jackman has thoroughly fulfilled the task he set himself. The book is already accepted as a valuable reference aid to all engaged in mining. Its 1,500 pages (demy 8 vo.) form a complete digest of information concerning every important mining company in the world known to the London market. By a reference to it one is able to see at a glance who are the officials, how its finances stand, where it is operating, what its past history is, and in fact every essential feature is given which is necessary to form a rapid opinion as to its position. By means of the plan adopted in the compilation of the book the salient features of the past year's accounts can be easily contrasted with those of the preceding year, and the same remark applies to the ore reserves, outputs and dividends. Amongst the prefatory matter there is an able article on recent mining developments all over the world from the pen of that well known authority, Mr. J. W. Broomhead. There are directories of directors, secretaries, mining engineers and metallurgists, the last mentioned being a special feature of the work which it is intended to extend in future editions. In addition to the names of mining engineers and metallurgists, their qualifications and the companies for which each firm or individual acts is also given. I am in a position to state that the editor of the Mining Year Book will be pleased to receive the names and addresses and particulars, as to business, experience, etc., of those mining engineers and metallurgists not given in the present issue, for inclusion in subsequent editions. This section is, in my opinion, one of the most valuable in the whole book. If we turn from the general to the particular there is ample to interest those engaged in mining operations in Canada, and of course, British Columbia. Mr. Broomhead has a good word to say for the Province in his article; in the section devoted to "Sketch Maps and Statistics of the Principal British Gold-producing Colonies," British Columbia is placed first, one page being given up to the output statistics from 1852 to 1902 and another to a map showing the principal (Southern) mining divisions. Le Roi and Le Roi No. 2 occupy a page between them, and it will give your readers some idea of the completeness of the book when I add that full information is furnished with regard to all those companies which have been formed since 1896 to exploit British Columbia. In some cases unfortunately this has to be given in the reference list of directors or deceased concerns, for quite a number of the Canadian mining companies have peacefully passed away during the last twelve months. The book is a veritable mine of wealth for reference purposes. From personal experience I can testify as to the labour in connection with a book of this kind, the minute attention to detail that is required, the incessant pegging away at secretaries for

information, and the care necessary in the revision of proofs when all the matter has been collated. To be valuable a reference book must be comprehensive, and absolutely accurate. "The Mining Year Book" fulfils both these requirements, and its editor is to be congratulated upon the attainment of this ideal.

COMPANY MEETINGS AND REPORTS.

LE ROI.

IN their report to shareholders the Directors state: The operations for the year resulted, as shown in the accounts, in a profit of £80,242, arrived at after writing off £32,015 in respect of development, and £19,148 for depreciation of plant, machinery, buildings, etc., at the mine and smelter.

It will be seen from the report that during the year under review, 172,669 dry tons of ore were mined and shipped to the Northport smelter, the gross value amounting to \$2,307,069 equal to \$13.36 per ton. In addition, the ore shipped from the dump to Northport amounted to 7,195 tons, with a gross value of \$80,368, equal to \$11.17 per ton.

It will be seen by reference to the accounts that the liabilities of the company at the 30th June, 1903, were £202,209, and the liquid assets were £204,830. There was thus a surplus of liquid assets over liabilities of £92,621, as compared with a deficiency of £5,512 at 30th June, 1902, showing an improvement of upwards of £98,000 in the comparative position of the company during the year.

During the year under review a considerable body of good ore was found on the 1,050 foot level of the mine, and exploration work was carried on in various parts of the property, particularly at the 1,350 foot level, in the hope of finding other bodies of payable ore. Recently, as the shareholders have already been advised, a large body of ore, running from \$10 to \$20 per ton, of which the extent is not yet ascertained, is reported by the General Manager to have been discovered on the 1,350 foot level.

The Manager has submitted the following:—

Review of Mining Operations.—During the business year of the company the work of mining ore was confined almost wholly to what is known as the "middle vein."

The condition in which I found the mine at the outset—I mean in regard to its having been stripped of practically all of the high grade ore located up to that time, a circumstance with which Mr. Mackenzie made you familiar by his letters—made it a difficult task for me to obtain ore of a value sufficient to meet our operating expenses. I feel that the work done in search of new and "pay" bodies of ore has in a large measure been justified. On the 1,050 foot level a body of ore has been disclosed which has well repaid the cost entailed in finding it. Below the 1,050 level the extent of the same body is, so far as prospected, somewhat limited. Nothing has been found upon the 1,200 foot level. On the upper levels we have had variable results in mining ore and in prospecting for it. On the whole, however, the result of the work done has been good. The new development work carried on from the 1,350 foot level has been by diamond drilling and cross-cutting. To the north, or towards the hanging wall of the vein, I have found nothing to warrant the expenditure of more money and have discontinued work here for the present at least. In drilling to the south, or towards the footwall of the vein, the existence of a highly mineralized zone has been disclosed by seven diamond drill holes. The mineralization has occurred, judging from these holes, at a distance of from 160 feet on the extreme east of the property to 225 feet in the most westerly hole—which is about 200 feet from the westerly boundary of your ground. In view of the foregoing development I have in two instances cross-cut south to the vein matter and in each instance found ore of smelting value which has been shipped. I regret to say, however, that I have not as yet found any solid masses of ore from which a large tonnage could be mined.

Ore Reserves.—As I have found that the values in the ore we have mined recently are irregular—the "faces" of the stopes changing materially from day to day—I am not disposed to make an estimate of the quantities and values of the ores in "sight" at the close of our business year. To assume such a task would be foolhardy in view of the fact that masses of ore which to all outward appearances are practically worthless, may really contain high values, and *vice versa*. Mr. Mackenzie, your former General Manager, estimated the reserves of the mine at June 30th, 1902, as equal to 447,358 tons of an average grade of \$9.96. In making this estimate he used Mr. R. J. Frecheville's report dated 4th December, 1901, as a basis, and added the tonnage developed during the seven months immediately following the date mentioned. The valuation was made upon the prices of metals then prevailing, which were:—Gold \$20 per oz., silver, 53 cents per oz., and copper 11 1-2 cents per lb. As the metals we have marketed during this year were settled for at the refinery on a basis averaging as follows:—Gold \$20 per oz., silver 50.82 cents per oz., and copper 12.54 cents per lb., the estimated value referred to would be thereby increased, approximately 25 cents per ton. Subtracting the tonnage we have mined during the year, which carried average values of \$13.36 per ton, our reserves may be assumed to be 274,689 tons of an average value of \$8.22, or 221,366 tons of an average value of \$10.21 per ton based upon the quotations last mentioned. Of course, I have not included in these figures the tonnage of ore which has been developed during the year for the reason that it is difficult to arrive at an approximate estimate concerning it. I believe, however, that the ore "in sight" in the mine on June 30th last was fully as great as the quantity in evidence at the time I assumed charge four months previously. It would, therefore, I think, be fair to add an additional tonnage of 51,120, of an average value of \$11.35, to our reserves of first class ore.

Our second class dumps on June 30th, 1902, were supposed to contain about 87,000 tons of ore of an average value of about \$7.50 per ton. As we shipped about 7,195 tons during the past year we may assume the tonnage of dump ore on hand at the close of the year to be approximately 80,000 tons. The 1902 estimate of metallic contents of this ore was under conditions which rendered it extremely difficult, if not impossible, to obtain a fair average of the entire dumps. Numerous samples were assayed, and every precaution was taken in an effort to make the estimate as accurate as possible, but I fear it is probable that when the final "clean up" is made the returns will show a shortage both in contents and values.

Ore Production, Etc.—The ore mined and shipped to Northport during the year amounted to 172,669.259 dry tons, its metal values averaging: Gold .443 oz., silver .6 oz., copper 1.655 per cent. per ton. Its gross value was \$2,307,069.70, equal to \$13.36 per ton. The location and area of the ore extracted is shown by heavy black contour lines on the vertical projection of the workings which accompanies this report.

Mining operations were carried on continuously during the year—the only stoppages which occurred being on "shift" Sundays and public holidays.

The second class ore shipped to Northport during the year amounted to 7,195.69 tons. It contained average metal values of gold .386 ozs., silver .53 ozs., and copper 1.27 per cent. per ton.

As the average value of the ore mined during the year was equal to \$13.36 per ton, and the entire operating expenses for the same period \$11.370 per ton, a profit of \$1.99 is shown to have been made on the first class ore, equal to \$343,611.82.

The gross value of the second class ore shipped being \$11.177 per ton, and the total expense of handling and treating same \$6.34 per ton, the profit assumed to have been made on this ore is, therefore, \$4.837 per ton, or \$34,809.30.

Working Costs.—The books show that our operating expenses, which embrace mining, freighting of ore, smelting and realization of matte values were equal to \$11.370 per ton

during the year. The subjoined table gives the comparative costs under this head for the years 1901, 1902 and 1903:—

	Per ton, 1901.	Per ton, 1902.	Per ton 1903.
Stopping and loading on railroad...	\$3.487	\$3.100	\$2.715
Exploration .....	.423	.451	.899
Depreciation—			
Mine equipment .....	.080	.138	.081
Surface improvements .....	.050	.061	.064
Mine machinery .....	.106	.125	.144
Pearl and ruby claims & sundries .....	...	...	.011
Freight on ore to smelter .....	.510	.400	.367
Smelter expense	4.465	4.205	4.310
Depreciation of smelter plant .....	.232	.119	.208
Interest and discount on ore in yard and matte in transit .....	.229	.233	.375
Freight on matte to refiners .....	.530	.404	.440
Sacking and crushing matte .....	.044	.043	.054
Eastern representation, assaying, etc .....	.028	.013	.022
Penalty for low copper .....	...	...	.091
Refiners' tolls .....	.534	.579	.741
Metal losses in smelting .....	...	.781	.839
	\$10.724	\$10.652	\$11.370

It will be noted that a substantial reduction has been made in our stopping costs and also, on the other hand, that most of the different items of expenditure enumerated in the table have sustained an increase during the past year. Concerning these latter I would furnish the following explanation.

Exploration.—This represents the amount written off capital account on June 30th, 1903, for work performed during the years 1901, 1902 and 1903 the details of which are:—

1901	\$ 35,993.24
1902	14,258.60
1903	105,022.62
	<u>\$155,274.55</u>

The total amount expended on development work during the business year 1902-3 was only \$149,601.57, so it will be apparent that a very liberal allowance has been made under this head.

Smelting Expenses.—The increase here shown is due to several causes, the chief being the "shut down" which occurred at the smelter during a portion of the months of February and March, caused by the labour strike at Fernie. For a long period we were unable to procure coke in any quantity from local or eastern sources, hence the smelter's operations were much curtailed and our expenses proportionately increased.

Interest Charges.—As the contract entered into by this company with the Nichols Chemical Company, which covers all the shipments of matte made during the past year, provides for the retention by the refinery of the values of gold and silver contents for 90 days, and copper contents for 60 days, while the contract made with the American Smelting and Refining Company, which embraced the shipments of the previous year, provided for the payment of all values on the tenth day following the receipt of the matte at the refinery, it follows, therefore, that our indebtedness to the Bank of Montreal would be largely increased during the later period.

Penalty for Low Copper and Refiners' Reductions.—These increases are wholly due to the differences in the terms of the two refining contracts just referred to, the earlier contract being much more favourable to this company than the one now in operation.

Metal Losses in Smelting.—The figures given for these are merely assumed, and cannot be checked in any way. Unless a general clean-up is made at the end of each financial year,

and a more accurate method of sampling between the mine and the smelter is resorted to, it is impossible to estimate our slag losses over a given period with any degree of accuracy. It is probable that our losses under this head were not greater in 1902-3 than during previous years, and that the excess amount shown would be "taken up" in the differences in sampling and assaying, or even—in a measure at least—by the metals which become scattered throughout the smelter yards.

Review of Mine Expenditure.—During the year the gross expenditures for operating and equipping the mine amounted to \$618,802.57.

The amount expended on Revenue account segregated as below, was:—

Stopping ore from mine	\$468,778 21
Loading second class ore	2,224 79
	<u>\$471,003 00</u>

The amount expended on Capital account, segregated as below was:—

Surface improvements and buildings	\$ 290 14
Furniture	273 90
Mine equipment	7,617 25
Exploration and development	149,601 57
	<u>\$157,782 86</u>
Less Credit for machinery sold, etc.	9,983 20
	<u>\$147,799 57</u>

The sum charged to "Profit and Loss" distributed as follows, was:—

Stopping ore from mine	\$468,778 21
Rossland Miner P. & P. Co.	1,425 61
Depreciation:—	
Surface improvements and buildings	11,035 50
Machinery and plant	24,867 38
Mine equipment	14,005 54
Exploration and development	155,274 55
Assay and surveyers' instruments	169 58
Furniture	604 94
Pearl and Ruby claims	1,025 63
	<u>\$677,186 94</u>

During the year the sum of \$149,601.57 was expended on the development of the mine. The details of the work performed and costs, are as follows:—

Work.	Footage.	Cost.	Cost per ft.
Combination Shaft.....	90	\$9,763.57	108.48
Peyton Shaft.....	50	1,517.20	30.34
Station Cutting.....	.....	2,766.59	.....
Pocket Cutting.....	.....	1,639.62	.....
Raising.....	588½	13,874.98	23.57
Winzing.....	69	2,563.85	37.15
Cross-cutting.....	2,453	34,529.49	14.07
Drifting.....	3,799	57,056.07	15.01
Prospecting.....	.....	45.88	.....
Open Cuts.....	.....	135.25	.....
Diamond Drill Station (1,200) .....	.....	185.31	.....
Diamond Drill Station (1,350) .....	.....	130.43	.....
Peyton Tunnel and Open Cuts .....	.....	4,753.44	.....
Peyton Tunnel Cross Cut	12	215.90	17.99
Diamond Drilling.....	6,123½	20,423.99	3.33
	<u>13,185</u>	<u>\$149,601.57</u>	<u>.....</u>

The accompanying plan shows the above workings wherever possible. They can be distinguished by the hatched lines.

The Northport Smelting Works.—These works are situated at Washington, U. S. A., and are distant seventeen miles from the Le Roi mine with which they are connected by the Spokane Falls and Northern Railway, a branch of the Great

Northern System. The full capacity of the plant provides for the treatment of 1,200 to 1,500 tons of ore daily. It consists of six large water jacket copper matting furnaces, three calcining furnaces, pug mills, briquetting machines, etc. The various mechanical appliances are in a first class condition.

Smelter Expenditure.—As already mentioned under the heading of "Working Costs" our expenses at the smelter have been abnormally high owing to the recent strike at Fernie, B.C., which necessitated the closing down of our furnaces for some weeks, and also by reason of the fact that for a long period we were unable to obtain adequate supplies of coke from any sources. The details of the expenditure are given below:—

The total working expenses for the year, segregated as follows, amounted to:—	
Smelting ores	\$808,462 02
Matte charges	101,564 10
	\$910,026 12
The total expenditure on Capital account, made up as follows, was:—	
Buildings	\$723 01
Credited with	258 04
	464 97
Bins, trestles and roast yards	570 38
Brick chimneys, etc.	994 48
Water and fire protection system	402 21
Machinery	9,175 64
Credited with	182 67
	8,992 97
Tramway and equipment	3,199 24
Credited with	3 88
	3,195 36
Sundry items not classified	16 00
	\$14,636 37
Less Sewage system and Sidewalks—	
Credited with	178 12
	\$14,458 25

General Remarks.—The profit made during the year, after making the very liberal allowances previously referred to, amounts to \$366,309.11. To this should be added the sum of \$68,487.01 which represents the amount realized from the ore stocks and furnace bottoms on hand at June 20, 1902, over and above the valuation placed upon them at that date. The difference between the sum gained in mining the first class ore and the total profit of the year is made up of the earnings of the smelter in the treatment of "custom ores."

The matte shipped during the year was 5,823,362 tons, of a net value of \$2,332,393.11, equal to \$400.52 per ton. The ores smelted amounted to 187,232.64 tons of which 36,115.958 tons were purchased.

The company's holdings in the name of the Northport Smelting and Refining Company, Limited, remain the same as on June 30th, 1902. Besides the smelter and the ground upon which it is situated, they comprise a half interest in the Northport Water System; 95 acres of land adjoining the Northport Townsite; an undivided fourth interest in the platted Northport Townsite; the quarry from which the excellent limestone used at the smelter is obtained; and a group of mining claims known as the La Fleur-Comstock, situated near Republic, Ferry County, Washington. These claims were purchased four years ago for \$49,500.

Conclusion.—My belief is that the vein which we are now prospecting on the 1,350 foot level is the South or Black Bear vein. Its extent is so great that a cross-cut of over 300 feet in vein matter has not yet reached the footwall. The prospecting of a vein of this width with the length of ore occurrence is necessarily an undertaking requiring time, patience, and the expenditure of money—how much, will entirely depend upon the results of the work. I cannot but feel that the future of your mine depends largely upon this development. In saying this, I do not wish to convey the impression that

there are not very important values developed and being developed on the upper levels, but the prospecting there has been merely in the large South vein.

The question of the best method of handling the ores which will not bear the smelting costs is a matter to which I am now giving serious attention. As soon as the experiments I am making are completed, I shall be prepared to make a recommendation in the premises.

I have made certain changes at the smelter, by means of which our smelting methods have been improved and our working costs reduced. I am endeavouring to build up as large a "custom" business as possible, and to this end am using every effort. I believe that the smelter is one of the company's most valuable assets.

Respectfully submitted,

S. F. PARRISH, *General Manager.*

CROW'S NEST PASS COAL.

The seventh annual general meeting of the shareholders of the Crow's Nest Pass Coal Co., Limited, was held in Toronto on February 12th. The President, Hon. Geo. A. Cox, was in the chair and Mr. G. G. S. Lindsay, K.C., acted as secretary.

The secretary read the annual report and the accompanying financial statement as follows:

The Directors beg to submit to the shareholders of the company their Seventh Annual Report, including Statement of Assets and Liabilities as of the 31st December, 1903.

The balance at the credit of Profit and Loss account brought forward from 1902 amounted to \$950,511.96. To this has been added the sum of \$310,492.28, being the company's net profits from the operations of the year, also the sum of \$913,526.25, representing the premium received on calls paid on new stock, the whole making an aggregate to the credit of the Profit and Loss account of \$2,174,530.49. From this amount the Directors have paid four dividends of 2 1-2 per cent. each, making 10 per cent. for the year and amounting in all to \$303,717.36. This amount deducted from the above balance at the credit of Profit and Loss account leaves at the credit of that account, carried forward to 1904, the sum of \$1,870,813.13.

The balance of the new issue of stock referred to in the last Annual Statement as to be paid during the year 1903 amounted to, including the premium, \$1,646,318.75. On the 31st of December last this had all been paid with the exception of \$123,775.00 (of which \$74,265.00 is premium.)

Substantial progress was made during the year in the permanent development of the company's properties at Coal Creek, Michel and Morrissey. It was not until the 1st of February, 1904, that the mines at Coal Creek, which had been damaged by the explosion of 22nd May, 1902, were fully restored.

During the year nearly a million dollars have been spent on plant, development and machinery, adding largely to the efficiency and capacity of the mines and of the operating and coking plants.

The steady increase of the production of coal is best illustrated by pointing out that the output for the year just closed exceeded that of 1902 by 49.83 per cent. while the output for December, 1903, is larger than that of January of the same year by 59.72 per cent. This satisfactory progress has been made notwithstanding that production was materially retarded by a strike of all the company's miners, lasting from the 11th of February to April 1st, and to a less degree by the strike of the coke oven men in May and of the miners at Morrissey in September. A contract has been executed with the men providing for wages, hours of labour and other usual matters, effective for three years, but determinable by either party at the end of the second year, and it is expected that there will be no more labour troubles during the life of this agreement.

The mountain slide at Frank, which covered up the Canadian Pacific Railway Company's main line in the Crow's Nest Pass, gave rise to a car shortage of considerable duration, as did the handling of the western harvest in the months

of October and November, both of which shortages interfered to a considerable extent with the transportation and therefore with the production of coal and coke.

The accounting work has been separated from that of the operating, and a new department created to take care of this and the purchasing, and Mr. Daniel Davies has been appointed comptroller in charge of this department.

Mr. T. R. Stockett, Jr., is now acting-general manager, and it is hoped that the confidence his record as general superintendent for several years has earned for him will be confirmed by his work as acting general manager.

The duties formerly performed by the managing director have been assigned to the office of the third vice-president, and are now being satisfactorily performed by Mr. G. G. S. Lindsey, who has been elected to that position.

Profit and Loss Account for the year ending 31st Dec., 1903:

Balance at credit Dec. 31st, 1902....	\$950,511 96
Net profits for 1903.....	310,492 28
Premium received on calls paid on new stock.....	913,526 25
	\$2,174,530 49

Appropriated as follows:—

Dividends paid	\$ 303,717 36
Balance carried forward to 1904..	1,870,813 13
	\$2,174,530 49

General Statement, December 31st, 1903—Assets:—

Mines, real estate, plant, development, etc	\$5,418,435 51
Cash in banks.....	66,551 31
Accounts receivable	313,660 79
	380,212 10
	\$5,798,647 61

Liabilities:—

Capital stock paid up	\$3,450,490 00
Bills payable	\$145,000 00
Accounts payable	250,265 64
	395,265 64
Dividend No. 12, accrued	82,078 84
Profit and Loss	1,870,813 13
	\$5,798,647 61

Senator Cox in moving the adoption of the Report, referred amongst others to the following items of interest:—

The coal produced during the year 1903 amounted to 661,118 tons, as compared with 442,049 tons in 1902. Of this tonnage 279,334 were sent to the coke ovens and produced 167,989 tons of coke, as against 121,000 tons made in 1902, while the balance 381,784 tons (with the exception of 22,823 tons consumed under the boilers) were disposed of as merchantable coal.

The new mines opened during the year were at Coal Creek, 3, at Michel 2, and at Morrissey 2.

The construction of 492 ovens was commenced during 1903—252 at Michel and 240 at Morrissey. Of these, 198 at Michel and 148 at Morrissey were completed, adding a total of 346 ovens to the company's coking plant, and bringing the total number of ovens now constructed up to 982. The remainder of the ovens will be completed early this spring.

The net profits as a result of the year's operations amount to \$310,492.28, of which \$303,717.36 was paid out in dividends and there was received for premiums on calls paid on new stock during the year \$913,526.25. This enables a carrying forward to the credit of Profit and Loss of \$1,870,813.13, of which \$145,078.13 is undistributed profits, and \$1,725,735.00 on premium received on stock.

On the 1st of May the new townsite of Morrissey Mines was put on the market and sales made amounting to \$30,000, which have been increased to \$35,712.

It has been found desirable to acquire the branch railroad between the main line of the Crow's Nest Southern at Morrissey Junction and the Company's mines, a length of about five miles, for which a charter was obtained from the British Columbia Legislature last year.

CARIBOO-M'KINNEY.

The Directors report as follows:—Your Directors beg to submit their 5th annual report and financial statement, duly audited, for the year ended 31st December, 1903, together with the report of the Managing Director as to the operations upon and condition of the company's property.

The reports of the Managing Director and the Superintendent submitted to your Directors in June last, incorporated in the report of the Managing Director herewith, in which they stated in plain terms that the mine could no longer be worked at a profit and advised a suspension of operations, were of so serious a character that your Directors deemed it proper to have expert examination made of the mine in order that they might be able to decide what course to pursue. Your Directors accordingly employed Mr. Harry McMaster, M.E., and Mr. Arthur Harvey, to make such examination. Those gentlemen visited the mine and their reports are submitted.

These reports not being, in the opinion of your Directors, sufficiently encouraging to warrant the continuation of operations which were then being carried on at a loss, your Directors acquiesced in the policy outlined by the Managing Director and the mine was closed down as stated in his report, on the 31st December.

At a meeting of your Directors held on the 18th December, 1903, a dividend of 4 per cent., amounting to \$50,000.00, was declared, payable to shareholders of record on the 10th January, 1904, and the Managing Director was authorized to sell and dispose of the company's machinery and plant.

At a subsequent meeting of your Directors, held on the 5th January, 1904, it was decided to submit the action of the Directors as above stated to the shareholders at this general meeting.

The Manager has presented the following report—I beg to submit the following report as to operations on the property of the company during the year ended 31st December, 1903:—

We have mined and milled during the year 14,878 tons of ore and 1,400 tons of tailings.

Average gross value of ore milled, \$5.50 per ton.
Average gross saving per ton of ore milled, \$4.41 per ton.
Average gross cost of extraction, \$3.77 per ton.
Net profit per ton of ore mined and milled, 64 cents.
Average extraction, 80 per cent.
Average extraction free gold on the plates, 68 per cent.
Average extraction by concentration, 12 per cent.
Gold obtained by amalgamation, 2,859 oz.
Gold obtained by concentration, 486 oz.
Total ounces gold obtained, 3,345.
Silver obtained by amalgamation, 1,280 oz.
Silver obtained by concentration, 720 oz.
Total silver obtained, 2,000 oz.

During the year we drifted south and east on the 5th level of the Okanagan claim for a distance of 140 feet, we located what is evidently the vein. This consists of a few small stringers of quartz and the vein is filled in with "country rock."

We drifted west from the stope above the 3rd level on the Alice claim, for a distance of 100 feet. In the face of this drift there are some three feet of ore of an average value of \$2.50 per ton.

The remainder of the work done during the year consisted in stoping and taking out small bunches of ore and pillars that had been left in the old workings.

In June, 1903, finding that the development work done upon the property during the previous five months was disappointing and discouraging in its result, on the 12th of that month I called upon the Superintendent to furnish a detailed report of the operations for the expired portion of the year and as to the then present condition of the mine. The Superintendent reported on the 15th June as follows:—

Mr. Geo. B. McAulay, Managing Director, Cariboo-McKinney M. and M. Co.

Sir,—In compliance with your instructions given to me June 12th, 1903, I submit below a general statement in reference to the production of the property for the first five months of 1903, also a general statement of the prospecting work done endeavouring to locate the extensions of the ore shoots, and the present condition and future possibilities of the mines owned by the Cariboo-McKinney M. & M. Co. You will also find copies (2) of maps complete to June 15th, 1903.

Production for 1903.—During the past five months we have mined and milled 6,558 tons of ore of a total approximate value of \$27,300.00 as shown by the bullion extracted and concentrates shipped. Our expenses for the same period have been \$29,052.74, or we have mined and milled the above mentioned ore at a loss of \$1,752.74.

Ore in Sight.—At present all the ore we are breaking is coming from the west end of the Cariboo and the east end of the Alice claims and from above the third level. This shoot is about 150 feet long and about 4 feet wide. We have worked up on this shoot for 100 feet above the third level, and there yet remains in this shoot between top of stope and the surface about 6,000 tons of ore. This ore is estimated to be of the same general value as the ore we mined and milled during the last month. (Last month's ore milled \$3.29 a ton.) Below the third level on the Cariboo and Alice claims there is ore in the bottom of the level for a distance of about 220 feet—this ore is of an average value of about \$3.00 a ton. In the face of the third level west on the Alice claim the vein remains about the same width as in the bottom of level (about 3 feet wide) but the quartz in the vein is replaced by "country rock" that assays 50 cents a ton. On the 350 feet level the vein in the face of this drift is filled with the same barren rock. On the fourth level we have the vein in the bottom of the level for a distance of about 250 feet and the average width is about two and a half feet. This ore is badly broken and will assay about \$2.50 a ton. In the west face of this drift the vein is about 3 feet wide and is filled with barren rock the same as the face of the third level and on the east end of this shoot the vein is filled with barren rock on the fourth level. With the exception of the ore left in the bottom of the tunnel level, the west shoot is all the ore we have in the mine. The ore on the west end of the Alice, on the Emma and on the Maple Leaf where development work has been done, will average less than \$3.00 a ton and is really too low grade to be called ore.

Middle Shoot.—This shoot on the Cariboo and Amelia claims was the main producing shoot of the mine, the ore continuing of a good grade and width from the surface to a point some 20 feet above the fourth level. This shoot was prospected for on the fourth level with various drifts and cross-cuts and though the vein was located in different places on the fourth level the ore streak did not average more than four inches in width and the value remained about \$20.00 a ton. Below the fourth level this ore shoot was prospected for by Diamond drill holes, and by a drift run in from the fifth level. The drill holes that struck the vein showed quartz of an average width of about three inches and of the same general value as the ore on the fourth level. The drift from the fifth level struck what is evidently the vein. This vein shows two streaks of quartz each less than an inch in width and between the streaks was some two feet of ledge matter. A crosscut was run north from near the end of this drift but no further evidence of a vein was found.

East Shoot.—This shoot on the east end of the Amelia, Saw Tooth and Okanagan extends from the surface to the sixth level. The ore is all of a good average value, but in some places is too narrow to stope at a profit. The ore shoot appears to gradually decrease in length, and on the sixth level this shoot is less than thirty feet long, and appears to be cutting out by one break that is dipping towards the east and one that dips towards the west. These two breaks should intersect about twenty feet below the sixth level. The ground on the sixth level is badly broken and the ore is

"frozen" to the wall of the vein, and though this ore was of a good grade (\$20.00 a ton), owing to the small breaks and set-offs fully fifty per cent. of waste was broken with the ore and on account of the large amount of powder necessary to break the ore this waste was broken so fine that it could not be hand sorted out of the ore. On the fifth level we endeavoured to locate the ore east of the east break by some 150 feet of Diamond drill work and a drift 140 feet long. About twenty feet back from the face of this drift we cut what is evidently the vein. This consists of vein filling and two small seams of quartz. On putting in two rounds of holes drifting on this vein we struck another break that evidently shifted the vein south and we then discontinued work.

Further Prospecting.—Though one not acquainted with the ground here might advise further prospecting, I consider all the prospecting that had a reasonable hope of finding an ore body has been done, and if further prospecting is done the chance of discovering ore that will repay the expense of this prospecting is very poor. I would say the chance is not better than one in ten.

Profitable Work.—As far as I can judge the only work that can be done at a profit is to take out the ore below the tunnel level and run the tailings through the mill.

J. P. KEANE, Superintendent.

This report was submitted by me to you with the following letter:—

"Spokane, Wash., June 25th, 1903.

"To the President and Board of Directors, Cariboo-McKinney M. and M. Co.

"Toronto, Ont.

"GENTLEMEN—Enclosed herewith please find the statement of Mr. Joseph P. Keane, your Superintendent at Camp McKinney.

"It has been hard for me to give up hope of the mine opening up at depth and may be I have prosecuted developments to this end further than I ought to have done. However, the facts must be met as they show up and I have instructed Mr. Keane to mine and mill what ore there is in sight (that will pay a profit) and to cease any and all prospecting or development work, unless instructed by you after receipt of this letter.

"Very respectfully yours,

"GEORGE B. McAULAY."

As it was apparent to me, that, notwithstanding the large expenditure which had been made in development work, both by diamond drill and drifting, for the purpose of locating new bodies of profitable ore, no result had been obtained which would justify the continuance of such work, I was forced to conclude that any further expenditure in that direction would be an unwarrantable waste of the company's money; and as the ore already located and remaining in the mine was of too low an average grade to admit of its being mined and milled at a profit, the only course which appeared to be open was to take out what profitable ore remained and suspend operations upon the property.

The whole facts in the case having been laid before you as above stated and no contrary instructions having been received from you, I proceeded upon the lines indicated in my letter above quoted. All the work upon the mine was suspended at the end of November, the mill was closed down on the 18th December, and by the 31st December all operations had ceased and all the company's employees at the mine had been discharged and paid off.

At the closing of the mine there remained some 60 tons of concentrates still to be shipped, this being the usual accumulation during the fall months when the condition of the roads was such as to render it impossible to have concentrates hauled to the railway.

Arrangements have been made with Cosons Bros., storekeepers at Camp McKinney, for the shipment of the above concentrates as soon as the roads will permit. Arrangements

were also made with Cosons Bros., who are responsible parties, for the care of the company's property at the mine. Certain ground leases granted to various parties by the company have been cancelled and the documents relating to such cancellations are on file.

All accounts owing by the company in connection with the operation of the mine have been paid.

An inventory of all the company's property at the mine has been prepared and is on file.

Having had charge of the development of the mine from its inception, and having made frequent personal examination of the workings, I am thoroughly familiar with everything pertaining to it. I have carefully reviewed the whole situation in respect to the property and as the development at depth has been so disappointing in its result I am satisfied that further expenditure in the hope of locating new bodies of profitable ore would be likely to lead only to a waste of your money.

CARIBOO HYDRAULIC.

The Manager, Mr. J. B. Hobson, reports as follows, reviewing operations during the season of 1903:

The past season turned out a most disappointing one, for the reason that the 26 inches of well-settled snow that laid on the watershed at the end of March, went off mainly by evaporation under the influence of the cold frosty weather, accompanied by the northerly winds that prevailed during the months of April and May; and afforded barely sufficient water to operate the mines 53 days and 7 hours, with a quantity of water varying from 2,000 to 2,500 miner's inches, being 12 days and 8 hours short of the time run during the season of 1902, 50 days and 18 hours short of the washing time reported for season 1901, and 118 days and 6 hours short of the washing time reported for season 1900.

The season's mining operations were divided into two runs as follows:—

Washing was commenced on the 3rd bench in Pit No. 1 on the 21st day of April, was continued for a period of 45 days and 7 hours, ending July 15th. During the progress of the run 111,083 miner's inches of water were used to wash out a slide of indurated volcanic mud, containing about 68,000 cubic yards, that came into the excavation from the north-west rim on the big bend of the channel north of Dancing Bill Gulch, and 248,000 cubic yards of the rocky deposits of the 3rd bench, making a total of 316,000 cubic yards for the run, from which was recovered 2,115 85-100 ounces of gold, valued at \$36,032.94, an average yield of 14 53-100 cents per cubic yard for the 248,000 cubic yards of gravel and slide rock washed from the 3rd bench, which was carried up to the face of the main bank.

About half the washing time was applied to the excavation of the rocky cuts required to accommodate the right and left branches of Sluice No. 1, which were advanced 740 feet on the right and 704 feet on the left side of the excavation.

The second run, commenced on the 21st day of July, included a period of 8 days, ending with the exhaustion of the water supply on the 1st day of August. During the progress of the run 16,000 miner's inches were used to wash out about 12,000 cubic yards of slide rock that came into the excavation from the south-west rim, and 44,000 cubic yards of gravel from the main bank, making a total of 56,000 cubic yards for the run, from which was recovered 523 24-100 ounces of gold, valued at \$8,910.76, an average yield of 20 25-100 cents per cubic yard for the 44,000 cubic yards of gravel washed from the main bank. The right-hand branch of Sluice No. 1 was advanced 45 feet, making the advancement of sluices amount to a total of 1,480 feet for the season.

The grade of the deposits of the 3rd bench increased gradually as the workings were carried up channel towards the main bank, but the immense deposits of slide rock, found lying next to the north-east rim, on line of left branch of Sluice No. 1, replaced a large area of the pay strata, and caused a material reduction in the average yield of the ground worked. The removal of this immense deposit of broken, angular rock retarded the progress of the work, and added

materially to the cost of mining and the excavation of cuts required for the advancement of left branch of Sluice No. 1.

The results of the second run is encouraging, and indicates a continuation of the high-grade deposits that gave such satisfactory results prior to the season of 1901, when enormous deposits of slide rock from the rims were found replacing large areas of the high-grade strata composing the main body of the fill found between the rims of the ancient river, (see cross and longitudinal sections accompanying reports).

The light gold output may be laid to the short water supply, the working time lost in removing large masses of slide rock, encountered while carrying the workings up stream, and excavating cuts for advancement of sluice branches.

Summary of the Season's Mining Operations.

Total time occupied in washing Pit No. 1	53 days, 7 hours
Total quantity of water used	127,083 miner's inches
Quantity of gravel, clay and rock washed:	
Gravel from third bench	248,000 cubic yards.
Gravel from main bank	44,000 " "
Slides from rims of old workings and indurated volcanic mud	68,000 " "
Bed rock slide	12,000 " "

Total quantity washed 372,000

Average duty of water per miner's inch	2 92-100 cubic yds.
Gold product for season	2,639.09 Troy ounces.
Value of gold	\$44,943.70

The receipts and expenditure attending the operation of the company's mines for the season will be found distributed in detail in the following statement:—

Mine Operating Expenses for 1903.—Expenditure.

Mining Account:—		
Mining	\$18,330 22	
Excavation for sluices	8,703 00	
		\$27,033 22
Explosives:—		
Mining	\$ 7,418 15	
Excavation for sluices	7,120 00	
		14,538 15
Sluice maintenance and extension	9,449 80	
Portable hydraulic plant maintenance	37 33	
South Fork Ditch maintenance	2,870 28	
Morehead Ditch maintenance	2,815 84	
Camp maintenance	1,189 59	
Mine and camp light maintenance	398 46	
Wagons and harness maintenance	144 07	
Telephone maintenance	77 57	
Prospecting account	729 22	
Stationery and printing	283 47	
Postage and Telegraph	134 34	
Incidental expenses	11 40	
Land and leases (lease purchases, rentals, etc.)	5,267 30	
License account (free miner's certificates)	110 00	
Fire insurance	803 00	
Travelling expenses (transportation of miners, etc)	6,039 87	
Mine office expenses	1,307 00	
Bullion expenses (royalty, insurance, transportation, etc.)	1,633 24	
Management	5,228 18	
Stable expenses	628 85	
Tools and implements—Loss for season	288 70	
Horses account	190 00	
Quicksilver account	242 69	
Total operating expenses for season	\$81,451 57	

Receipts for Season 1903.

Gold product for season	\$44,943 70
Profits on stores sold	2,123 19
Total receipts for season	\$47,066 89

Inventory.—There is on hand at the company's stores and mines, as per inventory made August 5th, 1903—

Miscellaneous provision stores, mining supplies, hydraulic Plant, etc	\$42,783 81
Explosives	20,704 59
Blacksmith stores	1,724 63
Quicksilver	2,644 60
	\$67,917 63
Horses	\$ 1,192 00
Wagons, sleighs and harness	2,109 92
Saw logs, lumber, flats, fuel, sluice blocks, etc.	7,943 74
Tools and implements	15,557 40
	26,803 06

Total as per inventories \$94,720 69

Water Supply.—The quantity of water available for use during season of 1903 was 52,437 miner's inches less than the quantity of water used during season of 1902, 131,167 miner's inches less than the quantity of water used during season of 1901, and 333,795 miner's inches less than the quantity of water used during the season of 1900.

Precipitation for season 1902	23.40/100 inches
Precipitation for season 1903	17.48 100 "
Less than precipitation for season 1902	5.92/100 "
Quantity of water available and used during season of 1902	179,520 miner's inches
Quantity of water available and used during season of 1903	127,083 " "

The winter snowfall turned out again below the average for the district and fell 26 67-100 inches short of that reported for 1902. The spring and summer rains turned out also below the usual averages and fell 1 41-100 inches short of the precipitation reported for season of 1902.

The snow went off during the months of April and May under the most unfavourable weather conditions, i.e., moderately warm days, cold nights accompanied with northerly winds and contributed but a small percentage of its water to the reservoir lakes. The unusual shortage in precipitation, together with the unfavourable weather conditions under which the snow went off, accounts for the shortage in the season's water supply.

SUMMARY OF MINING OPERATIONS FROM THE TIME OF COMPLETION OF WATER SUPPLY SYSTEM IN 1898.

YEAR.	Precipitation in inches.	Water used in Miner's inches.	Time Run.	Cubic Yards Gravel Washed	Product
1899	28-65/100	353,056	144 days, 8 hours	1,952,535	\$92,678 93
1900	30-67/100	460,878	171 " 13 "	1,843,038	350,085 77
1901	20-30/100	258,250	104 " 13 "	2,420,288	142,273 41
1902	23-40/100	179,520	65 " 15 "	690,442	61,395 19
1903	14-48/100	127,083	53 " 7 "	373,000	44,943 70

By reference to reports for 1899 it will be noted that the season's operations were confined, mainly, to cleaning out the deposits of boulders and debris left in bottom of old Chinese workings, and the low grade deposits of gravel and volcanic mud lying on the rims north and west of said old workings, which accounts for the light product, in proportion to the quantity of water used.

The precipitation for season 1900 was 30 67-100 inches, and made, with the 100,000 inches carried over from 1900, 480,878 miner's inches of water available for use, a quantity exceeding the estimated holding capacity of the reservoirs, aggregating 470,370 miner's inches, as shown by the following table that accompanied the Hydrographic Map prepared in 1897.

TABLE OF WATER SUPPLY.

LOCALITY.	AREA.		DEPTH.	RESERVOIRS.		CONTENTS.
	Sq. Ft. Mill In.	Acres.		Square Ft.	Square Ft. Min. Inch.	
Polly's Lake	337	7,736	12 09 8 ft.	40,666,000	304	140,741
Bootjack Lake	174	3,995	6 24 6 ft.	27,500,000	162	75,000
Main ditch below Hazeltine	352	8,081	12 63	27,000,000	550	254,659
Main ditch above Hazeltine	155	3,558	5 56 33 ft.	8,000,000		
Dancing Hill	79	1,814	2 83			
Morehead Lake	460	10,560	16 50			
Little Lake above Morehead Ditch	99	2,273	3 55			
TOTALS	1,656	38,017	59 40	2,184	1,016	470,370
Little Lake below Morehead Ditch	95	2,180				

By reference to Annual Report for 1901, and Section No. 4 on the longitudinal section accompanying this report, it will be noted that the intrusion of an immense deposit of slide rock replaced a large area of high-grade gravel and reduced the average yield of the ground. This condition, together with the light precipitation and short water supply, accounts for the reduced product for the season.

The short water supply and inclusion of large deposits of slide rock in the lower bench accounts for the light product for the seasons of 1902 and 1903.

The tables indicate that the gold product is dependent mainly, upon copious precipitation and a water supply ample to operate the mine full time with at least 2,500 miner's inches of water during the open season, including a period of about six months, commencing on or before May 1st and ending on or about November 1st.

It is, therefore, evident that the precipitation must return to what it was prior to 1894, as reported by government agents and old settlers, varying each season, with few exceptions, from 30 to 40 inches annually, or the company's catchment canals must be extended to control a much larger area of watershed, or to some stream affording an abundant and permanent flow of water throughout the open season. Surveys are now under way to determine the possibility and probable cost of extending the company's system to a source that will insure an abundant and permanent water supply that will be ample to carry operations over seasons of light precipitation.

The heavy precipitation recorded for September ultimo,

amounted to 6.24-100 inches, and caused the water in the storage reservoirs to rise as follows:—
Morehead Lake, rise 86 in., being now 13 in. lower than maximum height.

Polley's Lake, rise 20 in., being now 3 in. higher than for 1903.

Bootjack Lake, rise 15 in., being now 5 in. higher than for 1903.

With so large a quantity of water on hand in the storage reservoirs the outlook is certainly favourable for a good water supply for the ensuing season.

Condition of the Mine.—To better illustrate the subject I have prepared, and append hereto a longitudinal section on line of workings, and a cross section on line of proposed sluice tunnel site No. 2.

By reference to the longitudinal section you will note that all the ground in the third bench, including sections Nos. 5 and 7, has been worked out up to the face of the main bank, leaving a shallow bench of ground between sluice No. 1 and bed-rock as bench No. 4, extending from the point where sluice No. 1 goes above bed-rock at "A," about 1,110 feet to the face of the main bank.

Sections 1 a, 1 b, and portion of 1 c were worked out by the Chinese, who reported a gold recovery of \$900,000. The Cariboo Hydraulic Mining Companies worked out the remainder of sections 1 a, 1 b, and 1 c, and recovered therefrom \$128,000. The Cariboo Hydraulic Mining Company worked section No. 2 and recovered therefrom gold valued at \$400,000. The Consolidated Cariboo Hydraulic Mining Company worked section No. 3 during season of 1900 and recovered therefrom \$350,085.77. Section No. 4 was worked out in 1901 and produced \$142,273.41. Sections Nos. 5 and 6 were worked out during the season of 1902. Section No. 5 produced \$35,395.19, and section No. 6 produced \$26,000.00, a total of \$61,395.19. Sections Nos. 7 and 8 were washed during season of 1903. Section No. 7 produced \$36,032.94, and section No. 8 produced \$8,910.76, a total of \$44,943.70; making the total gold product for the 2,370 feet of channel worked amount to \$2,026,698.07.

The bed-rock Cut "B," and Sluice Tunnel No. 1, at site No. 1 should have been completed during the season of 1900, so that all the ground included in sections Nos. 4, 5, 6, 7, and 8 and the fourth bench, included in section No. 9, could have been washed through sluice, cut and tunnel at reduced cost for mining and sluice maintenance, but the delay in the delivery of the power drill plant and electric appliances, until late in 1901, made it impossible to complete either cut or tunnel as expected.

The sluice tunnel must be driven, from either site No. 2 or site No. 3, during the season of 1904 to afford outlet to the dumps for the ground worked during season of 1905.

Since the sluice cut has been lowered and the branches of sluice section No. 1 have been carried up to the main bank, and the working face includes a greater depth of high-grade gravel than has been exposed for washing since the opening of the property, the mine is in better condition for continuous and profitable operation than it was at the opening of the season of 1900, when \$200,000.00 was netted out of a product of \$350,085.77.

The outlook for the ensuing season's operations is, therefore, very favourable for a large output, at reduced cost, calculating, of course, on the precipitation being ample to afford a good season's water supply.

LE ROI NO 2.

The Directors report as follows: "The Directors herewith submit the audited accounts of the company for the year ending September 30, 1903, showing a balance to profit and loss account of £6,208 11s. 5d., which with £9,262 9s. 2d. brought forward from last year, gives £15,471 7d. available for distribution.

"The Directors recommend that a dividend for the year of one shilling per share be paid, free of income tax, absorbing the sum of £1,000 and leaving a balance of £9,471 7d. to be carried forward.

"It will be observed that the local auditors have written

off £14,870 12s. 3d. as depreciation on development work. The actual expenditure under this heading for the year has been £10,786 5s. 8d.

"As the result of the year's working 31,100 tons of ore were raised, of which 17,550 tons were shipped to the smelter at an average value of \$20.69. The cost of realizing upon this amounted to \$8,288 per ton, leaving the net returns from the smelter \$217,750.

"Since the termination of the contract with the Northport smelter on August 16, 1903, a contract has been made with the British Columbia Copper Company in Greenwood for the treatment of the Josie output on more favourable terms. Shipments commenced on September 9 and returns for the current year up to December 31 show profits from shipments at the rate of slightly over £2,000 per month.

"The Elmore oil concentration plant came into operation on November 7 last. So far it has only been considered advisable by the management to put through ore of a very low grade, averaging under \$5, so as to enable those in control to gain experience of the working and technical difficulties of the process. It may be stated, however, with confidence that the ratio of concentration is entirely satisfactory, but it is as yet too early to speak with any certainty as to the cost per ton of the treatment of ore or the profits which may be expected to be derived from the sale of the concentrates."

In his report Mr. Hill, the company's consulting engineer, says that in the past his attention has been devoted very largely to the Josie mine, but that in future he will direct considerable attention to the No. 1 mine. He hopes to ship 1,500 tons monthly from the mine and to realize therefrom a profit of at least \$1 per ton.

The company's profit-earning powers for the ensuing year are estimated as follows:

Concentration of ore from dumps, 300 days at 50 tons per day—15,000 tons, at say \$1 per ton profit—\$15,000.

Shipping ore from Josie mine, 12 months at 2,000 tons, 24,000 tons at say \$4 per ton profit—\$96,000.

Shipping ore from No. 1 mine, 11 months at 1,500 tons, 16,500 tons, at say \$1 per ton profit—\$16,500.

Total estimated profits, \$127,000.

WAR EAGLE.

The annual general meeting of the War Eagle Consolidated Mining & Development Company was held in Toronto on February 23rd. The General Manager, Mr. E. B. Kirby, reported as follows:—

"Developments to date show that the War Eagle mine has experienced the same general change in the character of its ore deposits which has occurred in all other productive mines of the Rossland district, and which is the general rule throughout the mining districts of the world. This is the transition from the occurrence of high-grade bonanza ore bodies, capable of profit under the expensive process of smelting to masses of lower grade, requiring a cheaper treatment by milling.

"As the bodies of smelting ore in the vein becomes less frequent and their average size diminishes, the proportion of this ore to the increasing quantity of development or dead work required to expose it rapidly lessens to a point where its profit is consumed by the cost of the dead work. The relief to be derived from milling will therefore be not only in the direct saving of cost expected, but also in the increased proportion of pay ore to development work, while the stopping of low-grade blocks will assist the exploration work by disclosing unknown bodies of smelting ore contained within their limits.

"The ore sales during the year have been 60,039 tons, averaging \$13 full assay value, or \$9.87 smelter's gross assay value. The average assay contents were: Gold, 0.418 ounces; silver, 1.02 ounces; copper, 1.45 per cent. As shown by the profit and loss statement, the net profit for the year was \$30,340.47, which with the amount charged off for depreciation of plant, etc., \$38,171.74, shows an excess of revenue over expenditure of \$68,512.21. The present reserves of

smelting pay ore are estimated at about \$20,000 tons, averaging \$10 smelter's gross assay value.

"A preliminary mill of 200 tons daily capacity, but designed for prompt enlargement to 400 tons, is now being built by the Rossland Power Company, Limited, and is located upon the line of the Canadian Pacific near the town of Trail. It is expected to begin operations by early spring, affording the desired outlet for the milling ores of the War Eagle and Centre Star mines.

"An examination of the cost sheet will show that the costs per foot for raises and drifts have been brought to lower figures than hitherto, while the stoping cost has been kept down approximately to the minimum record. The width, shape and distribution of the War Eagle smelting ore bodies are not so favourable for cheap stoping as those of the Centre Star vein, so that even with the same skill and economy the minimum cost figure is necessarily higher than that of the Centre Star vein.

"The mine produced 60,093 tons of ore during 1903 of a real or full assay value of \$13 per ton. The smelter net value of this ore f.o.b. cars at the mine was \$5.31. The expense of production was \$2.82 per ton. Development cost 44 cents per ton of ore shipped. The following charges are made per foot: Drilling, \$17.06; winzine, \$30.70; raising, \$26.29; stoping, \$2.90.

"Since 1894, during which year the mine shipped 48 tons, the War Eagle has produced 240,465 tons of ore worth \$5,152,109.11. With milling it is impossible to calculate the value of the ore that remains in the mine, but it is stupendous.

"The past development of the mine has shown large bodies of ore too low in grade for smelting, but of sufficient grade to promise a handsome profit to successful milling. Now that the mill of the Rossland Power Company assures an outlet for these ores within a few months, their contents will soon be available. It is impossible to present any reliable estimate of their quantity or precise value, because their limits have not been defined, and until milling begins they cannot be exposed and sampled accurately without excessive expense. They occur in extensive bodies, and exposed very imperfectly by the mine workings, since these have in the past been directed to the exposure of smelting ore bodies only.

"The serious obstacle presented to large scale milling by the so-called 2 per cent. tax imposed by the British Columbia Government upon the gross product of mines has not yet been removed. This tax has the peculiar effect of exacting an increasing proportion of the net profits as the grade of ore lowers. For instance, on milling grades of the War Eagle and other Rossland mines is will take anywhere from 10 to 20 per cent of the net profits, which greatly increases the difficulty of securing capital for milling operations. The disastrous effect of this tax in repressing the mining and milling of low-grade ores throughout the province has forced the mining communities to join in active measures for its repeal, and the matter is being steadily pressed by the Provincial Mining Association. It is hoped that the new Legislature will not longer delay the relief so urgently demanded by popular sentiment.

SOME NOTES FROM THE MINING CAMPS.

THE COAST.

IT is reported that active operations are to be commenced this spring on the Britannia mines, at Howe Sound, instructions having been received by the local Vancouver agents from New York to that effect. Should this report be true the working of the Britannia, which is undoubtedly one of the most remarkable deposits of low-grade copper ore in British Columbia, should appreciably affect this year's copper-gold production of the Coast districts.

THE NEW ALEK PLACERS.

Mr. T. A. Dickson, a land surveyor resident at White Horse, affords the following interesting information anent

the new Alek diggings: The district in which these important placers have been found is situated about 100 miles west of White Horse and 25 miles north, and is connected with White Horse by a fairly good trail. The diggings so far discovered and partly worked are situated on the watershed of two rivers, Alek and White. On the former are the two creeks, Fourth of July and Ruby, and on the latter Bullion and Sheep creeks.

The White River is an important branch of the Yukon, and flows to the north, and the Alek River is an independent river, which flows south into the ocean through Alaskan territory. Bullion and Sheep creeks drain into Klaune Lake, a body of water 60 miles long, which is drained again by the White River. The diggings are situated roughly, 75 miles east of the boundary between Alaska and Yukon Territory. There are sixty miners on Bullion Creek this winter sinking to bed-rock on their claims. There is any quantity of spruce fir in the district for lumber for building, fluming, etc., and the probabilities are a sawmill will be established there in the early summer.

A number of miners left White Horse on the 25th January last to sink to bed-rock on Fourth of July and Ruby creeks. The whole camp is controlled from White Horse for supplies, police and mining recording, and already there is a patrol of Mounted Police in the district. The pioneer discovery party, headed by a Mr. Smith, got the discovery claims free, i.e., they are exempt from the 2 per cent. royalty, and are thus well repaid for the hardships endured in prospecting this valuable and vast tract of country. On Bullion Creek a hole forty feet by six yielded \$750, and in short the field, from present report appears to be well worthy the miner's attention.

ATLIN.

The New Nimrod Company, Limited, has been registered in England, with a capital of £75,000 in £1 shares, to adopt an agreement with the Nimrod Syndicate Limited, operating in the Atlin district, to acquire and amalgamate the undertakings of certain companies therein mentioned (but not set forth in the registered documents), to carry on, assist, or participate in any financial, commercial, mercantile, industrial, manufacturing, mining, and other business. No initial public issue. The number of directors is not to be less than three nor more than seven. The signatories are to appoint the first. Qualification, 200 shares. Remuneration, £525 per annum and 5 per cent. of the profits, divisible (such percentage not to exceed £2,000 in any year).

CARIBOO.

The snowfall this year has been exceptionally heavy, there being now five feet on the level, and consequently an adequate water supply for hydraulic mining purposes this season is practically assured. Meanwhile work is in steady progress at the drift mines on Slough Creek and Willow River.

KAMLOOPS.

The *B. C. Review* (London) thus comments on the recent promotion of the Kamloops Mines, Limited:

"As the result of a satisfactory report by their engineer, the Ashanti Lands, Limited, have decided to take up their option with the B. C. Exploration Syndicate, and the result was seen last week in the issue of the prospectus of the Kamloops Mines, Limited. The capital is moderate, being placed at £150,000. The company acquires seven claims in the Kamloops district, the best known of which is the Iron Mask and five claims in the Coast district of British Columbia, all of which are Crown-granted. The syndicate has actually spent in acquiring and developing these properties, £43,000. On the Iron Mask a shaft has been sunk to a depth of 500 feet, and 62,000 tons of ore are in sight, on which it is estimated a profit of £40,000 will be realized. It is proposed to place a concentrating plant on the property, capable of treating 50,000 tons per annum, from which a net profit of £27,560 per annum is estimated by the company's engineer, Mr. William Jones. The prospectus is a businesslike and straightforward document, there are no founders' shares, and no attempt to unduly water the capital; the vendors are selling their property

entirely for shares, and £20,000 is set apart for working capital. The issue last week consisted of 150,000 shares at par, and 300 6 per cent. debentures of £100 each, offered at 50 per cent. discount. This appears to us the only matter inviting criticism, as although, of course, mining debentures are somewhat of a speculative holding, still when the engineer's report shows a net profit of £40,000 from the ore in sight, 12 per cent. seems rather a high price to pay for money. Debentures were only issued, however, on the terms that an equal number of ordinary shares had to be subscribed for. The minimum subscription on which the directors went to allotment was 12,500 shares, which were underwritten by two of the directors for a commission of 5 per cent. The Iron Mask is under good local management, and should, from all appearances, prove a profitable undertaking."

SLOCAN.

Several of the big mines near Sandon are now in active operation. The Ivanhoe concentrator is now in full running order and is producing both silver-lead and zinc concentrates. The Slocan Star has increased its force of workmen, and the Reco is employing some 40 men, and shipping at the rate of ten tons a day. Upon the advice of an eminent Belgium metallurgist the Monitor Company has practically decided to install a special plant for saving the zinc contents of the ore this year. The Queen Bess, it is reported, formerly owned by an English company, has been acquired by Messrs. Potter & Zwicky, well known local mine operators, from the Bank of Montreal.

SLOCAN CITY DIVISION.

In the Slocan City Mining Division, or the "dry ore belt," as it is termed, activity since the commencement of the year has been decidedly marked, and there is every likelihood that this district will make in 1904 a far better showing than in 1903. Several of the larger producing properties are now held under leasehold rights and are being worked most successfully. Of these the Enterprise, where a working force of 35 men is now employed, is shipping steadily, while a carload of ore was shipped from the Lorna Doone last week. Shipments have also been made by the Hewitt and Comstock, the ore from the former yielding \$27.50 per ton deducting freight and treatment costs, and the latter 20 to 90 oz. in silver and 50 to 60 per cent. lead to the ton, having an approximate net valuation per carload of a thousand dollars.

NELSON.

The annual general meeting of the B. C. Standard Mining Co., owning the Hunter V. mine at Ymir, was held in Nelson in February. The directors reported that a tramway equipped with 30 buckets of 1,000 pounds capacity each has been installed, and also a smaller subsidiary two-bucket system. A 200-ton ore bin has been constructed in addition to bunk and cook houses. The Hunter V. mine has been developed by a number of open cuts, shallow pits and drifts, an incline having since been run. On the Double Standard the shaft has been sunk a further 58 feet and a connection made with the shaft on the hill. There are also on the Double Standard adits, drifts and open cuts, while ground sluicing exposed bed-rock for about 1,000 feet. Shipments are now being made to the smelters at Nelson, Trail and Northport at the rate of about 40 tons a day, but this tonnage will ere long be materially increased.

The suit of the Star Mining & Milling Co. against the Byron N. White Co. is now being heard at Nelson. The question involved is one of extralateral rights, although the suit is one of trespass. It is alleged by the defendants that they have entered the ground of the plaintiffs in following the course of the vein downward from the apex, which they claim is on their ground. The plaintiffs claim that the apex of the vein is on their ground and that if the defendants have apex it is that of a different ledge.

BOUNDARY DISTRICT.

The Canadian Pacific Railway Company is essentially a businesslike organization and its affairs are conducted on

strict business principles. Here is a case in point: Copper-gold mining is the backbone of the mining industry in southern British Columbia. The future of the country depends largely, almost entirely in fact, on the successful development and utilization of the copper-gold resources of Kootenay and Yale, the mineral occurring in deposits large as to extent but containing a very low percentage of valuable material per ton of ore. For some years past ore of this character has been mined. It has now been demonstrated that it can be produced at a profit, but in any case the margin of profitable operation per ton is narrow, and consequently it is essential that the strictest economy should be exercised in producing and treating the ore, and further that these operations should be performed on the largest possible scale. In the Boundary district these requirements have long been realized, and mining engineers and metallurgists have been most successful in meeting and conforming with them, so that to-day the costs of mining and smelting, in the Boundary have been reduced to a degree that a few years ago would not have been considered possible. It follows, of course, that as production costs decrease ore of a still lower grade value becomes of commercial account, and the available tonnage is thereby increased. The C. P. R. Co. then recognizing this principle and co-operation with the efforts put forward by mine-operators in the districts has announced the very material reduction of 7 1-2 cents per ton in freight charges on the carriage of ore from the mines at Phoenix to the smelters at both Grand Forks and Greenwood, the present rate being but 30 cents a ton to those points. As ore is now being shipped at the rate of about 15,000 tons weekly from Phoenix, the saving to mine-owners of \$1,125 a week, or about \$60,000 a year on this output is a very considerable item, and should undoubtedly exercise a very stimulating effect on production. Again another evidence of the railway company's farsightedness is found in the reduction that has been made in freight rates on zinc ores. Zinc mining is practically a new industry in British Columbia. It has only lately deserved attention or consideration. That it may assume very important proportions is now generally conceded. The zinc producer in British Columbia has had two markets for his product, the United States and Europe. Until a few weeks ago both markets offered about the same opportunities, but in either cases the high freight rates eat very seriously into profits. The action of the C. P. R. in reducing rates from \$16 to \$13 a ton has, however, greatly improved the outlook for zinc mining, and already producers have taken advantage of the lower rate to ship to Europe.

EAST KOOTENAY.

The Government agent in South East Kootenay, reporting on 1903 conditions in that section of country states: "All our producing mines are closed at present, though the improvement of our markets leads us to believe that a revival is not far off. The pay-roll of the Crow's Nest Pass Coal Company approached \$1,800,000 for the year, an average of \$150,000 per month. The number of men employed are 1,549, besides 287 men employed on construction and in the different offices of the company. The daily output of the mines at present are: Fernie, 1,200 tons; Michel, 1,400 tons; Morrissey, 800 tons. A strike lasting from the middle of February to the first of April seriously reduced the output. At present the relations between the company and its employees is cordial. During the year 100 coal licenses have been in force on Upper Elk River. A syndicate, holding 44 licenses, has expended over \$10,000 in prospecting and developed numerous seams of valuable coal. Another syndicate on Fording River has also done valuable development work."

From North East Kootenay, the amount of ore shipped during the summer of 1903 was about 900 tons. This does not, however, represent the amount of mining done, the ore having been taken out in the course of development only. The number of miners employed shows an increase.

Mr. J. F. Ritchie, P.L.S., of Rossland, spent several days of last month visiting the Coast cities.

MACHINERY NOTES.

Mr. F. Fernan, an English metallurgist and consulting engineer now visiting British Columbia on behalf of an English Company, recently expressed his private opinion that in this country we are as far advanced in copper-gold smelting as we are behind in our knowledge of modern methods of handling silver-lead and zinc ores. As a result of a report made by Mr. Fernan last August, it is stated meanwhile that it has been definitely decided to erect at once in the Slocan both a zinc enriching mill and a zinc reduction plant. The erection of a lead smelter is under consideration. By the enriching plant it is proposed to take the ordinary zinc concentrates produced by the Slocan mills and enrich them by magnetic process to a point where they will stand exportation, that is 55 per cent. and upwards. Both this plant and the reduction works will have capacities to start with of 25 tons daily and will be built on the unit system.

The Mount Baker-Yale Mining Company has just installed a ten-stamp mill on the property on Siwash Creek, near Yale, and will shortly add another battery of ten stamps. The ore of which there is a large body, is said to average about \$4 to the ton.

In an interview the managing director of the Arlington mine, in the Slocan City Division, stated that the proposed 50-ton mill for the mine would be in operation before the close of the present year. This mill is to utilize the Parks process. The ore is first crushed in a 20-stamp mill and is carried by automatic distributors over six Overstrom tables. The slimes are put through a Klein separator. From laboratory tests it is considered that 90 per cent. of the silver values in the Arlington dump can be saved by this method at a cost of \$3.50 per ton, leaving a profit of \$7 per ton on 40,000 tons.

Imports of mining machinery into Canada during 1903 were very large, the total value thereof being \$1,281,185. Most of the machinery imported was supplied by manufacturers in the United States, the value of the imports from this source being \$1,206,465, while from Great Britain machinery to the value of \$61,425 was imported. Great Britain, however, supplied us last year with nearly double the quantity of wire rope as that furnished by the United States.

A matter of recent important occurrence is the commencement of lead refining operations at Trail on a commercial scale. It is expected that the refinery, which has a capacity of twenty tons a day, will be henceforward in steady operation, the intention being, it is announced, to produce a sufficient quantity of pig lead to meet the requirement of the Canadian market. As is well known, refining at these works is done by an electrolytic method, which has experimentally given excellent results. After the refinery has been in operation for a time sufficient material will have been accumulated to justify the opening of the slimes plant. This is a secondary process to handle the residue of the lead refinery after the pure lead has been extracted. The slimes carry gold and silver in conjunction with arsenic, antimony and other impurities collected in the refining process. Within the slimes plant the pure gold is taken out to be marketed at the Seattle or San Francisco mints, silver for export to the Orient, copper sulphate, which finds a ready market for pickling grain in the Northwest Territories, and either metallic antimony or antimonial lead, which is used largely in Canada in the manufacture of babbitts and other alloys.

A concentration plant with an initial daily capacity of 150 tons will shortly be installed at the Nickel Plate mine, at Hedley.

The aerial tramway, 13,000 feet in length, connecting the Hunter V. mine with the railway at Ymir having been completed, shipments from this property have been commenced.

The 350-horsepower motor to operate the new White Bear electrical air compressor has been shipped from the eastern manufactory where it has been under construction for several months. As soon as the motor is installed the compressor will be put into use. At present the mine is utilizing the old steam-driven compressor.

FEBRUARY DIVIDENDS.

Le Roi No. 2 (Rossland).—One shilling per share.
Sunset (Slocan).—The tenth dividend of \$6,000.
Cariboo (McKinney).—At the rate of 4 per cent.

PERSONALS.

Mr. B. Fallows, M.E., of Rossland, has been appointed engineer for the Monarch Gold and Copper mines property on Hall Creek.

Mr. Leslie Hill, C.E., of Nelson, consulting engineer and manager for the Hastings (British Columbia) Exploration Syndicate, Ltd., left Nelson on the 16th ulto. on a business trip to London, England.

Mr. A. B. W. Hodges, superintendent of the Granby Company's smelter at Grand Forks, went to Montreal recently to confer with the directors of the company on matters connected with their increasing smelter business.

Mr. Paul Johnson, E.M., was down from Hadley, S. E. Alaska, last month. Before returning he paid a visit to the B. C. Copper Company's smelter, Greenwood, where extensive additions and improvements to plant are being made.

Mr. Donald G. Forbes, late general manager of the Silver Cup Mines, Ltd., and the Great Western Mines, Ltd., with provincial head offices at Ferguson, in the Lardeau district, left for England last week after a short visit to Victoria.

Mr. S. Hirsch, representing Mr. L. Vogelstein of New York, agent in America for Aron Hirsch & Sohn, of Halberstadt, Germany, lately visited the Payne Mine, near Sandon, Slocan, in connection with the making of a contract for the zinc output of the Payne.

Mr. C. A. Stoess, C.E., P.L.S., at one time a resident of New Westminster, but for the last four or five years practising his profession in the Grand Forks district, has returned to the Coast, making Vancouver his headquarters.

Mr. R. I. Blomert, for the last three years in Mr. C. M. Fassett's laboratory, Spokane, Washington, and who had charge of the experimental Hendryx process plant working for several months in that establishment, has been appointed to supervise the operation of the Hendryx electro-cyaniding plant recently installed at the Mountain Lion mill, Republic.

Mr. Horace Mayhew, of Flintshire, Wales, was a visitor to Nelson last month. He is one of the directors of the York and Lancaster Syndicate, which owns the Alice group of mineral claims situate near Creston. This group has been leased by Mr. Mayhew and Captain John Hampson, the latter being in charge of the development work in progress on the property. Mr. Mayhew is also interested in other British Columbia mining properties, being a stockholder in the London & B. C. Goldfields, Ltd., owning the Ymir gold mine, and in the B. C. Standard Mining Company whose Hunter V. group, near Ymir, is considered one of the most promising mining properties in the Nelson Mining Division. He leaves early this month on his return to England, where he is largely interested in coal mining, being a partner with two sons of the late Hon. W. E. Gladstone in opening up coal measures on the Hawarden estates.

Mr. Beaudette, the Dominion Government Engineer who visited the Coast cities last month, expressed the opinion that the country in the vicinity of Dawson would long continue to yield annually a large amount of gold, the difficulty there being not any limitation of auriferous area or the early exhaustion thereof but the scarcity of water. For ordinary placer mining operations only gravel going two dollars a cubic yard or over will pay, but by hydraulic methods ground averaging 25 cents can and is profitably worked. In many cases, however, water could only be obtained from a distance requiring a large expenditure of capital, which is not easily obtainable for this purpose. Mr. Beaudette also stated that the quartz showings in the Yukon were most promising, and the Government is lending some assistance in proving the value of claims already discovered by crushing ore at practically cost and by other ways, but conditions are as yet hardly ripe for the establishment in the Yukon of a quartz mining industry on anything approaching an important scale.