

FOURTH ANNUAL REPORT
OF THE
MINISTER OF MINES
FOR THE
YEAR ENDING 31st DECEMBER,
1877,
BEING AN ACCOUNT OF
MINING OPERATIONS FOR GOLD, COAL, ETC.,
IN THE PROVINCE OF
BRITISH COLUMBIA.



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1878.

REPORT

OF THE

MINISTER OF MINES

FOR THE YEAR 1877.

To His Excellency A. N. RICHARDS, Lieutenant-Governor of the Province of British Columbia.

MAY IT PLEASE YOUR EXCELLENCY:—

I have the honour herewith to present to Your Excellency the Fourth Report of the Mining industries of the Province.

All of which is respectfully submitted.

I have the honour to be,

Your Excellency's obedient Servant,

A. C. ELLIOTT,

Provincial Secretary & Minister of Mines.

1st February, 1878.

REPORT.

GOLD MINING.

The amounts actually exported by the Banks during the year 1877 are as follow:—

Bank of British Columbia	\$353,254 16
Bank of British North America	497,748 65
Garesche, Green & Co.	355,133 48

1,206,136 29

Adding one-third for gold exported in private hands

402,045 43

Gives a total yield of

\$1,608,182 72

Even the most careful and painstaking officer cannot estimate the gold taken out with even an approximation to correctness.

The total yield for 1876 was estimated by the Gold Commissioners and Government Agents at \$980,671; but the Banks alone exported more than \$350,000 over that amount, and a large sum must be added for gold exported otherwise than through the Banks. One-third is the estimate of the gold so leaving the Province; but, at any rate, the returns from the Banks are absolutely correct, and afford solid ground for estimating the total yield.

CARIBOO.

For the second time in the history of British Columbia, the old mining district of Cariboo stands pre-eminently forward. Ever since 1863 companies have from time to time been formed, and large sums expended, in the endeavour to find gold quartz in paying quantities. Unfortunately, the necessary technical knowledge was wanting, and failure the result.

In May last, the Provincial Government—in addition to having offered a bonus, under certain conditions, to the company which should first erect a ten-stamp quartz mill in Cariboo—wrote to Mr. Booker, Her Majesty's Consul at San Francisco, asking him if he would kindly employ, on its behalf, the services of "some person skilled in quartz." The Province was indeed fortunate in Mr. Booker's selection, for Mr. Harper's great knowledge and experience in lodes and ores are undoubted, and have been of the greatest possible use in the, so far, successful developments which have been made during the past season. A year ago the miners of Cariboo, after long and patient struggling, had nearly given up all hope; to-day everybody is looking forward to an era of prosperity which, in the opinion of the well-informed, will even exceed that of the palmy days of 1862-3-4-5. Confidence and activity have been substituted for despondency and apathy, and even at this season of the year, with many feet of snow on the mountains, men are out in all directions prospecting for ledges.

The yield of gold from the alluvial claims in Cariboo has doubtless fallen off; it is probable, however, that such has not been the case to the extent estimated by the Government Agent.

It is greatly to be regretted that the Victoria Company, on Cunningham Creek, have been obliged to abandon their ground.

The reports received from the Government Mining Engineer, and the Government Agent at Cariboo, will no doubt be read with interest.

"BARKERVILLE, July 21st, 1877.

"*The Hon. the Minister of Mines.*

"SIR,—Since my arrival in Cariboo I have examined two well defined ledges in the vicinity of Barkerville, and veins at the head of Burns Creek, from which a specimen of ore, rich in gold, had been taken, which, upon examination, I found to be a detached spur from a ledge situated at a higher level, and therefore of little or no value.

"I have confined my attention to ledges in the immediate vicinity of Barkerville, owing to their accessibility, which is an important consideration in the transportation of heavy machinery and the favourable conditions under which rock can be extracted and sent to the mill.

"On my return from San Francisco, I shall examine and report upon the lodes situated at a greater distance which I may deem of sufficient importance to bring under your notice.

"The Big Bonanza ledge, situated on the summit of the mountain at the back of Barkerville, is a true fissure vein, having well defined walls running nearly east and west, with a pitch to the north at an angle of about twenty degrees. The ledge is twelve feet in width, containing milling ore, about four feet of which can be assorted for milling purposes, judging by the favourable surface indications obtained in the cut run across its width, which would probably increase in value at a greater depth. Some of the quartz was sent to Mr. Hitchcock, the Government Assayer, and a result obtained was gold, 1 oz. 6 dwt. 3 gr.; silver, 3 oz. 2 dwt. 1 gr.

"I next examined the Steadman ledge at Richfield, upon which a shaft has been sunk by the Cariboo Quartz Mining Company to a depth of fifty feet. Owing to a miscalculation of the contractor in sinking where it cropped out on the surface, without taking into consideration the dip of the vein, only the footwall was visible. The ledge is well developed and contains rock which will defray the expenses of milling, and will more fully exhibit the characteristics of a gold-bearing ledge at a lower level. I regret, for the reason above stated, that I was unable to form an opinion concerning the hanging

wall, which my experience leads me to believe contains vein matter of a richer character. The assays obtained from the ledge exhibited 13 dwt. 1 gr. gold, and 3 oz. 15 dwt. and 3 gr. silver, to the ton. I have inspected the four stamp mill at Richfield and found it deficient in two of the most important requisites for the saving of gold which contains enough silver to prevent its being arrested by quicksilver, viz:—an amalgamating pan and settler; owing to the absence of which, and the want of sufficient experience, no appreciable amount of the precious metal contained in the ore could be obtained.

"I have had several interviews with the Directors of the Cariboo Quartz Mining Company, and have given them what information lay in my power for the successful development of this important source of wealth. These gentlemen coincided with my views, and arrangements have been made for me to purchase the required apparatus for the present mill, in San Francisco, and also to engage the services of a thoroughly competent amalgamator, assayer, and panman, without whose skill and experience the best of machinery would be of no avail, for which purpose it is my intention to leave here by the next steamer in order to effect a return at as early a date as possible.

"I considered it necessary that the small mill be first put in working order, as the proper opening of a mine for the economical extraction of ore to keep a ten stamp mill going will necessitate considerable delay and expense. The latter will require about seven hundred tons of rock a month; only three hundred tons of which will be considered of sufficient value for milling. In the meantime, the small one can be kept at work developing the lode and testing its value, which I am confident will attract the attention of capitalists and enable the present company to raise the extra amount required, in addition to the Government loan, for the erection of more extensive machinery, thereby paving the way to remunerative employment, stimulating every branch of business, and launching the Cariboo district on a new tide of prosperity, which will increase with the lapse of time.

"I have, etc.,
(Signed)

"R. B. HARPER."

"BARKERVILLE, October 13th, 1877.

"The Hon. the Minister of Mines.

"SIR,—I have the honour to report that the Cariboo Quartz Mining Co's. tunnel, for the purpose of intersecting the Big Bonanza ledge at a lower level, is in a distance of 110 feet, leaving 50 feet more to be accomplished. The rock run through is a black slate, and exhibits small seams of quartz pitching in the direction of the lode. The rock in the face, at present, is so very hard as to greatly retard the progress hitherto made, and its completion will probably not occur before the end of this month.

"The St. Lawrence Co., situated at the eastern extremity of the Big Bonanza, have run a cut across the vein. This portion of the lode has well defined vertical walls, the vein matter, containing a small percentage of iron pyrites, lead, and blende, assays from \$6 to \$35 per ton.

"The American Mine, belonging to the same company, has had a cut run across the seam, which exposed rock of the same quality as that contained in the St. Lawrence.

"The Pinkerton Mine adjoins the American. The ledge in this locality crosses Lowhee Creek in the Victoria Co's. ground, at a depth of 150 feet from the surface, and I availed myself of the permission, obtained from the latter company, to descend into their diggings and inspect the remarkable body of ore upon which the foregoing and subsequent claims are located. The ground, which formerly covered it, having been removed by drifting, I had no difficulty in forming an opinion so favourable, with regard to its permanent and remunerative character as a gold-bearing ledge, that not a doubt remains in my mind as to the great influence its development will eventually have in the welfare of the district and the Province in general.

"Assays, from quartz taken at this depth, average \$36 in gold to the ton, with a small proportion of silver. The ledge is about 23 feet wide, and the deposit seems almost inexhaustible.

"The next location, owned by Mr. T. Harper, has been amalgamated with the preceding mine, and ore is now being hoisted in the Victoria Co's. shaft, from which a good return is anticipated.

"The Enterprise Mine, to the west of the above-mentioned, is owned by some of the most prominent citizens of Barkerville, and is, I consider, one of the best locations on the Big Bonanza, possessing as it does all the most favourable features of the preceding claims, and enjoying the additional advantage of being well situated for an economical extraction of the mineral it contains, without resorting to the expensive machinery for hoisting and pumping purposes.

"The Steadman lode, at Richfield, improves in appearance as work progresses. The vein matter carries a large quantity of iron, blende, and lead. Assays therefrom vary from \$16 to \$20 per ton. A better knowledge as to its average value will, however, be ascertained in about a month, as the mill is now engaged in crushing some of the rock.

"The Foster Mine, Chisholm Creek (which empties into Lightning Creek at the town of Stanley), has, so far, given the best assay returns, ranging from \$120 to over \$700 per ton. The vein, on the surface, is divided into three stringers, running parallel to each other, which will be found to unite at a lower depth and present a compact body of ore. A shaft has been sunk to a depth of 18 feet, with such promising indications that measures will be taken, in the ensuing spring, with a view to its thorough exploration.

"There has been considerable work done on the Montgomery extension, situated on the same ledge, in running cuts through the gravel to intersect the vein, which has not yet been found. It is my conviction that a more careful search will reveal its presence, concealed from view, under slide bed-rock.

"The Foster extension, located south of the last mentioned, met with a similar difficulty in finding the reef, which was covered with an alluvial deposit of considerable depth, but lately their exertions have proved successful, and work thereon will be energetically prosecuted next year.

"The test mill at Richfield, with a crushing capacity of about four tons per day, started to crush on Monday, 8th instant, since which time it has been running in a most satisfactory manner, for which great credit is due to Messrs. Nason and St. Lawrence whose exertions have so much contributed to its present efficient condition.

"In conclusion, I beg to return my sincere thanks to the Directors of the Cariboo Quartz Mining Company and other gentlemen for the assistance and information which have been so cheerfully accorded me on all occasions.

"Feeling that my humble endeavours to assist in developing the rich resources of the Cariboo District will be amply rewarded by the success which will certainly ensue,

"I have, etc.,

(Signed)

"R. B. HARPER."

"VICTORIA, B. C., 18th December, 1877.

"SIR,—Being on the eve of leaving the Province for some months, I deem it advisable to supplement my reports of last summer by a short summing up of the season's work in Cariboo with reference to the development of quartz:

"The Cariboo Quartz Mining Company have crushed forty-one tons of ore taken from the Steadman ledge with an average result of \$18 to the ton. This ore was taken from a cut in the creek, having a vertical depth of 18 feet, and the appearance of the rock in the bottom of the cut is richer than that where it was commenced.

"The same company's tunnel on the Bonanza ledge has been run in for the distance of 160 feet; at the distance of 133 feet the lode was intersected and run through; its width at this point being 22 feet and its depth from the surface 52 feet. The assays from this rock averaged \$33 per ton. I may add that 8 assays were made and the average result taken from all. On the surface, this rock only averages \$14 to the ton, the inference being that the ore increases in richness at the lower level. 3,000 feet beyond, I visited the Victoria shaft and found the same lode at a vertical depth of 350 feet below the surface where the rock was taken which averaged \$14 to the ton. At this point, the assays ranged from \$24 to \$36 per ton, and the ledge at this depth has a width of 30 feet.

"Work has been done on the Foster ledge, Chisholm Creek; a shaft has been sunk to the depth of thirty-three feet, and the indications are so favourable that the company are preparing to run a tunnel.

"Many other companies are prospecting for quartz in Cariboo, but I am not in a position to report on them.

"I may state, in conclusion, that I have formed a favourable opinion of the Steadman and Bonanza ledges—the only two which, so far, have been really tested.

"I have, &c.,
(Signed)

"R. B. HARPER.

"The Hon. A. C. Elliott, Minister of Mines."

"To the Honourable A. C. Elliott,
"Minister of Mines.

"RICHFIELD,
"October 19th, 1877.

"SIR,—I have the honour to enclose herewith, forms containing mining statistics, embracing operations in this district (exclusive of Keithley Creek Polling Division) for the first nine months of the present year.

"It will be observed that a material decrease in the gross yield of gold of the district, as compared with the same period in last year, has taken place.

"Considerable prospecting has been going on during the summer on various creeks and gulches, but no discoveries of moment have been made.

"I regret to say the Victoria Co., of Cunningham Creek, whose exertions have been watched with much interest the past year, have, after expending some \$35,000, taken their pumps out of the shaft and abandoned the ground, having thoroughly tested the channel, but without finding ground to pay.

"Two companies on Cañon Creek are still prospecting, with every hope of success.

"On Jack of Club's Creek, a company (the Sincock Co.) formed for the purpose of prospecting for a hill channel, have sunk two shafts 50 feet deep, as yet without succeeding in their object.

"The early resumption of work by the Lane & Kurtz Company is a matter for congratulation. The benefit to the district to be derived from the successful prosecution of this undertaking can hardly be over-estimated, many of our most experienced miners being of opinion that the work, if properly carried on, will prove highly remunerative to the company.

"The yield of gold from most of the old, well-known creeks, excepting Lightning, will be found to be about equal to that of last year.

"The yield of gold for nine months, as per statistics, is found to be \$391,402

"Estimated amount taken out by various companies that have not reported to the collectors 20,000

"Of the above amount the Bank of British North America, Stanley, purchased \$186,177

"The Bank of British Columbia, Barkerville 156,100

"Leaving amount in private hands 69,125

\$411,402 \$411,402

"Quartz.

"I am much pleased to report upon the progress made in developing this most important branch of mining industry. I have referred to the number and extent of our quartz veins in my former reports, but no definite knowledge of their remunerative value existed until the advent to Cariboo of the Government Mining Engineer, Mr. R. B. Harper, in July last; and as that gentleman's report has been made to you, I need but to say that the utmost confidence is reposed in Mr. Harper by the whole community, and that but one opinion prevails, viz., that an era of prosperity is about to dawn on Cariboo, surpassing the palmy days of 1863.

"Thirty-six quartz mining claims of 1,500 feet each, in all 54,000 feet, have been made since Mr. Harper's arrival, upon some of which work is being prosecuted with vigour. I may mention particularly two companies, the Cariboo Quartz Mining Company and the Enterprise Company. The former have two locations, the Steadman, a real estate claim, and a pre-emption on the Bonanza lode. The company is now running a tunnel on the Steadman vein, whence the rock, after being sorted, is hauled on a tramway to the mill and crushed. It is from this lode that the first test is being made, probably 40 or 50 tons. When the result is ascertained, a test will then be made from the Bonanza location, a tunnel being run through bed-rock to cross-out this ledge,

It is expected that by the time the test is made from the Steadman, this tunnel will have opened up the vein at about 50 feet deep.

"The Enterprise Company, situated on the west side of Lowhee Creek, on what is supposed to be an extension of the Bonanza ledge, is about to let a contract for about 200 feet of bed-rock tunnel to cross-cut the ledge at about 200 feet deep. This claim is very favourably located for prospecting; the face of the mountain being precipitous, will admit of comparatively short tunnels cutting the ledge at very great depth.

"The four-stamp test quartz mill is now running night and day, and appears to do good work. No wash-up has yet been made.

"Believing that quartz mining in this district is destined to take precedence in the future, I have endeavoured to ascertain the approximate cost of working the ledges, and find, upon the best information obtainable, that mining and milling the ore with a ten-stamp mill will cost from \$10 to \$12 per ton, which will vary according to circumstances; but in so far as our present experience can guide us, ores can be reduced without the use of expensive processes.

"I have, etc.,
(Signed)

"JOHN BOWRON,
"Government Agent."

—
"RICHFIELD, December 22nd, 1877.

"SIR,—I have the honour to inform you that since my last report the active working of quartz mining renders a supplementary report necessary.

"The crushing from the Steadman claim of the Cariboo Company has been completed, resulting in a gold bar of the value of \$341 81, obtained from forty tons of rock. This may be considered a highly satisfactory result, the whole of the rock crushed being from a cut on the surface from six to ten feet deep. The pulp assayed \$15, but the quicksilver was not retorted, the company having only a small retort.

"The same company have run a tunnel cutting the Big Bonanza lode at a depth of about 50 feet. The assays in crossing the ledge vary from \$10 to \$92. Five assays recently made from different parts of the ledge give an average of \$33 70. The drift is being extended in a S.E. direction, running on the lode toward the huge mass of quartz shewing on the surface, from which the ledge takes its name. The ledge where the tunnel crosses it is 20 feet wide.

"The result of such a favourable test from the Steadman, and the assays made on the Bonanza, have created quite an excitement throughout the district. The Bonanza, or what is believed to be an extension of it, having been staked to the head of Red Gulch, a number of companies are now actively engaged upon it.

"The Enterprise Co., referred to in my last report, have run their tunnel in bed-rock about 100 feet. They will cut the ledge about 150 feet deep.

"On the old Wilkinson ledge the British Columbia Gold and Silver Milling and Mining Company have a location on which they are working. Extending east from this company's ground is the Perseverance Co., in whose claim, from a stratum of decayed quartz four feet wide, dipping toward the main lode, an assay has been made of \$155 to the ton. The further locations extend to where the ledge crosses Grouse Creek. This lode is now believed to be the Steadman, and the impression among many is that the Steadman and Bonanza lodes are the same, forming one monster fissure, believed to reach from Grouse Creek to the head of Red Gulch, and, singularly enough, all the streams that cross it have been rich in alluvial deposits.

"The general bearing of this ledge would appear to be from due east and west to 18° north of west, with a northerly dip.

"From the Cariboo Co. location on the Steadman to the same company's claim on the Bonanza, several companies are actively at work. The result of the working in the Tahoe, the Vivian, and the Cooper Companies will prove or disprove this theory.

"Some work has been done, but I have no further developments to report, on Chisholm and Davis Creek lodes.

"On the Hood's lode, which crosses William Creek about half a mile above Richfield, and runs parallel to the Steadman, several companies have located claims.

"In all there have been 82 quartz claims recorded in the months of November and December.

"In consequence of the attention it has attracted, and its undoubted value, I deemed it advisable to employ Mr. O. Travailot to make a tracing of the Bonanza lode as far as surveyed, which I forward by this mail.

"I have, etc.,
(Signed)

"JOHN BOWRON,
"Government Agent.

"To the Hon. the Minister of Mines,
"Victoria, B. C."

The Government Agent at the Forks of Quesnelle, acting for the Keithley Creek section of the Cariboo District, has naturally but little to report upon which could be considered of much interest to the general public. It is satisfactory, however, to observe that Keithley Creek—discovered in 1861—still continues to yield gold in paying quantities. The great bulk of the mining population in this section is composed of Chinese, from whom it is impossible to obtain returns even approximately accurate.

"FORKS QUESNELLE, B. C.,
"October 10th, 1877.

"SIR,—I have the honour to forward herewith my report of the mining statistics of Keithley Division, Cariboo District, compiled from information gathered on my annual visit to the claims, and in most cases obtained from the actual owners. I consider it a fair estimate of the yield of gold.

"The white miners in all cases give the necessary information, but the Chinese (with whom I have most to do) are untruthful, and suspicious that by asking such questions I have a further design on their pockets; however, those among them who have been in the country for some years, know what is wanted, and give tolerably correct information.

"I am sorry to have to report that the outlying creeks have not improved any since last year. On my visit to Harvey Creek, I found two companies at work; they were not taking out any gold just then, but their prospects are good for the winter season. Keithley Creek seems to hold out well, and is the chief place of mining and business in that section, and the miners on all the creeks in that part of the district depend on the Keithley Creek traders for their supplies. In the statistics forwarded, I have only been able to give the yield of gold for the summer season; of the winter's mining on the rivers I am able to speak only from report, but think there might be \$7,000 or \$8,000 added to statistics for winter's work.

"I have, etc.,

(Signed)

"W. STEPHENSON,
"Government Agent.

"To the Honorable
the Minister of Mines."

CASSIAR.

The gold yield of this mining district slightly declined during the past year, but the season was a most unfavourable one for mining, and the report of the Gold Commissioner may on the whole be considered encouraging.

McDame Creek has not sustained the high opinion formerly held of it by miners. Its 1st North Fork, however, is apparently rich, the pay-dirt in one tunnel having yielded 136 oz. to five sets of timbers, and prospects found in other tunnels are equally indicative of rich ground.

The discovery, by Mr. Walker, of a new creek on a different range is most important; it will, in all probability, open up a new mining district. The prospect obtained—60 oz. for 48 days' work—is really a good one, and it would appear that paying ground extends for at least 2½ miles. The gold being obtained in a "different range from that in which previous discoveries have been made," is a fact of much significance to the practical miner.

It is hoped, and expected with confidence, that the approaching mining season will be a more prosperous one than the last. Two reports from the Gold Commissioner are published herewith.

"LAKETON, CASSIAR, October 1st, 1877.

"SIR,—I have the honour to enclose herewith the Mining Statistics for 1877; and, also, to furnish the following particulars in reference to the general progress, &c., of the District of Cassiar during the present year.

"Although the mild winter of 1876-77 and the following spring promised a more favourable season than usual, I regret that such it has not proved to be.

"A succession of freshets throughout the season rendered the creeks unworkable until within the last six weeks, and a similar recurrence of mud slides considerably retarded mining operations in the hills and benches; and in some instances, as regards the latter, so much damage has been done that the labour of the season has failed to put them in good working order.

"Dease Creek suffered most from the incessant rains, and the returns from that creek are in consequence far below what they otherwise would have been. The majority of claims in that creek have been transferred to the Chinese, and consequently much loss is entailed upon the hill claim-holders, who, although the creek has once been worked out by the whites, are still unable to open their ground.

"Thibert Creek has done comparatively well; the hills prospect very favourably, and I have no doubt that, should next season prove favourable to mining operations, its returns for 1878 will fully double those of the present year.

"McDame Creek has confirmed my previous reports, inasmuch as it is to a degree 'spotted,' and nothing like a 'lead' has as yet been found.

"Snow Creek has not realized the expectations of last autumn, a few claims only having yielded richly.

"The 1st North Fork (McDame Creek) has turned out very satisfactorily. The last 'wash-up' from the Dawson & Phillips tunnel (5 sets) yielded 136 ounces, or about \$154 a day to the hand. The tunnels that have struck bed-rock above them on that creek have obtained prospects equally encouraging.

"Nothing definite is as yet known as regards the 3rd North fork (McDame Creek). Prospecting by tunnel is still carried on with favourable anticipations as to the result.

"The late discovery, Walker's Creek, is worthy of notice as prospecting well, offering remunerative employment to, it is estimated, at least a couple of hundred miners, and tending to open up an entirely new section of this district. It is situated in a different range from that in which the previous discoveries have been made, and there is every hope that it will prove the nucleus of gold fields as valuable and extensive as any Cassiar has heretofore produced.

"Several applications under the "Mineral Ordinance, 1877," have been received, and, owing to the energy and enterprise of J. W. McKay, Esq., an arastra has been erected near Glenora, for the purpose of testing some rock taken from lodes in that vicinity. Mr. McKay has been untiring in his endeavours to develop that branch of mining in this district, but, owing to the great expense attending such an undertaking and to the little interest bestowed upon it by others, the practical results arrived at are of little consequence, further than to prove that this is a country rich in quartz, possessing every indication of valuable mineral deposits.

"Attempts have been made this year to grow grain and vegetables in the district; I am happy to say that very favourable results were arrived at, and that for the future many thousands of dollars, which hitherto went to a foreign market for the purchase of such necessaries, will henceforth be expended in our own country and district.

"Seven pre-emptions under the "Land Act, 1875," have been recorded.

"Packing across the portage from Telegraph Creek to the head of Dease Lake, owing to the excellence of our trails, &c., has been done this year at the rate of seven cents per pound instead of from ten to fifteen cents, as paid during last season.

"The mines have been well supplied with provisions during the past year, and a tendency, though slight, has been exhibited towards a reduction in the price of merchandise generally. The prices still demanded are, however, high, and I fear that there is no immediate likelihood of there being any material reduction.

"The number of men here this season, exclusive of Indians, did not at any time exceed 1,200, of these between 300 and 400 were Chinese.

"Owing to the unprofitable excitements of the spring, I regret to be obliged to report that many of the miners were little better than destitute, and had not, in many cases, the means of paying their way out of the country. There have, however, been

fewer cases of sickness during the year, and the number of deaths has been 5 as against 11 in 1876.

"It is very gratifying to me to be able to state that there have been no criminal cases, and with the exception of one robbery, supposed to have been committed by Chinamen, no crime has been committed in the district.

"The returns, as near as can be estimated from the closest enquiries, are as follow from the different creeks, viz.:—

Dease Creek,	\$ 81,300 00
Thibert Creek,	\$173,700 00
McDame Creek,	\$144,800 00

Amount taken out, of which no definite returns could be procured say \$45,000, which, with the sum of \$55,000 allowed for the probable yield from the date upon which the statistics were completed until the 31st December next, will bring the gross amount to \$499,830 00.

"Considering the many difficulties which have beset the miners, and the fact that there have not been as many engaged this year, I think that, on the whole, the results for 1877 are not unfavourable, but rather go to prove that Cassiar stands to-day a mining district second to none in the Province as regards the number of men it employs, its great extent, its prospects, and the fact that it is as yet, except as regards a very limited portion of it, undeveloped.

"A severe winter is anticipated.

"I beg to enclose herewith notice of the laying over of the claims in the Cassiar District, also a list of the prices current.

"I have, etc.,

(Signed)

"ARTHUR W. VOWELL,

"To the Honourable

the Provincial Secretary, Victoria."

"Gold Commissioner and Stipendiary Magistrate.

"LAKETON, CASSIAR, September, 24th, 1877.

"SIR,—I have the honour to report, for the information of the Government, that I visited McDame Creek on the 12th instant. That creek upon my arrival presented quite a different aspect from what it did upon the occasion of my last visit. Instead of finding the prospects bright, and the miners in that portion of my district prosperous, I regret to be obliged to state that, with the exception of the 3rd North Fork, everything seemed to indicate a state of things quite the reverse. Many of the claims which had been paying and prospecting well in the earlier portion of the season had apparently failed, and, owing to the distracting effects of the discoveries already reported upon in the immediate vicinity, portions of that creek which, by steady work would have proved remunerative, were neglected, and in many instances totally abandoned.

"The 3rd North Fork is turning out well; as the tunnels are driven in prospects are found as good as those already obtained, and it is estimated that it will prove comparatively rich all through, and thus afford employment during the coming winter to many.

"Before my return (19th instant), I am happy in being able to report upon the return of a Mr. Walker and others from what has proved a successful prospecting tour. The discovery of Walker Creek, as the new creek has been named, will be of vast service to the district by opening up a section of country hitherto practically unknown, and which from present reliable reports promises to afford diggings of a regular and lasting character.

"The new creek is situated some 70 or 80 miles due east from Sylvester's Landing, at the mouth of McDame Creek, on Dease River. The discoveries of last spring were to the north-west.

"The prospect obtained has been a very fair one; for an aggregate of 48 days' work some 60 ounces of gold dust were taken out, realizing from \$18 to \$21 a day to the hand. The gold is fine, of a granulated appearance, and heavy quality—the largest piece obtained weighing not more than fifty cents. I have seen some 40 ounces of it, and am of the opinion that it is a class of gold which promises a continuous and uniform deposit in the creek from which it was taken. Mr. Walker and party found that the creek prospected for about two and a half miles about the same as the ground they had

worked. They also report a cañon of about one and a half miles in length, composed entirely of decayed quartz, and full of iron pyrites. The creek is about six miles long, and the average width is 200 feet, depth to bed rock (slate) 7 to 12 feet, no benches,—with sloping banks similar to Williams Creek, Cariboo. The country intervening between Sylvester's Landing and new creek is of a nature not difficult to travel over. Several of the miners, together with Mr. Sylvester, who has a pack train ready for the new gold fields, intended, when I left (19th instant), cutting out a trail this autumn and endeavouring to get in a load of freight before the winter sets in.

"The country surrounding the new creek is reported to be quite different in its appearance from that in vicinity of McDame, Thibert, or Dease Creeks, being more open, possessing a more luxuriant vegetation, and abounding in good grasses, game, and fish. Nearly all the men have gone eastwards from McDame Creek, and several from Thibert and Dease have also—although in danger of being frozen in—started for the new country.

"I should have visited that portion of my district had the season not been so far advanced, and had there not been so many calls upon my presence elsewhere. However, as winter is setting in, all that was necessary for the requirements of the public has been met by having an officer there until the commencement of the close season, who can make records and attend generally to their wants. Immediately upon the intelligence of the strike reaching me, and as soon as he was relieved from other duties, I sent Mr. Wiggins, who has been engaged upon McDame Creek as acting constable for some time past, and who has proved a very efficient officer, to look after the new creek and report, etc.

"Trusting that my action in this matter may be approved,

(Signed

"I have, etc.,

"A. W. VOWELL,

"Gold Commissioner.

"To the Honourable
the Provincial Secretary, Victoria."

"PRICE LIST OF PROVISIONS FOR OCTOBER, 1877.

	DEASE CREEK.	McDAME CREEK.
Flour, per 100 lb. sack.....	\$30 00	\$30 00
Bacon, per lb.....	0 45	0 50
Ham, ,,	0 50	0 55
Beans, ,,	0 25	0 35
Sugar, ,,	0 45	0 55
Tea, ,,	1 25	1 25
Coffee, ,, roast	1 00	1 25
Do. ,, green	0 65	
Rice, ,,	0 25	0 35
Oatmeal, ,,	0 30	0 40
Dried fruit, apples, per lb.....	0 50	0 65
Canned fruit, per can.....	1 00	1 25
Onions, green, per lb.....	0 45	0 50
Do. dried, ,,	1 00	1 20
Potatoes, fresh, ,,	0 22	0 30
Do. per can	1 00	1 25
Do. ,, sweet.....	1 00	1 25
Peaches, dried, per lb.....	0 50	0 60
Brandy, per gallon.....	8 00	10 00
Whiskey, ,,	7 50	10 00
Boots, leather, per pair.....	7 00 @ 12 00	10 00 @ 12 00
* Do. gum, ,,	10 00	11 00
Nails, per lb.....	0 40	0 45
Shovels, each	3 50	4 00
Picks, ,,	7 00	9 00
Axes, ,,	4 50	4 00 @ 5 00
Steel, per lb.....	0 55	0 75
Iron, ,,	0 50	0 55
Tobacco, per lb.....	2 00	2 25
Soap, English, per bar	2 00	2 00
Cheese, per lb	0 75	0 80
Butter, ,,	1 25	1 25
† Beef, ,,	0 30	0 35 @ 0 40

* None in market.

† Very little in market.

KOOTENAY.

It is greatly to be regretted that the reports received from the Gold Commissioner of this district are of so unfavourable a nature. The efforts made by the miners to discover new diggings have, unfortunately, not hitherto been crowned with success. It is to be hoped, however, that the labours of the coming season will receive a better reward.

" KOOTENAY, 29th September, 1877.

" SIR,—I have the honour to enclose herewith tabulated statement for Minister of Mines.

" The material for any further report for the information of the Lieutenant-Governor is very scarce indeed.

" The company of three men that were prospecting on Perry Creek failed to test the deep ground in consequence of a serious break down in their machinery. The value of the deep ground on Perry Creek is to-day as great a mystery as ever, and must remain so for this season at least.

" A company of three men will prospect on Quartz Creek this season. Nothing heard from them yet.

" Another company of three men are prospecting on some tributaries of Kicking-horse River. One of the party has been there before, and found good prospects. They were all very sanguine when leaving here, and the majority of our miners think they will strike diggings.

" The Government road party that are operating on the trail through the Rocky Mountains to Fort McLeod, east of us, will also pass through a country where gold has been found, but I fear the lateness of the season, after completing the public works, will not leave any time for them to examine the country for gold on their own account.

" I will take the earliest opportunity of reporting from all those outlying parties after their arrival here.

(Signed) " I have, etc.,
" CORNELIUS BOOTH.
" Gold Commissioner.

" To the Honourable
the Provincial Secretary, Victoria,"

" KOOTENAY, 22nd November, 1877.

" SIR,—I have at present very little information for the Lieutenant-Governor, wherewith to supplement the mining report which I have had the honour to forward heretofore.

" Every effort made to develop new gold diggings in this district, during the past mining season, has proved an utter failure.

" In the majority of cases lack of judgment and want of means has been the cause.

" There are at present in Kootenay miles of streams on which gold has been found, but in no case during the last five years has any attempt to prospect any of them been carried out far enough to demonstrate satisfactorily whether gold in paying quantities was deposited in or near any of them.

" The population is sparse, their means are small, supplies are expensive, and credit limited, hence Kootenay is doubtless doomed to drag out a precarious existence until some lucky accident develops a portion of her hidden wealth.

(Signed) " I have, etc.,
" CORNELIUS BOOTH,
" Gold Commissioner.

" To the Honourable
the Minister of Mines, Victoria."

OKANAGAN.

The estimated yield from this section of the Province is the same as last year. Prospecting on Cherry Creek does not appear to have been attended with much success, but Mr. Duteau, late in the season, obtained a satisfactory prospect in the hill, and the discovery may lead to important results. Prospects have also been obtained on a small tributary of this creek, but no sufficient test has yet been made to justify any opinion concerning it.

The finding of gold on the head waters of the Kettle River is probably the most important discovery yet made in this district. It must be remembered, however, that but little prospecting has yet been done. Mr. Dawson, of the Dominion Geological Survey—whose opinion is valuable—examined the Cherry Creek section last summer, and considered it to be rich both in gold and silver.

It is scarcely necessary to dilate on the very great advantages which would accrue to the Province from the discovery of even a fairly paying mining camp in this, one of the most important farming and stock-raising districts of British Columbia—the miners would have cheap food, and the farmers a ready market.

Attention is directed to the Assistant Gold Commissioner's most interesting report.

" OKANAGAN,
" December, 1st, 1877.

" To the Honourable A. C. Elliott,
" Minister of Mines.

" SIR,—I have the honour to report, with regard to the mines in my district, as follows:—Prospecting has been carried on through the summer along the main Cherry Creek and its branches for a distance of several miles, and although some very coarse specimens of gold have been found at intervals, no bona fide lead of pay dirt has been discovered above the Christian and Schneider Claims.

" This company, whose claims are located on the hills some 50 feet above the creek, have done well this fall, and during the latter end of November were averaging an ounce a day to the hand. Pieces of gold weighing respectively 8½ ounces, 6 ounces, and 2½ ounces were taken out of this claim last month, and afterwards exhibited in Victoria, and this company are feeling sanguine of being able to make good wages for some time to come. Too much cannot be said of the enterprising way in which this company have been working and prospecting, and also in lending their assistance to all who visited the creek.

" Mr. N. Duteau has been prospecting for the past two months by tunnelling into the hill above the Christian and Schneider claims, and, I am glad to be able to report, that at the time of my laying over the claims, November 15th, had struck a prospect sufficient to convince him of the existence of pay-dirt, and he is under the impression that he is on a continuation of the lead owned by the adjoining company.

" Very fair prospects have also been found on a small creek known as Fall Creek, emptying into Cherry Creek, and it is the opinion of several old miners who visited the diggings last summer, but who, from want of means, were unable to prospect thoroughly, that eventually some rich strikes will be made on this tributary.

" Messrs. Busy and Thorpe (whom I mentioned in my last report as having made some ten ounces a day to the hand in the early part of the season, on a small bar of Cherry Creek, and which they worked out) started over the mountains during the month of August to prospect the head waters of Kettle River. They report having discovered one of the main branches of this river, at a distance of about fifteen miles from Cherry Creek; and, although exposed to severe storms of snow and rain, deterring them from properly examining the locality, panned out sufficient gold (of a coarse quality) to lead them to suppose that gold existed in paying quantities; so much so, that it was the intention of these men, on their return to Cherry Creek, to form a prospecting party and revisit the ground. In consequence of the bad weather which continued till late in the season, it was considered inadvisable to dispatch a party this year. It is, however, purposed by the settlers and miners in the Okanagan District, to subscribe and fit out a party the ensuing season, to thoroughly test the Kettle River country.

"The old quartz excitement on Cherry Creek has again been revived by the discovery of a quartz ledge on the opposite side of the creek to that where the old Cherry Creek Silver Mining Company formerly worked. It will be remembered this company expended some \$15,000 or \$20,000 in seeking and endeavouring to trace a vein of ore which they had discovered on the surface, but unfortunately, after prospecting for nearly two years at great expense (provisions, &c., then being very high), had to abandon the work without attaining any permanent result, having entirely lost the vein of ore, some of which assayed as much as \$2,000 to the ton. Claims have now been located by Campbell, Bissett and others, and these men are confident of having struck a continuation of the same ledge as that on which the original company worked.

"Mr. Dawson, of the Geological Survey, visited this creek last summer, and, in my presence, carefully examined several ledges of quartz, he also inspected the different alluvial claims then being worked, and gave it as his opinion that this section of the country was highly rich both in gold and silver.

"It is sincerely to be hoped that the Government will see the necessity of sending Mr. Harper, the Mining Engineer, next season to examine and report upon the quartz ledges on this creek.

"The new trail to these mines was completed, under my superintendence, about the end of August, and has proved a great assistance to the miners and others in enabling supplies to be packed into the mines at a lower rate of freight. This trail, having been made on an easy grade, could be converted into a waggon road should future discoveries justify its construction.

"On Mission Creek, at the southern end of my district, and at a distance of eighty miles from Cherry Creek, mining has also been successfully carried on this past season, and the McDougall claim have averaged about \$4 a day to the hand, even working in the most primitive manner, by packing the pay-dirt (cement) from their claim to the creek and washing out the gold with rockers.

"A company have, however, started to convey water from the creek on to the benches. This has been a long and expensive undertaking, and the promoter, Mr. Squires, deserves great credit for the work, which when completed will, it is supposed, bring a quantity of alluvial ground under water power.

"In compliance with the wishes of the miners in the district I have laid over the claims from November 15th, 1877, to April 15th, 1878.

"I have, etc.,

(Signed)

"CHAS. A. VERNON,
"Assistant Gold Commissioner."

KAMLOOPS.

A few Chinamen continue to work on Tranquille River, but the Government Agent is unable to report any new discoveries of paying ground.

"KAMLOOPS, October 2nd, 1877.

"SIR,—I have the honour to forward mining statistics for the year 1877, Kamloops Division, District of Yale.

"There has been little or no prospecting done in this portion of the district during the past year, and, consequently, there are no new discoveries to report. Some ten or twelve Chinamen are still working on Tranquille River, making small wages.

"I have, etc.,

(Signed)

"JOHN USSHER,

"Thomas Elwyn, Esq.,

"Deputy Provincial Secretary, Victoria."

FRASER RIVER.

Yale and Hope.

The bars and benches on this section of the Fraser appear to be inexhaustible; in fact, Mr. Teague's estimate of the amount of gold taken out in 1877 exceeds that made by him for the previous year. When it is considered that the ground in question has been more or less worked for twenty years, the result is truly astonishing. Mr. Teague's report, which follows, is decidedly encouraging.

"YALE, B. C., 29th September, 1877.

"SIR,—In compliance with your request of the 25th July last, I beg to submit my report, with mining tabular form giving statistics of mining for the Hope and Yale divisions for 1877, by which you will observe there appears to be signs of improving prospects. The past winter was an unusually mild one, therefore producing most favourable opportunities for the desultory mining operations successfully carried on in these placers, without any intermission, up to within a recent date, when operations had to be temporarily suspended for the want of a sufficient supply of water for sluicing. I have not been able to make a personal visit throughout these divisions, but from the most reliable sources I gather my information that the results of the placer deposits will compare most favourably with and exceed the amount of gold obtained in these divisions of recent years.

"The party of white men prospecting on Siwash Creek, and alluded to in my report of last year, remained and mined during the winter, or for a period of about eight months, on a bar situate just below the mouth of Siwash Creek, but with what kind of success I am unable to inform you, as apparently every thing was kept by them with a singular reticence.

"A company of three Indians, during the months of February and March last, were working on the bank of the Fraser near the 18-mile post, and within the short space of six weeks succeeded in taking out with a rocker the snug little sum of \$1,500, thus evidently supporting the belief that there are yet numerous placer deposits remaining undiscovered in the banks of the Fraser, that will eventually prove a source of wealth to those who have the enterprise to develop them.

"I am pleased to report a company of Chinamen have struck fairly remunerative diggings on Trafalgar Flat, about three miles above the town of Hope, from which they informed me they obtained from \$3 to \$4 per day to the hand. Numerous benches, or extensive flats, can be seen stretching along the course of the Fraser, bearing the same characteristic indications of alluvial deposits which can be worked inexpensively, and very little skill is required in the manner of working them. The claim at the head of the famous Hill's Bar, worked by a company of six Chinamen, yielded very favourable returns, and would have no doubt continued to do so throughout the year, had not the company been compelled to suspend operations temporarily for the want of a sufficient supply of water for sluicing. The pay they find still continues into the bank, and they have a large piece brushed off preparatory for the fall season's work.

"Until the late rains the creeks emptying into the Fraser were exceedingly low, several being almost dry, and the consequence was mining operations on the benches were suspended; the long drought and excessive heat rapidly melting the snow from the mountain tops, thereby causing the low stage of water in the Fraser to be unprecedented, leaving strong impressions upon the minds of old settlers that the water will be at a lower mark during the coming winter than any yet seen, affording favourable advantages for working the bars in the Fraser, whose hidden treasures have laid for centuries untouched. The extensive flat opposite Yale, and stretching away adjoining the celebrated Hill's Bar, was applied for by a company of capitalists from San Francisco, who intended to carry on mining operations on a gigantic scale; but their request, I regret to say, was unfortunately not acceded to, therefore leaving a monotonous aspect instead of a busy scene of mining enterprise.

"The silver mines in these localities, I deeply regret to inform you, are lying dormant and intact, for the want of capital or enterprise to work them; therefore I am unable to submit any further important changes respecting the development of any of

these promising resources. All successful mining must be based on the principle that mineral riches, as a rule, increase as depth is attained. Some of the most successful mines in Cornwall have returned millions of pounds sterling, although often the riches were not arrived at before the shafts were sunk some 100 fathoms from the surface. It is quite true that ores in many cases have given out at comparatively shallow depths; but over and over again miners have discovered that, after passing through a barren floor of silicine matter, a fresh deposit, richer than the surface ore, has rewarded their energy and perseverance. Upon these principles the nerve of the adventurer should be braced to invest his capital, together with the services of practical and skilful mining superintendents; then the metalliferous deposits of these divisions would not languish for the want of enterprise to develop and realize the riches of our hidden storerooms of untold wealth.

"To the Honorable,
the Minister of Mines."

"I have, etc.,
(Signed)

"WILLIAM TEAGUE,
Government Agent."

COAL.

It is most satisfactory to be able to report that, notwithstanding the continued depression of the coal market in San Francisco, the total yield of coal for the year 1877 exceeded by nearly 15,000 tons the output of 1876.

The depression above referred to has been the cause of the non-continuance of work at the Harewood Mine; should, however, the price of coal in San Francisco again become a paying one, active operations will be recommenced. For precisely the same reason, the Baynes Sound Co. have temporarily ceased to take out coal. The company, however, are not idle, and, acting on the advice of a geologist, are engaged in boring, between the present mine and the sea, with the view of still further testing the value of their property.

Returns from the different collieries are annexed.

RETURN OF COAL RAISED AND SOLD, 1877.

	Actual output of coal, 1877. Tons.	No. of tons sold for home consumption.	No. of tons sold for exportation.	No. of tons on hand, Jan. 1st 1877.	No. of tons sold, Jan. 1st 1878.
Vancouver Coal Co.....	94,869 ¹⁰	16,869	68,780	10,509	19,670
Wellington Colliery.....	48,742 ⁴	6,342	37,486	1,273	6,794
Harewood Mine.....	9,000	500	8,760	600	400
Baynes Sound Coal Co...	1,500	600	415	500	700
TOTALS.....	154,052 ¹⁴	24,311	115,381	12,882	27,564

COMPARATIVE STATEMENT SHOWING AMOUNT OF COAL RAISED AND SOLD IN 1876 AND 1877 RESPECTIVELY.

Total output of coal, 1877.....154,052 tons.
Do. do. 1876.....139,191 do.
Increase for 1877.....14,861 tons.

NANAIMO COLLIERIES.

Output of Coal for 12 months ending 31st Dec., 1877.	No. of tons sold for home consumption.	No. of tons sold for exportation.	No. of tons on hand January 1st, 1877.	No. of tons unsold, including coal in stock Jan. 1st, '78.
94,809½ tons.	16,869.	68,780.	10,509 8 cwt.	19,670 3 cwt.
No. of hands employed.			Wages per day.	
Whites, Men, 301. Boys, 17.	Chinese, 87.	Indians, 23.	Whites, \$2 to \$4	Chinese, \$1 to \$1 25. Indians, \$1 to \$1 50.
Total hands employed, 428.			Miners' earnings per day, \$2 75 to \$5 00.	

NOTE.—The number of hands employed does not include Indians or Chinamen working for Miners and paid by them.

Name of seams or pits..... Douglas, Chase River, and Fitzwilliam.

Value of plant..... \$123,000.

Description of seams, tunnels, levels, shafts, &c., and number of same: *Douglas Mine*, Nanaimo, worked by slope; there are six levels, three of which are in operation, the coal in the lowest is about 5½ to 6 feet thick. The product of this mine is first-class for gas making purposes. The old Douglas pit is now used as an up-cast shaft.

New Douglas Mine, is situated near Chase River, about 1½ miles from the old Douglas Pit. The mine is being opened up by slope with three North and South levels. The thickness of the seam extends from 4½ to 9 feet of very clean coal, which is known as New Douglas, or Chase River coal, and is held in the highest estimation in the foreign and domestic markets for steam and household purposes. The capacity is now upwards of 280 tons, which will be doubled on completion of the powerful hoisting and pumping engine in course of erection.

Fitzwilliam Mine, on Newcastle Island, is worked by slope of 800 yards. The coal produced is of a first-class quality for steam and household use.

Newcastle Mine, not in operation; 240 yards by slope, on Newcastle Island.

Chase River Mine, 290 feet deep by shaft; not in operation.

Description and length of tramway, plant, &c. The railway is a little more than 2 miles in length, constructed of heavy double-headed steel rails, 52lbs to the yard, laid on chairs, bolted to wooden ties. The railway extends from the New Douglas Mine to the Company's loading pier, with branches and sidings to the Douglas Pit, &c.

The Company have fifty 5½ ton coal cars and fifty of 3½ tons, and three powerful locomotives. There are facilities at the Company's wharves for delivering 1,500 tons of coal per day.

(Signed) M. BATE,

WELLINGTON COLLIERIES.

Output of Coal for 12 months ending 31st Dec., 1877.	No. of tons sold for home consumption.	No. of tons sold for exportation.	No. of tons on hand, 1st January, 1877.	No. of tons unsold, including coal in stock, Jan. 1, 1878
48,743½ tons.*	6,342½ tons.	27,486½ tons.	1,273 tons, 1 cwt.	6,794 tons, 13 cwt.
No. of hands employed.			Wages per day.	
Whites, Men, 162 Boys, none.	Chinese, 80	Indians, 10	Whites, \$2 to \$3 75	Chinese, \$1 to \$1 25 Indians, \$1 to \$1 25
Total hands employed, 252.			Miners' earnings per day, \$3 to \$4.	

*Strike by miners four months.

Name of seams or pits..... *Wellington Mine, No. 1 slope.*
 Value of plant..... \$140,000.
 Description of seams, tunnels, 8 to 10 feet thick; shaft one, 183 feet, not working; two levels, shafts, &c., and number 3 feet seams.
 of same.
 Description and length of tram- 3¼ miles railway, 3 locomotives, over 100 waggons, 3 way, plant, &c. engines, and 2 steam pumps, &c., &c.
 (Signed) *R. DUNSMUIR,*
Managing Partner.

HAREWOOD COLLIERY.

Output of Coal for 12 months ending 31st Dec., 1877.	No. of tons sold for home consumption.	No. of tons sold for exportation.	No. of tons on hand 1st January, 1877.	No. of tons on hand 1st January, 1878.
9,000 tons.	500 tons.	8,700 tons.	600 tons.	400 tons.
No. of hands employed.			Wages per day.	
Whites, Men, 40 Boys, 3	Chinese, 40	Indians, none.	Whites, \$2 to \$4	Chinese, \$1 12½ Indians, —
Total hands employed, 83			Miners' earnings per day, \$2 to \$4	

Name of seam or pits *Harewood.*
 Description of seams, tunnels, levels, shafts, &c..... 1 workable seam, from 3 feet to 9 feet; 1 tunnel (water level); air level, 6 feet by 6 feet; drawing level, 6 feet by 18 feet.
 No. of same 1 tunnel, 2 levels (1 air and 1 drawing).
 Description and length of tram- way, bunkers, &c..... 2 miles and eight-tenths in length (aerial tramway); capacity of bunkers about 800 tons.

BAYNES SOUND COLLIERY.

Output of Coal for 12 months ending 31st Dec., 1877.	No. of tons sold for home consumption.	No. of tons sold for exportation.	No. of tons on hand 1st January, 1877.	No. of tons unsold, including coal in stock, Jan. 1, 1878
About 1,500 tons.	About 600 tons.	415 tons.	About 500 tons.	About 700 tons.

Name of seams or pitsNo. 2, or old seam; No. 4, or new seam.

Value of plantAbout \$67,000.

Description of seams, tunnels, levels, shafts, &c., and number of sameOne 7-foot seam (No. 2); one 4 ft. 6 in. (No. 4); about six tunnels.

Description and length of tramway, plant, &c.....3½ miles; 1 Baldwin 8-ton locomotive; about 25 cars.

" OFFICE OF INSPECTOR OF MINES,
" Victoria, November 1st, 1877.

" SIR,—I have the honour to report that, in pursuance of instructions received, I proceeded on the 9th ultimo to Nanaimo and Baynes Sound, for the purpose of making an inspection of the several collieries situated in those districts.

" Baynes Sound Colliery.

" This company is at present only working one drift, which is driven 'level free' into the No. 4 seam for about 400 feet on the north side of the river. Two other drifts have been run in, but are now closed. The workings are of but small extent as yet, on account of the faulty nature of the ground. The roof is composed of hard sandstone and requires very little supporting by timber. The air passing around the mine was amply sufficient for the number of men employed, viz.: seven. I have written to the company's manager, drawing his attention to some of the clauses in the 'Coal Mines Regulation Act.'

" Wellington Colliery.

" This colliery is worked by means of a slope off which levels are driven on each side. The slope is divided by a strong row of timbers running down the centre, one side being for the hauling rope, the other a travelling way for the men. The ventilating furnace is built on a very good principle, and is capable of producing a large amount of air. Telegraph wires run from the lower workings up the main slope into the engine house, from any point of which a signal can be given to stop the engine or otherwise by merely pressing the two wires together.

" The method of ventilating the workings, at present in use, is the 'separate split system.' This object is accomplished by splitting the air so that instead of allowing the whole of the air to traverse the entire workings, a separate portion is conducted into each district, which sweeps the faces and is then taken straight back into the main return airway (by means of overcasts) and up to the furnace. By this means, each small group of men get nearly pure air instead of its being sub-charged with carbonic acid gas and other deleterious matter. As the mines were not working the day I made the inspection, I did not measure the quantity of air passing into the workings, as the amount would have been entirely different when all the men were in and blasting had been going on, but I considered that there was quite sufficient when conducted well up to the faces. About 120 men are employed below ground, and are divided into two gangs—one gang working on each shift.

" The whole colliery was in good condition both above and below ground, with but few exceptions, of which I have notified the manager. I only found carburetted hydrogen gas (fire damp) in one place; and that was only a small quantity. There are

three (3) means of escape for men out of the pit, viz.: the main slope, the adit level, and the upcast shaft, in which is placed an iron ladder. The shaft near Departure Bay, which was sunk to an upper seam, is not being worked at present, but is securely planked over.

"Harewood Colliery.

"This colliery consists of a drift run 'level free' into the bluff, and stalls worked up to the rise of same. I found by measurement that 5,160 cubic feet of air were passing round the workings per minute, which amount divided amongst 16 men (the number at present working on a shift) gave 322 cubic feet per minute per man. The roof is very treacherous in several parts of the mine, being composed of shale, full of 'slips' and 'pot-holes,' and requires great watchfulness on the part of the miner employed, but plenty of timber seemed to be both supplied and advantageously used. The only gas ever met with here is carbonic acid gas (black damp), and that, I was informed, is very rarely seen. In accordance with the 'Coal Mines Regulation Act, 1877,' some alterations will have to be made, about which I have written to the proprietor.

"Cornish Shaft.

"This is a new shaft which has been sunk by Messrs. Francis and Nicholas on their farm, situate between Wellington and Nanaimo. The shaft is down to what is commonly known as the 'Dunsmuir Seam,' which at that point is 147 feet below the surface. The coal sunk through was 12 feet thick. The shaft is being enlarged and secured, but no work has been done in the coal as yet.

"Douglas Pit—Douglas Seam.

"This pit is the oldest at present working in the country. Now that it is connected with the Chase River Mine, it forms a continuous network of levels, stalls, &c., for over two miles in length. The pitch of the seam is very irregular over the whole of this field, varying from 13° to 76°, which makes the working of it very intricate and difficult to ventilate at times. The slope by which the coal is brought to surface is about 700 yards long, at the bottom of which nearly all the work is being done at present. At the time I made the inspection there were 61 miners, besides runners, bratticemen, &c., in all about 75 men, working in the pit, but not all on one shift. I found that in No. 4 level there were 2,898 cubic feet of air passing per minute, which, divided amongst the 21 men employed in this level on one shift, gives an average of 138 cubic feet per minute per man. In Nos. 5 and 6 levels, which are ventilated by a different current from No. 4 level, I found 3,510 cubic feet passing per minute, giving an average of 121 cubic feet per man. This, I consider, is rather too small a quantity of air to keep the faces clear of smoke, &c., and in fit condition for men to work in; but Mr. Bryden, who is the manager, informed me that he contemplated making a change in the intake air-courses, and also in the position of the ventilating furnace, by which he hoped to obtain a much larger supply of air. On looking over the firemen's report book, I noticed that on several occasions small quantities of carburetted hydrogen gas had been encountered in the faces, but no accidents had occurred through it. There are four (4) different means of escape from this pit, viz.: by the main slope, the shaft, the adit level, and through into Chase River Mine. The workings are in a good state as regards safe timbering, man-holes, &c.

"Douglas Shaft—Lower Seam.

"This seam is not being worked at present. The old Douglas Shaft was sunk down and reached this seam at a depth of 283 feet from surface. Some prospecting was done, but it has been abandoned for a time on account of the extreme irregularity of the coal.

"Chase River Mine—Douglas Seam.

This is, in my opinion, a model pit in every respect. The workings are laid out with great regularity and the ventilating furnace is a fine piece of work, capable of producing 40,000 cubic feet of air per minute at any time if needed. The air is divided into five different main splits, and each main split into several smaller ones. The total number of men employed in this pit is 104, half of whom work on each shift. No one

split of air is taken past more than 21 men at the faces. The total amount of air passing through the pit, I found by measurement to be 24,408 cubic feet per minute; this amount of air distributed amongst the 52 men who are, as a rule, in the mine at one time, gives an average of 469 cubic feet per man per minute.

"Fitzwilliam Mine.

"This pit is situate on Newcastle Island, near Nanaimo. I found on inspection that in the main return airway 5,670 cubic feet of air were passing per minute, but in the airway, near the stalls at present working, only 2,970 cubic feet per minute, thus showing the difference to be gained by leakage through 'stoppings,' &c. Forty men are employed underground, but only 20 are in the mine at one time, thus having an average of 148 cubic feet of air per minute per man. The furnace and upcast shaft are, I was informed, going to be repaired immediately, when, I have no doubt, there will be a great improvement in the ventilation. The workings are in a safe condition.

"Newcastle Mine.

"This mine is abandoned.

"I have notified Mr. Bryden, who is the Manager of the five last-mentioned mines, with regard to alterations and additions which I noticed would have to be made in order to comply with the Act.

"I would beg to state that as I received my appointment so recently, I think it would be very injudicious on my part to offer any remarks as to the probable working of the Act, which has not as yet got fairly into operation.

"The Hon. A. C. Elliott,
Minister of Mines."

"I have, etc.,
(Signed)

"EDWARD GAWLER PRIOR,
Inspector of Mines.

"INSPECTOR OF MINES' OFFICE,
Victoria, January 10th 1878.

"Sir,—I have the honour to report that on the 11th December last, I proceeded to Nanaimo, in order to ascertain whether the alterations, &c., suggested by myself after my last inspection of the Collieries situated there had been attended to. One of the chief objects I had in view, was to measure the air in the Wellington Colliery when all the men were working underground, as at my inspection the pit was laid idle. Although the latest information I could gain before leaving Victoria was, that the mine was working steadily every day, yet, when I arrived there, I found that work had been suspended again, as there were no ships taking coal at the wharves.

"I found that at none of the pits proper attention had been paid to clause 46, article 9, paragraph D, 'Coal Mines Regulation Act, 1876;' although in my notices to the Managers of the said Collieries, I had particularly requested them to see that by the 30th November, 1877, the tools described in the said clause should be in general use.

"Only a few men were in possession of the proper tools, whereas all miners are, by the Act, required to use them.

"The alterations affecting ventilation had been promptly attended to, and I am glad to say very beneficial results have been attained.

"The additional instruments, &c., required by the Act had been ordered, and will, I expect, be in use in a short time.

"No 'special rules' have, as yet, been submitted to me, but I am informed that they are in course of compilation.

"I am sorry to have to report a fatal accident which took place in the Chase River Mine on the 10th December, 1877, by which one John Wood, a miner, met his death. From the evidence given at the Coroner's Inquest, which took place on 11th December, it appears that Wood and his partner had fired a 'face shot' which had only loosened the coal and not thrown it down; they had then commenced holing under it, and although Wood was warned by his partner to be careful, as it seemed unsafe, he persisted in working too long, for the whole piece came away suddenly, and a small piece from the top striking him on the neck he was killed instantaneously. Deceased was a very steady and careful workman, and an excellent miner, but in this instance he did wrong in holing a shot that had been fired. He ought either to have put another small shot in, or have 'spragged' or 'braced' the coal before mining it. •

"I went down the mine and examined the place where the accident occurred, nothing having been moved. I found that the cause of the coal falling away so suddenly, was a crack formed by an old 'rib shot.' There was also a natural slip in the coal, which the deceased could not possibly have been aware of, and which very materially weakened the coal.

"No blame can be attached to anyone connected with the mine, as the accident was purely the result of the deceased putting too much confidence in his knowledge of the coal.

"The fact that the coal in these collieries does not fall easily after being holed, accounts for the accidents and many narrow escapes that occur, as the miners are accustomed to trust so much to it that they get, in many instances, very careless of themselves, and run fearful risks.

"Several men have been more or less injured in different ways since I received my appointment, but as none of the injuries have proved fatal I need not describe them.

"I have, &c.,

(Signed)

"EDWD. GAWLER PRIOR,

"Inspector of Mines.

"The Hon. A. C. Elliott, Minister of Mines."

COPPER.

The accompanying report to the Minister of Mines, received from Mr. Harper, the Government Mining Engineer, after a personal inspection of the "Howe Sound Copper and Silver Mine," is wonderfully encouraging. Mr. Harper not only pronounces the lode to be a true fissure vein, but states that it is the richest ore of its character which he has ever seen on this coast or in England. Mr. Harper's belief that the country between Howe Sound and Jervis Inlet will in time become a great mining district, is well worthy of attentive consideration.

"VICTORIA, B. C., June 26th, 1877.

"SIR,—I have the honour to inform you that, in pursuance of instructions received by me, I proceeded to visit and inspect the Howe Sound Copper and Silver Mine, and beg to report as follows:—

"In consequence of a considerable depth of snow on the summit of the mountain where the mine is situated, I was not able to follow the lode continuously for any great distance, but on the south-east side there was about three hundred feet of the lode exposed. I examined it and found it about two and one-half feet wide, running nearly east and west. The lode, which I pronounce to be a true fissure vein, has a perpendicular foot wall. There are stringers further south which, at a lower level, will run into the lode.

"The ore is of a rich character, made up of what are known as Peacock and Grey ore and oxide of copper. It carries also a large percentage of silver. It is the richest ore of this character I have ever seen on this Coast or in England.

"The formation is granite. In Cornwall, England, the richest copper mines are in granite. In Nevada the richest silver mines, with the exception of the Comstock, are in granite. I firmly believe that the lode will, at a greater depth from the surface, prove to be richer in silver than in copper. I can, with confidence, recommend it to mining capitalists.

"I beg to inform you that there is no road to the mine, which is, in consequence, at present difficult of access. I would recommend that a competent person be sent to examine the country between the mine and the salt water, with a view to laying out a road in the most eligible location. Not only may the mine I have made particular reference to be thus opened, but the ground on the east and west may be worked also.

"I believe, in time, the country between Howe Sound and Jervis Inlet will be a great Mining District.

"I have, etc.,

(Signed)

"R. B. HARPER,

"Government Mining Engineer.

"To the Honourable
the Minister of Mines."