REPORT

OF THE

CHIEF COMMISSIONER OF LANDS AND WORKS

OF THE PROVINCE OF

BRITISH COLUMBIA.

FOR THE

FISCAL YEAR ENDING THIRTY-FIRST DECEMBER,

1878.

VICTORIA: Printed by RICHARD WOLFENDEN, Government Printer,
at the Government Printing Office, James' Bay.
1879.

18

REPORT

OF THE

CHIEF COMMISSIONER OF LANDS AND WORKS

FOR THE PROVINCE OF

BRITISH COLUMBIA,

FOR THE

FISCAL YEAR TERMINATING 31ST DECEMBER, 1878.

To the Honourable ALBERT NORTON RICHARDS, *Lieutenant-Governor of the Province of British Columbia.*

MAY IT PLEASE YOUR HONOUR:—

I have the honour, herewith, to lay before you the Annual Report of the Department, as required by the "Public Works Amendment Act, 1873."

The Report contains a statement of the construction and cost of maintenance of various public works during the year 1878.

A detailed account of expenditure, from the first January to the 30th June, is added, while the outlay for the balance of the year will be found in the Public Accounts.

Appended, also, are statements with reference to the survey of new lines of road, and reports thereon; surveys and sales of Provincial lands; and a schedule of the tenders for works submitted to contract.

GEO. A. WALKEM,
Chief Commissioner of Lands and Works.

Lands and Works Department,
Victoria, 31*st December,* 1878.

MAP

OF PORTION OF

OSOYOOS DISTRICT

B.C.

1878

Scale Two Miles to an Inch

George A. Walkem
Chief Commissioner of
Lands and Works

W. S. Gore, Draughtsman L. & W. Dep.t

LITH. BRITTON & REY, SAN FRANCISCO, CAL.

REPORT

OF

PUBLIC WORKS, BRIDGES, ROADS, BUILDINGS,

&c., &c., &c.

The last year was an exceptional one, in a legislative point of view—two sessions having been held during that period. The first session was convened on the 7th February and lasted until the 10th of April; shortly after which a dissolution of the House took place. The political changes, which followed, led to the retirement from office of my predecessor and his colleagues on the 27th June last. The House next met on the 29th July, and closed its session in September. The present report being an annual one, as prescribed by Statute, must therefore necessarily embrace the period of six months immediately preceding my induction in office.

During the first, or April, Session, one-half only of the Estimates submitted by the late Government for public works was voted, except in the instance of Kootenay, to which district the full amount set down was allotted on account of its distance from the seat of Government.

Even these greatly reduced Estimates of expenditure were, I regret to say, found, after a careful examination of the public accounts, to be far in excess of provincial means to meet them. Large quantities of road work, which had been commenced in May and June in some of the Electoral Districts, had consequently to be stopped without delay. Several road parties were disbanded, and it was also found necessary to dispense with the services of foremen who had for some years past been almost constantly employed by the Government.

The expenditure for the last half-year has, therefore, been unavoidably confined to works of absolute necessity. Fortunately the year has not been unfavourable to such a course, as no material damage has been sustained by roads or bridges from river freshets or from storms.

The unfinished contracts of 1877 have been completed and the contractors paid.

The condition of the public buildings of the Province is satisfactory, and the outlay upon them for repairs may be regarded as unimportant. From this general observation Government House must, unfortunately, be excepted. During the October rains, this building commenced to leak so badly that considerable loss seemed inevitable from impending destruction to the ceilings, walls, and furniture of some of the principal apartments, into which the water very freely flowed from defects in the roof. A mechanic was at once sent to examine the building and report upon the minimum amount of work necessary to stop the leaks, and thereby prevent further damage. From a rough estimate—for a close one was impossible—it was considered that a sum ranging between $250 and $400 would accomplish this object. Under the pressing circumstances mentioned, the necessary repairs were ordered to be made as rapidly as the weather would permit. On stripping portions of the roof, as the rain now and then abated, its condition proved much worse than was anticipated. Shingles apparently sound were found to be split or rotten, entailing the necessity of re-shingling the entire roof. The gutters were also found to be full of holes and cracks, as well as out of grade,—defects which caused the water to run down the sides of the building, destroy the outside plastering, and make the walls on the inside of the House wet. The timbers supporting the valley gutters, proved to be badly strained and decayed, and the principal part of the tinwork utterly worn out. To stop the work in such weather, or to defer its execution to a future day, would have been impossible, without incurring the certain penalty of great damage to the interior, and of adding largely to the cost hereafter of repairs. These unforeseen difficulties caused the original estimate to be considerably exceeded; but it is

satisfactory to be able to state, that the expense thus incurred will indirectly save the Government a much larger sum for more extensive repairs which would unquestionably have been forced upon the Province hereafter by the extension of the area of the mischief by daily decay.

The advisableness of inviting public competition for this work, and doing it by contract, was carefully considered before it was undertaken; but the urgency of the occasion, as well as the impossibility of even approximately ascertaining the extent of the repairs needed, prevented the adoption of such a course.

It may, perhaps, be well to mention that Government House when originally purchased by the Vancouver Island Government, in 1866, only consisted of the stone portion of the structure, and that the wooden, or frame, portion has since been added piecemeal. From the outset the building has been a continual source of heavy expense. This may be partly accounted for by the composite form of the structure—part wood, part stone, the one settling deeper than the other in some places, and more rapidly in others; and partly from the nature of the foundations of the wooden portion, some of the sills of which rest on piers placed on rock, while others are laid on clay. These irregularities in the foundations cause the building to settle unevenly, and thereby damage the gutters and crack the plaster and ceilings. The building is also too low, or, in other words, the floors are too close to the ground, which gives very imperfect ventilation, and causes injury to the sills, joists, and flooring. The house and furniture are insured for the sum of $31,000, which is much below the estimated value of the property.

The ventilation of the House of Assembly has been much improved by cutting out six panels in the dome and introducing wire cloth. Large openings have also been cut in both ends of the roof and been covered with similar material.

The repairs to the other buildings have been small, consisting of repairs to gutters and discharge pipes, portions of verandas, renewal of locks, glazing, &c., &c.

The two entrances from Fort Street to the School Reserve, purchased by the Government last year, have been graded and macadamized from the street to the school fence. The entrances are graded 18 feet clear of the ditches. A large quantity of blasting was required to carry out the work, which was done by the chain-gang. A very convenient carriage drive can now be made from one entrance to the other, past the principal door of the school building.

The Government grounds, James' Bay, have been further improved during the year, the gravel walks extended, and the ground levelled and laid down in grass. A moderate outlay will complete the grading of these grounds. A few trees will be required along the Menzies Street boundary of the reserve, in order to effectually shelter the grounds from the south-west winds.

The gaol prisoners have been employed during the latter part of the year in grading the pathway on Fort Street, near Moss Street. This work entailed the removal of a large quantity of rock. The path has been covered with a layer of broken stone, and when completed will be gravelled and rolled. The Municipal Council of Victoria have agreed to pay all the expenses for the tools and material used in the work.

In Victoria District all the work carried out to the 30th June was performed by day work, under the supervision of competent foremen. The cross road from Cedar Hill Church to the Saanich Road has been materially improved, the low places having been graded and gravelled, and the grades also reduced. The East Saanich Road has been extended to Ryan's, on Shoal Harbour. The roads throughout this district are in a fair condition. Some gravelling is required between Swan Lake and the Royal Oak, and between Bryant's and the Prairie Tavern. The latter portion was graded in 1877. The Mount Newton cross road requires some outlay.

The work on the Cofferdam at Esquimalt has been progressing very slowly during the past year. Under the head of Esquimalt District will be found the report of the Resident Engineer, on the progress of the work, the condition of the cement stored at Esquimalt; also copies of the correspondence between the Government and Messrs. Reed Bros. & Co.'s agent, the Resident Engineer, and the Engineers-in-Chief, since the date of the last return.

It being incumbent on the Government to erect the auxiliary pump in a suitable position, for the purpose of pumping out the water behind the dam on its completion, a platform on piles has been constructed under the personal supervision of the Resident Engineer, who anticipates that the pump will be in running order at an early date.

No new contracts have been entered into since the date of the last annual Report on Public Works, but, as therein stated, tenders have been received for the wrought caisson, and arrangements made with the Chief Engineers to advertise for tenders for the main dock work on the receipt of any telegram to that effect.

In Esquimalt District, all the road work carried out has been by day work. A sum of nearly $200 was expended gravelling the Gorge road between the bridge and the Craigflower-Colquitz bridge road. A deviation has been made on the Sooke road, between the commencement of the burnt timber and the "Eagle's Nest," avoiding two very steep hills. The new piece of road is practically level. The above-mentioned work was performed prior to the 30th June last. Since that date a party commenced to cut a trail from the North Fork of Leech River to the head waters of San Juan River, for the purpose of decreasing the labour and expense of conveying provisions and tools to the newly-reported gold mines in that neighbourhood. The trail party met with serious difficulties, as bush fires raged in the woods during the greater part of the time they were at work, and the foreman was in consequence compelled to return to Victoria, when within about four miles of the terminus of the line. His report will be found annexed.

In Cowichan District, new piles have been driven to replace the piles in the T, or main part of the Cowichan wharf, which had been eaten through by the worms close to the mud. The wharf is now safe and will stand for some years.

A new wharf has been constructed in Miner's Bay, Mayne Island (Plumper's Pass). It is long enough for the steamers plying between Victoria and New Westminster to lie alongside at any stage of the tide, and has proved a great boon to the settlers. Section 2 of the Cowichan and Goldstream road, placed under contract last year, has been completed and the contractor, Mr. Joseph Nicholson, paid. This section is 11¾ miles in length, commencing at a point near Thain's, in Shawnigan District, and terminating at the south end of Shawnigan Lake. Tenders were invited in 1877 for the construction of Section No. 1 of this road, extending from Goldstream to Shawnigan Lake, a distance of about 15 miles, but the contract was not awarded. Work was commenced on this section on the 4th May last by a party of men under the foremanship of Mr. George Jones. By the end of June some 1,700 yards of the road were graded 12 feet wide, at a cost of over $1,400. This being considered very expensive work, it was deemed advisable to disband and pay off the road party, which was accordingly done on the 3rd July. Several road contracts were let in this district, the particulars of which will be found in a later portion of this report.

The Legislature having voted money for increased school accommodation at Nanaimo, arrangements were made to purchase five town lots in Block 22, from the Vancouver Coal Co. at a maximum price of $650. These lots are pleasantly situated on the rising ground in about the centre of the city. Plans and specifications were prepared for a new building, and tenders called for last Spring. The contract was awarded to John Hilbert, who completed the structure a short time since. The work has been accepted, and the contractor paid. The principal objection to the old school house is its close proximity to the railway of the Vancouver Coal Co., the trustees and teachers being constantly afraid of accidents befalling the smaller children during play hours. The house, when completed, will consist of a main building and two wings, two storeys in height. The North wing, which has been lately finished, is 50 ft. by 24 ft.; the height of the ceiling in the lower storey is 15ft. 6in., in the upper storey 12ft. 6in. Suitable desks and seats have also been provided by the contractor.

The amount appropriated for the Nanaimo District has, with the exception of a small sum, been expended in pushing forward work on the road from the town of Nanaimo to Nanaimo River bridge. The road has been opened to the bridge, and moderate expenditure will complete it. The Wellington road has also been repaired. A wharf has been built on Gabriola Island at a point nearly abreast of the Nanaimo Rapids, which has proved a great convenience to the settlers.

The amount voted for Comox District has been disbursed for work done during the year 1877, under instructions from the Road Superintendent, and for repairing the Comox wharf. The piles of the wharf were found to have been eaten off by the worms and were renewed. More piles were driven, and the T portion enlarged to enable waggons to turn more conveniently. The large bridges over the Courtenay and Puntledge Rivers are reported to be in good order.

The work in New Westminster District has been confined to repairing the existing roads and bridges, with the exception of placing a portion of the Coast Meridian road under contract, and constructing a sleigh road from the North-East road, opposite Rodick's farm, to Hayman's clearing, a distance of about three-quarters of a mile. The Coast Meridian road contract was let on the 3rd of June, but was stopped a month afterwards on account of the limited means at the disposal of the Government. In the detailed statement of expenditure annexed will be seen an item "J. McIntosh, award of arbitrators, $2,645 00." This claim arose out of a contract for the construction of Section No. 4 of the New Westminster and Hope waggon road, let in the year 1874 to James McIntosh, the contract price being $14,000. Mr. McIntosh claimed that he was entitled to compensation on account of a portion of the road, across Sumass Prairie, having been changed from its original course along the flats to the foot hills, necessitating a large quantity of extra blasting and heavy grading. The matter was arbitrated upon in April, 1878, and an award made in favour of Mr. McIntosh for the full amount of his claim, without costs.

THE SUMASS DYKING ACT, 1878.

Mr. E. L. Derby applied for and obtained, during the first Session of the past year, a special Act of the Legislature for the purpose of dyking those portions of the Chilliwhack, Sumass and Matsqui settlements which are subject to overflow from the Fraser during high water. The Act provides that if Mr. Derby shall effectually dyke these lands in accordance with plans and specifications furnished by the Chief Commissioner, he shall receive certain grants of land from the Government, and be at liberty to levy assessments on the lands benefited by the scheme. It is also stipulated that the entire dyking shall be completed by the 1st July, 1880. Work was commenced on the Matsqui portion in May last, and Mr. J. A. Navarre, C. E., was appointed to supervise it by the Government. His report of progress will be found in the detailed return of contracts for New Westminster District. Mr. Derby, I regret to state, has not pushed forward the work with the rapidity anticipated. Nothing has been done on the Chilliwhack and Sumass portions of the scheme up to date.

In the Osoyoos Division of Yale District a contract for the construction of a log lock-up was let by my predecessor. The building is 24ft. by 13ft. inside measurements, and is divided into a court room and two cells. The amount placed on the Estimates for the structure was $400, while the lowest tender was $825. This difference arose from the difficulty of obtaining suitable lumber and from the heavy cost of iron-work in that neighborhood. The work is still in the hands of the contractor.

That portion of the Yale-Cariboo trunk road passing through Yale District, and about 116 miles in length, has been kept in good order, and the road foremen report it to be in excellent condition. The snow fall having been light during the winter of 1877-78, no "breaks" of any consequence followed the Spring freshets. Although strict economy has been exercised, a large sum has been expended in the maintenance of this thoroughfare. Old cribbing has been advantageously replaced with stone walls; bridges have been renewed and a considerable amount of gravelling done.

The Mission Creek bridge, Okanagan, mentioned in the last report as having been placed under contract, has been satisfactorily completed.

Section No. 2 of the Kamloops-Nicola Valley road, which was commenced by the contractor, D. A. McDonald, last year, has been finished and accepted. Mr. McDonald has made a claim for nearly $3,000 for alleged extra work on this road, but in the absence of sufficient information respecting it, I have not as yet felt justified in allowing it. Several small road contracts have been undertaken in different portions of the District, the particulars of which will be found annexed. The Nicola-Hope trail has been cleared and repaired at some cost. One truss bridge on this route has been carried away by high water, and it will be necessary to replace it early in the Spring. The other roads and trails in this extensive District have been carefully looked after, and are in a very fair condition.

No works of any magnitude have been undertaken in Lillooet District this year, with the exception of repairing that portion of the Yale-Cariboo trunk road included within its limits. A quantity of gravelling has been done on this road, and it is reported by the foreman to be in very good condition. Some bridges will require renewing next Spring. In past years great difficulty has been experienced in obtaining the necessary information to enable the Department to construct roads on the Mainland above Yale

in the most advantageous localities, and on the easiest obtainable grades. These difficulties arose from there being no resident engineers or surveyors there. The selection of the lines of new roads was entirely left to the judgment of different foremen employed. Hence, many of the roads have enormously heavy grades and very sharp curves, while a number of the bridges are much too low. It was therefore deemed advisable to dispatch an engineer to survey certain lines of road in Lillooet and Cariboo Districts. Mr. John Jane was employed for the purpose on the 28th of March last, and completed his work in September. His plans and descriptive notes are now filed with the Department and will be of value hereafter in settling the lines, curves, and grades of the roads contemplated at the time he received his instructions.

In Cariboo District the only new work undertaken has been the construction of a 12ft. road from Barkerville to the new townsite of Carnarvon, distance 1½ miles. This road was required for the conveyance of quartz, mining and other machinery to the mineral claims of that locality. A contract was entered into with Mr. D. McDonald to clear the Omineca trail. This work was satisfactorily performed for the sum of $300.

The Yale-Cariboo road, on leaving the 150-Mile House, follows a line over Carpenter's Mountain, thence viâ Deep Creek to Soda Creek. This road, as originally surveyed by the Royal Engineers, passed down the San Juan Valley, by Williams Lake to the Fraser, thence following that river to Soda Creek. For some reason the first survey was abandoned, and the contractor for the construction of the road permitted to follow the Carpenter Mountain route. On several occasions the policy of reverting to the first line has been pressed upon the Government, and as strongly opposed. Mr. Jane, however, made an exhaustive survey of the first line. He reports comparatively easy grades and light work until it reaches Fraser River, thence to Soda Creek, very heavy grading, cribbing, etc., etc. A large petition from teamsters and others has been received, praying that this portion of the road may not be altered, as the feed for their animals is more abundant along the present line. This important protest, coupled with the fact that the alteration would prove very costly, has influenced the Government against making the proposed change. On completing the above survey, Mr. Jane laid out a new line of road from Stanley to Barkerville, viâ Jack of Clubs Lake. This line has many substantial advantages over the present one. The grades are easy, and the road would be clear of snow about six weeks earlier in the Spring than the existing road over the mountain, as it has a southern aspect. Goods could therefore be taken in at a correspondingly earlier date. The yearly cost of keeping the present road from Stanley to Barkerville has been excessive owing to the roadway being continually washed out by freshets from melting snow, and being constantly filled with gravel and other slides from the mountain sides. As it passes over very high ground, it is late in the season before ordinary teams can reach Barkerville. During the past year no work has been done on this section other than what was absolutely necessary for ordinary traffic. The bridges, culverts and cribbing throughout are in a very rotten state, nothing material having been renewed since the road was first constructed. It will therefore require a very considerable outlay during the ensuing season to make it secure for the year's traffic. The road is also very narrow in a great many places. It is probable that the new road, viâ Jack of Clubs Lake, might be constructed for the same sum that it would take to keep the present road in repair for a period of say three years. In the event of its adoption, there will be no difficulty in letting a contract for the work at the earliest practicable date.

No work has been done during the year on the Barkerville bulkhead by this Department. To prevent the Government buildings from being embedded in tailings, they were raised in the Spring, but from recent advices they will require to be raised to a still greater height to save them from destruction.

In Kootenay District the original appropriation in the first part of the year, viz., $1,000, was authorized to be expended.

Cassiar District.

I regret that I have to report the total destruction by fire of the Government buildings at Laketon, together with the records, books and furniture contained in them. The appropriation of $1,500, made during the first Session, has been expended in erecting new offices, although this amount was intended for the improvement of the accommodation for Government officers in different parts of the District. Mr. Robertson

was dispatched early in the season with the requisite material to repair the Taltan or first North Fork bridge. The centre pier of this structure had settled down stream rendering it unsafe. Mr. Robertson reconstructed the bridge, introducing needle beams and braces, and it will now, with a little care, stand, in all probability, for some time. The planking will, however, require renewing during the coming season. The Dease Creek trail has been thoroughly repaired, and the other trails in the District attended to.

A new trail has been cut from Thibert Creek to the newly-discovered auriferous gulch known as Defot Creek.

A bridge should be built over Thibert Creek before the water rises, or otherwise travel will be seriously impeded to Defot Creek.

It is generally supposed that a shorter and easier route can be found from some point on the Glenora-Dease Lake trail to Defot Creek, but this can only be settled by exploration.

I submit herewith a more detailed statement of the various works carried out in the different districts during the year.

Victoria Electoral District.

ROADS AND BRIDGES.

DAY WORK.

The following work has been performed by day work, under the superintendence of foremen, during the first half of the year:—

William H. Snider, foreman; wages, $60 per month.

REPAIRS, CROSS ROAD FROM CEDAR HILL CHURCH TO SAANICH ROAD.

Grading, 967 yards, 18 feet wide.
Macadam, rock, 937 yards, 10 feet wide, 6 inches deep.
Gravel, 937 „ 10 „ 6 „
3 culverts, 19 feet by 2½ feet by 1½ feet.
1 „ 30 „ 2 „ 1 „
A considerable amount of cutting and filling was required on a portion of this road to bring it to grade.

EAST SAANICH ROAD, FROM MCDONALD'S TO RYAN'S.

William Reid, foreman; wages, $80 per month.
Grading, 630 yards, 18 feet wide.
Gravel, 570 „ 10 „ 6 inches deep.
1 bridge, 75 feet long, 12 feet wide, 8 feet high.
2 culverts, 18 feet by 2 feet by 1 foot.
1 „ 21 „ 2 „ 1½ „

REPAIRS, MOUNT TOLMIE CROSS ROAD, from Nicholson's to North Dairy bridge.

John Nicholson, foreman.
Grading, 25 yards.
Macadam, rock, 150 yards, 10 feet wide, 6 inches deep.
Gravel, 150 „ 10 „ 6 „
1 culvert, 18 feet by 2 feet by 1 foot.

The usual number of culverts has also been repaired, planks in bridges mended, holes and ruts filled, &c., on the different roads throughout the district.

Esquimalt Electoral District.

ESQUIMALT GRAVING DOCK.

The Esquimalt Cofferdam is still in the hands of the contractors, Messrs. Reed Bros. & Co., of London.

Although the work has been carried on continuously during the year, it can scarcely be considered more than two-thirds finished. This is certainly due to the absence of activity and energy on the part of the contractors.

It will be remembered that the time considered requisite to complete the dam by the Chief Engineers was nine months only. The contract is dated 24th January, 1876, and the work was to have been completed on the 18th October of the same year.

On the 23rd June, 1876, on application from Mr. C. E. Dawson, C. E., agent for Messrs: Reed Bros. & Co., the time limit was extended by my predecessor in office to the 1st February, 1877. On a further application from the same gentleman, dated the 24th January, 1877, the time limit was again extended to the 31st July, 1877. Since that date, Mr. Dawson has repeatedly applied for additional time, but his requests have not been entertained.

On account of the continued procrastination of the contractors, the Government felt it their duty to stop all further payments, and on the 6th December last, their agent was duly notified to that effect.

According to the annexed report of the Resident Engineer, it is almost impossible to say, under present circumstances when the work will be completed, although it has been in the contractors' hands a little over two years and eleven months.

The total amount paid to Messrs. Reed Bros. & Co., has been $30,357.42. There is also due on certificates Nos. 11 and 12 (to the 31st December, 1878) for money withheld until after the work is completed, $9,038.01.

The Resident Engineer's report shows the amount of work performed from the 1st January to the 31st December, 1878.

During the latter portion of the year this gentleman has been superintending the erection of the auxiliary pump. A statement of the nature of this work and the progress made will also be found in the report referred to.

Subjoined, are copies of the letters and reports connected with the Cofferdam contract during the past year:—

"ENGINEER'S OFFICE, ESQUIMALT, B. C.,
"23rd March, 1878.

"SIR,—I have the honour to inform you that the two castings for pumping machinery, ex ship 'Barracouta,' to replace those broken, ex ship 'Mountain Laurel,' have been received by me in good condition, and stored with the rest of the machinery at Esquimalt.

"I have, &c.,
(Signed) "W. BENNETT.

"*To the Hon.*
"*The Chief Commissioner of Lands & Works.*"

"LANDS AND WORKS DEPARTMENT,
"Victoria, April 18th, 1878.

"SIR,—I have the honour to request that you will be good enough to inform me as to the time requisite for erecting the auxiliary pump at the Graving Dock site, Esquimalt, in order that, on the completion of the Cofferdam, no delay may take place in testing the stability of the work.

"You will please also prepare plans and specifications for the erection of the said pumping machinery, and advise me as to the particular place on the Government property, at Esquimalt, you deem it most expedient to erect the same; and, further, inform me as to the time it will require to complete the necessary plans and specifications.

"You will observe by the terms of the contract with Messrs. Reed Bros. & Co., for the construction of the Cofferdam at Esquimalt, that it is incumbent on the Government to erect the machinery for testing the work; and, further, that in the event of the Dam being approved of by your principals, that the said contractors are

entitled to a payment of 10 per cent. on the contract price; therefore, it is evident that steps should be taken to prevent the possibility of any claim arising, after the Dam is completed, on account of the Government not being in a position to accept the work or otherwise.

"I have, &c.,
(Signed) "F. GEO. VERNON,
"*Chief Commissioner of Lands & Works.*

"*W. Bennett, Esq.,*
"*Resident Engineer, Esquimalt.*"

"LANDS AND WORKS DEPARTMENT,
"Victoria, April 18th, 1878.

"SIR,—Adverting to your letter of the 18th January last, reporting on an application received by this Department from Mr. C. E. Dawson, acting as agent for Messrs. Reed Bros. & Co., of London, contractors for the Esquimalt Cofferdam, for an extension of the time limit of the contract, I have the honour to request that you will be good enough to furnish me with the following information, viz.:—

"1. Your reason for declining to recommend an extension of the time limit.

"2. A statement, in detail, setting forth where, since the 9th of February, 1877, the date when an extension of the time limit was granted the contractors to the 31st July, 1877, the agent, Mr. Dawson, has neglected to use every exertion to push the work with all possible rapidity.

"3. What time will be required to complete the work from date, provided every effort is made?

"An early reply to this communication will be acceptable.

"I have, &c.,
(Signed) "F. GEO. VERNON,
"*Chief Commissioner of Lands & Works.*

"*W. Bennett, Esq., C. E.,*
"*Resident Engineer, Esquimalt.*"

"ENGINEER'S OFFICE, ESQUIMALT, B. C.,
"22nd April, 1878.

"*To the Hon. Chief Commissioner of Lands & Works.*

"SIR,—I have the honour to acknowledge the receipt of your letter, dated 18th of April, asking for certain information—Firstly, for the reason of my declining to recommend an extension of the time limit.

"In my letter to you, dated 18th January, 1878, I declined to recommend the extension of the time limit, for the completion of the Cofferdam, to September, because I considered the work could be finished by June, at the latest; my further remark, 'that I was doubtful if I ought to recommend any extension at all,' was added because, as the contractors had been going on with the work since the previous July without a formal extension of time, I saw no reason why they should not do so to its completion.

"I took into consideration also, that as the second extension of the time limit had expired without the work being half finished, and the contract consequently broken; and that as the contractors had always been treated most fairly by the Government in the matter of payments, that it was only quite proper for the Government to have it in its power, and the right at any time to adopt any other measures it might see fit to complete the work. I said then, I had no wish to urge the Government to any extreme measures, nor do I wish to do so now; at the same time, I thought the knowlepge, by the contractors, of what the Government could do, would induce them to make greater exertions than they did.

"Had an extension been granted to September next, I do not see how the Government could have well interfered with the contractors, even if it wished to, till that time had elapsed, when, no doubt, if the work was then unfinished, another extension would be applied for, and afterwards perhaps another.

"If then every request, on the contractors' part, for further extension is to be granted as soon as applied for, what guarantee will the Government have that the work will ever be finished.

"Secondly, to the request for details where the contractors have failed to use every exertion since 9th February, 1877, I beg to state that during the month of February, 1877, scarcely any work at all was done, and the same in April, excepting during the latter part of the month; this was in consequence of the dredging machine not being ready.

"The dredging was carried on, perhaps as rapidly as the appliances at hand would admit of, from April 13th to September 22nd; and, as stated in my Report, dated 31st December, 1877, piling for the dam was commenced on September 29th, and carried on steadily, but I cannot say as rapidly as possible, for to the end of October only 24 piles were driven.

"In November, 117, and in December, 141 piles were driven, which numbers do not prove at all satisfactorily that more might not have been driven in the same time.

"I have, on many occasions, observed that time has been wasted in not having material and plant ready for use when wanted; sometimes the breaking of a pile ring has stopped the pile driving, as it happened to do from April 8th to 12th, 1878, inclusive; if spare gear had been on the ground, no delay need have occurred.

"The progress of the piling was delayed from the 21st January to 22nd February, 1878, and from that date to 23rd March, 1878, only 8 piles were driven, the time being occupied in making tram-cars and excavating for the filling between the buttress and middle row of piles, which work might have been started as soon as the dredging was finished in September, 1877.

"I consider also that the employment of more men would have hastened the progress of the work.

"Work on the shore ends of the dam, which has been in progress during the past month, might easily have been done twelve months ago; and the time so spent now would have been occupied in forwarding some other part of the work.

"I think it necessary again to refer to the ironwork for the sluices, which ought now to be on the ground, but is not; for unless advantage is taken of the low tides which occur at this season of the year, it will be almost an impossibility to fix the sluices for another twelvemonth.

"I regret that the drilling of the holes at the shore ends of the dam, in deep water, to receive rock pile shoes, is not now in active progress; this work might have been going on for some time past.

"It may be urged that it is necessary to re-erect the dredging machine to clean off the shingle overlying the rock before commencing; the services of a diver would, however, obviate this difficulty.

"Thirdly, as to how much time will be required to complete the work from date, provided every effort is made? Unless the various portions of the work are carried on simultaneously and vigorously, it would be useless on my part to attempt to form an estimate.

"In January last, I considered the work should be finished by June, and then calculated that the buttress piling and rock drilling would be much further advanced than they are now. Looking at the amount of work remaining to be done, I see it is now impossible to finish at the date I named; if, however, a diver and three or four sets of drillers be employed at once, and a strong gang of labourers put on to excavate for puddle and filling as soon as the gauge piles on rock are planted, I consider the work ought, under ordinary circumstances, to be finished by August next.

"A tram-way, from the bank to the dam, should be commenced immediately, and trial pits sunk to find the most suitable clay for puddle; extra tram-cars also should be provided, the present number (4) being totally inadequate to keep a large number of men employed.

"I much regret that the points on which you required information have necessitated such a lengthy reply.

"I shall have the honour to reply to your letter referring to the erection of the pump, &c., at an early date. "I have, &c.,

(Signed) "W. BENNETT."

"LANDS AND WORKS DEPARTMENT,
"Victoria, 7th May, 1878.

"SIR,—Referring to your letter of the 19th February last, applying for a further extension of the time limit for the construction of the Cofferdam at Esquimalt, I have the honour to inform you that your communication was submitted to the Resident Engineer, who duly reported thereon; I beg to enclose a copy of the Resident Engineer's Report for your information.

"I have the honour to instruct you to carry out the Resident Engineer's suggestions with regard to the provision of the necessary sluices, and also to the immediate construction of the tram-way for the conveyance of the puddle to the dam.

"I have, &c.,

(Signed) "F. GEO. VERNON,

"*C. E. Dawson, Esq., C. E.*" "*per* A. S. FARWELL.

"ENGINEER'S OFFICE, ESQUIMALT, B. C.,
"21st May, 1878.

"*To the Hon. Chief Commissioner of Lands & Works.*

"SIR,—I have the honour to enclose herewith, for your approval, a plan shewing the site I propose and recommend for the erection of the auxiliary pump.

"I also beg to recommend that the work be taken in hand at once, and be carried out under my supervision by day work.

"I would further suggest that application be made to the Resident Engineer of the Dominion Government for the use of two hopper barges, provided they are not required by Mr. Dawson, agent for Messrs. Reed Bros. & Co., to whom they are at present lent.

"The barges will only be required for a day or two, during the time the boiler, &c., is being removed from the shed to the staging on which it will have to be erected.

"I have, &c.,

(Signed) "W. BENNETT."

"COFFERDAM WORKS, ESQUIMALT, B. C.,
"June 17th, 1878.

"*To the Hon. the Chief Commissioner of Lands & Works.*

"SIR,—I beg to acknowledge the receipt of your letter of the 7th of May last, in answer to mine of the 19th February, and enclosing a copy of a letter addressed you by the Resident Engineer, dated April 22nd, 1878.

"I am greatly surprised that, notwithstanding the full explanations I have given, both in writing and verbally, upon every point raised, you should, after the lapse of more than two and a half months, have again referred the matter to him.

"On the 18th January last, Mr. Bennett reported to you, at your request, upon my letter applying for an extension of the time limit for completion. On the 8th February, he further reported, at your request, on the same subject, and professed to be most explicit on all the points upon which he said he had to find fault. The result of this mode of proceeding, which I must again respectfully protest against as unjust to my principals, is, I regret to observe, that the Resident Engineer has been driven to search for any remote point, and to use any possible argument, in his endeavour to maintain the position he has taken.

"I also regret to see that, notwithstanding my repeated protests, Mr. Bennett has not been required to confine himself to matters technical; and I must again point out to you that it is entirely against the terms of the contract to make the granting of an extension of the time limit dependant on the recommendation of the Resident Engineer.

"I should have answered your letter before, but for various reasons I have thought it better to delay any further communication until events themselves had disproved half of the Resident Engineer's statements.

"I will, therefore, now touch upon the various explanations, arguments, and statements contained in Mr. Bennett's letter of the 22nd April, 1878, in the order they are set down.

"He commences, by saying that he declined to recommend an extension until September, because 'he considered the work could be finished by June at the latest.' At the time, I informed you this was impossible, and the event has proved I was right, and that Mr. Bennett was entirely mistaken, as in this letter he is obliged to admit.

"He then goes on to say that his remark, that he was doubtful if he *ought* to recommend any extension at all, was added, because as the contractors had been going on with the work for a long time *without* any formal extension of time, he saw no reason why they should not do so to the end! What the meaning of this peculiar reasoning is, I am at a loss to understand, unless he means that under present circumstances the contractors are practically entitled to an unlimited extension of time, which indeed is really the case.

"Mr. Bennett, in the next paragraph, makes a most rash and unjustifiable statement to the effect that Messrs. Reed Bros. & Co., have broken their contract. As, however, Mr. Bennett's opinion on this score is of no importance, I will only remark that the fact of his making such a statement shows the inexpediency of submitting matters to him that are not in his province to enter upon.

"His next remark, concerning the matter of payments, as far as I can see, is simply a sarcasm directed at the Government on account of its having persisted in unjustly refusing to make the payments as contemplated in the contract, and most urgently required and solicited, confining itself to the payment of only such sums as could not possibly be withheld.

"His next argument is one that, had he thought seriously about, I am sure he would have been ashamed to urge, even in a private matter, and much more so to a gentleman acting in the interest of the public. I think it is quite unnecessary for me to say more to you on this point, but I may perhaps just observe that hampering a contractor by destroying his credit is not the way to expedite work intrusted to him; and, moreover, that to keep a man at work by constantly menacing his shoulders with a cow-hide is not a suitable means to be adopted by the Government of a civilized country!

"As for asking for further extensions of time, the Resident Engineer is perfectly right. Had the extension applied for been granted, and at its expiration the work still incomplete, if the works had been carried on with all reasonable speed, or further alterations made, I should most certainly have applied for further extension, and should have been fully entitled to it. It is contemplated in the contract that extensions would be necessary, and the Government had its remedy if the contractor fails in his duty; not such remedies as Mr. Bennett proposes, but proper ones, and only to be used when it has been proved beyond doubt that the contractor has so failed.

"The Resident Engineer now endeavours to shew that the contractors have failed to use every exertion since the 9th February, 1877.

"He commences by again harping on the subject of the time spent in procuring the dredging apparatus. Now, I beg to repeat that as long ago as July, 1877, my explanations of any delay on that account were given, and that they were accepted is proved by your letter of the 30th July, 1877.

"His next statements are misrepresentations of the facts of the case, and contradict his own previous statements. He commences by saying that 'the dredging was carried on '*perhaps* as rapidly as the appliances at hand would admit of, from April 13th to Septem-'ber 22nd.' Now, in his report of the 31st December last, he says: 'From this date' (April 13th) 'to September 22nd, when the dredging was completed, it' (the dredging machine) 'was *constantly* at work, on many days from daylight to dark, &c., &c.'

"Mr. Bennett goes on to contradict further, his report of the 31st December, 1878, which clearly shows that the piling operations had been carried out quite satisfactorily under exceptionally difficult circumstances, and makes a most misleading statement as to 24 piles driven to the end of October. Now, Mr. Bennett cannot be ignorant of the fact that amongst these first piles driven in the dam were the 16 principal guide or distance piles, set *at intervals right across Thetis Cove*, to establish the curve of the dam and to receive the walings which were to serve as guides in pitching and driving the rest of the piles of the dam; that each of these distance piles had to be pitched and driven with the greatest nicety; that each had to be brought exactly to the plumb, and separately strutted and secured. When this was finished, exact measurements had to be taken, and a separate drawing prepared for each end of every waling; a double tier of walings had then to be erected, which could only be done when exceptionally low tides occurred, which at that season of the year was only at night. All this had to be done before one single other pile of the dam could be driven!

"Mr. Bennett now goes on to say: 'In November 117, and in December 141, piles 'were driven, which numbers do not prove at all satisfactorily that more might not 'have been driven in the same time.' Now this argument is, I cannot but say it, so positively silly that I am sure I cannot be expected to waste my time by giving it any further notice.

"He has now again recourse to *vague* charges, and then speaks of delays occasioned by the breaking of pile rings. Here, he even takes advantage of the very difficulties we have had to contend with in his endeavour to fix blame. He knows perfectly well that, in consequence of the exceptionally hard nature of the bottom, I have been driven

to my wits' end endeavouring to procure pile rings capable of resisting the excessive pounding to which they have been exposed; he knows that I have tried rings made of all kinds of the heaviest iron to be procured in the Province; that I have tried all the best blacksmiths in the city; that I have procured iron of special quality and dimensions from California, and that I have spared no expense, and yet that it has been impossible to procure a ring that could be relied on!

"He is also incorrect as to the delay he instances, for piling was going on on the morning of the 8th, and from noon on the 12th April; and the stoppage was principally caused by a break and necessary repairs to the steam hoisting engine.

"Mr. Bennett proceeds to complain of delays in the piling operations from 21st January to 22nd February, 1878, and says from that date to the 23rd March only eight piles were driven. He also speaks of the building of tram-cars, and of excavation for filling in between the buttress and middle rows of piles.

"Here, again, he suppresses the real state of the case, and again misleads as to the work done. In my letter of the 12th January, 1878, I informed you that I should shortly be ready to proceed with the work on the buttress, and again called your attention to the necessity of making alterations in the design, having already long ago warned you and the Resident Engineer that it would be necessary to do so; but no proper instructions were given to me with regard to these alterations until the 19*th February*, 1878, and I was in consequence put to great inconvenience, expense, and trouble.

"A *very considerable* loss of time would now have occurred had I not found a means of occupying profitably the time necessary to procure the extra timber required on account of these alterations. I gave the order for this timber even before I had received the proper instructions to make the alterations, and then to save time proceeded, with the concurrence of the Resident Engineer, with the filling in behind the main trunk, which should not have been commenced until the whole of the piling was finished. This was a useful piece of work, done during a period of time that would otherwise have been wasted, and served eventually greatly to facilitate the pitching and driving of the buttress piles.

"Mr. Bennett again ignores the fact that the eight piles he now mentions are the guide or distance piles for the buttress, and had to be driven under the same exceptional circumstances as the corresponding 16 guide piles in the main trunk, and also that double walings had to be erected as the state of the tide would allow; all this before another pile of the buttress could be driven.

"He further withholds the fact that the extra timber specially ordered for this portion of the dam did not arrive until the 12th April, and that to save time I carried on the piling in the meantime, at great expense to my principals, using timber destined for other portions of the work and of much greater length than was required. All this is entirely due to the Government or the Engineers not having sooner taken steps to make the necessary alterations, and it is quite useless for Mr. Bennett to try and shift the blame on to the contractors' shoulders.

"What Mr. Bennett can mean by saying that the work of filling in between the buttress and middle rows of piles could have been commenced before any piles at all were driven, is entirely beyond my comprehension.

"It is only now, after all this lapse of time, after writing many reports and after receiving repeated enquiries as to the contractors' short comings, that Mr. Bennett discovers and informs you that he considers the employment of more men would have hastened the progress of the work. Mr. Bennett cannot but be aware that I have always had as many men employed as could be used to advantage under the circumstances.

"With regard to the work lately executed on the shore ends of the dam, Mr. Bennett again entirely misrepresents the facts of the case. It has been carried on simultaneously with the principal work on the dam, and by a separate gang of men—the number of hands being increased expressly for that purpose. If it had been completed a twelve-month ago, the works would not now be one single day more advanced than they are.

"With reference to the sluices I need only say that, since he wrote this report, he has recognized the impossibility of constructing them even at the altered level fixed upon by him, and that he has adopted a suggestion of mine suppressing them altogether in the Cofferdam itself, and placing a double sluice in the earth dam to be raised between Thetis Island and the shore. According to his instructions, I am now carrying out this alteration.

"I may here mention that up to the present time, on account of the tide level, no opportunity has offered of erecting the wrought iron tie bolts of the fourth tier of walings, although in the altered design they have been raised three feet.

"Mr. Bennett now goes on to say he regrets that the drilling for the rock pile shoes, in deep water, is not now in active progress, and says a *diver* could have cleared off the shingle overlying the rock!

"In answer to this I need only inform you that, in compliance with the Resident Engineer's instructions, some special, extra dredging is now being done; that the dredging machine *has* been re-erected, and that from *one end* of the dam *alone*, where these holes have to be drilled, 207 *cubic yards* of material has already been dredged up! This shows *how far* the services of a diver would have 'obviated' this difficulty!!!

"I cannot contain my surprise at the proceedings of the Resident Engineer in this matter, for I must beg you carefully to note that, early in December last, I explained to him point by point how I proposed to proceed with the works, viz.:—

"I proposed, as soon as the piling of the centre portion of the main trunk was finished, to proceed with the piling of the buttress (centre portion) leaving the ends in deep water until later, when the low tides should commence. As soon as the centre portion of the buttress was finished, I proposed the re-erection of the dredging machine to clear out the clay and shingle, &c., that had fallen in at the shore ends in deep water, in consequence of the great extra depth of the excavation. I *pointed out* to Mr. Bennett that this was a work *far beyond* the powers of a diver, and also informed him that it was probable that some dredging might require to be done in the main trunk of the dam. When this was *done*, the drilling was to be commenced, and while *it* and the erection of the gauge piles was in execution, the preparations for filling in with puddle, &c., &c., should be made. The shore ends of the dam, in shallow water, were to be erected simultaneously with the other works, as it was a work of no particular difficulty.

"All this I *clearly* explained to Mr. Bennett, and he as clearly signified his approval of it! Everything has been carried out as I proposed, except that through the fault of the Goverment more time than necessary elapsed between the completion of the centre portion of the main trunk and the commencement of that of the buttress, which time, however, was usefully employed by me. How Mr. Bennett can ignore all this, as he does, is a mystery to me!

"I must now beg to say that on the 30th July, 1877, in answer to an application for extension of the time limit, you distinctly promised to grant an extension on condition that during the following few weeks proper exertions should be used to hasten the progress of the works,

"It has been distinctly shewn, by the Resident Engineer's own reports, that this condition was fulfilled; and, notwithstanding his present attempts at fault finding, that the works have been carried on satisfactorily ever since.

"I have repeatedly, both in writing and verbally, complained of the injury done to my principals by the course the Government has pursued in regard to this extension; but notwithstanding my repeated protests and my full—and as you have yourself given me to understand *to you satisfactory*—explanations of all delays, this extension of the time limit has been withheld for all this length of time.

"Having regard to this most unsatisfactory state of things, I must now beg you to take notice that, under present circumstances, Messrs. Reed Bros, & Co., are entitled to require payment, at rates over and above the schedule prices of the contract, for all work executed since the expiration of the time limit for completion.

"To this my principals are undoubtedly entitled, for not only have the works been of a different character and carried on from their commencement under different circumstances from those represented, but on *every single point alterations* have now been made from the original designs, which have proved to have been quite impossible of execution; and according to the contract, one of the considerations under which the contractors are bound to carry out alterations is, that extensions of the time limit for completion of the works should be granted! I must also again remind you that extra works, quite unforeseen in the contract, have been and have yet to be executed at great expense and at great loss of time to my principals.

"Before concluding, I beg to inform you that the works are progressing as well as circumstances will allow, and that I shall continue to use every endeavour to complete them with the shortest possible delay.

"According to your instructions I have got in hand the construction of a tramway for the conveyance of the puddle to the dam, but I must beg you to bear in mind that no provision has been made for such a work in the contract. "I am, &c.,

(Signed) "C. E. DAWSON,

"*Agent for Messrs. Reed Bros. & Co., London.*"

"3, WESTMINSTER CHAMBERS, LONDON, S.W.,
"AND HAVELOCK BUILDINGS, GREENOCK, N.B.,
"19th June, 1878.

"*To the Hon. Forbes George Vernon,*
"*Chief Commissioner of Lands and Works, B.C.*

SIR,—We have the honour to inform you that we duly received your favour of the 18th May, last, enclosing draft for £28 in payment of Messrs. Watt & Co.'s account for duplicate machinery supplied.

"We duly handed the same to Messrs. Watt & Co., and herewith enclose their receipt in acknowledgment thereof, in discharge of their account for duplicate machinery supplied. We have, &c.,

(Signed) "KINIPPLE & MORRIS."

"90, LEADENHALL ST. CITY, LONDON, E.C.,
"June 18th, 1878.

"*Messrs. Kinipple & Morris,*

"GENTLEMEN,—We have to thank you for the receipt of a draft upon the Bank of British Columbia for £28, in payment of our account for sundry articles supplied to the Government, rendered against the Chief Commissioner of Lands and Works, Victoria, dated June 23rd, 1877. Yours very truly.

(Signed) "JAMES WATT & Co."

"LANDS AND WORKS DEPARTMENT,
"Victoria, July 19th, 1878.

SIR,—I have the honour to request that you will, with as little delay as possible, be good enough to report, in detail, upon the amount of work performed on the Esquimalt Cofferdam by the contractors, Messrs. Reed Bros. & Co., since the date of your last report, on the 31st December, 1877. I have, &c.

(Signed) "GEO. A. WALKEM.

"*W. Bennett, Esq.,*
"*Resident Engineer, Esquimalt.*"

"LANDS AND WORKS DEPARTMENT,
"VICTORIA, JULY 19TH, 1878.

"*To W. Bennett, Resident Engineer, Esquimalt.*

"SIR,—I beg to acknowledge the receipt of your letter of the 21st May last, enclosing a sketch showing the site you propose and recommend for the erection of the auxiliary pump.

"I have the honour to request that you will be good enough to provide me with an estimate of the cost of erecting the said pump, at your earliest convenience.

"I have, &c.,

(Signed) "GEO. A. WALKEM,

"*Chief Commissioner of Lands & Works.*

"ENGINEER'S OFFICE, ESQUIMALT, B. C.,
"22nd July, 1878.

"*To the Hon. the Chief Commissioner of Lands & Works.*

"SIR,—In reply to your letter, dated 19th July, asking for a detailed report on the progress of the Cofferdam since 31st December, 1877, I have the honour to submit the following:—

"The number of piles driven in the outer and middle rows of the dam at the date of my last report amounted to 263; this number has been increased by 470, and in addition thereto 159 piles have been driven in the inside or buttress row, making a total of 892 piles driven and erected in the dam to date; of this number, 247 piles have been planted on the rock at the shore ends of the dam.

"There yet remain about 60 piles to be planted on rock bottom at each of the shore ends in the outer and middle rows. A number of these piles will have to be secured to the bottom with rock pile shoes, at from 20 to 25 feet below high water mark. A diver

is now employed on the works whose services will be indispensable during the operation of drilling holes to receive the rock pile shoes. Preparations are being made for the immediate prosecution of this portion of the work.

"In the buttress row, about 100 piles remain to be driven or planted.

"The four tiers of walings running the whole length of the dam both inside and out, are in position and bolted up.

"As soon as the piling of the dam was completed between bays four and eleven, an examination of the bottom of the main trunk was made by carefully probing the same, and the clay bottom between the outer and middle rows of piles from the action of the pile driving proved to be so broken up and disturbed that I found it necessary to order that portion to be re-dredged. The dredging apparatus was accordingly again rigged in the beginning of May, and dredging was continued to the middle of June. Bays two, three, eleven and thirteen, were also re-dredged, a quantity of sand and shingle having slipped in since the first dredging; in these bays also the bottom, which is rock, was swept, a large brush being rigged for the purpose.

"2,365 cubic yards of filling and toeing have been deposited behind the main trunk of the dam; 49 cubic yards of rock and clay were removed for the construction of the shore ends of the dam above low water mark, and 13 cubic yards of cement concrete were used in securing the feet of the piles at those places.

"The amount paid to Messrs. Reed, Bros. & Co. for work executed, and for material on the ground to December 31st, 1877, was $14,860 86, since which they have received $11,705 76, the last payment being made on 9th May, for work executed to 30th April. Provided the contract is satisfactorily completed by the end of this year, as I confidently hope and fully expect will be the case, a further sum of about $33,000 will be due to the contractors.

"The sluices, which were intended to have been constructed through the Cofferdam I have recommended should be placed through the earth dam, between Thetis Island and the shore. In this position, a much tighter job can be made of them, and, what is of equal importance, they can be placed at a lower level and thereby save considerable pumping when the dam is completed. This work is in progress, and the tramway on which will be conveyed the puddle, etc., to the dam, is about two-thirds finished.

"In addition to the remaining number of piles which I have already referred to as having to be driven, and the construction of the sluices and earth dam, there yet remains the remainder of the filling and the whole of the puddling to be done before the dam can be said to be completed.

"The space enclosed must then be pumped out at the expense of the Government, whereby the tightness of the dam will be tested before the work will be accepted from the contractors.

"I have, &c.,
(Signed) "W. BENNETT."

"ENGINEER'S OFFICE, ESQUIMALT, B.C.,
"22nd July, 1878.

"*To the Honourable the Chief Commissioner of Lands and Works, Victoria, B.C.:*

"SIR,—In reply to your letter of 19th July, asking for an estimate of the cost of erecting the pump in its temporary position inside the Cofferdam, I have the honour to inform you, I consider the work can be executed for the sum of from $1,200 to $1,500. An engineer will have to be provided to work the pump after its erection, at the expense of the Government.

"I have, &c.,
(Signed) "W. BENNETT."

"3, WESTMINSTER CHAMBERS, LONDON, S.W.,
"27th August, 1878.

"*To the Honourable the Chief Commissioner of Lands and Works, Victoria, B.C.:*

"SIR,—Mr. Bennett's term of service of three years as Resident Engineer, the time we expected it would take to complete the whole of the works, expired on the 12th July last. In our agreement with him, dated 19th June, 1878, he is entitled to a payment, in lieu of a yearly increase to his salary to a bonus of £100 sterling at the expiration of the third year. We shall be glad if you will arrange for the payment to him of this amount out of the commission due to us in connection with these works.

"We have, &c.,
(Signed) "KINIPPLE & MORRIS."

"ENGINEER'S OFFICE, ESQUIMALT, B. C.,
"30th November, 1878.

"*To the Hon. Chief Commissioner of Lands & Works.*

"SIR,—I have the honour to inform you that the amount due to Messrs. Reed Bros. & Co., on account of Cofferdam contract, for work executed, is $5,091 38, as per Certificate No. 11 herewith enclosed. The material on ground has been taken no notice of in this Certificate.

"I have, &c.,
(Signed) "W. BENNETT."

"ESQUIMALT, B. C.,
"November 30th, 1878.

"*To the Hon. Chief Commissioner of Lands & Works.*

"SIR,—I have the honour to hand you, enclosed, a statement of works executed to the 31st ultimo, also an account of sums due to Messrs. Reed Bros. & Co.; the whole under Certificate No. 11. The amount due is $5,091 38.

"I am, &c.,
(Signed) "C. E. DAWSON,
"*Agent for Messrs. Reed Bros. & Co.,*
"*London.*"

"LANDS AND WORKS DEPARTMENT,
"Victoria, 6th December, 1878.

"SIR,—I have the honour to inform you that I am authorized by the Government to withhold all further payments on Esquimalt Cofferdam account, until the work is completed to the satisfaction of this Department. I have also to observe that the Government, as at present advised, do not intend to waive any rights acquired by them by reason of the delay in the completion of the Cofferdam according to agreement.

"This conclusion has been arrived at, after a careful consideration of all the correspondence between you and the Government on the subject.

"Any further delay will necessarily form the subject of future consideration.

"I have, &c.,
(Signed) "GEO. A. WALKEM,
"*Chief Commissioner of Lands & Works.*

"*C. E. Dawson, Esq., C. E.,*
"*Agent for Messrs. Reed Bros. & Co.,*"

"COFFERDAM WORKS, ESQUIMALT, B. C.,
"December 27th, 1878.

"*To the Hon. the Chief Commissioner of Lands & Works.*

"SIR,—I have the honour to acknowledge the receipt of your letter of the 6th inst.

"In reference to its contents, I beg to say that the withholding of payment of the voucher you delivered to me, for $5,091 38, is a most serious inconvenience to my principals; and the course adopted by the Government is causing, and if persisted in will cause, very serious injury to their interests, and may, moreover, result in a stoppage of the works.

"I am at a loss to understand why the voucher should not have been paid, because, although it might possibly be contended that the works referred to in the contract not having been completed within the stipulated time or the extensions granted by your predecessor, my principals have rendered themselves liable for the penalty referred to in the 66th clause of the specification; yet to me it is perfectly clear that, instead of being liable to penalties, they are justly entitled to compensation, and I believe that any disinterested and impartial person on a review of the correspondence and on proper enquiry into the circumstances, &c., even if he would not readily admit my position, would consider that the extra work, datum lines, and borings are sufficient reasons for any matters in difference between my principals and yourself being referred to arbitration under clause No. 78 of the specification.

"I cannot but suppose that you have not sufficiently examined and considered all the present circumstances of the case, otherwise it would be apparent to you that the course adopted by the Government, viz., that of allowing the contractors to suppose

that the Government was satisfied with the progress made until a large amount of money was payable, not only for works mentioned in the contract but for additional and extra work, and then without the slightest warning to withhold payment, is not only a most unjust course, but is also one that must of necessity greatly hamper and injure the contractors and cause a useless delay in the completion of the works.

"I am quite sure that whatever differences of opinion there may be between the Resident Engineer and myself with respect to certain points connected with the contract, he would by no means approve or advise the course adopted of stopping further payments at the present time and under the present circumstances, when, if no useless impediment like the present occurs, there is no reason that the works should not be brought to a speedy and satisfactory conclusion.

"I hope, therefore, you will reconsider the matter, and cause the payments due to be made without further delay.

"I have, &c.,
(Signed) "C. E. DAWSON,
"*Agent for Messrs. Reed Bros. & Co.,*
"*London.*"

"LANDS AND WORKS DEPARTMENT,
"Victoria, January 3rd, 1879.

"SIR,—As a reply to your letter of the 27th ultimo, I have the honour to state that all the correspondence relating to the Cofferdam, which passed between you and this Department and the Resident Engineer, was very carefully examined and considered before the Government concluded, as announced in my letter of the 6th ultimo, to stop further payment on Cofferdam account until after the completion of the work.

"I do not, therefore, feel myself justified in requesting the Executive Council to reconsider their decision; nor is the case, in my opinion, one which could, with advantage to the public, be left to arbitration.

"Without intending the slightest disrespect, I would observe that the Government are fully alive to the remedial powers placed in their hands by the Cofferdam contract, and do not therefore require their attention to be drawn to them for the purpose of enabling them to shape their future action in this matter.

"I have to urge upon you to complete your contract with all practicable dispatch.

"I am, &c.,
(Signed) "GEO. A. WALKEM,
"*Chief Commissioner of Lands & Works.*

"*C. E. Dawson, Esq., C. E.,*
"*Agent for Messrs. Reed Bros. & Co.*"

"COFFERDAM WORKS, ESQUIMALT, B. C.,
"January 3rd, 1879.

"*To the Hon. Chief Commissioner of Lands & Works.*

"SIR,—Enclosed, I beg to hand you a statement of works executed upon the Esquimalt Cofferdam, up to the 31st December, 1878, under Certificate No. 12; also an account showing the sum due to Messrs. Reed Bros. & Co., on account of the same, amounting to $3,946 63.

"Some further works, over and above those contained in the certificate, have also been executed.

"I have, &c.,
(Signed) "C. E. DAWSON,
"*Agent for Messrs. Reed Bros. & Co.,*
"*London.*"

"ENGINEER'S OFFICE, ESQUIMALT, B. C.,
"3rd January, 1879.

"*To the Hon. the Chief Commissioner of Lands & Works.*

"SIR,—I have the honour to inform you that the amount due to Messrs. Reed Bros. & Co., on account of Cofferdam contract, for works executed, is $3,946 63, as per Certificate No. 12, herewith enclosed.

"I have, &c.,
(Signed) "W. BENNETT."

"ENGINEER'S OFFICE, ESQUIMALT,
"31st December, 1878.

"*To the Honourable the Chief Commissioner of Lands and Works.*

"SIR,—I have the honour to submit my report on the progress of the works at Esquimalt for the past twelve months.

"*Cofferdam.*

"The number of piles driven in the outer and middle rows of the dam at the end of 1877, amounted to 263; this number has been increased by 493, and in addition thereto 159 piles have been driven in the inside or buttress row, making a total of 915 piles driven and erected in the dam to date; of this number, 269 piles have been planted on the rock at the shore ends of the dam.

"There yet remain 53 piles to be planted on the rock bottom at the western end and 62 piles at the eastern end of the dam. These piles will not be placed in position till a bank of puddle has been deposited on the rock where the openings occur. In the buttress row, about 100 piles remain to be driven or planted.

"The four walings running the whole length of the dam, both on the inside and outside of the main trunk, are in position, and the number of bolts used in securing them is as follows: 1st tier, 50; 2nd tier, 50; 3rd tier, 37; 4th tier, 36; making a total of 173; these bolts are 12 feet 9 inches in length, and vary in diameter from 1½ inches in the 1st tier to 2¼ inches in the 4th tier; each bolt has a cast iron washer, weighing nearly 60lb, at each end. The buttress row is connected to the main trunk by 28 bolts 14 feet 9 inches in length and 2 inches in diameter, with a cast iron washer at each end. About 30 more bolts have yet to be fixed to the walings on the main trunk, and about 20 to the buttress walings.

"The rock drilling for the gauge piles shod with rock pile shoes was a tedious and expensive operation. The drills used were 32 feet long, and owing to the hardness of the rock constantly required re-sharpening. The holes drilled for the rock pile shoes varied in depth from 2 to 3 feet, and were 3 inches in diameter. The services of a diver and his gang were in almost daily requisition from 27th July to 29th August, during the progress of the rock drilling. In testing the holding down power of the holes, one at the eastern end broke away, owing to a seam in the rock; a fresh hole was started on 30th September, but on 3rd October when the hole was down 28 inches, the end of the drill broke off in the hole, and as the diver was unable to recover the lost end the hole had to be abandoned; another hole was then started and finished on October 7th. This is one instance of the many troubles encountered during the rock drilling operation.

"As soon as the piling of the dam was completed between bays 4 and 11, an examination of the bottom of the main trunk was made by carefully probing the same, and as the bottom between the outer and middle rows of piles from the action of the pile driving into remarkably hard clay, proved to be so broken up and disturbed, I found it necessary to order that portion to be re-dredged; the dredging apparatus was accordingly again rigged in the beginning of May and dredging was continued to the middle of June. Bays 2, 3, 11 and 13 were also re-dredged, a quantity of sand and shingle having slipped in since the first dredging; in these bays also the bottom which is rock was swept, a large brush having been rigged for the purpose; the diver's services were also called for to clean out shingle &c., from the crevices in the rock.

"An examination by the diver of the large boulder met with in bay 9 at the bottom of the main trunk during the first dredging was made; he reported a large amount of sand, shingle, shells &c., around and below it. I thought it advisable therefore to have it removed, as from the amount of sand, &c., it would have been impossible to make a water-tight connection between the clay bottom and puddle, which might have greatly endangered the stability of the dam. The removal of the sand by the diver was commenced on the 31st August, and after working at it steadily to 14th September, the boulder was slung in chains, lifted to the surface and dumped on the rocks on the outside of the dam at the western end. The estimated weight of the boulder was upwards of three tons and its top surface was 28 feet below high water mark. The dredging apparatus was again rigged on October 31st, and the spot from which the boulder was lifted was cleaned of all shingle, &c., that remained.

"The staging on which the travelling platform runs was extended one bay westward in the month of September, and the shafting of the engine was altered to adapt it

for hauling the tram-cars which convey the puddle and backing from the shore to the dam by means of an endless rope, which at the same time works a pug-mill for crushing clay for puddle.

"*Sluices.*

"The sluices which were originally intended to have been constructed through the dam, I recommended should be placed through the earth dam between Thetis Island and the shore. Instead of three sluices each 3 ft. 9 in. by 3 ft. 9 in., two sluices, each 4 feet 6 inches by 3 feet 9 inches, have been erected, the original area of discharge being maintained. In the new position of the sluices a much better job has been made of them, as it would have been exceedingly difficult to have ensured a perfectly water-tight connection through the dam, owing to the natural subsidence and shrinkage of the puddle, and the fact of their being placed at a lower level than they would have been if in the dam is also of some importance, as thereby considerable pumping will be saved when the dam is completed. The sluices which are now finished will drain the area enclosed by the dam to 7 feet below high water mark. The earth dam has yet to be raised about 5 feet.

"*Backing and Puddle.*

"The earthwork in connection with the dam is as follows:—2,645 cubic yards have been deposited as backing and toeing behind the main trunk of the dam, 477 cubic yards in front of the dam, and 151 cubic yards of puddle in the main trunk. The getting of clay for puddle, &c., was re-commenced on 9th November, and has continued to date; a much stronger gang of men should however be employed in this work.

"The amount paid to Messrs. Reed Bros. & Co. for work executed and for material on the ground to 31st December, 1877, was $14,860 86, since which date they have received $15,496 56, the last payment being made to 31st July, 1878. Since that date to December 31st, the value of works executed is $9,039 01, which amount I understand has not yet been paid to the contractors.

"*Auxiliary Pump.*

"In the centre of the bay enclosed by the Cofferdam, and at a distance of about 20 feet inside the dam, a platform has been erected for the purpose of carrying the machinery and boiler necessary for the working of the pump which is to clear the Dock site of water as soon as the dam is completed.

"The platform is 32 feet long by 24 feet wide, and is supported on 36 piles, whose average length is 32 feet; 12 inch square caps are fastened to the pile heads by one inch round spikes 18 inches long, on which are spiked joists some 12 inches by nine inches and others 12 inches square, on which in turn are spiked 6 inch planks. The level of the platform is 6 feet 9 inches above high water mark. The pump will drain the space enclosed to within 18 inches of the deepest part, and the water pumped will be discharged over the dam into Esquimalt harbour. The height from suction to delivery is 23 feet 3 inches.

"As soon as the excavation for the Dock itself is commenced the suction pipe will be extended downwards, and the works during their progress will by this means be drained. The pump, &c., will eventually be placed in the permanent engine house on the side of the Dock and be used as a drainage pump for the Dock.

"The platform has been constructed by a gang of men in the Government employ, with W. Clarke as foreman, under my superintendence, and was commenced on November 12th. A number of logs were collected from the beach at the Lagoon, near Fisguard Lighthouse, for the purpose of forming a raft, on which a pile-driver was erected and from which the piles were driven. The pump and its connections, adapted from the original design, are fixed in a framework of four 15-inch square timbers, securely tied and braced together. This work was done on shore, and of necessity had to be very strong to prevent racking; when finished it was transported on the raft across the bay, launched into the water, then dragged in between two rows of the platform piles and upended in its position; by means of the raft, too, the boiler, weighing 8 tons, was safely carried across, then placed on rollers, drawn up a slipway—for which 4 piles had to be driven—and placed on its seat. Much credit is due to Mr. Clark and his men for the care and ability they displayed in successfully performing these somewhat ticklish operations.

"A gangway 4 feet wide and 255 feet long connects the platform with Thetis Island; by this means the boiler will be supplied with coals. The piles, caps, and runners for the gangway were collected from the Lagoon beach.

"A coal shed, 28 feet by 12 feet, is to be erected on cribbing on the rocks of Thetis Island, and close to the Admiralty coal sheds. Preparations are being made to drive a row of piles to carry a small flume about 550 feet long to supply the boiler with fresh water, which will be obtained from a well already sunk at the head of the bay.

"A shed, 30 feet 8 inches by 23 feet, will be erected over the engine, boiler, &c., on the platform; a brickwork base for an iron chimney-stack for the boiler is about to be commenced; the brickwork will be carried up to the level of the crown of the boiler, which is about 8 feet above the platform level, and will be lined with fire-bricks; an iron door will be constructed in the brickwork for the purpose of cleaning out the flues of the boiler; on top of the brickwork an iron stack, 21 feet high and 2 feet 6 inches in diameter, will be fastened.

"The pump will, I expect, be in working order in about five weeks. The amount expended in its erection to date has been: for wages $945 35; for materials, &c., $550 57; total, $1,495 92; liabilities for material, about $223.

"*Cement.*

"From tests I have recently made of the cement stored at Esquimalt, I would recommend that it should be used as soon as possible.

"It is with much regret I close this report without being able, as I anticipated twelve months ago, to announce the satisfactory completion of the Cofferdam; when that is likely to happen it is impossible for me to say. The action of the Government in withholding payment to the Contractors has not caused them to push on the work with any extra amount of diligence. The number of men now employed is about twenty; at least double, if not treble, the number could be employed with advantage, as the work at which they are engaged is straight forward. Of this fact, however, I am sure, that even with the larger number of men employed I have referred to, and with increased appliances for making puddle, the work is not likely to be finished for another three or four months.

"I have, &c.,

(Signed) "W. BENNETT.

"*Resident Engineer.*"

ROADS AND BRIDGES.

DAY WORK.

REPAIRS, SOOKE ROAD.

Samuel Morrow, foreman, at $60 per month.

Grading, 780 yards, 15 feet wide.

Forest clearing, 780 yards, 20 feet wide.

Gravelling, 255 yards, 6 feet wide, 6 inches deep.

1 culvert, 15 feet by 2½ feet by 1½ feet.

1 „ 17 „ 3 „ 2 „

1 „ 20 „ 3 „ 2 „

A large quantity of cutting and filling was also performed to ease the grades, and five bridges repaired.

REPAIRS TO THE GORGE BRIDGE.

John Nicholson, foreman.

Bridge, 112 feet long, 12 feet wide, 25 feet high.

The repairs consisted of renewing 4 straining beam braces, each 20 feet long, and two posts, fixing the hand-railing, planking, &c.

Gorge Road Repairs.
Gravelling, 150 yards, 10 feet wide, 10 inches deep.
Filling holes, ruts, &c., &c.

Metchosin Road Repairs, between Gleed's and Parker's.
Samuel Morrow, foreman.
Grading, 240 yards, 16 feet wide.
Gravelling, 240 yards, 10 feet wide, 6 inches deep.
Forest clearing, 240 yards, 20 feet wide.
1 culvert, 17 feet by 2½ feet by 1½ feet.

Repairs, Highland District Road, between Francis' and Maltby's.
Thomas Maltby, contractor (verbal) at $30.
Old bridge removed, 60 feet long.
1 culvert, 13 feet by 3 feet by 2 feet.
1 „ 20 feet long, by 3 feet by 2 feet.
Hollow filled in and graded 12 feet wide.

Various small repairs have been made throughout the district, to culverts, bridges, &c. A heavy slide has also been removed from the Sooke Road.

San Juan Trail.

George H. Baker, foreman.

It having been reported that paying alluvial gold diggings existed on San Juan River, it was deemed expedient to cut a trail to connect Leech River with the headwaters of that stream.

A sum having been placed on the Estimates for this purpose, Mr. Baker was instructed, on the 12th of August last, to form a party of men and proceed to cut a trail from the north fork of Leech River to the headwaters of San Juan River. On Mr. Baker's return, he reported having cut a suitable pack-trail from the initial point to within a distance of about 3 or 4 miles of San Juan River.

Mr. Baker's return was brought about by the very severe bush fires which were raging at the time. The foreman's report is hereunto appended :—

Received at the Land Office, Victoria,
January 15th, 1879.

"Sir,—In accordance with your letter, of August 12th, 1878, instructing me to proceed to the north branch of Leech River and construct a trail from there to San Juan River, I formed a party, and left Victoria on the 13th August, and arrived at the forks of the west branch and north branch of the Leech River on the 15th August, and commenced work on the north side of the west branch, and following it up on that side for 4½ miles, the first 200 yards being a rather steep side-hill cutting. At 1½ miles built a bridge of 40 feet span over a ravine. At 3 miles crossed a creek, emptying into west branch, with very little water in summer, and showing indications of gold and gold-bearing quartz. On this section the grading is done 2½ feet wide, and the clearing, which was very heavy on account of the dense underbrush and heavy fallen timber, has been made 6 feet wide.

"I then crossed to the south side of the west branch, and followed it up a distance of 3 miles. On this section built a bridge, 12 feet span, over ravine; about 1½ miles of the distance heavy side-hill grading 2½ feet wide; the clearing, as on previous sections, 6 feet wide; heavy underbrush and fallen timber. I then crossed to north side of west branch, and followed it up on that side for 2½ miles, building 1 bridge, 16 feet span, over small creek; about one-half of this section side-hill grading 2½ feet wide; clearing as before 6 feet wide, heavy underbrush and many fallen logs. I then crossed the west branch, and leaving it, carried the trail, by an easy grade, 4 miles to summit; the work principally side-hill grading 2½ feet wide, and the clearing as in previous sections. From this summit the trail descends, with clearing and grading as before, to the

meadows, a distance of 2½ miles. Just before reaching the meadows, comes a creek about 30 feet wide, containing very little water in summer, and having indications of gold and gold quartz. The trail then comes to the meadows at a distance of about 400 yards. These meadows contain about 2,000 acres of open land, suitable for agricultural purposes. Where the trail crosses the meadows, it is carried over on a reef of sandstone, which stands up above the surface of the meadows about 6 feet, and is about 100 yards wide. Adjoining this reef, and running parallel to it, is a vein of quartz 8 to 10 feet wide, encased between walls of slate rock. Leaving the meadows, the trail is carried in a north-westerly direction 1 mile to summit, and thence 1¼ miles, descending to Jordan River, the clearing and grading being similar to preceding sections. On arriving at the Jordan, the trail is carried across, and then upon the westerly side, a distance of 200 yards, to a creek coming in from the west, called "Eight-Mile Creek," crossing which I followed up on its north side to the summit, a distance of 3 miles. There are indications of gold in this creek.

"On this last section the work was particularly heavy; the ascent not being steep, but, for about half the distance, consisting of steep side-hill grading, and the clearing being heavier than on the other sections; the undergrowth being very dense, and very many fallen logs; the grading was made as on the other parts, 2½ feet wide, and clearing 6 feet wide.

"From this point to the San Juan River, is a distance of 3½ miles through heavy timber, but as fires were raging in the neighbourhood, and from what I saw, and from information received as to the extent of the fire, I deemed it unwise to proceed any further with the work, as it seemed more than probable that any work which I did would be destroyed, especially as 2 miles of the trail which I had already built on the west branch, had been destroyed by fires; and I was necessitated to rebuild it on my way back to Victoria.

"I completed my work on the 21st September, and returned to Victoria. I would beg to mention that in returning, and passing over the trail between the north branch of Leech River and Goldstream, I found that the fires had done a great deal of damage to the trail. All bridges have been destroyed, with the exception of one, and that is unsafe. The bridge over Goldstream is unharmed, but at least 6 miles of the 15 miles, between the two points, have been burnt over, and are choked up with fallen logs.

"The total length of trail which I built between the north branch of Leech River and the San Juan River, and with moderate grades, is 22 miles, and was in good condition for men or pack-animals to travel over. "I have, &c.,

(Signed) "GEORGE H. BAKER.

"*To the Hon. G. A. Walkem,*
"*Chief Commissioner of Lands and Works.*"

Cowichan Electoral District.

ROADS AND BRIDGES.

CONTRACTS.

MAYNE ISLAND WHARF.

John Nicholson, Superintendent.

T. W. Bennett, contractor, at $850.

This wharf has been built in Miner's Bay, Mayne Island (Plumper Pass), and is a great convenience to the settlers on that island.

The work has been completed in a substantial manner by the contractor. The main wharf is 30 feet by 40 feet, provided with a suitable slip for the shipment of cattle, &c.

The approach is 178 feet in length, in 25 feet spans, with a roadway 10 feet wide, protected with substantial combings on each side.

A dolphin, consisting of three raking piles, securely banded together at the top, has been driven in a line with the face of the wharf, and 20 feet distant therefrom.

There is a depth of 9 feet at the end of the wharf at low water spring tides.

Repairs to Thain's Road, near Dougan's.
John Nicholson, superintendent.
James Dougan, contractor, at $91.
Grading, 265 yards, 15 feet wide.
Gravelling, 265 „ 9 „ 6 in. deep.
Holes and ruts were also filled for a considerable distance, and the hillocks levelled.
This piece of road is situate on the line between Harrisville and Shawnigan Lake.

Sleigh Road from Junction of Kokasailah Road to Hennessy's.
John Nicholson, superintendent.
Peter Hennessy, contractor, at $85.
Grading, 1,320 yards, 10 feet wide.
Some cutting and filling was required on this road.

Repairs to Road from Tod's to Flats Road.
John Nicholson, superintendent.
William Copley, contractor, at $249.
Grading, 557 yards, 15 feet wide.
Gravelling, 744 „ 9 „ 6 in. deep.
1 bridge repaired.
2 culverts, 15 feet by 2 feet by 1 foot.
1 „ 16 „ 2½ „ 1½ „
Forest clearing, the entire distance, 20 feet wide.
Numerous holes, ruts, &c., were also specified to be filled up with gravel.
This contract was stopped by a written notice to the contractor on 15th July, 1878.

Repairs to Road from Harrisville to Flats Road.
John Nicholson, superintendent.
James Love, contractor, at $380.
Grading, 666 yards, 16 feet wide.
Gravelling, 713 „ 10 „ 6 in. deep.
A bridge near Richardson's repaired, new hand-railing, sills raised, &c.; approach filled in to height of 4 feet; length 47 yards.
This work was stopped by letter dated the 15th July, 1878.

Repairs to Road from Harrisville to Sayward's Mill.
John Nicholson, superintendent.
James Dougan, contractor, at $290.
Grading, 406 yards, 16 feet wide.
Gravelling, 406 „ 9 „ 6 in. deep.
1 culvert, 16 feet by 2½ feet by 1½ feet.
Repairing bridge, filling holes with gravel, &c.

Cross Road from McLay's to Love's.
A Blyth, contractor (verbal), at $25.
Grading sleigh road, 500 yards, 10 feet wide.

Bridge near McLay's.
David Evans, superintendent.
A. Blyth, contractor (verbal), at $150.
This bridge is 117 feet long, 12 feet wide, and 13 feet high, with substantial crib abutments. The agreement for its construction was made in the autumn of 1877, and the work was stopped on the 13th July, 1878. The site originally selected for this bridge has been objected to by a number of settlers, who have stated that it would benefit but one person, whereas if its position was altered it would be a convenience to a number of the residents in that neighbourhood.

Day Work.

Repairs, Cowichan Wharf.
John Nicholson, foreman.
This wharf having been reported as very unsafe, Mr. Nicholson was dispatched to repair it. It was found that nearly all the piles in the main portion of the wharf had

been eaten close off to the mud by worms (*Torredo navalis.*) The repairs consisted of driving 31 new piles, varying in length from 28 feet to 35 feet. These piles have been securely braced; the gangway has also been repaired.

SECTION 1, COWICHAN AND GOLDSTREAM ROAD, Shawnigan Lake to Goldstream.

George Jones, foreman, at $50 per month.
Forest clearing, 1,669 yards, 20 feet wide.
Grading, 1,669 „ 12 „
1 bridge, 54 feet long, 12 feet wide, 14 feet high.
5 culverts, 12 feet by 5 feet by 2 feet.

The total length of this section is about 15 miles, and tenders were invited for its construction, at the same time as for section 2 of this road. On the 29th January, 1877, several tenders were received for the work, the lowest being that of Mr. Joseph Nicholson for $9,627, but the contract was not awarded. From the above amount it would appear that Mr. Nicholson estimated the cost of building the road, including bridging and culverts, at some $640 per mile. The cost of the works enumerated above, and conducted under the supervision of Mr. George Jones, was $1,421.84; therefore, the total cost of the section at that rate would have been say $1,500 per mile, or $22,500. It may be further stated that the portion of the road built by Mr. Jones was not by any means the most expensive to construct, but may be taken as a fair average of the entire line. This work was stopped, as previously mentioned, on the 3rd July last, and the road party paid off.

TRUNK ROAD, DUNCAN'S TO THE MISSION.

David Evans, foreman.
Grading, 420 yards, 22 feet wide.
Gravelling, 420 „ 11 „ 8 in. deep.
1 bridge, 102 feet long, 14 feet wide, 26 feet high.

This bridge is built over Mill Creek, on the section line near the Mission, and is nearly level with the road at either end. The old crossing was very dangerous, the bridge being narrow and rotten, with very steep pitches both on to and off it.

The usual amount of general repairs have been carried out in this district, fallen timber cleared, bridges and culverts repaired, &c.

Nanaimo Electoral District.

ROADS AND BRIDGES.

GABRIOLA ISLAND WHARF.

Colin McDonald, superintendent.
A. J. McLellan, contractor at $684.

This wharf has been built at a point on Gabriola Island just abreast of the entrance to the Nanaimo rapids. The main wharf is 40 feet by 30 feet, provided with a suitable gangway or slip, mooring and fender piles. The approach is 159 feet in length, carried on piles and trestles securely braced. The roadway is 12 feet wide and protected with substantial combings on both sides. The East Coast mail steamers, carrying mails, can now call at the Island without danger and with very little delay.

MAIN ROAD FROM NANAIMO to Nanaimo River Bridge.

James Clandenning, foreman.
Grading 2,000 yards, 18 feet wide.
Forest clearing 1,200 yards, 40 feet wide.
1 bridge, 100 feet long, 16 feet wide, 10 feet high.
9 culverts, 19 feet by 1½ feet by 1 foot.

This road is practically constructed on an entirely new line, and is much shorter than the old bush road, which followed for a considerable part of the distance the the old Victoria-Comox Road.

This work was commenced in 1877, and has been prosecuted during the past spring and summer. The road is now opened to the Nanaimo bridge, but some gravelling and culverts and a bridge over Chase River are still required.

When completed it will be a great convenience to the settlers in Cedar and Cranberry Districts, and also make a pleasant drive for the inhabitants of Nanaimo.

Some repairs have also been made to the Wellington Road, and on the other roads in the district fallen trees have been removed, culverts and bridges repaired, &c.

Buildings.

Nanaimo School-House.

Colin McDonald, superintendent.

John Hilbert, contractor at $2,225.

The School-house when finished will have two wings, and a principal building between. This contract only included the north wing, which is two storeys high and erected on a substantial stone foundation.

The structure is 50 feet long and 24 feet wide, outside measurements, divided as follows: Lower floor school-room, 32 feet 6 inches by 22 feet 6 inches ; class-room, 16 feet by 13 feet 6 inches ; hall; height of ceiling 15 feet 6 inches. These rooms are suitably fitted up with teachers' desks, seats and platforms, and desks and seats combined for the pupils.

As the School Trustees considered that the extra accommodation afforded by the lower storey would be sufficient for some time to come, a staircase to the first floor was omitted, but ample room has been provided in the hall for its construction when additional room is required. The first floor is not filled up or divided off into rooms ; the height of the ceiling is 12 feet 6 inches. The building is hard-finished throughout.

The School-house is centrally situated, and has been erected on land which the Government have made arrangements to purchase from the Vancouver Coal Co. The land consists of lots 18, 19, 20, 21 and 22, block 22, of Nanaimo Town, giving a frontage on two streets.

Comox Electoral District.

Repairs, Comox Wharf.

John Nicholson, foreman.

This wharf was discovered early in the year to be in a very unsafe condition from a similar cause to that which endangered the stability of the Cowichan wharf, viz.: a number of the piles having been eaten through close to the mud by the worms. The repairs consisted of driving four new piles, 15 inches in diameter, 40 feet long; three raking piles, 75 feet long, bolted to caps; 2 raking piles, 40 feet long, fastened in a like manner.

The north side of the main wharf has been enlarged by adding a piece 40 feet long, with—

21 piles, 36 feet long.

2	stringers,	44 feet long,	10 inches by	12 inches.
2	"	30	"	"
2	"	20	"	"
2	"	10	"	"

Covered with 12 inches by 3 inches planking.

A T turnout was also constructed, adjoining the approach, 60 feet long and 6 feet wide. This was built for the convenience of wide-track waggons passing on the approach, which is 1,035 feet long and 12 feet in width, between the handrailing.

Bridge on Denman Island Road.

C. McCutcheon, contractor (verbal) at $130.

Geo. F. Drabble, superintendent.

This work was performed in 1877 by contractor, acting under instructions from Mr. Drabble.

Some small repairs have also been made to bridges, culverts, and roads, in different parts of the District.

New Westminster Electoral District.

CONTRACTS.

SLEIGH ROAD, from point on North-East Road, opposite Rodick's farm to Hayman's clearing.

L. F. Bonson, Superintendent.

William Murray, contractor at $420.

Grading, 1,232 yards, 12 feet wide.

Forest clearing, 1,232 yards, 18 feet wide.

One culvert, 20 feet by 2 feet by 1½ feet.

The grading consisted of levelling the hillocks, filling in holes, removing stumps, &c., &c.

COAST MERIDIAN ROAD, from the New Westminster and Hope Road along the Coast Meridian to the road from Langley to Ladner's Landing.

L. F. Bonson, Superintendent.

Alexander Murchison, Contractor, at $1,750.

Grading, 2,016 yards, 12 feet wide.

Forest clearing, 2,016 yards, 18 feet wide.

Grading, 1,289 yards, 18 feet wide.

Gravelling, 1,289 yards, 12 feet wide, 6 inches deep.

Ditch, 1,289 yards, 7 feet wide at the top, 2 feet at bottom, 3 feet deep.

Brush, 1,289 yards, 12 feet wide, 6 inches deep.

Gravelling, 66 yards, 12 feet wide, 6 inches deep.

Corduroy, 374 yards, 12 feet wide.

Ditches on both sides, 3 feet by 1 foot by 1 foot, 20 feet apart inside edges.

Necessary culverts were also provided for.

On the portion of the road, 1,289 yards long, one ditch had already been cut and a narrow roadway constructed. A berm of 6 feet was specified for to be left between the inside edge of the ditching and the bottom of the slopes of the raised roadway.

A letter was dispatched to the Government Agent at New Westminster, dated the 4th July, instructing him to notify the contractor to stop the work. This was accordingly done with the least possible delay.

Numerous repairs have been made on the different roads throughout the district, under the superintendence of Mr. L. F. Bonson, the heaviest expenditure having occurred in the maintenance of the New Westminster and Hope road.

The repairs consisted of mending bridges, renewing culverts, clearing out fallen timber, scouring ditches, enlarging tail-drains, gravelling, etc.

The above-mentioned work was carried out prior to the 30th June last.

BUILDINGS.

The roof of the Hospital has been repaired, and portions of the Gaol building and fencing have been renovated.

A survey has been made with the idea of eventually conveying water by means of iron pipes from the Ravine, near the Penitentiary, to the Lunatic Asylum. The result shows sufficient fall can be obtained to force the water over the entire building, and by that means utilize the fire plugs and cisterns with which it is provided. The site of the dam, constructed by the contractors for the building, is, I am advised, not well adapted to its purpose. During the dry season the water for the Asylum is supplied by water-carts.

"THE SUMASS DYKING ACT, 1878."

It will be remembered that in the year 1876 the settlers in the Chilliwhack and Sumass Settlements experienced great loss from the remarkable height Fraser River attained in the annual summer freshets. After the water subsided Mr. E. Dewdney, acting under instructions from the Department, made a survey and ran several lines of levels for the purpose of ascertaining the feasibility of protecting these lands from further inundation by a system of levees and floodgates. His report, which, on the

whole, was favourable to the scheme, together with plans, profiles, sections and rain-fall tables explanatory thereof, were published in the Departmental Report for the year 1876.

The Government received a communication, dated the 18th October, 1877, from Mr. E. L. Derby, of San Francisco, stating that he had examined the Chilliwhack and Sumass Settlements, and reporting on the practicability of successfully dyking the lands included therein. He proposed to build the requisite levees, floodgates, etc., in a thoroughly substantial manner, and estimated the cost of the work at $118,000. To reimburse himself for this large outlay, he stated that the settlers in the neighbourhood of the Hope and Camp sloughs, in Upper Chilliwhack, were prepared, on the completion of the work, to pay him the sum of $2,500, and the settlers of Sumass $50,000 in instalments, leaving a balance of $66,000 to be met. As an equivalent for this sum, he stated that the unoccupied Crown land in the vicinity amounted to 45,000 acres, including Sumass Lake, with an estimated area of 10,000 acres, and proposed to take this amount of Government land in full satisfaction thereof. The sums to be paid by the settlers were to be extended over a term of years, and the ultimate payment of the total amounts secured by charges on their lands.

Mr. Derby not being able to make satisfactory arrangements with the Government on this basis, applied for a private bill during the first session of the Provincial Legislature held in 1878. A bill was introduced, and, in due course, referred to a Select Committee on Private Bills. That gentleman explained his project to the Committee, and submitted plans and specifications of the works he deemed necessary to effectually dyke the Chilliwhack, Sumass and Matsqui Settlements. These documents were referred to the then Chief Commissioner, who, in a communication, dated the 11th March, 1878, condemned them on account of the meagreness of the specifications, and the evident weakness of the framing, and the slightness of the sheet piling proposed to be used in the floodgates.

Between the date of Mr. Derby's first proposition and his examination before the Select Committee, that gentleman again carefully examined the ground, accompanied by an engineer acting on behalf of the Government.

The engineer's reports were placed at the disposal of the Committee, who finally recommended that, taking into consideration the large interests at stake and the importance of having the levees and gates built in a thoroughly efficient manner, the necessary plans and specifications should be prepared by the Chief Commissioner. On account of the time required to do this it was found impossible to submit more than sketches of the proposed works before the House was prorogued.

The "Sumass Dyking Act, 1878," was assented to on the 10th April, and its principal features are as follows, viz.:—

Mr. E. L. Derby, on properly and effectually dyking the Sumass, Chilliwhack and Matsqui Settlements, on or before the 1st July, 1880, in accordance with plans and specifications, prepared under the supervision of the Chief Commissioner, and approved of by him, shall be entitled, out of the Chilliwhack and Sumass districts, to receive free grants of 45,000 acres of Crown land, selected from unoccupied sections in townships 16, 19, 20, 22, 23, 25, 26, 27, 29 and 30, including Sumass Lake, one-half to be chosen by Mr. Derby, and one-half by the Chief Commissioner. On the Matsqui section, 6,000 acres are to be selected in a similar manner from land in townships 13, 14, 16, 17 and 20. The occupied lands, not being Crown lands, are to be assessed at the following rates:— The land subject to overflow in the southern half of township 16, and in townships 19, 20, 22 and 23, at $5 per acre, payable in three instalments, due respectively in 5, 10 and 15 years, dating from the 1st January, 1878, and carrying interest from the 1st July, 1878, at the rate of 8 per cent. per annum until paid. The lands subject to overflow in townships 26, 27, 29 and 30 to be assessed at the rate of 50 cents per acre, payable in two instalments, due on the 1st January, 1879, and 1st January, 1880, carrying interest at the rate of 8 per cent. until paid.

The land subject to overflow within the line of dykes in townships 17 and 20, and north of the line of dyke surveyed for C. B. Sword, $4 per acre, and the land subject to overflow in Townships 13, 14, 16, and 17, south of the aforesaid line, at the rate of $2 50 per acre. Such sums of four dollars, and two dollars and fifty cents per acre, respectively, to be payable, in two instalments, in four and nine years, dating from January 1st, 1878 and carrying interest, from the 1st July, 1878, at the rate of eight per cent. per annum.

The Act also provides that the work shall be performed under the supervision of the Chief Commissioner, and that all costs and charges connected with the preparation of plans and specifications, and the inspection of the work, shall be refunded to the Government by Mr. Derby. Suitable penal clauses are also embodied in it to insure the satisfactory completion of the work; also powers to resume possession of the lands granted, provided Mr. Derby fails to effectually protect the said districts from inundation from Fraser River.

Work was commenced on the Matsqui section of the scheme in May last, and on the 25th June, Mr. J. A. Navarre, left Victoria to superintend the work on behalf of the Government.

The draft plans, and specifications were perused and agreed to, with some unimportant alterations, and duly signed by both parties on the 13th June, 1878.

Up to the date of this report work has been entirely confined to the Matsqui section, and has been continued, with occasional stoppages, since its commencement. Some unforeseen difficulties have arisen during the progress of the work, the most important being the discovery of an extensive peat bed some 1800 feet in length. This bed occurs on the upper or Sumass Mountain end of the dyke. It is not probable that very rapid progress will be made until the spring, as the severity of the weather precluded the possibility of constructing earth or clay embankments to advantage.

Annexed are two reports from the Superintendent of the works; one devoted especially to peat bed obstruction referred to above, the other being a general report on the amount of dyke constructed since the commencement of the work.

"RIVER SIDE, B. C.,
"December 5th, 1878.

"*To the Hon. Chief Commissioner of Lands and Works.*

"SIR,—I have the honour to submit, herewith, the supplemental report and tracings mentioned in my report for the month of November.

"In connection with the tracing I will simply state,—

"1st. That in the prosecution of the work in this portion of the Matsqui Dyke, we have encountered an obstacle unlooked for, viz.: a vast peat bed extending from the foot of Sumass Mountain, 1,800 feet of which distance the dyke must, under existing circumstances, be constructed over.

"2nd. The tracing will inform you of the height of the grade line from station 353 to 378; also the point of commencement of peat on line of dyke, and the average depth of the mountain; the direction of drain-water as it courses to the creek; where the creek crosses the dyke, &c.

"As I stated in my monthly report referred to, a drain-ditch cut inside the dyke will drain the water into the creek and obviate all interference of the same with the dyke-ditch.

"The ditches shown in the tracing have very effectually drained what was heretofore a vast swamp. The land side ditch is the only one that now carries any water of consequenee. By tapping the creek at the upper side of the prairie the water in the same can be diverted into the river at very little cost.

"Bulkhead, supported with earth embankment to the top, is essential at the creek. You will observe that for a short distance the bottom of the ditch is sandy. This sand is dangerous when saturated with water. In other parts of the line, except in the peat bed, the soil is a stiff blue clay as far as I can ascertain, and this will make a firm and secure embankment when once settled in place and reveted.

As I believe it will not be safe to build an embankment of the peat, and that it will be dangerous to drain it and place it in a condition liable to be fired, and as the cost of its removal to the clay bed would be exorbitant, I would recommend a plain bulkhead work, commencing at a point where the peat is more than twelve inches in depth, and thence extending to the mountain; the structure to be piling and stringers, as in the plan for bulkhead in Matsqui, and two thicknesses of sheet piling, three inches to each thickness, making a solid mass of timber six inches thick, dispensing with the batten, but having the outer sheet break joints with the inner, the whole to be fastened, at intervals on the outside of 18 inches, with 5-inch wrought spikes; the inner sheet to be securely fastened to the stringers, or if the whole is fastened to stringers from the outside, then a

sufficient length of fastening should be used, that will very nearly penetrate through the stringer. But a much more preferable structure would be the use of 6-inch solid sheet piling with battens well fastened. This at any point where the grade line is more than four feet above the surface; at all points less than four feet, one thickness of sheeting with 1½-inch by 6-inch battens will do.

"All lumber cedar, clear and sound. Piles and sheet piling to be well driven into clay or below peat.

"I have, etc.,

"I. A. NAVARRE,

"*Superintendent Sumass Dyking Scheme.*"

"VICTORIA, BRITISH COLUMBIA,
"January 9th, 1879.

"*To the Hon. Chief Commissioner of Lands and Works:*

SIR,—In accordance with your request, I have the honour to herein submit a brief summary of the work done by virtue of the "Sumass Dyking Act Scheme," under my supervision, as your agent on the works.

"No construction has been done except on the Matsqui division of the dyke.

"All work done to date is earthwork embankment.

"The total length of line of dyke as located measures 37,845 feet over all. The height of grade line varies from two-tenths of a foot to fourteen feet. Grade line is one foot above high water mark of 1876.

"Cedar pile timber is on the ground for the building of the gates in the sloughs.

"Work has progressed slowly for reasons best known to the promoter of the scheme. A gap of very nearly 9,000 feet remains to be closed. None of the embankment is in a finished state, as, owing to shrinkage and other causes, slopes must be slightly remedied and more earth added before the same is in a fit state to seed.

"In the further construction of the dyke a few changes must necessarily be made to meet exigencies which were not anticipated and probably unknown at the time of the drafting and signing of plans and specifications. Such exigencies are liable to occur in any work as extensive as this.

"The exigencies spoken of are the finding of an immense peat bed at the extreme upper end of the line, and a quick-sand bottom at points where heavy embankment is required. I anticipate no trouble in successfully overcoming these difficulties.

"At this writing the cold and snow prohibits the construction of earth work. The timber work might be done to advantage.

"The work cannot be completed too soon. The time to be occupied in the completion of the work depends entirely on the force of workmen employed.

"I have, etc.,

"I. A. NAVARRE,

"*Superintendent Sumass Dyking Scheme.*"

Yale-Cariboo Waggon Road.

The amounts expended on the Cariboo Trunk Road have been kept, as in the past two years, distinct from the Districts of Yale, Lillooet and Cariboo. A similar arrangement and division into sections has also been maintained, viz.:—

Section 1.—Yale to Boston Bar	25	miles.
„ 2.—Boston Bar to Clinton	111	„
„ 3.—Clinton to Soda Creek	130½	„
„ 4.—Soda Creek to Quesnellemouth	58	„
„ 5.—Quesnellemouth to Cameronton	60	„

The following work has been executed on the different sections :—

SECTION 1.—YALE TO BOSTON BAR.

N. Black, foreman ; salary $130 per month.

Month.	Nature of work.	No. of men.	No. of days.	Rate of Wages per diem.
January	Gravelling, 625 yards, 36 feet wide, 2 to 3 ft. deep Do. 102 ,, 12 ,, 6 to 12 in. ,, Stone walling, 118 feet, 5 feet high ..... 2 culverts, 50 feet by 2 feet by 1½ feet..... 1 ,, 18 ,, 3½ ,, 2 ,, ... Re-covering bridge, 47 feet long..... General repairs, clearing slides, widening road, &c.	11 Whites 1 Chinaman	223	$1 66 to $3
February	Gravelling, 271 yards, 12 feet wide, 12 in. deep... Stone walling, 78 feet, 2 feet high ..... Re-covering 1 bridge, 34 feet long, 18 feet wide ... 1 culvert, 18 feet by 6 feet by 3 feet ..... General repairs, blasting and removing rocks and clearing slides	11 Whites 1 Chinaman	207½	,,
March	Stone wall, 136 feet, 2 to 8 feet high ..... Half bridging, 370 ft., 18 ft. wide, 13 to 19½ ft. high	11 Whites 1 Chinaman	313½	,,
April	Grading, 20 yards, 18 feet wide ..... Filling, 20 ,, 2 to 10 feet deep..... Stone walling, 136 feet, 3 to 12 feet high ..... 1 bridge, 90 feet long, 18 feet wide, 19 feet high... 3 culverts, 12 feet wide, 18 feet long, 3 to 5 ft. deep	15 Whites 1 Chinaman	.....	1 66 to 3 18½
May	Blasting, 717 cubic yards ..... 1 bridge, 42 feet long, 18 feet wide, 22 feet high... 1 ,, 52 ,, 18 ,, 18 ,, 1 ,, 57 ,, 18 ,, 13 ,, ½ ,, 49 ,, 9 to 18 ,, 17 ,, 1 culvert 16 feet by 18 feet by 4 feet ..... 1 ,, 19 ,, 18 ,, 2 ,, ...	14 Whites 2 Chinamen	360	,,
June	Stone walling, 67 feet, 4 to 5 feet high ..... Gravelling, 404 yards, 12 ft. wide, 6 to 24 in. deep 1 bridge, 42 feet long, 18 feet wide, 22 feet high... ½ ,, 143 ,, 8 to 18 ,, 12 ,, General repairing, re-covering bridge, 131 ft. long, clearing slides and rocks ..... 1 culvert, 18 feet by 12 feet by 4 feet.....	10 Whites 2 Chinamen	273½	,,
July.....	Cribbing, 49 feet, 9 feet high ..... Gravelling, 60 yards, 12 feet wide, 10 to 18 in. deep 1 bridge, 134 feet long, 18 feet wide, 65 feet high	10 Whites 1 Chinaman	274	,,
August	Cribbing, 48 feet, 10 feet high..... Gravelling, 170 yards, 12 ft. wide, 6 to 12 in. deep 1 bridge, 52 feet long, 18 feet wide, 10 feet high... 1 bridge re-covered, 32 feet long..... 3 culverts, 18 feet long, 6 to 13 ft. wide, 4 to 6 ft. deep	9 Whites 2 Chinamen	251	,,
September ...	Cribbing, 230 feet, 10 feet high ..... Stone walling, 86 feet, 5 to 11 feet high ..... 1 bridge, 28 feet long, 18 ft. high ..... 1 culvert, 18 feet by 8 feet by 3 feet	9 Whites	124	2 69 to 3 18
October	Grading, 100 feet, 12 feet wide ..... 1 culvert, 18 feet by 10 feet by 3 feet..... 1 ,, 18 ,, 8 ,, 3 ,, ... 1 ,, 18 ,, 8 ,, 2½ ,, ...	10 Whites	105	2 69
November.....	Blasting, 32 cubic yards ..... 1 bridge, 47 feet long, 22 feet wide, 19 feet high... 1 culvert, 18 feet by 17 feet by 8 feet.....	7 Whites	89½	2 69 to 3 00
December.....	General repairs	2 Whites	.....	2 69

SECTION 2.—BOSTON BAR TO CLINTON.

Arthur Stevenson, foreman, at $130 per month.

Month.	Nature of work.	No. of men.	No. of days.	Rate of Wages per diem.
January	General repairs to road Cutting out ice, clearing ditches and removing loose rocks and gravel slides	6 Whites	87	$2 69 to 3 08
February	General repairs	8 Whites	107	2 92 to 3 08
March	Cribbing 125 feet, 6 feet high Stone walling 150 feet, 4 feet high Grading 400 yards, 25 feet wide Ditching 500 yards Gravelling 200 yards, 12 feet wide, 10 inches deep Gravelling 700 yards, 10 feet wide, 8 inches deep 1 bridge 40 feet long, 18 feet wide, 12 feet high 4 culverts, 20 feet by 2 feet by 1½ feet	21 Whites 1 Chinaman	527	2 19 to 3 46
April	Cribbing 70 feet, 10 feet to 15 feet high Stone walling 200 feet, 5 feet high Gravelling 200 yards, 12 feet wide, 10 inches deep 1 bridge 20 feet long, 18 feet wide, 14 feet high ,, 40 ,, 20 ,, 18 ,, ... ½ ,, 30 ,, 10 ,, 20 ,, ...	18 Whites 1 Chinaman	418	2 19 to 3 46
May	Grading 100 yards, 18 feet wide Gravelling 1,000 yards 12 feet wide, 10 inches deep Cribbing 90 feet, 5 feet wide	.....	.....	.....
June	Ditching 100 yards, 2 feet by 1½ feet Gravelling 830 yards, 10 to 18 feet wide, 12 inches deep Covering one bridge, 20 feet long, 20 feet wide	.....	.....	.....
July	Gravelling 1,115 yards, 10 to 15 feet wide, 10 to 12 inches deep 1 culvert 18 feet by 2 feet by 1 foot General repairs, clearing out slides and ditches	12 Whites 1 Chinaman	.....	2 19 to 3 08
August	Gravelling 1,250 yards, 12 to 15 feet wide, 10 to 12 inches deep General repairs, clearing rock and gravel slides	31 Whites	.....	2 69 to 3 46
September	Stone walling 75 feet, 5 feet high Gravelling 120 yards, 15 feet wide, 10 inches deep Cribbing 90 feet, 6 feet high Cabin for section men at Nicomin, 12 feet by 14 feet	10 Whites	.....	2 69 to 3 08
October	General repairs, clearing water courses, shovelling out rock and other slides, and gravelling portions of the road	3 Whites	.....	.....
November	General repairs	4 Whites	.....	.....
December	General repairs, clearing gravel slides, scouring ditches, &c	3 Whites	.....	.....

SECTION 3.—CLINTON TO SODA CREEK.

William Boyd, foreman, at $130 per month.

Month.	Nature of work.	No. of men.	No. of days.	Rate of Wages per diem.
April	Grading 660 yards, 14 feet wide ,, 155 ,, 16 ,, Gravelling 175 yards, 14 feet wide 12 inches deep ,, 72 ,, 12 ,, 10 ,, Ditching 400 yards, 2½ feet wide, 18 inches deep 1 culvert, 20 feet by 11 feet by 3 feet Corduroy 156 feet, 18 feet wide	10 Whites	154½	$1 92 to 3 46
May	Forest clearing 500 yards, 66 feet wide Grading 75 yards, 12 feet wide Gravelling 256 yards, 12 feet wide 15 inches deep Corduroy 392 feet, 18 feet wide 1 bridge, 30 feet long, 20 feet wide, 5 feet high ,, 38 ,, 20 ,, 8 ,, ,, 18 ,, 21 ,, 4 ,, 1 culvert, 18 feet by 4 feet by 3 feet Widening road, 35 yards, 12 feet wide	10 ,,	242	,,
June	Forest clearing 2,200 yards, 66 feet Gravelling 223 yards, 14 feet wide, 12 inches deep Corduroy 1,092 feet, 18 feet wide 1 bridge, 18 feet long, 10 feet wide, 4 feet high ,, 18 ,, 8 ,, 3 ,, ,, 18 ,, 7 ,, 4 ,, ,, 18 ,, 10 ,, 4 ,, 4 culverts, 18 feet by 4 feet by 3 feet Ditching 713 yards, 3 feet wide, 14 inches deep	11 ,,	243½	,,
July	Forest clearing 6,160 yards, widening to 75 feet Gravelling 916 yards, 14 feet wide, 12 inches deep Corduroy 120 feet, 18 feet wide Bridge, 45 feet long, 21 feet wide, 5 feet high 9 culverts, 3 feet to 10 feet long, 20 feet wide, 2 feet to 3 feet deep Ditching 1,182 yards, 3 feet wide, 10 inches deep	10 ,,	264	,,
August	Forest clearing, widening to 60 feet, 8,800 yards Gravelling 510 yards, 14 feet wide, 12 inches deep 1 bridge, 15 feet long, 22 feet wide, 4 feet high 2 ,, 13 ,, 21 ,, 4 ,, 1 culvert, 21 feet by 7 feet by 2 feet Ditching 866 yards During the progress of the work in this section, rock, trees and slides were removed throughout its entire length, and the deep ruts filled up.	10 ,,	244	,

SECTION 4. SODA CREEK TO QUESNELLEMOUTH.

W. A. Johnston, foreman, at $200 per month.

Month.	Nature of work.	No. of men.	No. of days.	Rate of Wages per diem.
March	Stone walling 285 feet, 6 feet high Cribbing 32 feet, 3 feet high Clearing slides and ditches, and repairing bridge covering	9 Whites 1 Chinaman	87½	$2 25 to 3 25
April	Cribbing 194 feet, 4 feet to 6 feet high Forest clearing 1,870 yards, 33 feet wide Grading 1,870 yards, 18 feet wide 1 bridge, 28 feet long, 17 feet wide, 7 feet high ,, 23 ,, 17 ,, 7 ,, ... ,, 55 ,, 17 ,, 7 ,, ... ,, 32 ,, 17 ,, 5 ,, ... ,, covering renewed	11 Whites 1 Chinaman	239½	2 40 to 4 00
May	Stone walling 96 feet, 6 feet high Cribbing 624 feet, 6 feet high 1 bridge, 8 feet long, 18 feet wide, 3 feet high	3 Whites	79½	3 40 to 3 60
July	Cribbing 490 feet, 4 to 9 feet high 2 culverts 17 feet by 2 feet by 3 feet 2 bridges, 12 feet long, 17 feet wide, 4 feet high Clearing slides, filling ruts, and other general repairs	4 ,,	63	,,
August	Stone walling 265 feet, 4 feet high Cribbing 940 feet, 5 feet to 9 feet high	3 ,,	79	,,
September	Cribbing 320 feet, 5 feet high General repairs, clearing slides, filling ruts, etc	3 ,,	30	,,
October	Cribbing 234 feet, 6 feet high Clearing slides, fallen timber, etc	2 ,,	23	3 40 to 3 50

SECTION 5. QUESNELLEMOUTH TO BARKERVILLE.

W. A. Johnston, foreman, at $200 per month.

January	Completing Cottonwood bridge, commenced in Fall of 1877. Length of bridge 220 feet, width 16 feet, 16 feet high	7 Whites	169	$3 50 to 4 00
February	1 bridge, 86 feet long, 17 feet wide, 7 feet high. This bridge was constructed with a centre pier of piles driven into tight gravel, one span 16 feet, two 35 feet. The men were also employed during this month in clearing away the debris of the old bridge at Cottonwood and completing the approaches to the new one	6 ,,	116½	,,
March	Gravelling 460 yards, 10 to 18 feet wide, 3 inches to 9 inches deep General repairs, clearing land slides, filling in approaches to bridges, etc	5 ,,	68½	3 50
April	General repairs, and keeping road clear of slides and timber	5 ,,	41	3 50 to 5 00
May	Ditching 710 yards, 6 to 12 inches deep Cribbing 40 feet, 8 feet high 1 bridge, 26 feet long, 17 feet wide, 6 feet high ,, 24 ,, ,, ,, 5 ,, ... ,, 21 ,, ,, ,, 8 ,, ... Corduroy 165 feet, 17 feet wide	12 Whites 2 Chinamen	214½	2 40 to 4 00
June	Cribbing 492 feet, 2 to 8 feet high 17 culverts, 18 feet by 1½ feet by 1 foot	7 Whites 1 Chinaman	186	2 60 to 4 00
July	Cribbing 1,331 feet, 1 to 12 feet high Ditching 1,528 feet, 2 feet wide, 1 foot deep 6 culverts, 17 feet by 2 feet by 1½ feet 4 ,, ,, ,, 3 ,, 2 ,, ... 5 ,, ,, ,, 1½ ,, 1 ,, ...	12 Whites 1 Chinaman	270	,,
August	1 bridge, 25 feet long, 17 feet wide, 4 feet high 4 culverts, 17 feet by 4 feet by 2 feet 3 ,, ,, ,, 2 ,, 1 ,, ... 5 ,, ,, ,, 1 ,, 1 ,, ...	8 Whites 1 Chinaman	234	3 25 to 4 00
September	1 bridge, 6 feet long, 17 feet wide, 4 feet high General repairs	8 Whites 1 Chinaman	51	2 60 to 4 00

Yale Electoral District.

ROADS AND BRIDGES.

CONTRACTS.

SECTION 2.—KAMLOOPS AND NICOLA ROAD. From the end of Section 2, in Township No. 105, Kamloops Division of Yale District to Nicola Valley; distance 22½ miles, more or less.
John Ussher, superintendent.
Duncan A. McDonald, contractor, at $6,700.
This work was commenced in 1877, and completed and accepted last summer.
The contractor has been paid the full amount of the contract price, but he still claims a large sum for extra work alleged to have been performed.

MISSION CREEK BRIDGE.
C. A. Vernon, superintendent.
J. D. Bermingham, contractor, at $1,730.
This bridge has been satisfactorily completed, the work accepted, and the contractor settled with in full.

KAMLOOPS-TRANQUILLE ROAD.
George Newlove, contractor, (verbal) at $420.
John Ussher, superintendent.
This contract was let for the purpose of completing the road, which was commenced in 1877, from a point opposite Fort Kamloops to Tranquille.
The work was stopped early in July by Mr. John Ussher, Government Agent at Kamloops, who acted under instructions from the Department, embraced in a telegram dated 2nd July, 1878. Mr. Newlove totally disregarded the notification from the Agent, and has demanded payment in full for the work, which he alleges is completed according to the specification. The contractor's claim has therefore not been recognized.

OKANAGAN AND SAVONA'S FERRY ROAD, (Improving grade at Summit Hill).
A. J. Kirkpatrick, contractor (verbal).
John Ussher, superintendent.
This Contract was let for the purpose of easing the grades near Grand Prairie, but was cancelled by the Government Agent. The Department has no advice of the work having been commenced by Mr. Kirkpatrick.

DUCK AND PRINGLE'S TO THE HEAD OF OKANAGAN LAKE, (keeping road clear, &c.)
Charles W. Dixon, contractor, (verbal) at $200.
John Ussher, superintendent.
This work comprises keeping the road clear of fallen timber and branches, &c., from 14th May, 1878, to 14th May, 1879.

DAY WORK.

ROAD FROM SIMILKAMEEN TO OSOYOOS.
Thomas Curry, foreman.
This work comprised grading a 4 feet trail round the bluff, about half a mile below Price's, at Keremeos; also grading round nine-mile bluff. This bluff is 1,000 feet in length, 600 feet of which has been graded 13 feet wide, and 400 feet 4 feet wide. The foreman was instructed to commence work on 14th May, 1878, and the party was disbanded early in July, and paid off.
It is estimated that a further outlay of some $400 would be sufficient to make the road passable for waggons.

Repairs, Hope-Similkameen Trail.

William Bristol, foreman.

The usual annual amount of labour was required on this trail, consisting of clearing out slides, removing fallen timber, repairing bridges and corduroy.

Hope-Nicola Trail.

On account of the large quantity of cattle driven every season over this route, a party was dispatched, as early as possible in the spring, to clear and repair the trail from Hope to the Summit. The Government Agent was instructed, on the 8th May, to take the necessary steps to get the work completed with all practicable speed.

On the same date, Mr. Clapperton, of Nicola Valley, was requested to send one or two men to open the trail from Nicola Valley to the Summit, and connect their work with the party starting from Hope.

Subsequently arrangements were made, by my predecessor in office, with Mr. J. Wilson to travel over and look after the trail during the season, for wages at the rate of $80 per month.

The expense, therefore, connected with clearing and keeping open this trail has been rather heavy, amounting to some $1,500.

Repairs, Nicola Valley Waggon Road, at Coutlie's point.

J. T. Edwards, foreman.

Cutting new road round point of bluff to avoid a very steep grade.

General Repairs, Nicola Valley Road, from Spence's Bridge to Moore's Ranch.

Distance, about 70 miles.

From the 1st July to November 30th, from one to three men were employed, under the supervision of Mr. Arthur Stevenson, in keeping this road open. They were employed shovelling out slides, clearing water-courses, and repairing bridges, culverts, and the road generally.

Numerous small sums have been expended on the roads throughout the District, and I am advised that they are in a very fair state of repair.

Works and Buildings.

Okanagan Lock-up.

Jean Leveau, contractor, at $825.

This building has been erected at a convenient point near Coldstream, Okanagan. It is constructed with logs, 24 feet by 16 feet, inside measurement, and is divided into a court room, two cells, and a lavatory; the floors, sides, ceiling, and partitions are constructed of two thicknesses of two-inch plank laid transversely. The necessary bolts, bars, locks, &c., are provided.

This work is still in the hands of the contractor.

Savona's Ferry, foot of Kamloops Lake.

As mentioned in the last Annual Report, this ferry was run by Mr. James Uren, under a temporary arrangement, until the 16th March, 1878.

The wire rope stretched across Thompson River, the scow, blocks, and running gear, are the property of the Government.

Tenders were called for the maintenance of this ferry on the 5th of January, to be received at Victoria on the 24th February last, the term to be three years, with the usual determinating clause inserted in the charter, in case the Government thought fit to erect a bridge in the neighbourhood. The tolls to be similar to those heretofore collected at the same point, and the competition to be on the amount of rent to be paid annually to the Government for the privilege of collecting tolls under charter.

Two tenders were received and opened on the appointed day, but neither conformed with the terms of the notice calling for the same, both parties requiring to be paid a monthly sum for running the ferry.

Subsequently, arrangements were made by my predecesssor in office with Mr. Uren to carry out the ferry services on the conditions set forth in the notice of the

5th January, 1878, the Government paying him $10 per month, in addition to the tolls collected.

A charter was forwarded for his signature on the 24th June last, but the Department has not received any advice of its execution.

Lillooet Electoral District.

No new work has been undertaken in this district during the past year, the expenditure being confined to payment of arrears due by the Department, general repairs to the roads, and surveying new lines of road; the latter item being by far the most considerable.

ROAD FROM BIG BAR CREEK TO FRASER RIVER.

P. Grinder, contractor (verbal), at $275.

This work consisted of grading a road between the above-mentioned points. The agreement was made by Robert Carson, then road superintendent for the district, in 1877. The contractor was paid in April last.

The Clinton-Lillooet Road has been repaired where found necessary. The Lillooet-Lytton Trail and the other roads and trails in the district have been generally repaired and attended to.

ROAD SURVEYS.

Mr. John Jane was instructed, on the 28th March, to at once proceed to Lillooet District and survey a road from Haller's, on Big Bar Creek, to Canoe Creek; and a road from Oppenheimer's store, on Dog Creek, to the plains to the eastward.

Mr. Jane's reports on the different surveys are herewith submitted:—

"DOG CREEK, April 20th, 1878.

"*The Hon. F. G. Vernon,*

"*Chief Commissioner of Lands and Works.*

"SIR,—I have the honour to inform you that I have laid out a waggon road from Mr. Haller's, on Big Bar Creek, to a point near the Canoe Creek House.

"After examining the country in company with Mr. Haller, I found that I could not improve upon the route, "No. 1," as recommended by Mr. Johnstone. I therefore adopted it. I quite agree with Mr. Johnstone in his remarks about route "No. 2," wherein he states that it is "almost impossible to obtain a suitable grade; very little of the grading done last year could be utilized, and it is quite too steep for a sleigh or waggon road." The foreman did not use discretion in spending money on this absurd route. The mountain over which he intended to pass is fully 1,500 feet in altitude above the Canoe Creek Valley.

"The route now laid out may be described as follows:—

"Miles.

"1 to 2, —Open country, some grading and a couple of culverts.

"2 to 4, —A bridge, 46 feet long and 3½ feet high, to cross a wet bottom and small stream. These two miles have a light growth of small black pine, some few rocks near Gallagher's trail, and a little light grading.

"4 to 8, —The first 3½ miles has a thin growth of small black pine, and the ground is covered with rocks, generally from 1 to 4 feet through; a large proportion of these are embedded in the ground, and will have to be removed by means of gunpowder.

"8 to 9, —Open grassy slope; this mile has a fall of about 200 feet, but the grades will be easy.

"9 to 11,—Foot of grassy hills; very little work.

"11 to 12,—Here there are two banks, the first 40, the next 100 feet in height. On the first I have laid out a new grade. A road down the second bank was made a year or two ago, but it is so steep and narrow that I had to lay it out afresh. About two chains of the old work can be utilized with some few improvements.

"12 to 17,—Some 50 to 59½ chains. In order to avoid building two new culverts, and to escape a small hill, it is necessary to grade the point of a gravelly ridge, and keep clear of the ditch.

"Seventeen miles and seventeen clains will be the end of the contract. Thence to the end of the Dog Creek Road there is a distance of 1¼ miles to be completed at some future time. I could not lay out this portion at present without annoying the Indians by passing through their crops, and causing them to remove their fences. I, however, pointed out to them the line of road that would be finally adopted, and advised them to remove their fences accordingly. I enclose—

"1 map of surveyed road.

"1 rough sketch to indicate the shape of the Clinton and Canoe Creek Country.

"1 sheet—estimate of expenses; calculated at wages per man: labour, $2 50; food, 75 cts.; per diem, $3 25.

"1 packet of notes for guidance of contractor and superintendent in constructing.

"From Canoe Creek to this place, there is but an indifferent road—merely a makeshift for the time being. The grades leading up over the hill, at the back of Mr. VanVolkenburg's house, are far too steep for a freight waggon. This ascent will have to be re-surveyed, and the road built elsewhere. From the top of this hill there is an undulating country all the way to the brow of Dog Creek Valley. A road could be made over this portion at no great expense. The descent to Dog Creek should be improved. A light waggon with about 500lbs. of freight can now pass along this line of road, but it must not be supposed that a regular waggon road exists. The money spent on VanVolkenburg's Hill has, I think, been thrown away by some incompetent foreman. I am not sure of this, but I will spend a day there and explore for a better grade. I have explored the shoulder of hill behind Oppenheimer's store on the right bank of Dog Creek, and believe that I can ascend to the open plain without much trouble. The existing road leads abruptly up over a hill 900 feet in height; this distance is reached (if in a straight line) within a mile. A pair of horses could not draw an empty waggon up this terrible ascent without taking many rests; a man on horseback would dismount before attempting the hill. This is, I believe, the worst piece of work ever performed by any rational being.

"I find that the whole population in this part of the country are strongly opposed to the disbursement of any money on the Canoe Creek and Kelly Road, but are anxious that the money should be expended on the old pack trail road, leading from the 9th mile on my map viâ Big Bar Lakes to the Waggon Road from Clinton to Cariboo. Their reasons are as follows: The Big Bar Lake Road would be permanent; would be level; is grassy nearly the whole way to the Cariboo Road; and is the nearest. On the other hand the road from Kelly's is very badly made; has very bad grades; is muddy in places; there is not (save at Haller's) a blade of grass on it; it leads over a considerable elevation; and is liable, if not sure, to be blocked with snow very frequently in winter.

* * * * * * *

"I have, etc.,

"JOHN JANE."

"DOG CREEK, May 1st, 1878.

"*The Hon. F. G. Vernon,*
"*Chief Commissioner of Lands and Works.*

"SIR,—I have the honour to inform you that I have laid out a road from this place northward, round a point of mountain to the plains; distance, 5 miles and 25 chains.

"The work will consist mostly of plain grading; bed-rock protrudes in two places only; 90 feet will cover the whole length; even that piece is not solid or difficult to work. There are 3 low bridges to build over dry hollows,—1 of 50 feet by 13 feet high; 1 of 50 feet, by 12 feet high; and one of 66 feet, by 12 feet high.

"This line has been very carefully laid out, the grades are easy, and there will be no sharp turns, but the construction, if not put under the care of a careful foreman, is sure to be slighted. It is a piece of intricate work, and should be well done.

"From the end of the 4th mile, people can now take lightly-loaded waggons to Alkali Lake without much trouble. There is about three miles of grading to be done this side of Little Dog Creek, but the work is light, and could be done by "day-work." I will send you an account of this portion at some future time.

"The people of Alkali Lake have now to pay 1½ cents for packing their wheat to this place to get it ground, and 1 cent for packing the flour back again,—$2 50 per 100 lbs. When the 4 miles of hill-road shall be constructed, they will be able to use waggons. The settlers seem pleased that this piece of work is about to be performed.

"Since writing to you last, I have re-examined the country between Canoe and Dog Creeks. I thought that a good grade could be found from Canoe Creek up over the mountain, northward, but I find that I was mistaken in my opinion. The present road over the side-hill is built in the proper place; in its present condition, it will answer for lightly-loaded waggons. At some future time, when the present cribbing becomes rotten, the grades can be eased considerably,—*vide* enclosed sketch. On a former occasion I told you that the road from Canoe Creek to Dog Creek "was only a makeshift for the time being," but the road is somewhat better than that description would infer. The plateau has numerous small hollows, that could be avoided, and the descent to Dog Creek is very steep, still this portion of road will answer for years to come.

"I shall start to-day for the Alkali Lake and Chimney Creek District. After having completed the road surveys there, I shall proceed onward to the 150-Mile Post and commence the Williams Lake Road. "I have, etc.,

"JOHN JANE."

"150-MILE HOUSE, May 13th, 1878.

"*The Hon. F. G. Vernon,*

"*Chief Commissioner of Lands & Works.*

"SIR,—I have the honour to enclose a survey of 3¼ miles of light side-hill grading, leading down to Little Dog Creek from the south. The cost of construction I estimate at * * , probably a little less will build it.

"The work consists of plain grading, and can be done by day work or by contract; the latter would probably be the cheapest. Mr. Meason, J. P., lives on Little Dog Creek, and should he not engage in the work himself he would, I think, make an excellent overseer, to see that the contract was properly carried out.

"From Little Dog Creek to Alkali Lake, the waggon road is in pretty good condition, but there should be from $15 to $20 spent on it in repairing two or three places and culverts. The road in one place is washing away for want of a trifling outlay. I would advise you to authorize Mr. Meason to send a man to fix the above places; he knows what is needed. "I have, etc.,

"JOHN JANE."

"150-MILE HOUSE, 13th May, 1878.

"*To the Hon. Forbes George Vernon,*

"*Chief Commissioner of Lands and Works, B. C.*

"SIR,—I have the honour to enclose the survey of a new waggon road from the upper end of Alkali Valley to St. Peter's Springs, distance 8 miles. The old road from Mr. Bowe's house leads up a narrow gorge over a steep hill side. I could not get even an indifferent grade by going in that direction; neither could I find a suitable ascent anywhere over the hills in that locality. I therefore determined to follow up the valley of the stream (which rises steeply), and to get back to the old road by an easy grade.

"The new road rises very gently, passes through a fine grassy valley, where there are numerous springs, and, save round the point of mountain, goes in the right direction. The work will consist of plain grading; there are miles of the distance which will not need touching; there will not be a single hill or a steep pitch for the whole distance.

"I estimate that the work will cost as follows, viz.: $——.

"Should you ever wish to continue a waggon road from St. Peter's Springs to (Pinchbeck's) the main waggon road in Williams Lake Valley, the line should be surveyed, as there are numerous small lakes and swamps to be avoided.

"From Alkali I came in a direct course to 'The Mission'; there is a good trail to the crossing of Chimney Creek, and a sleigh road from there to the Mission.

"To-morrow I shall commence to lay out the road from here towards Soda Creek.

"I have not received any letters from your Department since I left Victoria.

"I have, etc.,

"JOHN JANE."

LILLOOET FERRY.

Tenders were invited on the 4th April last for the right, under charter, of running a ferry across Fraser River at Lillooet, with the privilege of collecting the following tolls for the term of five years. The competition was required to be on the annual rent to be paid the Government for the charter rights, viz.:—

Freight per 100 lbs	$ 12½
2-horse vehicle	2 50
Cattle, mules, and horses per head	1 00
Pigs, sheep and goats, per head	37½
Passengers	25
Large packages of merchandise, per ton measurement	2 50

Eight tenders were received on the 6th May, and the charter awarded to James Halladay; rent per annum, $140.

The ferry scow, hawser, and running tackle are the property of the Government.

Cariboo Electoral District.

OMINECA TRAIL, Quesnellemouth to Manson Creek:
Donald McDonald, contractor, at $300.
Clearing trail 6 feet wide, repairing corduroy and bridges, etc.
The work has been completed and the contractor paid.

CARNARVON ROAD:
W. A. Johnston, foreman.
Distance, 1⅓ miles.
Cribbing, 400 feet, 4 to 5 feet high.
Forest clearing, 300 yards, 12 feet wide.
Grading, 2,300 yards, 8 to 12 feet wide.
Gravelling, 120 feet, 10 feet wide, 6 inches deep.
1 bridge, 13 feet long, 18 feet wide, 5 feet high.
1 bridge, 8 feet long, 18 feet wide, 4 feet high.
10 culverts, 16 feet, by 1 foot, by 1 foot.

Repairs have been made where required on the different trails in the District.
The above-mentioned works were carried out prior to the 30th June last.

Mr. John Jane, acting under instructions from the Department, made exhaustive surveys of a proposed line of road from the 150-Mile Post, on the Yale-Cariboo Trunk Road, to Soda Creek, viâ Williams Lake, and a new line of road from Stanley to Barkerville viâ Jack of Clubs Lake. Mr. Jane's reports on these routes are herewith annexed:—

"QUESNELLEMOUTH, 28th June, 1878.

"*To the Honourable the Chief Commissioner of Lands & Works.*

"SIR,—I have the honour to send you the plans, notes, etc., of the proposed waggon road via Williams Lake to Soda Creek.

"By the plan you will observe that I commenced my work at a point a little below the 'Sugar Cane' Farm; my reason for this was that I found the valley leading down from the 150-Mile House, to be somewhat steep and rocky, and not so direct or so well adapted for a permanent waggon-road as the route via 'the Mission.' Should I not hear from you on this subject, I propose, on my return from Cariboo, to survey both routes, viz.: from the 150-Mile House to 'Sugar Cane,' and thence southward to the Cariboo waggon-road, making the junction at or near Felker's ranch.

"The first mile is made to pass under a rocky bluff, thereby avoiding the present steep and somewhat dangerous road over the hill.

"Thence to 'Pinchbeck's,' 5½ miles; there will be some light work in widening and improving the grades on the old road, and in making occasional deviations; the ground is dry and slightly undulating.

"At Mr Pinchbeck's, I have run two lines; one passes by his buildings, the other across the centre of his farm. The latter is the shortest by 34 chains, and would be the cheapest to build by about $300; but it would intersect and destroy the only good piece of land there is in the neighbourhood, and put the owner to the expense of building a new fence on each side of the road for over a mile. Mr. Pinchbeck offers to build a mile of the road at his own expense, provided it is taken past his house. I am in favour of the road passing by the buildings without accepting Mr. Pinchbeck's offer.

"From Pinchbeck's down the valley towards Fraser River, for 3¾ miles to 'the Bluff,' the descent is gradual, probably 50 feet per mile; the ground is dry and gravelly; the work will consist of light clearing, grubbing and grading. Near 'the Bluff' there is a deep dry hollow, and a high bank to be crossed, to be done by means of cutting, cribbing and filling, as per profile.

"'The Bluff.' The course is direct, and the grades are tolerably easy, the distance from end to end is 55.63 chains. Of this—

	Chains.
Can be graded and cribbed	20.63
Mostly rock beneath the surface, hence heavy cribbing, 12 to 15 feet high	28.00
Broken slide to crib or bridge	2.15
Bluff, surface fractures, but heavy blasting for 3 chains	4.85
Total chains	55.63

"I examined the bluff most thoroughly, and found that I could not go above the place chosen, on account of a steep, rocky side hill, neither could I go lower down on account of precipitous slides and chasms, hundreds of feet deep. The ancient deposit that rests on the face of the bluff is so broken and rent, that it is impossible to get a foundation on it, or to cross it; it is affected by every wind that blows and rain that falls, and is constantly giving way.

"From the top of the bluff I ran a trial line straight northward for a mile, falling at 1 in 20; this took me across several ravines, one of which would require a bridge of 138 by 36 feet. I next started somewhat differently, and ran the first 34 chains at 1 in 12, this brought me below the ravine, and did away with the necessity of bridging; the remainder of the mile (46 chains) was run at 1 in 14½. For the whole of this distance the ground is dry and regular, and generally open and grassy; towards the foothill there is a thin growth of fir; the grading will average about 4 or 5 in 18.

"Thence, for four miles, there is a natural road. There are two small bridges to build, and some light grading, grubbing, clearing, and levelling to be done; the ground is hard, dry and gravelly.

"On completing the 5th mile from 'the Bluff,' I next examined the Cañon at Whiskey Creek, from its mouth upwards, and found that it was impossible to cross it, the banks being hundreds of feet high, and broken. I therefore went to the top of the Cañon, where it is crossed by an old Indian trail (latterly improved by the whites), and ran a trial line southward to ascertain the fall. I then went again to the crossing, and located a line at 6½ links fall in a chain, or at 1 in15. The distance down to where I had left off (end of 5th mile) is 1 mile and 34 chains. There will be more or less grading for the whole of this distance, the average cutting will be about 3 or 4 feet in 18 feet. The ground is generally covered with light fir, but there are stretches of open grass and cotton-brush without any timber. The slope is dry and gravelly for the whole distance; near Whiskey Creek the side is steep and will have to be cribbed for about 12 chains.

"The crossing at Whiskey Creek is good, the foundations solid, and the approaches easy. The total length of bridge is 164 feet, but 50 feet of this distance on the north side of the stream can be cribbed; this will reduce the length to 114 feet; the height at south end is 9½ feet, and at the north end 19 feet, centre span 52 feet. There is plenty of good fir suitable for building purposes, close at hand.

"From Whiskey Creek to Hawk's ranch, a distance of two miles—the work is somewhat light—will consist of grading, clearing, ditching, gravelling, etc.; no cribbing needed.

"The third mile from Whiskey Creek follows the old road for three quarters of a mile, the remaining 20 chains falls at 1 in 14, over an open side hill; one small bridge to build in this portion.

"The 4th mile falls 10 chains at 1 in 14, over an open side hill, then crosses an open

field, and then falls again over a bank at 1 in 20, for a quarter of a mile; thence open woods, and improvement on old road, to within 4 chains of end of mile.

"The descent to Deep Creek is over a very steep side hill, averaging 12 to 13 feet in 18 feet, for the whole distance; the cribbing will have to be from 6 to 7 feet high. The ground consists of sandy clay and is easily dug. An old road passes down over this hill, but it is too steep for heavy freighting. From where the old road commences to descend I measured southward until I came to where the bank of Fraser is broken—12 chains; the grade having been thus lengthened, I was enabled to fall at 1 in 11 for the whole way down to the bridge—46 chains.

The bridge over Deep Creek is a poor structure; it will have to be re-built, raised on the north end, and lengthened by about 17 feet.

"From Deep Creek there is already a road built to Soda Creek, but it was badly laid out, and is so steep in places that heavy freight waggons could not pass over it. I have done away with the whole of these hills, and my heaviest grade is only 1 in 12, and even that grade could still be reduced. From the bridge the gravel bar will have to be cribbed up for about 5 feet in height, for two chains; thence there is some light side hill grading, and then a steep and lightly timbered gravel bank, 25 chains in length, rising at 1 in 15; this bank to be cribbed the whole way, average slope 10 to 11 in 18 feet. This grade avoids two very steep hills on the old road. From the top of this bank I have followed the old road for some distance; the notes explain where it has to be widened and improved. At the 'Hogs Back' the old road is altogether too steep, rising probably at 1 in 8. Here I have laid out a new road for about 27 chains falling at 1 in 12, but this grade can be lightened. This distance is mostly on a lightly timbered side hill, the slope of which is about 3 or 4 in 18; about 15 chains will have to be cribbed on the lower side.

"From the top of the 'Hog's Back,' the present road is good for half a mile, thence there will have to be 14 chains of grading made to reach the flat at a reasonable slope. The old road leaves the side hill too abruptly; thence the road is good for the whole distance to its junction with the Cariboo Road at Soda Creek.

"Mr. Spence intended to have crossed the Cañon of Deep Creek at a point about 500 yards above the mill. I have examined the Cañon very carefully, and cannot find a crossing of any sort; the banks are all crumbling and falling away. At the point chosen by Mr. Spence, both sides of the valley has fallen in; on the north side several acres of land, trees and all, have sunk bodily down, leaving a high bluff behind.

"From the Bluff northward, I am at a loss to know how Mr. Spence intended to have made the descent to the Fraser Valley. He left no marks on the top of the hill, but fell suddenly 200 or 300 feet, as though no hill existed, and then kept on his way up the valley, blazing as he went. I do not know by whom he was employed, neither can I understand what this peculiar survey could have been made for; it would have surely puzzled a contractor, and might have hurt him in a pecuniary way.

"I have a copy of Mr. Mahood's report on this road, but cannot say that it has been the means of enlightening me on any point. Mr. Mahood may have looked at 'the Bluff,' but save that particular point, he does not seem to have made any observations. He has simply ridden over the country like any cursory traveller might have done. He has fallen and risen over 500 feet at a time, and still says: 'By the route which I propose, the grade would be nearly level.' Moreover, he speaks as though he had discovered some new route. I know of only one way by which the road could be taken.

"One objection to this road is the scarcity of grass, although there appears to be tolerable good pasturage at present. The extent of grazing land is somewhat limited, and the bull-teamsters would prefer the old road to the new; on Carpenter's Mountain the cattle can wallow in grass and pea-vine.

"By next stage I shall proceed to Stanley, and travel with Mr. Johnstone over the line of road to Barkerville. "I have, etc.

(Signed) "JOHN JANE."

"QUESNELLEMOUTH, 25th July, 1878.

"SIR,—I have the honour to enclose the plan and notes of a survey for a waggon road from Stanley, *viâ* Jack of Clubs Lake, to Barkerville; distance, 14 miles. The notes fully explain, in detail, the nature of the ground and of the work to be done.

"The first two miles consist of ordinary grading and forest clearing, with but little or no cribbing.

"The third mile (in the centre of the pass) will be somewhat heavy to build. The side grading is steep and rocky; twelve chains will have to be cribbed. There are places covered with large loose rocks, fallen from the mountain side; these spaces will take a great deal of labour in levelling and putting into proper shape.

"The west side of the valley was chosen on account of its being the most exposed to the sun; the snow is likely to disappear early on that side in the spring of the year.

"Another reason for my going on that side was to avoid a bluff, 50 to 60 feet in height, situated on the right bank of the creek, at the outlet of the lake, at the head of Devil's Cañon. With the above altitude added to my grade, I should have experienced some difficulty in getting a road down through the cañon without running into rocks and precipitous places.

"About sixty chains of the fourth mile consists of heavy grading; a few of the steepest places must be cribbed, probably six to ten chains in all; ordinary grades can be walled up if necessary. There are plenty of flat rocks and stones, fit for building purposes, intermixed with the soil. The cañon is composed of rotten blue slate, which will stand well and make a good road.

"The fifth and sixth miles consist of plain foot-hill grading, without any cribbing. There are two low bridges needed in this portion, one to cross Burns Creek, the other to span the Slough Creek and a belt of swamp. The crossing at Burns Creek is fast filling up with tailings. It would be well to construct an open cribwork here, to rest on triangular piers, pointing up the stream, so that it could be raised from time to time by adding logs to the top, according as the tailings might accumulate. The bridge across Slough Creek will be a low structure—4 to 6 feet high.

"Thence, for the remaining eight miles, there is nothing but plain grading, forest clearing, ditching, etc., needed for the whole distance, save about four chains at the end of the Hospital Bridge, Barkerville. The outlet of Jack of Clubs Lake will require a new bridge and end cribbing, 79 feet long altogether, by 5 feet in height.

"From Lowhee Creek, for two miles and ten chains, the present road is from seven to ten feet wide; it must be made the full width of 18 feet, and be ditched, drained, and gravelled where necessary, and made hard; thence to end of the fourteen miles, the course of the road will be changed. At present it crosses a swamp and passes over miles of tailings. The new road leaves the flat, and curves round the shoulder of a dry ridge. The steepest grade in the whole length of the road occurs in Devil's Cañon; for twenty chains the fall there is 1 in 12.

"Mr. Johnstone meant to have passed over a point of hill between Devil's Cañon and Burns Creek, but I could not make the ascent out of the cañon; a ravine above, and perpendicular rock below, makes it impossible to build a waggon road there, without having very steep grades.

"The road, if properly built, will be hard and firm from end to end. My estimate per mile is less than Mr. Johnstone's figures, but seeing that there will be but little cribbing to be done, I consider that I have made a very liberal estimate.

"Some parties in Cariboo thought of applying for a sleigh road to be built on the line laid out by me, but this proposal could not be entertained.

"I have two days' work to do in this town—re-surveying, to give the angles of the principal blocks. I shall then move down to the Australian Ranch; the proprietors of that farm wish to have their boundaries defined.

"I have, etc.,

"JOHN JANE.

"P.S.—Miners say that waggons could travel by this route early in May, or as soon as the feed became good. By VanWinkle the road is usually blocked by snow until the beginning of July. "J.J."

Kootenay Electoral District.

The amount set down in the Estimates for the first session of 1878 was $1,000, and instead of voting half the amount—a course adopted in the case of other Districts,—the House, taking into consideration the remoteness of the District from the seat of Government, and the very limited mail communication vouchsafed it by the Postal Department, passed the full amount.

The Government Agent at Kootenay was instructed, in a letter dated the 15th April, 1878, to open the following trails, viz.:—

1. From Joseph's Prairie to Perry Creek.
2. From Joseph's Prairie to Palmer's Bar and Government Bar.
3. From Wild Horse Creek to Perry Creek, and up the said Creek.

That gentleman was further instructed to make arrangements with Mr. Phillips, of the Tobacco Plains, to clear the trail from Wild Horse Creek to the said Plains for a sum not exceeding $125, and further pointing out to him that the expenditures in the District were not to exceed in the aggregate the sum of $1,000.

The work included in the above instructions was proceeded with until the 13th July, when the men employed at that date (2) were notified by the Government Agent to cease work.

These instructions the two men, Goodridge and McQuade, declined to take any notice of, and, having continued the work, now claim a considerable sum for wages. No decision has, as yet, been come to with regard to their claim.

Cassiar Electoral District.

ROADS AND BRIDGES.

On the 21st February last, Mr. Thomas Robertson, the Cassiar road foreman, was instructed to proceed, with as little delay as possible, to the Taltan or First North Fork Bridge, and repair that structure.

On the completion of this work, he was to repair the trail to Dease Lake, and then report himself to the Gold Commissioner for the District, and act under his instructions in cutting new trails and repairing existing means of communication in the vicinity of the gold mines.

WALKER CREEK TRAIL:

This trail was constructed by Mr. Sylvester, and as that gentleman commenced to collect tolls on the bridges, Mr. Vowell inspected the work and settled with him for the work performed for the sum of $450.

WORKS AND BUILDINGS.

New Government offices have been erected by contract at Laketon, under the supervision of the Gold Commissioner, to replace buildings destroyed by fire last Spring.

No definite cause has been assigned for this fire, but as it occurred in very cold weather, it is supposed to have originated in a defective flue.

The Gold Commissioner's and Stipendiary Magistrate's offices have been completed in a satisfactory manner by Charles W. Baker: Contract price, $660; extras: woodshed, office fixings, pigeon holes, etc., $192 75; total, $852 75.

The building, containing the Government lock-up and constable's quarters, has been built by Alexander Fulton: Contract price, $610; extras, $82; total, $692.

Appended are the reports of A. W. Vowell, Esq., Gold Commissioner, on the Walker Creek trail and the new buildings at Laketon, also a report on general trail work by the district foreman:

PROVINCIAL LIBRARY,
VICTORIA, B. C.

"LAKETON, CASSIAR, 16th July, 1878.

"*To the Hon. Chief Commissioner of Lands & Works.*

"SIR,—I have the honour to report for your information, that since writing my letter of the 17th ultimo, I have visited Walker's and McDame's Creek, and inspected the trails in that portion of my district. The distance from Sylvester's Landing (Dease River) to Walker's Creek is about 50 miles, and upon that route a trail has been cut and graded and bridges built sufficiently good to meet the present requirements of the travelling public as based upon the apparent importance of the gold fields discovered in that locality.

"The work done on the trail and bridges is not as substantial, etc., as if it had been performed under Government supervision, and has, consequently, been much less expensive. The cost of constructing the trail and bridges, as mentioned above, has been something over one thousand dollars. The bridges were built by Mr. Sylvester, *i.e.*, at his expense, this spring, and the trail also made by him, with some assistance in labour given by miners last autumn.

"Upon my arrival I found that a toll was being collected on the bridges, and as I considered that the Government would not approve of such an imposition upon the public, I immediately took them over on behalf of the Government, paying Mr. Sylvester what I considered he was justly entitled to, viz., $450. Had the bridges, etc., not been constructed in the early spring, much inconvenience would have been entailed upon the miners and packers, etc., as it would have been impossible, during high water, to have got in supplies to Walker's Creek, where there were then assembled some 250 miners.

"The amount of tolls collected, owing to partial failure of Creek, was very trifling, and did not pay for collecting.

"I beg to enclose four vouchers of receipt, and trusting that my action on behalf of your Department may meet with approval,

"I have, etc.,
"A. W. VOWELL,
"*Assistant Commissioner, Cassiar.*"

"CASSIAR, B. C.
"15th October, 1878.

"*To the Honourable the Chief Commissioner of Lands and Works.*

"SIR,—I have the honour to report for the information of your Department, that in accordance with instructions received, I have had every economy, compatible with the absolute requirements of the district, practiced this year in regard to the expenditure incurred upon trails and public works, etc. * * * * * *

"The amount expended upon Government buildings was $1,544 75, whilst that upon trails, etc., has been $5,600 76—former slightly in excess of vote, latter considerably under same.

"The contracts having been entered into before I received instructions impressing upon me the necessity of confining expenditure in connection with buildings, etc., within the amount voted, I could not avoid the above slight excess, although I did all that was reasonably possible to prevent it. However, as the total amount voted for trails, etc., and buildings, exceeds the sums so expended, I trust that my action in the matter may meet with approval.

"The buildings are substantial and well finished, reflecting credit upon the contractors who, I regret to write, did not make wages while engaged in their construction.

"The contractor for the gaol, Mr. Fulton, I believe to have lost money by the undertaking, as the excitement caused by discovery of Defot Creek, raised the rate of wages current to nearly double that demanded when contracts were entered into.

"I enclose herewith three vouchers of receipt for the sums of $692, $17 50, and $852 75, respectively, which, with the vouchers (4) forwarded by me in July last, makes the total amount due by your Department to this Office for 1878, $2,240 25.

"A draft for same will be acceptable at convenience.

"I have, etc.,
(Signed) "A. W. VOWELL.
"*S. M., etc., Cassiar.*"

"Victoria, B. C.
"October, 24th, 1878.

"*To the Honourable the Chief Commissioner of Lands & Works.*

"Sir,—I have the honour to report for your information on the nature of the work performed on trails, etc., in the Cassiar District during the past summer.

"In the early part of the season the Dease Lake trail was put in good repair, but owing to fire, for about 30 miles along the trail, a great deal of corduroy was destroyed, which had to be replaced.

"The local trails of Dease and Thibert Creeks have been put in good repair; the former having been lengthened to Buck's Gulch, two and a half miles, making the trail nine miles up from Laketon.

"A good cattle trail has been cut from Laketon to Porter's landing, on mouth of Thibert Creek, about ten miles, now making a continuous trail around Dease Lake for thirty miles.

"A 5-foot graded trail has also been constructed up the first North Fork of McDame's Creek to the summit, about two and a half miles.

"A trail has been explored up the Dease River Valley, from Sylvester's landing to Thibert Creek, and blazed; distance about 71 miles. This trail was explored by instructions from the Lands & Works Department, and my estimate of the cost of this trail, that is to say, brush and cutting the logs out ten feet wide, would cost $1,500.

"A pack trail has also been made from a point about eight miles up Thibert Creek trail to Defot Creek, fourteen miles.

"In coming out over the Dease Lake trail this fall, it has again been put in thorough repair, and all the corduroy re-covered with dirt.

"I also wish to state for your information, as the several works under my superintendence did not necessitate a large party of men at any one time, I found it more convenient, and I believe, less expensive, in some cases, to pay a higher rate of wages than heretofore, and let the men find and move themselves, as pack animals were not to be had, and could not have been utilized to advantage—to hire Indians and feed them, is much the dearer way.

"In no case has the men's wages come up to the general rate of the district.

"Annexed to my report is a tracing showing the positions of the trails in the Cassiar District.

"I have, etc.,
(Signed) "Thos. Robertson.
"*Superintendent of Cassiar Trails.*"

"Victoria, 23rd January, 1879.

"*To the Hon. Chief Commissioner of Lands & Works.*

"Sir,—I would recommend the re-covering of the bridge on the second North Fork of Stickeen River with 2-inch planking, as the corduroy covering at present being very much worn, I would not consider it safe for pack animals during the coming season. Lumber, 1,820 feet at 10 cents, $182; re-covering, $30; total, $212.

"I would also bring to your notice that it is absolutely necessary to construct a bridge at a point about 12 miles up Thibert Creek, that being at present the only highway into Defot Creek, and during the high water of June and July pack animals could not cross the stream, as also foot passengers might be put to great inconvenience should the present crossings be washed away.

"Timber is very stunted in this neighbourhood, and I would recommend the building of two "V" piers, each about 20 feet from either bank of the stream, the entire length of the bridge being about 70 feet.

"If covered with poles, my estimate of said bridge would not exceed two hundred and fifty dollars.

"I have, etc.,
"Thos. Robertson."

Detailed Expenditure.

From 1st January to 30th June, 1878.

Detailed Expenditure, Victoria District Roads, 1st January to 30th June, 1878.

Date.		Particulars.	Amount.	Total.
		General Repairs.		
March	15	A McLeod, labour	18 00	
		J P Lewis, cutting fallen timber	5 00	
April	15	S Jones, board for Nicholson in town	9 50	
		H Simpson, meal and horse feed	1 00	
		J Henderson, meals	1 00	
		H Wain, meals and bed	2 50	
	23	H Simpson, repairs to culvert near Henderson's	5 00	
		Do. repairs to roads and clearing fallen timber	28 50	
		W H Snider, team hire and board for men	30 00	
		J Goyette, labour, filling holes, &c	7 50	
		H Hewitt, do. do.	4 50	
		J Nicholson, proportion of salary	100 00	
May	7	G Stelly, team hire	12 00	
		W H Williams, repairs to cribbing, Saanich Road	7 50	
	10	H Wain, horse feed, board, &c	2 50	
		J Nicholson, proportion of salary	42 50	
	25	D Heal, cutting tree from road	2 50	
		J Hamilton, repairs to bridge, Saanich Road	5 00	
		H Simpson, repairs to Saanich Road, new culvert	33 50	
		G Thomas, butter	6 65	
June	4	W H Williams, clearing fallen timber	5 00	
		H Simpson, meals, beds, &c	1 50	
		J Nicholson, proportion of salary	30 00	
		G Francis, buggy hire for Surveyor-General and road superintendent	25 00	
	11	S Jones, board for Nicholson	5 25	
	19	J Sluggett, chopping out road to Greig's	22 00	
		Do. clearing out fallen timber	8 00	
	25	S Jones, board for Nicholson	3 50	
	29	R Shiel, labour on Saanich Lake bridge	1 00	
		S Cooness, hauling lumber for do.	1 50	
		G Thomas, cutting out fallen timber	10 00	
				437 40
		Burnside Road.		
May	22	Pay sheet, labour, etc	28 00	
	25	W Tierney, superintendence	47 50	
	28	C Ball, blacksmithing	3 00	
June	23	W P Sayward, lumber	4 32	
				82 82
		Extension, East Saanich Road.		
June	19	Pay sheets, labour, etc	486 48	
		C Ryan, blacksmithing	2 50	
				488 98
		East Saanich Mill Road.		
May	20	E Marvin, tools	27 75	
June	11	C Lawson, buggy hire for Nicholson	5 00	
	15	J Boyd, labour	22 00	
				54 75
		Cross Road, Cedar Hill Road to Saanich Road.		
April	29	G Nicholson, team hire	38 50	
May	16	Thos Deasy, labour	1 50	
		W Burnes, labour	11 25	
	23	Pay sheets, labour, etc	96 25	
	25	W H Snider, on account of salary	20 00	
		Pay sheets, labour, etc	42 00	
		N Leclaire, team hire	33 00	
	29	W H Snider, on account of salary	20 00	
		Ah You, wages as cook	23 00	
June	1	S L Kelly, cooking utensils	16 87	
		G Nicholson, team hire	104 50	
	11	G W Anderson, provisions	46 93	
		H Saunders, groceries	91 00	
		W H Snider, on account of salary	20 00	
		Pay sheet, wages	132 77	
		G Nicholson, team hire	90 00	
	20	Pay sheet, labour	260 74	
		McKenzie and Neston, blacksmithing	14 50	
		W H Snider, in full, salary as superintendent	238 25	
	21	H Young, meal	50	
		— Garmer, meals	2 00	
	25	W P Sayward, lumber	95	
				1,304 51
		Cadboro Bay Road.		
May	23	N Leclaire, team hire	4 00	
		Pay sheet, labour	8 00	
				12 00
		Total Victoria District Roads		2,380 46

Detailed Expenditure, Graving Dock, Esquimalt, 1st January to 30th June, 1878.

Date.		Particulars.	Amount.	Total.
February	4	W Bennett, salary as Resident Engineer, January	$ 182 25	
	5	Northern Assurance Company, insurance on machinery	80 00	
		Reed Bros. & Co., instalment on cofferdam contract	2,900 15	
		Western Union Telegraph Co., message to London	19 80	
March	4	W Bennett, salary, February	182 25	
April	2	Do. March	182 25	
	8	Reed Bros. & Co., instalment on cofferdam contract	4,165 81	
	20	W Selleck, store rent, 3 months	240 00	
May	1	W Bennett, salary, April	182 25	
		W Selleck, rent of store, April	80 00	
		Scottish Commercial Insurance Co., insurance on machinery	175 00	
		Phœnix Fire do. do.	175 00	
		Northern Assurance Co., do.	87 50	
	10	Reed Bros. & Co., instalment on cofferdam contract	2,563 31	
	16	North British & Mercantile Insurance Co., insurance on machinery	175 00	
June	1	W Bennett, salary, May	182 25	
		W Selleck, rent of store, May	80 00	
	21	Northern Assurance Co., insurance on machinery	50 00	
	30	W Bennett, salary, June	182 25	
		Total		11,885 07

Detailed Expenditure, Esquimalt District Roads, 1st January to 30th June, 1878.

		General Repairs.		
March	14	A McLeod, labour	2 00	
April	15	S Jones, board for Nicholson	9 50	
	23	J Nicholson, proportion of salary	100 00	
	25	J O'Brian, cutting tree from Colquitz River Bridge	8 00	
	29	Thos Maltby, removing old corduroy, etc	30 00	
May	10	J Nicholson, proportion of salary	42 50	
	22	W Allatt, repairs to Craigflower bridge	6 75	
	25	J W Williams, buggy hire	6 50	
		J Mull, clearing fallen timber	4 00	
June	4	J Nicholson, proportion of salary	30 00	
		Mrs Calvert, repairs to culvert	5 00	
		G Francis, buggy hire	15 00	
	11	S Jones, board for Nicholson	5 25	
	15	J G Winter, carriage hire	5 00	
	17	W G Bowman, do.	3 50	
	25	S Jones, board for Nicholson	3 50	
	29	R Shiel, labour on bridge at Point Ellice	1 00	
		S Cooness, cartage of lumber	50	
				278 00
		Simpson's Point to Vine's.		
April	15	R Graham, meals, etc	50	
		H Helgesen, do.	1 50	
		J Parker, do.	5 00	
		Do. do. and fare	5 00	
				12 00
		Gorge Road and Bridge.		
May	25	Pay sheets, labour on road	28 00	
		W Tierney, superintendence	47 50	
		Mrs Calvert, team hire	21 00	
June	4	Pay sheet, labour on bridge	52 00	
	11	M Dodd, board for Nicholson's party	11 00	
	14	S Jones, board for Nicholson	5 25	
		J Spratt, bolts and nuts, repairs to screw-jack	14 43	
		W P Sayward, lumber for bridge	10 77	
		J D Johnson, hire of cart	1 00	
		W A Franklin, do.	50	
		S Harding, axe handle	50	
		Mrs Calvert, board	2 00	
				193 95
		Sooke Road.		
June	4	Mrs Calvert, meals for Nicholson	1 00	
		M Muir, meals and clearing fallen timber	31 00	
		G W Anderson, groceries and provisions	69 62	
		Spratt & co., blacksmithing	3 00	
		P Polson, wages	6 16	
		A Lawrence, butter	9 20	
		Pay sheet, labour	409 98	
	30	Mrs Calvert, team hire	83 87	
				613 83
		Metchosin Road.		
June	29	Mrs Calvert, team hire	5 50	
		Pay sheet labour	89 75	
				95 25
		Total Esquimalt District roads		1,193 03

Detailed Expenditure, Cowichan District Roads, 1st January to 30th June, 1878.

Date.		Particulars.	Amount.	Total.
		Cowichan Wharf.		
March	15	Pay sheet, labour	122 97	
		J Lemon, rafting lumber	4 00	
		Indian Joe, sawing plank for slip	75	
		W Richardson, hauling piles	10 00	
		McPherson Bros., do.	10 00	
		Thomas Goudy, hauling pile-driver	6 00	
	18	J Spratt, fare steamer "Fly," Nicholson's party	38 00	
		J Kinnear, board for Nicholson's party	72 20	
	30	James Dougan, labour	32 50	
April	15	S Jones, board for Nicholson in town	3 00	
	23	J Nicholson, proportion salary	50 00	
	26	Hudson Bay Co., manilla rope	22 00	
	29	W P Sayward, lumber	18 02	
		J Spratt, use of jackscrews, &c	12 75	
				402 19
		Love's Cross Road.		
June	22	A Blyth, contract for repairs		25 00
		Mayne Island Wharf.		
May	17	J A Mahood, plans and specifications	23 08	
June	25	W Smithe, services locating site, &c	32 00	
				55 08
		General Repairs.		
February	22	D Evans, salary Superintendent	75 00	
May	10	J Kinnear, meal for Nicholson	50	
		A Todd, do. do.	2 00	
		J Dougan, do. do.	1 00	
		R White, beds and meals for Nicholson	13 00	
	25	Indian Joseph, clearing drift wood	2 00	
		R Hopkins, clearing trees	10 00	
		Pay sheet, labour sundry roads	58 00	
	28	E Grancini, tools	13 50	
	30	E B Marvin, tents	27 50	
June	4	H Simpson meals for Nicholson	1 50	
		J Nicholson, salary	40 00	
	15	J Kinnear, procuring signatures to contracts	10 00	
	17	J Dougan staking out road	8 75	
	20	Steamer "Fly," fares	4 50	
	25	S Handy, repairs to bridge, Mill Bay road	2 50	
				269 75
		Thain's Road to Dougan's.		
	25	J Dougan, contract for repairs		91 00
		Cowichan-Nanaimo Road.		
May	31	J Brenton, clearing road		50 00
		Flats to Kokesailah Bridge.		
June	22	R McLay, contract for repairs ... Arrears 1877		200 00
		Total Cowichan District		1,093 02

Detailed Expenditure, Victoria-Nanaimo Trunk Road, 1st January to 30th June, 1878.

February	6	J Charley, provisions for Evans' Party	15 32	
		J Jones, labour	30 80	
	23	D Evans, salary as Superintendent	76 43	
April	23	Steamer "Maude," fare J Jane	9 00	
May	13	G B Odano, provisions	113 42	
June	1	W Copley, labour	11 47	
		R White, board, lodging and buggy hire	5 00	
		G Stelly, passage from Victoria to Saanich	1 25	
		Indian Sam, canoe hire from Saanich	2 25	
		E Marriner, hauling provisions and tools	15 00	
	15	J Love, labour	15 30	
		J Dougan labour	10 71	
		J Parker, meat	49 98	
	20	Steamer "Fly," freight	4 75	
		G B Odano, provisions	183 94	
		E Marriner, team hire	10 00	
		W Richardson, labour	40 00	
	22	Steamer "Fly," passage J Nicholson	4 50	
		R White, meals	7 00	
	25	Pay sheet, labour	612 91	
		J Skinner, storage tools	3 00	
		J Ball, butter	35 80	
		J Henderson, meal	50	
		Steamer "Fly," passage	2 25	
		R White, board, lodging and horse-hire	5 00	
		Indian Jim, canoe hire	2 50	
	29	Pay sheets, labour	76 94	
		Do. do.	27 34	
		Do. do.	18 48	
		J Fletcher, blacksmithing	3 50	
		E Marriner, team hire	27 50	
		Total Trunk road		1,421 84

Detailed Expenditure, Nanaimo District Roads, 1st January to 30th June, 1878.

Total.		Particulars.	Amount.	Total.
		Cedar District.		
June	22	J Caufield, chaining	17 50	
	25	R George, surveying	35 00	
				52 50
		Nanaimo-Comox Road.		
	22	J Hobart, repairs	3 00	
	25	J Harvey, provisions	10 00	
				13 00
		Gabriola Island Wharf.		
May	4	Steamer "Maud," fares, Mahood	9 50	
		J Jenkins, meals, do.	4 00	
		W Hoggan, boatman	9 00	
		P Papley, axeman	5 00	
		J Thompson do.	5 00	
		C H Robinson, beef and bacon	2 00	
		J H Pleace, cod-line and cord	1 50	
		J Hirst provisions	6 00	
		J Holden, sounding-lead	50	
	20	J A Mahood, plans and specifications	69 24	
	29	J A McLellan, contract in full	684 00	
				795 74
		General Repairs.		
	7	J J Russell, carriage hire	2 50	
	10	G Winter do.	2 50	
		Louis Stark, clearing fallen timber	9 00	
		W McFarlane, labour	7 70	
		W Bonell, moving camp	4 00	
		J Ganner, hauling lumber	6 50	
		C Carpenter, lumber	3 00	
	27	T Glaholm, hauling	15 25	
June	25	A S Farwell, personal allowance	10 00	
		J Clendenning, salary	80 00	
	29	C H Robinson, beef	1 03	
				141 48
		Nanaimo-Cowichan Road.		
	22	T L Fawcett's Vouchers.		
		Indian Billy, canoe hire	3 75	
		J Carne, labour	36 19	
		Indian Johnny, messenger	1 25	
	25	J Harvey, provisions	185 81	
		W Parkin, do.	67 42	
		J Abrams, bacon and canoe hire	5 00	
		J Clendenning, salary as Superintendent	213 33	
		Pay sheet, labour	429 36	
		J H Pleace, tools	5 60	
		D Baker, beef	32 04	
		S Brightman, beef	24 48	
	29	J Jenkins, board	1 50	
		E Pimbury, stationery	1 13	
		J Holden, blacksmithing	6 00	
		P Sabiston, board	1 50	
		York & Gordon, meat	42 30	
				1,056 66
		Total Nanaimo District		2,059 38

Detailed Expenditure, Comox District Roads, 1st January to 30th June, 1878.

		Comox Wharf.	
March	15	R Swan, repairs	4 70
April	15	W R Clarke, carpenters, wharf	84 00
		J Fitzpatrick, board	104 57
		Pay sheets, labour	107 48
		J McPhee, hire of oxen	11 25
		W Robb, do.	13 50
		Indians, canoe hire and labour	20 00
		J E Jenkins, board for Nicholson	7 00
		J Hirst, storage tools	25
		A Cooness, hauling lumber	1 00
		J Rodello, spikes	9 76
		T Barry, drayage pile driver	2 50
		S Jones, board for Nicholson in town	5 37
	26	P McQuade, hook and thimble	1 68
		J Nicholson, proportion salary	50 00
	29	Steamer "Maude," fares, freight, &c	31 00
		J Spratt, use of grindstone	3 00
		W P Sayward, lumber	8 82
		Carried forward	465 88

Detailed Expenditure, Comox District Roads.—*Concluded.*

Date.		Particulars.	Amount.	Total.
		Brought forward	465 88	
May	7	Pidcock & Guillod, lumber	65 16	
	10	J Nicholson, salary	15 00	
	25	Steamer "Pilot," freight on pile-driver, etc	58 50	
				604 54
		General Repairs.		
March	15	McPhee, cutting out fallen timber, section G	2 10	
		T Beckensall, do. do. Point Holmes Road	7 35	
		T Piercy, do. do. do.	2 50	
		J H Piercy, do. do. section A	4 20	
		T Piercy, repairs bridge, section E	6 30	
May	6	P Smith, wages Point Holmes Road	7 80	
				30 25
		Denman Island.		
May	7	C McCutcheon, building bridge		130 00
		Total Comox District		764 79

Detailed Expenditure, New Westminster District Roads, 1st January to 30th June, 1878.

Date.		Particulars.	Amount.	Total.
		New Westminster and Hope Road, General Repairs.		
March	4	E Dickinson's vouchers, steamer Reliance, freight	1 00	
April	29	,, ,, D W Miller, tools, etc	17 12	
May	10	,, ,, Thos Greenham, labour	160 00	
	21	,, ,, W Clarke, labour	30 00	
June	22	,, ,, J Cotton, labour	10 00	
		,, ,, S W Barnes, teamster	60 00	
		,, ,, W Clarke, labour	65 00	
		,, ,, Thos. Greenham, labour	52 50	
	29	,, ,, do. do.	15 00	
		,, ,, W Sweetman, clearing timber from Luckakuk bridge	35 00	
		,, ,, J. Slaven, repairs	11 87	
				457 49
		Coast Meridian Road.		
March	4	E Dickinson's voucher—R Dickinson, meat		44 88
		False Creek Bridge		
June	22	E Dickinson's voucher—Thos Cudlip, repairs		50 00
		Hastings-Granville Road.		
May	21	E Dickinson's voucher—Thos Cudlip, clearing fallen timber		18 00
		Ladner's to Langley.		
April	29	E Dickinson's vouchers—A Huck, labour	3 75	
May	7	,, ,, M O'Brien, cutting ditch and clearing logs	90 73	
	21	,, ,, Pay sheets, labour	272 87	
				367 35
		Burrard Inlet Road.		
April	29	E Dickinson's vouchers—L Carpenter and others, clearing fallen timber	16 25	
May	10	,, ,, M Nelson, labour	2 50	
June	29	,, ,, L Carpenter, repairs, bridges	6 00	
				24 75
		General Repairs, District.		
April	29	E Dickinson's vouchers—L F Bonson, salary, 3 months	300 00	
		,, ,, R W Deane, wheelbarrows and shovels	17 50	
May	7	,, ,, Steamer Enterprise, freight	4 50	
		,, ,, W Blackie, blacksmithing	24 64	
		,, ,, S Barnes, teamster	220 00	
		,, ,, H Kills, clearing fallen timber	8 75	
		,, ,, L F Bonson, salary, April	100 00	
	10	,, ,, G Winter, buggy hire	2 50	
		,, ,, R W Deane, tools	40 50	
		,, ,, J Robinson, clearing timber	8 75	
		,, ,, Steamer Ada, passages and freight	10 50	
		,, ,, H Holbrook, ground barley	4 12	
		,, ,, J McMurphy, ferriage	7 75	
	21	W A Franklin, drayage, Surveyor-General's baggage	50	
		E Dickinson's vouchers—J W Howison, oats	2 25	
		,, ,, W Blackie, tools for chain-gang	76 56	
		,, ,, J Todd, hay (provender)	52 80	
		,, ,, J C Todd, horse hire	32 50	
		Carried forward	914 12	962 47

Detailed Expenditure, New Westminster District Roads.—*Concluded.*

Date.		Particulars.	Amount.	Total.
		Brought forward	914 12	962 47
June	11	L F Bonson, salary	120 00	
	22	A McPhaul, ferriage	4 75	
		W J Armstrong, lumber	15 16	
		J Gray, repairs, bridge	2 50	
	25	A S Farwell, travelling allowance	10 00	
	29	L F Bonson, salary	120 00	
		H W Bonson, drayage	2 75	
		T McCutcheon, meals	5 50	
		H Elliott, team hire	4 00	
		A McPhaul, ferriage	3 50	
		C G Major, tools, axle grease, etc	41 25	
				1,243 53
		North-East Road.		
April	29	C McMillan, labour	25 00	
May	21	J Hall, labour	2 50	
June	11	W Hayman, chaining	2 50	
		A McLeod, do.	2 50	
		J Scott, jr., clearing road	7 50	
	22	G Brown, do.	11 25	
	29	J T Scott, labour	10 00	
		J Scott, jr., labour	2 50	
				63 75
		Section 4, New Westminster and Hope Road.		
April	29	J McIntosh, award of arbitrators	2,645 00	
		Thos Earle, fee arbitrator (half)	37 50	
		C W R Thomson, fee umpire do.	37 50	
		E Marvin, fee arbitrator do.	37 50	
		L F Bonson, travelling allowance, witness	30 00	
		G Turner, do. do.	9 00	
				2,796 50
		Total New Westminster District Roads		5,066 25

Detailed Expenditure, Trunk Road, Yale to Cariboo, 1st January to 30th June, 1878.

		Section 3.		
April	23	Wm Saul, horse	200 00	
		P C Dunlevy, labour on bridges	15 00	
May	7	J McCully, blacksmithing	10 00	
June	18	W B Withers, labour	112 50	
		J Geske, dump-cart and harness	150 00	
		G Keatley, clearing road	1 50	
		G Kunyou, labour	7 00	
		J Pickley, labour	87 00	
		J Hamilton, clearing road	16 25	
		A McLeese, hay and grain	27 93	
				627 18
		Section 4.		
June	11	Pay sheets, labour	787 28	
		do. do.	254 37	
		do. do,	169 00	
		do. do.	78 00	
		G Murray, labour	15 00	
		R McLeese, hay	39 12	
		P C Dunlevy, provender, tinware, etc	67 19	
		J Reed, tools, tinware, harness, etc	83 80	
		G Cates, axeman	58 50	
		Downes & Co., horse hire	51 25	
		Fletcher & Co., glue	2 50	
		Pay sheet, labour	277 20	
		J Stone, telegrams	11 25	
		J Green, second-hand waggon	60 00	
				1,954 46
		Section 5.		
April	23	J E Nelson, work-horse	200 00	
		Pay sheet, labour	780 25	
		H Moffat, hauling	8 00	
May	7	W A Johnson, horse hire	27 00	
		Pay sheet, labour	534 50	
		do. do.	84 00	
June	11	do. do.	199 75	
		do. do.	43 20	
		do. do.	15 00	
		Carried forward	1,891 70	2,581 64

Detailed Expenditure, Trunk Road, Yale to Cariboo.—*Concluded.*

Date.		Particulars.	Amount.	Total.
		Brought forward	1,891 70	2,581 64
June	11	Pay sheet, labour	143 50	
		R Pacey, hay and oats	54 06	
		R Anderson, guide	2 50	
		J Boyd, hay	88 15	
		J Reid, tools	58 50	
		J Evans, labour	4 00	
		A Carson, blacksmithing	111 61	
		G Cates, axeman	42 00	
	22	Pay sheet, labour	886 65	
	29	E Ogden, repairs	20 00	
		J Girod, shovel	2 00	
		J Reid, wheelbarrows	21 12	
		Pay sheet, labour	712 00	
				4,037 79
		Black's Section, No. 1.		
May	10	Pay sheets, labour	765 36	
		do. do.	670 47	
		do. do.	947 80	
		do. do.	79 35	
		L Pardo, labour	14 79	
		C Delatree, carrots	5 00	
		J C Brown, posters	2 50	
		Jno George, labour	5 00	
	27	Pay sheet, labour	112 98	
		do. do.	309 70	
June	18	Thos Mitchell, repairs, weigh bridge	20 00	
		Hudson Bay Company, wheelbarrows, etc	19 50	
		Barnard & Co., hay and oats	68 43	
		do. do.	97 90	
		do. do.	118 34	
	25	W L Alexander, hay	25 62	
		P Fink, hay	108 77	
		Oppenheimer & Co., provisions	165 74	
				3,537 25
		Stevenson's Section, No. 2.		
May	13	P Moren, hay	14 62	
		E Fie, barley	97 68	
		J Dowling, provender	16 12	
		Mrs. Marshall, provender	1 50	
		Indian, Jim, labour	30 00	
		J T Jones, horse feed	3 75	
		H Randall, do.	1 50	
		J T Reid, repairs to sulky	18 00	
		Pay sheet, labour	159 00	
		do. do.	498 00	
		do. do.	381 16	
		do. do.	470 34	
		do. do.	567 30	
		do. do.	304 00	
		do. do.	52 14	
June	29	McKay & Co., horse feed	106 00	
		H B Dart, hay	35 07	
		W Truline, carrots	9 74	
		F J Barnard & Co., provender	26 12	
		Indian, Charley, labour	25 00	
		A Stevenson, horse hire	60 00	
		Barnes & Co., freight	20 00	
		J Murray, tools	50 71	
		Mrs. Marshall, hay	1 50	
		J A Newland, horse feed	6 00	
		E E Bligh, blacksmithing	36 00	
		J McIntyre, tools	91 84	
		J Boucherat, tools	5 00	
		S M Nelson & Co., hay and grain	28 50	
		H Blackford, blacksmithing	53 50	
		J McKay, horse feed	37 50	
		Pay sheets, labour	36 00	
		do. do.	891 00	
		do. do.	569 00	
				4,703 59
		Total, Trunk Road		14,860 27

Detailed Expenditure, Yale District Roads, 1st January to 30th June, 1878.

Total.		Particulars.	Amount.	Total.
		Deadman's Creek Bridge.		
April	15	S McDonald, freight on bolts		10 42
		Coldstream Valley Road.		
June	29	V Dutcan, constructing waggon road		75 00
		Similkameen Trail.		
May	13	Pay sheet, labour	155 00	
		Hudson Bay Co., provisions	19 47	
		C Galloway, bacon	5 75	
June	11	H Hunter, do.	7 70	
		Pay sheet, labour	153 75	
		Allison & Hays, provisions	17 10	
		W Yates, do.	16 84	
		B Price, beans and rope	4 75	
	29	Pay sheets, labour	147 50	
		Hudson Bay Co., provisions	9 55	
				537 41
		Hope-Nicola Trail.		
May	13	Indian Tom, labour	7 50	
		W Nelson, bacon	13 25	
		Pay sheet, labour,	77 50	
		J G Wirth, provisions	25 10	
June	4	J Phillips, labour	60 00	
	11	Pay sheet, labour	92 50	
		J G Wirth, provisions	19 02	
	29	E E Bligh, blacksmithing	10 50	
		A Coutlee, horse feed	4 25	
		W Voight, team hire	14 00	
		Jno Jack, labour	18 50	
		Pay sheets, labour	492 00	
		Do. do.	57 50	
		J G Wirth, provisions	4 63	
				896 25
		Section 5, New Westminster-Hope Road.		
May	27	Pay sheet, labour	16 14	
June	18	R Ryder, repairs to bridge	15 00	
				31 14
		Kamloops-Nicola Road, Section 1.		
June	18	G Newlove, labour		5 77
		Kamloops-Nicola Road, Section 2.		
	17	D A McDonald, instalment on contract		1,500 00
		Cache Creek and Savona's Ferry.		
	18	A McKinnon, harness	9 50	
		Uren & Co., meals and bed	9 00	
		Mara & Wilson, axle grease	75	
		J T Jones, meals and beds	4 00	
		D Fraser, horse feed	40 00	
		Pay sheet, labour	106 82	
				170 07
		Mission Creek Bridge.		
May	13	J D Birmingham, instalment on contract	1,000 00	
June	18	Do. balance do.	730 00	
		Do. extra length of bridging	350 00	
		C A Vernon, commission on contract	52 00	
				2,132 00
		Savona's Ferry to Okanagan.		
	18	P McPhadden, hauling timber	1 00	
		Hudson Bay Co., lumber and nails	7 87	
		J Peterson, man and team	5 00	
		J Headland, labour	16 00	
		J Roper, meal and horse feed	1 00	
		J Birmingham, repairs to culvert	20 00	
		D Fraser, horse feed	12 50	
		Pay sheet, labour	29 77	
		J Duck, team hire and meals	8 00	
		J Pringle, meals	2 00	
				103 14
		Mission Valley to Penticton.		
	25	H Hayburn, clearing out road		50 00
		Spellamacheen Road.		
	18	Duck & Pringle, meals	3 50	
		J Pringle, meals and horse feed	4 00	
		J Jacko, chaining	2 50	
				10 00
		General Repairs.		
	21	F J Barnard & Co., freight on parcels		12 50
		Total Yale District		5,533 70

Detailed Expenditure, Lillooet District Roads, 1st January to 30th June, 1878.

Date.		Particulars.	Amount.	Total.
		Howe Sound Trail.		
March	4	D Carey, labour	63 36	
		Cole & Carey, provisions	54 85	
		J Hall, labour	90 00	
April	29	B H Wilson, board and horse hire for Mahood	17 00	
				225 21
		Big Bar to Fraser River.		
April	23	P Grinder, grading road		275 00
		Clinton-Lillooet Road.		
April	23	J R Tait, cutting timber	12 00	
May	7	C O'Halloran, clearing road	18 00	
	18	B R Bullard, repairs to road	15 00	
		J Patterson, do.	27 25	
		W Keatley, repairs to bridge	5 00	
				77 25
		General Repairs.		
April	23	W R Lewis, bed and meal	1 50	
		Steamer Enterprise, fare, meal, etc	3 75	
		Do. Reliance, do.	8 50	
		H B Dart, meals and bed	3 00	
		L Hautier, meal	1 00	
		S M Nelson, meal	2 50	
		J T Jones, do.	1 00	
		J Foster, provisions for J Jane	56 25	
May	1	E B Marvin, tents do.	11 00	
	10	Indian Pupacaca, packer, etc	24 00	
		Do. Frank, chainman	16 00	
		W Keatley, waggon hire	20 00	
		Mrs Marshall, board, etc	5 00	
		W A Franklin, carriage of instruments	1 50	
	21	Thos Saul, packing and waggon hire	7 75	
		J Haller, board and horse hire	17 00	
		P O Charlebois, chaining	13 00	
		Oppenheimer, provisions and tinware	27 02	
		Indian Louis, labour	4 50	
		Do. Quatalsht, packing	16 00	
		Do. King George, do.	22 00	
June	21	Barnard & Co., passage of J Jane, freight, etc., of parcels	79 25	
	29	G Hamilton, tinware	10 00	
		Indian Joe, pack-horse hire	2 00	
				353 52
		Lillooet-Lytton Trail.		
May	13	Pay sheet, labour		51 00
		Total Lillooet District		981 98

Detailed Expenditure, Cariboo District Roads, 1st January to 30th June, 1878.

		Barkerville to Stanley, Sleigh Road.		
April	23	R Graham, instalment on contract	162 50	
June	22	Do. balance do.	162 50	
				325 00
		Beaver Lake to Keithley Creek.		
June	22	Ah Voey, labour		21 00
		Quesnelle Bridge.		
June	2	D F Adams, material used in construction of bridge	622 75	
	21	J J Robertson, allowance attending as witness on arbitration	225 00	
				847 75
		Williams Lake to Soda Creek Road.		
June	29	Pinchbeck & Co., provisions	16 14	
		Indian Jim, labour and chaining	86 00	
		Downes & Co., meals, etc	3 50	
		R McLeese, provisions	40 36	
		G Hamilton, do.	19 15	
				165 15
		Lowhee Trail.		
June	29	A Castleman, labour, tools, etc		45 50
		Mosquito Creek Trail.		
June	29	A Monro, labour		28 12
		Carnarvon Road.		
June	29	Devlin & Co., rope	2 80	
		C P O'Neill, blacksmithing	28 00	
		Hudson Bay Company, shovels and nails	15 00	
		Mason & Daly, horse feed	16 00	
		A Monro, team hire	10 50	
		C Paulson, axes	12 00	
		Pay sheet, labour	707 63	
				791 93
		Total Cariboo District		2,224 45

Detailed Expenditure, Cassiar District Roads, 1st January to 30th June, 1878.

Date.		Particulars.	Amount.	Total.
		Dease Lake Trail, &c		
April	2	H Saunders, provisions for Robertson's party	140 05	
	15	G C Keays, tinware for do.	29 71	
	20	J Heywood, bacon for do.	91 80	
		E Grancin', tools for do.	95 40	
	26	Steamer Otter, fare and freight	42 50	
		P McQuade, rope, etc	16 40	
May	1	E B Marvin, tents	37 50	
	10	P Smiley, labour and provisions	46 85	
		do. H Sheppard, labour	27 00	
		Indian, Jim, packer	2 50	
		L Ward, horse hire and hay	9 50	
		Indian, Bill, packing	2 50	
		Indian, Charley, sleighing freight	25 00	
		Indian, Latoose, canoe hire	10 75	
		W J Stephens, tinware	21 00	
		Jules Earliott, board	4 50	
		Hayward & Jenkinson, box	2 50	
		J C Dennis, custom house storage	2 50	
		Indian, Charley, labour	28 00	
		J Moore, labour	40 50	
		M Cassey, wages, cook	42 00	
		W P Wilson, provisions	21 50	
		H Sheppard, sleighing, etc	38 00	
		M Cassey, cook, wages	36 00	
		J B Lovell, provisions	33 18	
		J R Hoskings, horse	130 00	
	25	C Ball, bolts and nuts	9 00	
	29	W Humphreys, building bridge, Upper McDames Creek	170 00	
June	11	F Reynolds, meat	125 00	
		Callbraith & Cook, provisions	70 42	
		J R Hocking, provisions	12 50	
	13	Ignatio Sauches, labour	14 00	
		W C Pullen, do.	16 00	
		J Chaplin, do.	14 00	
		J B Lovell, provisions	64 44	
	29	D Brily, board for Robertson	27 50	
		W P Wilson, labour and board	19 00	
		M Moss, board	16 00	
		M Cassey, chopper	12 00	
		Desormir & Co., meals	3 75	
		R Walch, repairs corduroy, and chopping	34 00	
		R Hughes, do. do.	30 00	
		J A Gardiner, do. do.	21 50	
		P Kereloff, do. do.	29 00	
		E T Riley, do. do.	14 50	
		A Johnson, do. do.	20 00	
		R McDermott, do. do.	35 50	
		J McKenzie, ferriage	4 00	
		Clarihue & Carson, meals	6 00	
		J McGillis, meals	4 00	
		P H Turk, repairs	12 00	
		J C Moore, repairs to Glenora and Telegraph trail	9 00	
		Total Cassiar District		1,760 25

Detailed Expenditure, Kootenay District Roads, 1st January to 30th June, 1878.

		Quartz Creek Trail.		
March	4	B Margaen, canoe hire		18 00
		Fencing Burial Ground.		
March	4	J Morrisey, fencing		85 00
		Total Kootenay District		103 00

Detailed Expenditure, Works and Buildings, 1st January to 30th June, 1878.

Date.		Particulars.	Amount.	Total.
		GOVERNMENT HOUSE, VICTORIA.		
		Repairs.		
April	23	Eli Harrison, glazing	11 38	
		Thos Storey, preparing roller blinds for green house, trelliswork, gate posts, &c.	150 24	
	29	W P Sayward, lumber	11 14	
June	13	J Teague, estimate for repairs	10 00	
	14	Stewart & Braden, repairs to force pump, fixing soil-pipe, new pan, etc	33 50	
	19	D Leneveu, lime	18 00	
				234 26
		Water.		
March	15	Mrs Lawrance, water, January	8 00	
April	15	do. do. February and March	19 00	
May	7	do. do. April	46 00	
	9	do. do.	10 00	
	31	P Murphy, water cask	2 25	
				85 25
		Furniture.		
April	23	Stewart & Braden, lamp chimneys	6 00	
		S L Kelly, pail, egg beater, etc	4 00	
				10 00
		Fuel and Light.		
February	6	H Gaston, coal	28 50	
	28	do. do.	57 00	
May	1	do. do.	52 50	
	9	do. do.	97 50	
		Engelhardt & Co., coal	49 00	
	21	Hudson Bay Co., coal oil	73 25	
June	30	H Gaston, coal	35 00	
		do. do.	28 50	
				421 25
		Grounds.		
February	6	Inland Revenue, duty on tobacco leaves	8 00	
March	15	M Wells, hauling	12 00	
		J Barry, drayage of tobacco	75	
April	20	M Wells, hauling	30 00	
	27	G Jay & Co., fruit trees	9 00	
	29	E Marvin, tools for chain-gang	14 25	
May	9	J H King, manure	97 00	
				171 00
		REPAIRS TO GOVERNMENT BUILDINGS, VICTORIA.		
		House of Assembly.		
April	20	C E Bunting, cutting out ventilators, fitting sash door, painting, &c., wire cloth	109 09	
	23	E Harrison, glazing, etc	18 37	
May	16	E Grancini, lock	1 00	
	25	C Ball, hooks, staples, and curtain rod	2 50	
	28	J McDowell, sundry repairs	6 50	
				137 46
		Provincial Secretary's Office.		
April	23	E Harrison, glazing	1 75	
May	1	A Vipond, keys for office desk	1 50	
		E B Marvin, set of halliards	2 50	
	16	E Grancini, locks	2 00	
				7 75
		Supreme Court.		
April	23	Stewart, Braden & Co., gas-fittings, fixtures, piping, etc	37 82	
		Thos Storey, building coal sheds	22 75	
		Eli Harrison, glazing, etc	30 55	
				91 12
		Registrar's Office.		
May	1	A Vipond, key for desk		75
		General Repairs.		
June	13	J Teague, estimate for repairs generally		10 00
		Land Office.		
February	6	J McDowell, repairs to verandah	57 75	
April	24	Stewart & Braden, gas shade and repairs	5 63	
May	16	W A Franklin, carriage of sundries	1 00	
June	4	J Randolph, cleaning offices, windows, etc	7 00	
				71 38
		County Court.		
April	23	Eli Harrison, glazing, etc		5 25
		Victoria Gaol.		
May	25	Kinsman & Styles, bricklaying	47 87	
		E Mallandaine, estimate and plans for naval lock-up	16 00	
				63 87
		Carried forward		1,309 34

Detailed Expenditure, Works and Buildings.—*Continued.*

Date.		Particulars.	Amount.	Total.
		Brought forward		1,309 34
		REPAIRS TO GOVERNMENT BUILDINGS, VICTORIA—*Concluded.*		
		Messenger's Quarters.		
February	6	J McDowell, repairs to verandah	38 75	
April	29	W P Sayward, lumber	32 64	
May	16	J McDowell, fencing garden lot	32 50	
				103 89
		High School.		
April	23	Eli Harrison, glazing		4 50
		Sheriff's Office.		
May	25	T Storey, making ballot boxes		3 25
		REPAIRS TO GOVERNMENT BUILDINGS, NEW WESTMINSTER.		
		Government Agent's Office.		
April	29	R W Deane, ironware, locks, etc	3 75	
June	22	W Insley, glazing	2 00	
				5 75
		Court House.		
June	22	W Insley, glazing		5 50
		Gaol.		
May	7	W J Armstrong, lumber	5 54	
		Steamer Enterprise, freight	2 00	
	21	W J Armstrong, boards	2 43	
				9 97
		Court House, Granville.		
	21	R Elliott, shingle nails and labour		25 00
		REPAIRS TO GOVERNMENT BUILDINGS, NANAIMO.		
April	24	Stewart & Braden, 3-light fixture	35 50	
May	10	C Carpenter, lumber	14 83	
	28	W Earl, glazing	2 25	
June	22	J Holden, tools for chain gang	24 00	
		,, spikes	3 75	
	25	J Hirst, hardware	7 87	
		Steamer Fly, freight on pump	62	
	29	A Mayer, nails for boat landing	9 77	
				98 59
		REPAIRS TO GOVERNMENT BUILDINGS, YALE.		
May	10	E Peck, repairs to office	5 00	
June	18	W Forister, sheet lead for Court House	3 87	
				8 87
		Gaol, Kamloops.		
June	18	J Carragher, hauling sand	1 12	
		McIntosh & McPhaden, brick	5 00	
		G Newlove, building flue	9 00	
		R A Nimmo, elbow	1 50	
		Mara & Wilson, lime and nails	5 14	
				21 76
		REPAIRS TO GOVERNMENT BUILDINGS, CARIBOO.		
April	23	Hudson Bay Co., shingle nails	6 25	
		Mrs. Hitchcock, purchase of lot	41 00	
		G Byrnes, drawing bill of sale	5 00	
June	22	J Bibby, stove repairs	14 00	
		J Jones, raising building	87 50	
				153 75
		FURNITURE, GOVERNMENT OFFICES.		
		Land Office.		
March	1	C E Bunting, laying linoleum in safe		2 50
		Printing Office.		
March	15	C E Bunting, roller, blind and repairs	2 50	
April	24	S L Kelly, putting up stove pipe	3 25	
				5 75
		Carried forward		1,758 42

Detailed Expenditure, Works and Buildings.—*Continued.*

Date.		Particulars.	Amount.	Total.
		Brought forward		1,758 42
		FURNITURE, GOVERNMENT OFFICES.—*Concluded.*		
		Legislative Assembly Room.		
March	15	C E Bunting, repairs to and cleaning furniture, taking up carpets, etc	114 00	
		do. repairs to furniture	10 50	
April	20	J Weiler, matting, linoleum, etc	175 16	
	24	S L Kelly, piping, tin conductor, elbow, cleaning ventilator, etc	32 50	
May	10	J Seal, green rep for chair covers	18 37	
				350 53
		Provincial Secretary's Office.		
June	1	S L Kelly, tinware		2 50
		Attorney-General's Office.		
March	15	C E Bunting, cleaning furniture, repairs, etc		14 00
		Supreme Court.		
June	1	S L Kelly, coal scuttles, etc		18 50
		Government Offices, Cariboo.		
April	23	J Bibby, stove piping	110 00	
		C P O'Neill, repairs stove	6 00	
				116 00
		Government Offices, Nanaimo.		
May	25	E W Stirtan, table legs	1 50	
		W Earl, knobs for drawers	1 00	
				2 50
		LUNATIC ASYLUM, NEW WESTMINSTER.		
		Repairs, etc.		
April	29	C E Woods, chainman, running line for water pipes	7 50	
		Indian, Jim, axeman	3 75	
		J Teague, on account commission for plans of alterations	100 00	
May	7	J Kennedy, services superintending construction of fence	200 00	
		J Reynolds, watchman, salary	240 00	
June	1	J Teague, on account commission for plans and specifications	300 00	
	11	J Cunningham, pump	12 40	
		H Hoy, repairs, carpentering	80 25	
		W Blackie, ironwork	50 00	
		Indian, Bill, and others, labour	10 50	
	13	J Teague, on account commission	56 10	
	29	J Reynolds, taking charge	60 00	
				1,120 50
		Furniture.		
June	11	H Hoy, furniture	433 00	
	22	J Lord, ,,	371 50	
	29	H Hoy, ,,	137 00	
				941 50
		IMPROVEMENT GOVERNMENT RESERVE.		
February	6	M Wells, hauling gravel	36 00	
April	20	,, ,,	24 00	
	27	G Jay & Co., pruning tools and grass seed	57 00	
	29	W P Sayward, lumber	51 94	
		E Marvin, tools for chain gang	14 22	
May	7	A Vipond, repairing lawn mower	4 50	
				187 66
		INSURANCE, GOVERNMENT BUILDINGS.		
February	4	Imperial Insurance Co., insurance Government House stables	43 75	
March	15	Phœnix do. do. Lake school house	7 00	
		do. do. do. North Cowichan school house	7 00	
		do. do. do. North Saanich ,,	7 00	
	18	Imperial do. do. Metchosin ,,	8 75	
April	17	Royal do. do. Cedar Hill ,,	15 75	
		do. do. do. Victoria District ,,	12 50	
	23	Imperial do. do. Comox ,,	7 00	
		do. do. do. Yale ,,	8 75	
		do. do. do. Chilliwhack ,,	7 00	
		do. do. do. South Cowichan ,,	3 50	
		do. do. do. Burgoyne Bay ,,	5 25	
		do. do. do. Burrard Inlet ,,	10 50	
		do. do. do. Gabriola Island ,,	5 25	
		do. do. do. Salt Spring Island ,,	5 25	
		do. do. do. Sumass ,,	7 00	
May	17	North British & Mercantile do. Cedar District ,,	14 00	
		Carried forward	175 25	4,512 11

Detailed Expenditure, Works and Buildings.—*Concluded.*

Total.		PARTICULARS.	Amount.	Total.
		Brought forward	175 25	4,512 11
		INSURANCE GOVERNMENT BUILDINGS.—*Concluded.*		
May	17	Phœnix Insurance Co., insurance, Barkerville school house	9 63	
		Imperial do. do. Sooke ,,	11 25	
		Phœnix do. do. Craigflower ,,	17 50	
		do. do. do. High School, Victoria	125 00	
	22	Northern Assurance do. Court House, New Westminster	45 00	
				383 63
		LOCK-UP, OKANAGAN.		
May	31	J A Mahood, preparing plans and specifications		40 39
		REPAIRS, ROYAL COLUMBIA HOSPITAL, NEW WESTMINSTER.		
June	22	J Gray, carpenter work	75 25	
		A Richardson, do.	87 50	
		H Hoy, lumber and labour	38 50	
		W J Armstrong, lumber	84 70	
		Edwards & Digby, repairs to chimney	10 50	
		F McWilliams, cutting drains	50 00	
		Thos Rayen, repairs	43 75	
		H Elliott, team hire	9 80	
				400 00
		WING TO ROYAL HOSPITAL, VICTORIA.		
June	22	E Mallandaine, making tracings and specifications		11 00
		NEW SCHOOL, NANAIMO.		
May	3	Steamer Maude, fare Surveyor-General and Architect	14 50	
June	20	Steamer Fly, fare Architect	8 50	
	22	J J Jenkins, board, etc., Mr. Mallandaine	5 00	
		E Mallandaine, copying specifications, and time at Nanaimo	37 50	
				65 50
		Total Works and Buildings		5,412 63

TENDERS RECEIVED AND CONTRACTS AWARDED

During the Year 1878.

Nature of Work.	Name of Tenderer.	Amount.	Award.
VICTORIA CITY.			
Addition to Royal Hospital	McKillican & Elford	$1,067 00	Not awarded.
	J McDowell	1,140 00	
	M Baker	1,235 00	
	G Simpson	1,260 00	
	Hayward & Jenkinson	1,269 00	
Supplying coal and wood to Government Buildings, James Bay	DeWeiderhold & Co, coal	7 00	Awarded.
	Do. wood per load		
	Engelhardt & Co.		
	Coal, Wellington	8 00	
	,, Chase River	8 00	
	,, Harewood	7 00	
	Wood, per load	6 00	
COWICHAN DISTRICT.			
Mayne Island Wharf	T W Bennett	850 00	Awarded.
	Puetz & Gyves	1,400 00	
Repairs to Thain's road, near Dougan's	J Dougan	91 50	Awarded.
	J H Thain	110 00	
Cross road from Kokasailah road to Hennesy's House	Peter Hennessy	85 00	Awarded.
	John McLay	165 00	
Road from Tod's to the junction of the Flats road	William Copley	249 00	Awarded.
	W McPherson	525 00	
	J Dougan	377 00	
Road from Harrisville to the Flats road	James Love	380 00	Awarded.
	J Dougan	467 00	
	Alex. Reid	575 00	
	James Kier	603 00	
	William Thomson	733 00	
Repairs to road from Harrisville to Sayward's Mill	James Dougan	290 00	Awarded.
	E J Thain	300 00	
	W Thomson	499 00	
NANAIMO DISTRICT.			
Nanaimo School House	John Hilbert	2,225 00	Awarded.
	A J Dixon	3,800 00	
	W Pringle	3,333 00	
	Fletcher & Thames	2,262 00	
	J W Stirtan	2,216 00	
	J W Stirtan	2,286 00	
Gabriola Island Wharf	A J McLellan	684 00	Awarded.
	T W Bennett	780 00	
	G H Baker	800 00	
NEW WESTMINSTER DISTRICT.			
Highroad, from a point opposite Rodick's farm on the north-east road to Hayman's Clearing	W Murray	420 00	Awarded.
	Howell & Carpenter	450 00	
	T Graham	625 00	
	F Forrest	890 00	
Coast Meridian road	Alex. Murchison	1,750 00	Awarded.
	W Shannon	2,965 00	
	Michael O'Brien	2,998 00	
	McMillan & Murray	3,250 00	
	Adam Innes	3,700 00	
	William Thomson	5,000 00	

TENDERS RECEIVED AND CONTRACTS AWARDED.—*Concluded.*

Nature of Work.	Name of Tenderer.	Amount.	Award.
NEW WESTMINSTER DISTRICT.—*Concluded.*			
Repairs Hasting road	Howell & Carpenter	600 00	Not awarded.
YALE DISTRICT.			
Kamloops-Tranquille road	G Newlove	420 00	Awarded.
	J Ratchford	480 00	
	Garnio & Garragher	550 00	
	Francis McBryan	565 00	
Clearing road for term of one year, head of Okanagan Lake to Duck & Pringle's	C W Dixon	200 00	Awarded.
Okanagan Lock-up	Jean Laveau	825 00	Awarded.
	P Ellison	850 00	
	Tronson & Brewer	1,052 00	
	Walker, Deloire & Andrews	975 00	
Road from Summit Lake towards Okanagan	A J Kirkpatrick	495 00	Awarded.

SURVEYS, 1878.

No Surveys of any large extent have been undertaken during the year. An amount of $5,000 was placed on the Estimates laid before the House during the first Session held in 1878, but of this sum only a moiety was voted for the half-year ending the 30th June, 1878, and about $500 of this were due for arrears of 1877.

During the second Session of the past year, the sum of $1,000 was appropriated for future surveys, and $1,207 for arrears to the 30th June.

On the 23rd June, 1877, an application was received from the Dominion Government, on behalf of the Department of Marine and Fisheries, for grants of land at Cape Beale and Point Atkinson, in British Columbia, for lighthouse purposes. The quantity of land required was as follows: at Cape Beale, 120 acres, exclusive of the islands, on the largest of which the lighthouse is built; and 160 acres at Point Atkinson.

On the 5th February, 1878, the Secretary of State was informed that the tracts applied for would be granted, provided the Dominion Government would cause the necessary surveys to be made and plans thereof to be deposited with this Department. This proposition was acceded to, and the Provincial Government requested to make the surveys, the cost of which the Dominion Government agreed to reimburse.

The survey of the two parcels of land has been completed; the Cape Beale lot containing 160 acres, and the Point Atkinson lot 185 acres. The same Department has also applied for a grant of Berens Island (at the entrance of Victoria Harbour), on which a lighthouse stands. This application has not been dealt with.

The other surveys, made during the year, have been principally confined to land purchased under clause 62, "Land Act, 1875." Several claims in the vicinity of the Cariboo waggon road were surveyed last year. These claims were either old pre-emptions or pre-emption purchase claims, and the expenses of their survey were in most instances borne by their owners.

Mr. G. Turner completed the survey of several townships in New Westminster District during the spring, and in June last was instructed to define the amount of land subject to overflow and included within the Derby Dyking Scheme.

This work required great care, and entailed running careful contour levels, and accurately traversing the lines on which the levels were taken.

The contour was run on a datum line taken from the extreme height the flood attained in the Chilliwhack, Sumass, and Matsqui settlements in the year 1876.

The line, as regards the Matsqui portion, has been completed and carefully plotted in the official maps; and the areas of the different sections and lots computed, showing the amount of land subject to overflow, or otherwise, in each parcel. The expense connected with this work has to be refunded by Mr. E. L. Derby, in accordance with the terms of the "Sumass Dyking Act, 1878."

With regard to the settlement of vacant Crown Land throughout the Province, the quantity recorded during the past year, by homestead settlers and pre-emptors of unsurveyed land, has nearly amounted in the aggregate to that taken up in a similar manner during 1877. More rapid settlement has met with the same obstructions this year as last. The extensive withdrawal of public lands from the market, pending the adjustment of Indian claims; secondly, the large Reserve placed on Vancouver Island, from Esquimalt to the Seymour Narrows; and, lastly, the extensive additional Reserve, for Railway purposes, placed on the Mainland on the 3rd August, 1878, have chiefly contributed to the result mentioned.

It is confidently hoped that the Department will, ere long, be in a better position to place actual settlers on suitable homesteads.

The Indian Commission, it is believed, have completed their labours in the District of Yale, and their reports and plans may therefore be shortly expected.

Hope was expressed in the last Annual Report that, by this date, a lithograph would have been compiled, embracing the surveyed portions of the Kamloops and Osoyoos Divisions of Yale District, but the project has been abandoned for want of means to prosecute it.

The different surveys made in the neighbourhood of Okanagan Lake appear in a newly lithographed plan, a copy of which accompanies this Report.

Annexed, will be found a list of the surveys made during the year.

DETAILED SURVEYS.

No. of Township or Group.	Description.	Acreage.	Name of Surveyor.
	VICTORIA LAND RECORDING DISTRICT.		
	Section 2, Barclay Sound, Lighthouse purposes	160	E Stephens.
Group 1	Kennedy Island and Skeena River, Lots 1, 2, 3, 4, 5, 6, 7, and 8	587½	A R Howse.
,, 1	Near Millbank Sound, Lot 9	22 7-10	J W McKay.
	TOTAL ACREAGE	770 1-5	
	COWICHAN LAND DISTRICT.		
	Lot 1, Chemainus	100	E Stephens.
	NANAIMO LAND DISTRICT.		
	Lots 1, 2, 3, and 4, Nanoose District	625	J H Gray.
	COMOX LAND DISTRICT.		
	Section 31	160	G F Drabble
	NEW WESTMINSTER LAND DISTRICT.		
Township 12	W. ½ of Section 27, E. ½ Section 28, S. ½ of S.E. ¼ Section 33	1,153	G Turner.
Group 1	Lot 430		
,, 3	Lot 7		
Township 14	N. ½ & S.W. ¼ Section 24, Section 25, E. ½ Section 26, N. ½ & S.E. ¼ Section 35, and Section 36	4,447	G Turner.
Group 1	Lots 433 to 445 inclusive, and lots 455, 456, 457		
Township 15	Sections 3, 4, 5, and 6	2,200	G Turner.
Group 2	Lot 430	182	J McClure.
,, 1	Lot 448	16	J A Mahood.
,, 1	Lot 425	240	G Hargreaves.
,, 1	Lot 450	2,775	R E Cridge.
,, 1	Lot 447, Point Atkinson Lighthouse	185	E Stephens.
,, 1	Lot 448	291	J H Gray.
	TOTAL ACREAGE	11,489	
	YALE LAND RECORDING DISTRICT.		
	Yale Division.		
Group 1	Lot 39	80	W D Patterson.
,, 1	Lots 40, 41, 42, and 43	3,960	E Dewdney.
,, 1	Lot 41	22 7-10	G Turner.
,, 1	Lot 26	22 7-10	G Hargreaves.
	Kamloops Division.		
,, 1	Lots 357 to 366, inclusive	2,229	E Dewdney.
,, 1	Lots 400 to 420, inclusive	4,482	E Dewdney.
	TOTAL ACREAGE	10,796 2-5	
	LILLOOET LAND RECORDING DISTRICT.		
,, 1	Lots 4, 5, 6, and 7	1,173	John Jane.
	CARIBOO LAND RECORDING DISTRICT.		
,, 1	Lot 1	188	O J Travailliot.
,, 1	Lots 2 to 14, inclusive	2,702	John Jane.
	TOTAL ACREAGE	2,890	

Detailed Expenditure, Surveys, 1st January to 30th June, 1878.

Date.		Particulars.	Amount.	Total.
		General.		
February	6	Wells, Fargo & Co, freight on maps	14 00	
March	15	C G Ewing, repairs to transit	20 62	
May	16	W A Franklin, cartage, maps	1 50	
	28	Wells, Fargo & Co., freight, etc., maps	28 95	
				65 07
		Ralph's Party.		
April	20	W Ralph, salary, (arrears, 1877)		250 00
		Salt Spring Island Surveys.		
April	15	A H Green, surveying	25 00	
June	20	E Bittancourt, board for A H Green	4 00	
				29 00
		Carnarvon Town Site.		
April	28	O J Travaillot, surveying town site		300 00
		Cape Beale and Point Atkinson Survey.		
June	12	H Saunders, provisions	133 77	
	15	E B Marvin, tents, etc	35 75	
				169 52
		(N.B.—The cost of these surveys, on completion, to be refunded by the Dominion Government.)		
		Salmon River Valley Survey.		
May	25	Steamer Otter, freight on supplies		2 25
		Dyking Scheme.		
February	6	J A Mahood, examining ground and reporting	20 00	
	23	W U Telegraph Co., message, Mahood	1 00	
May	21	Mrs Evans, beds and meals for Mahood	5 00	
	25	J Matthews, cartage, Mahood's instruments, etc	1 50	
		R Savage, ,, ,,	1 00	
		J A Mahood, on account of salary	60 00	
June	1	,, balance ,,	113 10	
	20	J F Swanwick, copying specifications	25 80	
				227 40
		[N.B.—Expenses of superintending Dyking operations to be refunded by E. L. Derby, under Section 36, Dyking Act.]		
		Turner's Party.		
May	1	E B Marvin, tents. etc	12 50	
	21	H B Co., provisions	1 67	
June	11	M Cox, potatoes, fish	4 00	
		Indian, Jim, ,,	3 00	
		J L Scott, chaining	51 66	
		R Robertson, provisions	6 85	
		A Gray, axeman	25 80	
		G Newton, chainman	27 09	
	22	G Turner, salary	150 00	
	29	Antoine, canoe hire	7 00	
		A Gray, salary, axeman	17 33	
		J Patterson, salary, axeman	29 67	
		J Boyd, ,,	28 88	
		A Hawkins, butter	4 29	
		Indian Joe, labour	23 89	
		A L McColl, chainman	28 00	
		J L Scott, ,,	50 00	
		M LaCroix, axeman	10 66	
		Indian, Supple Jack, labour	6 00	
		J Eickhoff, provisions	30 62	
		C G Major, ,,	95 37	
		J McK Lambly, stationery	20 75	
				635 03
		Gastineau's Party.		
June	11	J Parker, meat (arrears, 1877,)		31 14
		Jane's Party.		
	18	Hudson Bay Company, Kamloops, coffee [arrears, 1877.]		8 00
		Total Surveys		$ 1,717 41

RECAPITULATION OF EXPENDITURE.

ROADS AND BRIDGES.		
Victoria District	$ 2,380 46	
Esquimalt ,,	1,193 03	
Cowichan ,,	1,093 02	
Nanaimo ,,	2,059 38	
Comox ,,	764 79	
Main trunk road to Cariboo	14,860 27	
New Westminster District	5,066 25	
Yale ,,	5,333 70	
Lillooet ,,	981 98	
Kootenay ,,	103 00	
Cariboo ,,	2,224 45	
Cassiar ,,	1,760 25	
Victoria-Nanaimo trunk road	1,421 84	
		39,242 42
WORKS AND BUILDINGS.		
Repairs, Government Buildings, Victoria	499 22	
,, ,, ,, New Westminster	46 22	
,, ,, ,, Nanaimo	98 59	
,, ,, ,, Yale	8 87	
,, ,, ,, Kamloops	21 76	
,, ,, ,, Cariboo	153 75	
Furniture, Government offices	512 28	
Lunatic Asylum, New Westminster	2,062 00	
Improvement Government reserve, James Bay	187 66	
Insurance, Government Buildings	386 63	
Okanagan lock-up	40 39	
Repairs, Royal Columbia Hospital, New Westminster	400 00	
Wing to Victoria Hospital	11 00	
New school, Nanaimo	65 50	
Government House, Victoria	921 76	
		5,415 63
Surveys		1,717 41
Graving Dock		11,885 07
TOTAL EXPENDITURE		$ 58,260 53

LAND RETURN.

RETURN shewing the number of Pre-emption Claims recorded under "Land Ordinance, 1870," Certificates of Record, and Homestead Pre-emptions under "Land Act, 1875," Certificates of Purchase, and Crown Grants issued, from January 1st to December 31st, 1878.

	Victoria Electoral District.	Cowichan Electoral District.	Nanaimo and Comox Electoral Districts.	New Westminster.	Yale.	Kamloops.	Osoyoos.	Kootenay.	Cariboo.	Lillooet.	Cassiar.	Total.
Records, "Land Ordinance, 1870,"	5	.....	.....	5	3	.....	.....	.....	.....	.....	.....	13
Records, Unsurveyed Land, "Land Act, 1875."	1	4	1	38	5	28	2	2	4	11	2	98
Homestead Pre-emptions, "Land Act, 1875."	.....	11	21	98	1	.....	3	.....	.....	.....	.....	134
Certificates of Purchase	16	32	20	185	7	30	9	.....	3	2	.....	304
Certificates of Purchase, Town Lots	.....	.....	.....	13	.....	.....	.....	.....	.....	.....	.....	13
Crown Grants issued under "Land Act, 1875."	12	21	4	83	2	9	11	.....	3	3	.....	148
Do. do. "Gold Mining Act, 1873."	.....	.....	.....	.....	.....	.....	.....	7	.....	.....	.....	7
Do. do. "Mineral Act, 1877."	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1
Do. issued, Town Lots	.....	.....	2	8	1	.....	.....	.....	3	2	.....	16
TOTAL	34	68	48	430	20	67	25	9	13	18	2	734

SUMMARY.

	1877.	1878.	Increase.	Decrease.
Land Records	322	245	.....	77
Certificates of Purchase	261	317	56	.....
Crown Grants	88	172	84	.....
Total acreage deeded	9,991	31,210	21,219	.....