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APPENDICES.

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REPORTS OF SELECT COMMITTEES.

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FIRST REPORT

OF THE

SELECT COMMITTEE

ON THE

DEVELOPMENT OF QUARTZ MINES.

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*To the Honourable the Speaker of the Legislative Assembly :—*

Your Committee appointed to enquire into the manner in which the authority granted to the Executive Council to aid in the development of quartz mines has been exercised, have the honour to report the documents and evidence produced to the present time, and ask that the same be printed, and that an order be granted for printing the evidence taken from day to day.

JOHN GRANT.

*19th February, 1889.*

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## MINUTES AND EVIDENCE.

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### FIRST DAY.

THURSDAY, 14th February, 1889.

At the first meeting of the Committee held on Thursday, the 14th February, at 10 A.M.

Present—Messrs. Grant, Beaven, Mason and Baker.

Proposed by Col. Baker, seconded by Mr. Mason, "That Mr. Grant do take the chair." Carried.

Proposed, "That Col. Baker act temporary as secretary." Carried.

Proposed by Col. Baker, seconded by Mr. Beaven, "That it is expedient to employ a Secretary, and that Mr. Walby be invited to attend, and the matter be brought before the House." Carried.

Moved by Mr. Beaven, seconded by Mr. Mason, That all Orders in Council, letters, telegrams, vouchers and papers in connection with the erection of crushing, chlorinating and smelting works in the Province, and maintaining the same, be placed before the Committee." Carried.

Meeting adjourned to Saturday, the 16th instant, at 10 A. M.

Confirmed, February 19th, 1889.

J. GRANT, Chairman.

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### SECOND DAY.

SATURDAY, February 16th, 1889.

Present—Messrs. Beaven, Baker, Mason and Higgins.

Col. Baker, in the absence of the Chairman, was called to the chair.

Correspondence laid before the Committee and read.

On motion it was resolved, "That the House be requested to order that the correspondence be printed." Carried.

On motion, Hon. Mr. Robson, Minister of Mines, was requested to attend and give evidence.

The Chairman (Mr. Grant) here took his seat.

Hon. Mr. Robson having attended, in reply to Mr. Beaven, stated that under the authority of the Act of 1888 in aid of the further development of Quartz Mines, the Government had erected a reduction works at an expense in the neighborhood of \$20,000; there was no official action taken with respect to setting aside for Cariboo any specific portion of \$64,000; no specific part of that sum has been set aside for any other section; it was generally understood that a portion of the sum voted would be available for Kootenay or elsewhere; no portion of that sum has been applied to any other district than Cariboo; the works in Cariboo are being carried on under the supervision of Edward A. Martin; do not remember how long he has been in the employ of the Government; we used all means within our reach to ascertain Martin's capability; he had gained the confidence of a majority of the people there; the Government consulted with the local members and others about his ability; we took all the precautions possible, and thought it would be better to employ him than to run the risk of bringing in a stranger who might have a higher reputation and prove not so capable; know nothing inconsistent with the theory that Martin is a sober man.

To Mr. Mason—Think that during the progress of the reduction works he reported weekly to the department.

To Mr. Beaven—There may have been correspondence with the local members respecting Martin's appointment, but I think we consulted them verbally; think we consulted them first; the consultation was chiefly with Messrs. Mason and Cowan; think Mr. McLeese was either consulted or volunteered information; my recollection is that they were all favourable to Martin's appointment; we naturally consulted more with Messrs. Mason and Cowan, because they were in the heart of the mining district and had more knowledge of Mr. Martin than Mr. McLeese, and we had more confidence in their judgment; no one as well qualified (as we believed) as Martin was available to take charge of the reduction works at the time; my impression is that there was correspondence with Mr. Bowron, the Gold Commissioner of the district, on the subject; will ask the proper officer to get the correspondence out for the Committee; speaking from memory, in the neighbourhood of \$20,000 has been expended on the works; have made every effort to have the works economically and judiciously (and in accordance with the Act) performed, and have every reason to believe that it has been so performed; consider that the work performed at Cariboo meets the requirements of the Statute which gives authority for the "erection of crushing, chlorinating and smelting works, and maintaining the same."

Q.—Can smelting be carried on at the works at Cariboo?

A.—I am not an expert; but as I understand it, at these works all these processes can be carried out—crushing, chlorinating and smelting.

Q.—What is the capacity of the works?

A.—I think it is eight tons per day.

Q.—To do what with eight tons?

A.—To crush eight tons.

Q.—Nothing else?

A.—No; do not recollect its capacity with regard to the other processes.

Q.—As Minister of Mines, do you consider the present works suitable for crushing, chlorinating and smelting rock?

A.—I am given to believe so.

Q.—Are there any telegrams from the members for the district that have not been placed before us to-day?

A.—All I can say is that I gave my deputy instructions to send in to the Committee all correspondence, whether by letter or telegram, and I presume he has done so.

Q.—Whereabouts in Cariboo District are these works situated?

A.—As I understand it, they are erected in the neighbourhood of a mile of Barkerville, in as central a position as possible to known ledges, and where there are facilities for fuel and water.

Q.—Who selected the site?

A.—The Superintendent was instructed to make the selection with a view to these conditions and to consult with local members and others as to location.

Q.—Do you include the three local members for Cariboo when you refer to local members?

A.—Do not think that any names were mentioned, but naturally the Superintendent would consult with the members residing in the locality and not with one residing a hundred and twenty miles away.

Q.—Why was Mr. McLeese not included?

A.—I have not said that Mr. McLeese was not included.

Q.—In what manner were these instructions conveyed from the Minister of Mines to the Superintendent?

A.—Verbally and, perhaps, also by letter or telegram.

Q.—What is the distance from the office of the Minister of Mines to that of the Superintendent?

A.—I do not know.

By Col. Baker.

Q.—Do you interpret the intention of the Act to mean the erection of small test mills for the benefit of miners, or the erection of works for commercial purposes?

A.—I interpret the intention of the Act to mean the erection of works that would answer the purpose of test and something more.

By Mr. Beaven.

Q.—The Act says the Lieutenant-Governor in Council may decide where these works shall be erected. Is there an Order in Council selecting Cariboo as the point where these works are to be erected?

A.—I don't know that there is an Order in Council, *per se* selecting Cariboo as the place; but, I believe, there is an Order in Council constructively selecting Cariboo as the place.

Q.—Is that Order in Council among the papers submitted to us?

A.—I do not know.

By the Chairman.

Q.—Do you think that the mill erected at Cariboo by the Government is of such capacity as would generally pay as a customs mill?

A.—No.

JNO. ROBSON.

Committee adjourned till Tuesday, 19th instant, at 10 A. M.

Confirmed, February 19th, 1889.

J. GRANT, *Chairman.*

## CORRESPONDENCE, &c.

VICTORIA, 8th May, 1888.

SIR,—I enclose herewith a copy of an Act passed last session of the Legislature, making provision for the erection of crushing, chlorinating, and smelting works; and inasmuch as the desirability of constructing such works in Cariboo is now under consideration, I have to request you will take the earliest opportunity of discussing the subject with Joseph Mason, Esq., member for the district, and reporting to this department, giving any information calculated to assist the Government in arriving at wise conclusions as to the kind and capacity of the works, the most desirable location, and any other suggestions you may have to offer.

The primary object of the Government is, having due regard to economy, to establish and operate these works for the treatment of ore in a suitable locality, which shall present the greatest possible facilities for submitting surrounding ledges to a thorough milling or working test, not for the purpose of working the ledges, but to demonstrate that they are workable.

I am, &c.,

(Signed)

JNO. ROBSON,

*Provincial Secretary.*

*E. A. Martin, Esq.,  
Cariboo, B. C.*

BARKERVILLE, B. C., May 24th, 1888.

SIR,—I have the honour of forwarding estimates of the cost of erecting roasting, smelting, amalgamating and chlorinating works in Cariboo District:—

Long hearth roaster, 45 feet long, 10 feet wide, 7 feet high, with reverberatory smelter attached, 13 feet long, 8 feet wide, 7 feet high; dust chamber and stack 40 feet high:

20,000 fire bricks made from native clay (sample forwarded), @ \$70 per 1,000	\$ 1,400
70,000 red brick, @ \$40 per 1,000	2,800
Buckstays and bolts	903
Doors, pots, tools, and castings	695
Building furnace	1,050
Grading	500
Frame building	3,000
Incidentals	1,700

Total \$12,048

Small five-stamp battery (one-stamp batteries are not manufactured at present), engine, grinding pan, and settler :

Engine, boiler, and connections—price, \$1,650 ; freight, \$1,125 .....	\$ 2,775
Five-stamp battery, complete, \$650 ; freight, \$675 .....	1,325
Grinding pan, complete, \$600 ; freight, \$595 .....	1,195
Settler, complete, \$400 ; freight, \$400 .....	800
Erecting machinery .....	1,000
Frame building and grading .....	2,000
Incidentals .....	1,000
Total .....	\$10,095

The duty is to be added to the cost price of the machinery.

Chlorinating vats, generators, and building 5 tubs, \$200 each .....	\$ 1,000
Generators for chlorine gas .....	320
Flooring and setting generators .....	1,000
Frame building and grading .....	2,000
Incidentals .....	680
Total .....	\$ 5,000

The roasting furnace has a capacity of  $4\frac{1}{2}$  tons to 5 tons in 24 hours, when roasting for the smelter, because sufficient sulphur has to be left in the ore to produce  $\frac{1}{8}$  to  $\frac{1}{10}$  of the weight of ore, as matt which will contain from 92 to 94 per cent. of the gold originally in the ore.

The enriched matt is then crushed, roasted, and amalgamated; the residue returned to the smelter, where the gold that resisted amalgamation is concentrated into the succeeding matt.

Experiments made here on a small scale in matting the sulphurets gave:—8 parts of ore reduced to one part of matt concentrated 92 per cent. of gold value in the original ore, viz., sulphurets. 7 parts reduced to one gave 94 per cent.

Cost of roasting and smelting  $4\frac{1}{2}$  tons of sulphurets :—

2 roasters .....	\$ 8 00
2 smelters .....	9 00
1 roustabout .....	3 50
6 cords of wood, @ \$4.50 per cord .....	27 00
Sundries .....	1 00
Total cost $4\frac{1}{2}$ tons .....	\$48 50

Or \$10.55 per ton.

Cost of roasting and amalgamating  $\frac{1}{8}$  of a ton of matt, \$1.94.

Total cost per ton, \$12.49.

#### ROASTING AND AMALGAMATING.

The sulphurets must be roasted completely until no sign of sulphur remains; then withdrawn from the furnace, cooled and put into pans, where it is ground and amalgamated. The capacity of the roaster in this case is 3 tons in 24 hours. The items of cost are:—

2 roasters .....	\$ 8 00
2 roustabouts .....	7 00
2 engineers .....	8 00
$4\frac{1}{2}$ cords of wood .....	20 25
Loss of mercury, 3 lbs. ....	1 80
Sundries .....	1 50
Total cost of 3 tons .....	\$46 55

Or \$15.51 per ton of sulphurets.

## ROASTING AND CHLORINATING.

The sulphurets must be thoroughly roasted until no trace of sulphur remains; then salt is added to decompose any sulphates formed during operation. It is then withdrawn from the furnace, cooled, moistened with water into a paste, and put into the tubs for chlorinating. The capacity of the roaster is 3 tons in 24 hours. The items of cost are:—

2 roasters .....	\$ 8 00
2 roustabouts .....	7 00
1 chlorinator .....	4 50
4 cords of wood .....	18 00
30 lbs. of manganese .....	4 80
100 lbs. of salt .....	9 00
75 lbs. of sulphuric acid .....	9 00
Sulphate of iron .....	1 70
Sundries .....	1 50
<b>Total cost of 3 tons .....</b>	<b>\$63 50</b>
Or \$21.16 per ton of sulphurets.	

The five-stamp battery has a capacity of about 6 tons in 24 hours. Items of cost of running:—

2 feeders .....	\$ 7 00
1 cord of wood .....	4 50
Sundries .....	1 00
<b>Total cost of 6 tons .....</b>	<b>\$12 50</b>
Or \$2.08 $\frac{1}{3}$ per ton.	

The engineers are already itemized in the amalgamating department.

Roasting, with concentration, smelting, and amalgamation, extracts the highest percentage of the gold contained in the sulphurets, and up here is the cheapest process. Concentration smelting is carried on in several places in Montana, and the resulting matt is shipped to the works at Denver, where the silver is leached out, and the gold extracted by a process which is kept a secret. These branches in Montana are operated and owned by the silver and gold works at Denver.

Roasting and direct amalgamation, I believe, is the most favourable for this portion of the country, although the cost for working is a little higher than the first process; yet it can be operated on a smaller scale, which will be a great advantage to several isolated districts. In localities where freights are low it will be advisable to ship the concentrated sulphurets to a common centre.

Roasting and chlorinating has been a very suitable process for a great number of places, yet the practical working of it for a length of time has proved that no more gold can be extracted by it than by amalgamation, for only the gold that has been brought to a metallic state by roasting is dissolved by the chlorine gas, which is exactly the same that can be said of amalgamation with quicksilver. The heavy freights on chemicals to carry on the process in a district like this makes it more costly to work, without any apparent advantage.

In discussing the question of location of works with Joseph Mason, Esq., and going over the ground, we came to the conclusion that a certain portion of ground situated nearly at the foot of Williams Creek, between the main road and the creek, about a mile below Barkerville, would be the most central point, and most accessible from all the surrounding districts. Sufficient clear water for working the engine and battery can be led on to the ground at a small cost, and wood for the furnace and boiler can be easily brought down to the works.

I have, &c.,

(Signed) E. A. MARTIN,

Assayer.

To the Hon. the Provincial Secretary,  
Victoria.

[TELEGRAMS.]

BARKERVILLE, B. C., May 29th, 1888.

Report mailed you last Friday.

(Signed) E. A. MARTIN.

*Jno. Robson, Victoria.*

VICTORIA, 31st May, 1888.

Come down at your earliest convenience for the purpose of consultation about proposed quartz work.

(Signed) JNO. ROBSON.

*E. A. Martin, Barkerville.*

VICTORIA, May 22nd, 1888.

SIR,—As an appropriation has been made by the Government to erect reduction works in the Cariboo District, which will enable the miners in that section to test the value of their mines, the Island Mountain Company will make the following proposal: If the Government will erect their works in proximity to and in connection with the works of the Island Mountain Company, and will erect sufficient additional plant to reduce, say 35 tons of ore per day, the Island Mountain Company will turn their plant over to the Government to have the entire management of the same for the space of twelve months.

The Island Mountain Company shall have the privilege of purchasing the Government works at cost, and reasonable interest upon cost, for a period of time not exceeding two years after they are erected and working.

The Island Mountain Company will pay to the Government \$5 per ton for all ores treated by them.

The sum of \$2,500 will be required to set the present plant to crushing and concentrating ores, which shall be expended by the Government.

If they purchase the Government plant, they agree to set apart four days in each month if needed in which small lots of ores from miners may be tested, and agree further to give a reasonable time for working ores for other parties, when offered in larger quantities. I wish to give the following reasons why such a plan would benefit the entire mining population of Cariboo:

1st.—The amount of money appropriated is too small to enable the Government to erect complete works for treating ores in that district; they would be compelled to erect the duplicate of the works now owned by the Island Mountain Company for crushing the ores. By having the two sets of plants, they will, with the expenditure of the amount of money appropriated, or less, be enabled to work in very considerable quantities all the various kinds of ores which may be offered.

2nd.—The Island Mountain Company now have upon their dumps several thousands of tons of paying ores, while no other companies, except the British Columbia Milling and Mining Company and the Lowhee Company, have 20 tons. And the works when completed can be immediately and continuously set at work. It is well known that to work with economy, steam must be kept up all the time, and in smelters they must not be allowed to cool. No portion of the Cariboo district now, except the Island Mountain, can furnish sufficient amount of ore to enable this to be done.

3rd.—Fuel is cheaper at the Island Mountain; can be bought for \$2 per cord. At Barkerville, it will cost now, at present, \$4.

4th.—It is an advantage to the mines in other portions of the district that the haul to the Island Mountain is all down hill. If the Government works are erected at Barkerville, all the mines, Mosquito Creek, Lightning Creek, and elsewhere will have a long up hill haul.

5th.—It is of importance to the whole mining community that the success of some mine should be proved as speedily as possible. No claim is so far advanced as the Island Mountain, and so ready to furnish immediate ore for reduction works.

6th.—The erection of the Government works themselves can be completed much sooner by being able to utilize those already put up. If entirely new ones are built, it will be an im-



possibility to get them completed and working before winter, which is the most unfavourable season for amalgamating or chlorination.

For these reasons the company ask that the erection of the Government works be commenced as soon as possible, and located at the Island Mountain Company's Mill.

I am, &c.,

(Signed) P. C. DUNLEVY,  
President I. M. Co.

Hon. John Robson,  
Provincial Secretary.

VICTORIA, May 22nd, 1888.

SIR,—There are some gentlemen now here, who are largely interested in mines, and whose opinion I am anxious to obtain before they leave the Province on Saturday's steamer.

May I therefore look for an early answer from you to my proposition made this day, on the part of the Island Mountain Company.

These gentlemen have seen the ore from our mine, and seem to be familiar with the proper method of treating it, and are willing to give me the benefit of their knowledge, if my proposal is accepted by the Government.

I am, &c.,

(Signed) P. C. DUNLEVY,  
President I. M. Co.

Hon. John Robson,  
Provincial Secretary, &c.

VICTORIA, 22nd May, 1888.

SIR,—I have the honour to acknowledge receipt of yours of even date, submitting a proposition for the erection of the contemplated Government Quartz Works in connection with the Island Mountain Mine.

The matter will be brought before the Executive at an early date.

I am, &c.,

(Signed) JNO. ROBSON,  
Provincial Secretary.

P. C. Dunlevy, Esq.,  
President I. M. Q. M. Co., Victoria.

VICTORIA, 26th May, 1888.

SIR,—The Executive have considered the proposal contained in your letter of the 22nd instant, and have come to the conclusion that they cannot entertain it, as it would not be consistent with the spirit and intention of the Act, which was the erection and operation of test works "so as to enable individual miners to prospect and develop quartz ledges in the outlying districts of the Province" *Vide* section 4 of Act.

I am, &c.,

(Signed) JNO. ROBSON,  
Provincial Secretary.

P. C. Dunlevy, Esq.,  
President I. M. Q. M. Co., Victoria.

[TELEGRAM.]

BARKERVILLE, B. C., June 5th, 1888.

If satisfactory terms can be made we think it would expedite the object in view if Government would take over and operate the Island Mountain Company's works as an independent custom and test mill.

(Signed) NEIL CAMPBELL,  
SAMUEL WALKER,  
I. B. NASON,  
HUGH WATT.

Hon. Jno. Robson,  
Minister of Mines, Victoria.

## [TELEGRAMS.]

STANLEY, B. C., June 6th, 1888.

We think if Government can make reasonable terms with Island Mountain Company and assume their plant already erected, and run it as Government works, it will be most expeditious means of testing our quartz this year; said works are in the most central and convenient spot in Cariboo district.

(Signed)	WM. MCKILLOG,
"	J. E. ROSS,
"	C. O'NEILL,
"	P. FLYNN,
"	G. ISAAC,
"	S. SINCOCK.

*Hon. Jno. Robson,*  
*Minister of Mines, Victoria.*

*Hon. A. E. B. Davie, Victoria, to Joseph Mason, Barkerville.*

June 12th, 1888.

We were about to send off Martin to purchase machinery for reduction works near Barkerville when committee of citizens, consisting Rithet, Earle, Dr. Jones (the Dentist), John Grant, and Dunlevy, requested re-consideration by you and Cowan, urging that Government should complete and operate, for a given period, Island Mountain Works, stating this scheme would be as serviceable to community as proposed works near Barkerville, and less expensive, with additional advantage of continuous work and reasonable prospect of substantial returns at early date. Please wire answer.

Telegraph operator requested to give George Cowan copy of above telegram.

*From Messrs. Mason and Cowan, Barkerville, to Hon. A. E. B. Davie, Victoria.*

June 14th, 1888.

We strongly urge the Government to proceed as originally intended. Dunlevy Company can have their concentrates tested as other companies by Government works. Cost of hauling trifling. It is the wish of nine-tenths of people here that Government works should be independent of all private companies. Public meeting called next Tuesday.

*From Messrs. Mason and Cowan, Barkerville, to Hon. A. E. B. Davie, Victoria.*

June 14th, 1888.

Advise you to go on at once and erect testing works as asked for. Dunlevy's proposition not to be thought of. Asking Government to increase capacity to 35 tons per day means a very large expenditure of money. People here very much incensed at his asking for the change.

*From Messrs. Mason and Cowan, Barkerville, to Hon. A. E. B. Davie, Victoria.*

June 20th, 1888.

At a well attended meeting last-night the following resolutions were passed, being only one dissenting vote:—

“Resolved, that this meeting strongly protests against having the works in any way connected with or subject to any private enterprise, as we do not believe the public interests would be served thereby, but that the main object of your petitioners would be defeated;

“And be it further resolved, that it is the opinion of this meeting that the said works should be erected at some point on the waggon road, on such site as shall be selected by the party authorized to do so by the Government, and that said works be under the immediate supervision of some one appointed by the Government, who shall have absolute control of the same;

“And be it further resolved, that our representatives be and are hereby requested to use their utmost endeavours to have the same carried out as originally intended.”

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[TELEGRAM.]

*From Hon. A. E. B. Davie, Victoria, to Messrs. Mason and Cowan, Barkerville.*

27th June, 1888.

Decided by Government to-day to proceed with reduction works near Barkerville. Martin will go off on Saturday's steamer.

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QUESNELLE, 21st June, 1888.

SIR,—Enquiry has been made by several of the ranchers in this neighbourhood as to the action (immediate or otherwise) the Government intend taking in respect to the proposed Reduction Works in some portion of the District of Cariboo. The scheme is very generally conceded to be a good one, and in order to be of some assistance towards making it a success, it has been proposed to me, that as soon as the before-mentioned works are about ready, they (the ranchers) would fit out a small pack train and send it up, to be under the management of the party in charge of the works, in order to assist miners in shipping ore from the various ledges that in the estimation of the Assayer would warrant being tested by the regular milling process. The Government or miners to be at no expense in respect to the getting up of this train, and the miners only would be at the expense of furnishing the necessary men to load and unload the ore, and one man to take charge of the animals when not engaged packing.

The man in charge of the works, or Assayer, would only have to give directions as to what particular ledge ore should be brought from, as we fear, that if left to the miners themselves, a great deal of worthless rock would be packed, simply because some one thought he had a ledge worth testing.

Please let me know if you favour the scheme as proposed, and, if so, how soon the Government propose to take action in respect to the proposed Reduction Works.

I am, &c.,

(Signed) JAMES REID.

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VICTORIA, 29th June, 1888.

DEAR SIR,—I have received your letter of the 21st instant, and hasten to say in reply, that it is the intention of the Government to proceed as quickly as possible with the erection of the proposed reduction works in Cariboo, for which purpose Mr. Martin is to leave for San Francisco to-morrow.

The Government recognize with satisfaction the public spirited proposal of the ranchers to organize and maintain a pack train in connection with the projected reduction works, and will be happy to avail themselves of it at the proper time.

Thanking you for the interest you have manifested in the matter and for your practical suggestion about providing against worthless rock being sent to the reduction works.

I am, &c.,

(Signed)

JNO. ROBSON,

*Provincial Secretary.*

*James Reid, Esq., M. P.,  
Quesnelle, B. C.*

VICTORIA, 30th June, 1888.

SIR,—The Government having determined upon making an effort to establish reduction works at Cariboo, on the lines of your report of the 24th ultimo, I have to instruct you to proceed at once to San Francisco for the purpose of obtaining all possible information as to the plant best adapted for the purpose.

You will be furnished with a letter of introduction to Alexander Dunsmuir, Esq., of San Francisco, who will assist you in obtaining the best and most reliable information upon the whole subject, and with whom it will be your duty to consult freely upon all important points arising out of your mission.

The governing consideration in determining and selecting plant should be adaptation to the work required and economy in cost and operation; and having arrived at a satisfactory conclusion, it will be your duty to report the same to this Department and obtain approval and full authority before entering into any contract or incurring any liability.

It has been thought that it may be desirable to omit, for the present at least, that part of the plant comprising the smelting department. In reporting you will, therefore, treat that branch separately.

In sending you on this important mission, the Government feel that they are placing a very great responsibility upon you, as the success or failure of the experiment must, to a great extent, depend upon the manner in which you manage the business.

You are, therefore, admonished to exercise the utmost care and discretion, and use every means in your power to obtain the best possible information and advice.

You will also ascertain and report upon the most favourable terms of transport to Vancouver by steamer; and upon this, as upon other points, Mr. Dunsmuir will be able to render valuable advice and assistance.

I am, &c.,

(Signed)

JNO. ROBSON,  
Provincial Secretary.

*E. A. Martin, Esq.,  
Assayer, &c., Victoria.*

SAN FRANCISCO, July 7th, 1888.

SIR,—I have the honour to enclose Marshutz & Cantrell's bid for engine, boilers, rotary stamp mills, grinding pan and settler, and all iron work for the roaster which is the lowest bid Mr. A. Dunsmuir could get; Messrs. Marshutz & Cantrell agree to get the machinery ready for shipment in two weeks after the order is received. The other manufacturers need from 30 to 45 days.

The general opinion of mining men here is, that roasting and amalgamating the sulphuret ores of Cariboo is the best and cheapest method at the present time known. In time should the mines improve and produce larger quantities of ore, smelting can be introduced to advantage.

Mr. Kustel, the Assayer and Metallurgist, is of the opinion that roasting with a long hearth furnace and amalgamating in pans is the most suitable process for Cariboo, because amalgamation will extract within from two to three per cent. of what can be extracted by chlorination and is a much cheaper process, and does not require as much skilled labour to carry it through. Mr. Lockhardt, Assayer and Metallurgist, is of the same opinion; he has tested large samples of ore for the Island Mountain Mining Company, and has recommended amalgamation.

Mr. Davis, Chemist and Amalgamator, has a mine in Placer County, California, which contains large bodies of sulphurets, assaying \$19 in gold per ton. He has practically demonstrated that by roasting and amalgamation he can mine and treat the \$19 per ton ore to a profit, while chlorinating would not pay expenses.

From the best information that I can obtain the enclosed list of machinery from Marshultz & Cantrell is the best adapted for amalgamation and the cheapest that can be got in the market.

I have endeavoured to carry out your instructions in regard to the freight to Vancouver, but not being able to give the exact weight of the different parts of the machinery, could not get a fixed figure, but from the data received judge the freight will range from 225 to 250 dollars.

I have, &c.,

(Signed)

E. A. MARTIN.

[ENCLOSURE.]

SAN FRANCISCO, July 5th, 1888.

GENTLEMEN,—We will furnish you with an 8"x 16" Corliss frame slide valve engine, a 36"x 12' tubular boiler; two Kendall patent stamp mill; one 5 feet combination amalgamating pan; one 8 feet settler; one pan tightner, steam, feed and exhaust pipes, pipe and fittings for pan, settler and battery; one counter shaft 10 feet long x 3"; two bearing boxes; two set collars; five pulleys from 12" to 36" for counter, mill, settler and pan, about 300 feet of belting; thirty-two binders, six working doors, one fire door and thirty-six binder bolts for Reveratory Furnace, and deliver same at ship's tackles in this city for the sum of two thousand eight hundred and sixteen (\$2,816) dollars. Awaiting your valued order for the above. Weight about 33,000 lbs.

We remain &c.,  
(Signed) MARSHUTZ & CANTRELL.

Messrs. R. Dunsmuir & Sons, City.

SAN FRANCISCO, July 20th, 1888.

SIR.—I have the honour to inform you that there will be needed, in addition to the machinery already bid for and ordered, two shoes, two dies, one tappet, two sets of screens for the stamp, a complete set of shoes and die for the pan, three stirrer bars and two hoes for roasting furnace, twenty-five square feet of silvered sheet copper for the stamp apron, and about fifteen flasks of quicksilver to carry on the amalgamation. It is always advisable to have extra shoes, dies, tappet, and screens on hand, so that should any of the above parts give way or wear out they can be changed and work go on without having to wait to send to San Francisco for new ones. The cost will be about as follows:—

Shoes and dies for stamp and pan . . . . .	\$101 50
Tappet . . . . .	15 00
2 sets of screens . . . . .	40 00
Tools for the roaster . . . . .	6 00
25 square feet of silvered copper . . . . .	90 00
15 flasks of quicksilver, about . . . . .	600 00
Total, about . . . . .	852 50

I have made enquiries here for a skilled amalgamator, but failed to find one that parties here would recommend. It will be necessary to go to Grass Valley, California, or to the State of Nevada, to make certain of getting a good man. Do you wish me to go and find one, so that you could send for him if needed?

Hon. Jno. Robson,  
Provincial Secretary, Victoria, B. C.

I have, &c.,  
(Signed) E. A. MARTIN.

[TELEGRAMS.]

SAN FRANCISCO, July, 1888.

The lowest price that I can procure a quartz reduction works is twelve hundred and sixteen dollars, delivered on board of steamer here in two weeks.

(Signed) E. A. MARTIN.

Hon. Jno. Robson, Victoria.

VICTORIA, 7th July, 1888.

Your telegram unintelligible when read in the light of your estimate. You surely cannot mean that reduction works such as contemplated can be procured for twelve hundred and sixteen dollars. What do you mean?

E. A. Martin, San Francisco.

(Signed) JNO. ROBSON.

## [TELEGRAMS.]

SAN FRANCISCO, July 7th, 1888.

Should be twenty-eight hundred and sixteen dollars. This means price of all iron work here, not including freight to Barkerville.

(Signed) E. A. MARTIN.

*Jno. Robson,  
Provincial Secretary, Victoria.*

SODA CREEK, B. C., July 15th, 1888.

Government can have at cost what brick we have, about eighty thousand or more, for thirty-five hundred dollars.

(Signed) P. C. DUNLEVY,  
*President Island Mountain Company.*

*Hon. Jno. Robson,  
Minister of Mines.*

VICTORIA, 23rd July, 1888.

Please wire date at which our freight may be expected at Vancouver, also date of sailing.

(Signed) JNO. ROBSON.

*Edward A. Martin, San Francisco.*

VICTORIA, 25th July, 1888.

You are authorized to purchase additional plant and material mentioned in your letter of twentieth instant, and to find a reliable amalgamator, but not to enter into any engagement. All material for Cariboo should be shipped as soon as possible. Wire me when it may be expected delivered at Vancouver. Dunlevy now offers us his bricks at thirty-five dollars a thousand. Will they answer?

(Signed) JNO. ROBSON.

*E. A. Martin,  
Care Alex. Dunsmuir,  
620 East Street, San Francisco.*

SAN FRANCISCO, Cal., 26th July, 1888.

Freight will be shipped August 3rd. Arrive at Vancouver 7th. What agent shall we consign to at Vancouver. Dunlevy's bricks will answer.

(Signed) E. A. MARTIN.

*Hon. John Robson,  
Provincial Secretary.*

VICTORIA, 30th July, 1888.

Please wire me what you would consider favourable rate freight to Barkerville for about sixteen tons, delivered at Ashcroft within ten days.

(Signed) JNO. ROBSON.

*Walter Gladwin, Ashcroft.*

ASHCROFT, 30th July, 1888.

Think five cents a fair rate on good freight, but think five and half will be wanted for machinery.

W. B. GLADWIN.

*Hon. John Robson, Victoria.*

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VICTORIA, 31st July, 1888.

Shall the freight to be shipped from 'Frisco be consigned to you direct. Answer by telegraph.

(Signed) JNO. ROBSON.

*Walter Gladwin, Ashcroft.*

---

ASHCROFT, 31st July, 1888.

Better be shipped to owners and to my care.

(Signed) W. B. GLADWIN.

*Hon. John Robson, Victoria.*

---

VICTORIA, 1st August, 1888.

If freight shipped from 'Frisco to your care will you attend to transhipment at Vancouver.

(Signed) JNO. ROBSON.

*Walter Gladwin, Ashcroft.*

---

ASHCROFT, B. C., 1st August, 1888.

If you see C. P. N. Company they will attend to transhipment. Think best plan to ship direct to Vancouver from 'Frisco.

(Signed) W. B. GLADWIN.

*Hon. John Robson, Victoria.*

---

VICTORIA, 2nd August, 1888.

Consign freight to Government, shipping to Vancouver, care Walter Gladwin, Ashcroft.

(Signed) JNO. ROBSON.

*E. A. Martin,*

*Care Alex. Dunsmuir, 620 East Street, San Francisco.*

---

ASHCROFT, B. C., 7th August, 1888.

Will you arrange at Vancouver on having duty paid. Invoices of same must be there at same time as freight.

(Signed) W. B. GLADWIN.

*Hon. John Robson, Victoria.*

---

VICTORIA, 7th August, 1888.

Yes; the matter will be attended to.

(Signed) JNO. ROBSON.

*W. B. Gladwin, Ashcroft.*

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SODA CREEK, B. C., August 15th, 1888.

Hundred and fourteen thousand brick originally; we used eleven thousand. First cost thirty-five hundred; deducting cost of what used leaves thirty-two hundred. So far as examined brick are good, and no doubt the whole are suitable.

(Signed) P. C. DUNLEVY.

*Hon. John Robson, Victoria, B. C.*

---

VICTORIA, 15th August, 1888.

We will take whole of brick at price named, provided amount is applied in reduction of Island Mountain indebtedness to Government.

(Signed) JNO. ROBSON.

*P. C. Dunlevy, Soda Creek.*

SODA CREEK, B. C., 16th August, 1888.

If you will pay twenty-five hundred will allow balance to go as requested ; must have that amount to enable us to crush.

(Signed) P. C. DUNLEVY.

*Hon. John Robson, Victoria, B. C.*

ASHCROFT, B. C., 17th August, 1888.

O'Hara & Gilmore want five and half cents on machinery ; one team here ready to load : can't do better. Answer.

(Signed) W. B. GLADWIN.

*Hon. John Robson, Victoria.*

VICTORIA, B. C., 18th August, 1888.

A. Gilmore offered to take the freight for five cents, and we cannot exceed that.

(Signed) JNO. ROBSON.

*Walter Gladwin, Ashcroft.*

SODA CREEK, 15th August, 1888.

Dunlevy's terms are that kiln of bricks must be taken as it stands ; about one hundred thousand.

E. A. MARTIN.

*Hon. John Robson, Victoria.*

VICTORIA, 18th August, 1888.

I suppose we shall have to take the bricks on terms stated in your telegram of Thursday. I will instruct Martin accordingly.

(Signed) JNO. ROBSON.

*P. C. Dunlevy, Soda Creek.*

VICTORIA, 18th August, 1888.

Have arranged with Dunlevy for bricks ; go ahead.

(Signed) JNO. ROBSON.

*E. A. Martin, Barkerville.*

VICTORIA, 21st August, 1888.

Has machinery been shipped ? and when should it reach Barkerville ?

(Signed) JNO. ROBSON.

*Walter Gladwin, Ashcroft.*

ASHCROFT, B. C., 22nd August, 1888.

Mailed you letter Monday. Machinery will be Barkerville about October first.

(Signed) W. B. GLADWIN.

*Hon. John Robson, Victoria.*

VICTORIA, 23rd August, 1888.

Upon examination Martin finds your bricks worthless, consequently Government cannot take them.

(Signed) JNO. ROBSON.

*P. C. Dunlevy, Soda Creek.*



[TELEGRAM.]

VICTORIA, 23rd August, 1888.

Abandon Dunlevy's bricks, and do the best you can in having what is required made as soon and economically as possible.

(Signed) JNO. ROBSON.

E. A. Martin, Barkerville.

*Copy of a Report of a Committee of the Honourable the Executive Council, approved by His Honour the Lieutenant-Governor on the 31st day of July, 1888.*

Under the authority of the Statute of the Province of British Columbia, passed in the Legislative Assembly of 1888, the Government of the Province has ordered from the United States certain mining machinery for the purpose of erecting quartz reduction works in the mining district of Cariboo. The burden of the undertaking, the procuring of the machinery, the erection of the same, and the maintenance of the works, has, in accordance with the expressed wish of the Legislature, been assumed by the Provincial Government, it being deemed in the interest of the whole Province, as well as of the Dominion, that an earnest effort should be made for the development of quartz mining in British Columbia. To further this view, the Committee of Council submit for the consideration of the Dominion Government that as the machinery in question cannot be procured in Canada, that Government should assist in the project to the extent, at all events, of relieving the Province from the Customs duty payable upon the machinery so imported, and which is expected to arrive in British Columbia within the space of a fortnight; and they respectfully request that the necessary instructions be given by telegraph to the Collector of Customs at Vancouver.

The Committee advise that a copy of this Minute, if approved, be forwarded by His Honour the Lieutenant-Governor to the Honourable the Secretary of State for Canada.

(Certified) A. CAMPBELL REDDIE,  
Deputy Clerk of Executive Council.

Receipt of the above acknowledged 9th August, 1888.

VICTORIA, 2nd August, 1888.

SIR,—We have about sixteen tons, more or less, of mining machinery coming up from San Francisco, which should reach Vancouver on the 7th, and Ashcroft about the 9th instant; same will be addressed to your care.

Shall you have receipt and transhipment at Vancouver attended to?

Messrs. Gilmore, carriers, are to have the freighting from Ashcroft to Cariboo, provided they will take it on as favourable terms as anyone else, not, however, to exceed the rate of five cents a pound.

The freight must be forwarded under the usual conditions with all reasonable dispatch, and delivered at a place to be designated, in the vicinity of Barkerville.

You will distinctly understand that, should any unforeseen circumstance prevent the freight reaching Ashcroft at the time above mentioned, or at any time, the Government are to be in no way held responsible.

I am, &amp;c.,

(Signed) JNO. ROBSON,  
Provincial Secretary.

To W. B. Gladwin, Esq.,  
Ashcroft, B. C.

*Copy of a Report of a Committee of the Honourable the Executive Council, approved by His Honour the Lieutenant-Governor on the 10th day of August, 1888.*

The Committee of Council recommend that the Order in Council of the 15th day of August, 1887, whereby Edward A. Martin was appointed Melter and Assayer at Barkerville at a salary of \$125 per month be cancelled, and that under an Act intituled "An Act to aid in the further

development of Quartz Mines," the said Edward A. Martin be appointed Superintendent of the reduction works now about to be erected in Cariboo, at a salary of \$250 per month, to commence on the 15th day of August inst., and that the said Edward A. Martin be also appointed Melter and Assayer in Cariboo, his remuneration therefor being included in the above sum of \$250 a month. The employment of the said Edward A. Martin, as in this Minute mentioned, being terminable by one month's notice.

Dated this 10th day of August, A.D. 1888.

(Certified) A. CAMPBELL REDDIE,  
*Deputy Clerk of Executive Council.*

VICTORIA, 10th August, 1888.

SIR,—I have the honour to inform you that your appointment as Melter and Assayer at Barkerville at a salary of \$125 a month has been cancelled, and that under an Act entitled "An Act to aid in the further development of Quartz Mines," you have been appointed Superintendent of the reduction works about to be erected in Cariboo; also Melter and Assayer in Cariboo, at a salary of \$250 (two hundred and fifty dollars) per month as from the 15th instant. It is understood that your services, as above, are terminable by one month's notice.

I am, &c.,  
(Signed) T. ELWYN,  
*Deputy Provincial Secretary.*

*E. A. Martin, Esq.,*  
*Barkerville.*

BARKERVILLE, B. C., August 17th, 1888.

SIR,—I have the honour to report on the bricks that Mr. Dunlevy has for sale. About sixty per cent. of the kiln are in fairly good condition, and, seemingly, would do to build the roasting furnace, but after closely examining the cause of so many of the brick splitting and falling apart, I find that there are little lumps of lime contained in the bricks which, as soon as the brick gets wet, slacks and swells and bursts the brick. Therefore, I consider the bricks are worthless. There is a good practical brickmaker here now, and I would suggest that he be engaged at once to make a fresh lot of bricks from a different kind of clay that has been found near here. Bricks have been made from it and reported good.

I have, &c.,  
(Signed) E. A. MARTIN.

*Hon. Jno. Robson,*  
*Provincial Secretary, Victoria.*

BARKERVILLE, B. C., August 24, 1888.

SIR,—I have the honour to inform you that we are making preparations to make bricks, and have no doubt but we will succeed in making a good article, although the season is now late. We have sent to the Mouth of Quesnelle for a brickmaker.

Your telegram advising us to abandon Mr. Dunlevy's brick came to hand last evening.

I have, &c.,  
(Signed) E. A. MARTIN.

*Hon. Jno. Robson,*  
*Provincial Secretary, Victoria.*

BARKERVILLE, B. C., September, 7, 1888.

SIR,—I have the honour to inform you that we have succeeded in making about ten thousand bricks, part of which has been destroyed by the rain that has fallen for the last five days. It is fine weather again, and to take advantage of it I have set two gangs of men at the brickmaking. Owing to the scarcity of men I was forced to engage four Chinamen to

work on the brickyard. Tenders were called for the erection of the buildings and supplying the lumber. The contract was awarded to Mr. John Knott, of Barkerville, for \$4,700, to erect mill and furnace buildings. Grading for the mill is nearly finished, so the carpenters will commence on the building in a few days.

Hon. Jno. Robson,  
Provincial Secretary, Victoria.

I have, &c.,  
(Signed) E. A. MARTIN.

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BARKERVILLE, B. C., September 14, 1888.

SIR,—I have the honour to inform you that the carpenters have commenced work on the buildings of the Government Reduction Works. The weather is still unfavourable for making bricks, but we manage to make a few thousand every fine day we get. We have about 20,000 good bricks stored in a building erected for the purpose of keeping them from being frozen until we have sufficient to commence burning.

Hon. Jno. Robson,  
Provincial Secretary, Victoria.

I have, &c.,  
(Signed) E. A. MARTIN.

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BARKERVILLE, B. C., September 21, 1888.

SIR,—I have the honour to inform you that the contractor has one of the mill buildings nearly ready to be shingled, so that we will be able to put the machinery under cover as soon as it arrives. We are still making some progress in brickmaking. We now have 25,000 stored in the kiln, and about 10,000 on the yard waiting favourable weather to dry them.

Hon. Jno. Robson,  
Provincial Secretary, Victoria.

I have, &c.,  
(Signed) E. A. MARTIN.

---

BARKERVILLE, B. C., September 28, 1888.

SIR,—I have the honour to inform you that the first team with one-half of the machinery has arrived here. The other half will be here in a few days. We are having good weather now for brickmaking, and if it will continue a little while longer we will have sufficient bricks made to commence burning them. Bricks in the kiln, 35,000; on the yard, about 10,000. The contractor is getting along well with the buildings.

Hon. Jno. Robson,  
Provincial Secretary, Victoria.

I have, &c.,  
(Signed) E. A. MARTIN.

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BARKERVILLE, B. C., October 5, 1888.

SIR,—I have the honour to inform you that all the machinery for the Government Reduction Works has been received in good order and put under cover. The weather has been excellent for brickmaking this last week. We now have 65,000 in the kiln, and from 9,000 to 10,000 on the yard drying, to be used to cover the kiln. We will be ready to commence burning the bricks in a few days. The carpenter has finished shingling the mill and engine building, and is now putting up the roasting furnace building.

Hon. Jno. Robson,  
Provincial Secretary, Victoria.

I have, &c.,  
(Signed) E. A. MARTIN.

BARKERVILLE, B. C., October 12th, 1888.

SIR,—I have the honour to inform you that we are firing up the brick kiln, and have every confidence in being able to burn the bricks successfully. We are burning lime rock to make lime for laying the foundation for the engine and boiler and roasting furnace stack. The weather is still fine and greatly in our favour to carry on all work. The carpenter is about ready to commence shingling the roasting furnace building.

*Hon. Jno. Robson,*  
*Provincial Secretary, Victoria, B. C.*

I have, &c.,  
(Signed) E. A. MARTIN.

BARKERVILLE, B. C., October 19th, 1888.

SIR,—I have the honour to inform you that we have burned the kiln of bricks successfully. A temporary building has been erected over the kiln to keep the snow or rain from cooling it too quick. Lack of lumber and shingles the first part of the week, and snow the latter part, has prevented the contractor from doing much work on the mill buildings this week. We will commence erecting the machinery and roasting furnace as soon as the carpenter has sufficiently advanced with the work to give us room.

*Hon. Jno. Robson,*  
*Provincial Secretary, Victoria, B. C.*

I have, &c.,  
(Signed) E. A. MARTIN.

BARKERVILLE, B. C., October 26th, 1888.

SIR,—I have the honour to inform you that the contractor has finished shingling the mill buildings, and will now finish the inside work as fast as the lumber arrives. Work on the roaster has not been commenced yet, owing to bad weather and some trouble in finding a suitable lime rock. We have succeeded in finding and burning a very fair quality of lime.

*Hon. John Robson,*  
*Provincial Secretary, Victoria, B. C.*

I have, &c.,  
(Signed) E. A. MARTIN.

BARKERVILLE, B. C., November 2nd, 1888.

SIR,—I have the honour to inform you that we have opened the kiln and commenced using the bricks and find that they are of an excellent quality. I believe they are superior to the brick made at Victoria, for they will ring like a piece of earthenware and can be thrown around without danger of breaking and are proof against all kinds of weather. The foundations for the engine, roasting furnace and stack are well under way. The lime has proved to be of a good quality.

*Hon. John Robson,*  
*Provincial Secretary, Victoria, B. C.*

I have, &c.,  
(Signed) E. A. MARTIN.

BARKERVILLE, B. C., November 9th, 1888.

SIR,—I have the honour to inform you that good progress has been made this last week in building the roasting furnace and stack. Open fires kept in the building at night prevents the frost from getting to the brickwork so that we can keep building right along without any delay. The engine has been set on its foundation, but we are now waiting for the timbers to make the frame work for the balance of the machinery.

*Hon. John Robson,*  
*Provincial Secretary, Victoria, B. C.*

I have, &c.,  
(Signed) E. A. MARTIN.

BARKERVILLE, B. C., November 23rd, 1888.

SIR,—I have the honour to inform you that the timbers for the frame work of the machinery has been received and the carpenters are at work framing them. Good progress has been made in building the furnace, and also on the brickwork enclosing the boiler. We are taking all the advantage of the present fine weather, which is thawing by day and a very few degrees of frost by night.

*Hon. John Robson,*  
*Provincial Secretary, Victoria, B. C.*

I have, &c.,  
(Signed) E. A. MARTIN.

BARKERVILLE, B. C., November 30th, 1888.

SIR,—I have the honour to inform you that the brickwork around the boiler has been completed, and all the men that are laying brick are now working on the roasting furnace, which, I think, will be completed in about a week from to-day. The carpenters are making good headway in framing timbers for the pan and settler. The weather is still mild and very favourable to carry on the brickwork.

*Hon. John Robson,*  
*Provincial Secretary, Victoria, B. C.*

I have, &c.,  
(Signed) E. A. MARTIN.

BARKERVILLE, B. C., Dec. 7th, 1888.

SIR,—I have the honour to inform you that the roasting furnace and stack are now complete. It is a good strong substantial furnace. I guarantee that it will do its work well. Have commenced operations on the dust chamber and the connection between the furnace and stack. Good progress is being made in setting up the pan and settler.

*Hon. Jno. Robson,*  
*Provincial Secretary, Victoria, B. C.*

I have, &c.,  
(Signed) E. A. MARTIN.

BARKERVILLE, B. C., December 7th, 1888.

SIR,—I have the honour to request you to grant me leave of absence for a month, as I would like to visit Denver. The reduction works will be completed about the end of the year or the middle of January, too late to commence operations this winter. I would then be able to visit some of the Colorado mines and take items of any late improvements in the reduction of ores, and also be back in time to commence operations as soon as the heavy frosts are over. I have spoken to the members for the district and the Gold Commissioner, and they seem to think favourably of it.

*Hon. Jno. Robson,*  
*Provincial Secretary, Victoria, B. C.*

I have, &c.,  
(Signed) E. A. MARTIN.

BARKERVILLE, B. C., December 14th, 1888.

SIR,—I have the honour to inform you that the dust chamber and connection between the roasting furnace and stack is nearly complete. The bricklayers will be through in about two days more. Good work is being made on the shafts, pulleys, and connections between the engine and pan and settler. It will take from two to three weeks more to complete the steam connections, flooring, &c. Will commence work on the stamp battery the coming week.

*Hon. Jno. Robson,*  
*Provincial Secretary, Victoria, B. C.*

I have, &c.,  
(Signed) E. A. MARTIN.

BARKERVILLE, B. C., December 21st, 1888.

SIR,—I have the honour to inform you that we have put the stamp battery in place, and are now framing timbers around it to hold it firm. We are also laying pipe to convey water from a tank on the hill to the pan settler and boiler. The tank is so situated that we will have pressure enough to use the hose in case of fire.

Hon. Jno. Robson,  
Provincial Secretary, Victoria, B. C.

I have, &c.,  
(Signed) E. A. MARTIN.

BARKERVILLE, B. C., December 28th, 1888.

SIR,—I have the honour to inform you that very little progress was made at the mill the last week, owing to most of the men laying off for the holidays. The few that were on hand were set to putting up ladders and platforms on to the top of the buildings, so that the snow can be pushed off the buildings.

Hon. Jno. Robson,  
Provincial Secretary, Victoria, B. C.

I have, &c.,  
(Signed) E. A. MARTIN.

BARKERVILLE, B. C., January 4th, 1889.

SIR,—I have the honour to inform you that we are working on the steam connection and fittings, and have riveted together the iron stack for the boiler and hoisted it into place. The carpenters have put up a platform behind the battery, for an ore floor, and are now flooring it.

Hon. Jno. Robson,  
Provincial Secretary, Victoria, B. C.

I have, &c.,  
(Signed) E. A. MARTIN.

BARKERVILLE, B. C., January 11th, 1889.

SIR,—I have the honour to inform you that the engine, and its connections with the boiler and with the pan, settler and stamp, are nearly complete. We will be able to get up steam to-morrow to test the working of the different parts, so that we can remedy any defects found.

Hon. Jno. Robson,  
Provincial Secretary, Victoria, B. C.

I have, &c.,  
(Signed) E. A. MARTIN.

BARKERVILLE, B. C., November 20th, 1888.

SIR,—I have the honour to submit in response to your request for a report upon the progress, present condition and description of the Reduction Works, as follows: Although some delay occurred in getting started, I regard the progress made under many adverse circumstances as exceedingly satisfactory. Our distance from railway communication, I have found a great drawback to pushing the work, and in many ways taxes a person's inventive genius to the utmost to improvise and find a substitute for ever recurring necessities not here obtainable, but this is invariably the experience of all pioneer establishments of the kind in other places.

After my return from San Francisco, where I had been selecting machinery, a site was chosen for the Reduction Works on the waggon road, about two miles below Barkerville, where a force of men were at once put to clearing the ground and grading for a foundation.

Some little difficulty was met with in finding suitable clay for making bricks, but this was finally obtained of a good quality, about a mile from the mill-site, and at once a large force of men was put on clearing a place for a yard, and finally making and burning a kiln of about 80,000 bricks which have proved to be of a very good quality.

A contract was let, by tender, to Mr. John Knott for the necessary buildings, which consists of a furnace building seventy-five feet long by twenty-seven feet wide; a mill building forty feet long by twenty-two feet wide; a pan room thirty feet long by twenty-two feet wide, and an engine room forty feet long by twenty-three feet wide, all boarded, studded and lined, which will make them good, strong, substantial buildings. The contract price being \$4,700. The buildings are now nearly complete, the work being done satisfactorily.

The machinery purchased in San Francisco, consists of one Kendall stamp mill; capacity five tons in twenty-four hours; one twenty-horse power engine and boiler; one five foot improved pan; one six foot settler, the necessary shafts and pulleys for the above, and door frames, bolts and buckstays for a fifty foot reverberatory roaster, which has a capacity of three tons of concentrated sulphurets in twenty-four hours.

The reverberatory roasting furnace is now well on to completion and also the brick stack for the above. The boiler and engine have been set up, but the necessary connections are yet to be made. The pan and settler are in place, but the stamp has yet to be put up, all of which will be completed about the end of the present year.

Good limestone was found here, and a sufficient quantity for our purpose was burned.

I might say that in selecting the machinery and appliances for the works I was guided entirely by what I conceived to be the best of the known methods for the treatment of such character of ore as is here found, and I have endeavoured to adopt the least expensive but nevertheless effective method, so mine owners of limited means would not be deterred by a heavy outlay from opening out their mines.

In conclusion, I must express my unbounded confidence in the future of this district as a mineral country, and although, from its remoteness, its development may be slow for a time, yet with the production of bullion, confidence will be inspired and development encouraged.

I have, &c.,

(Signed) E. A. MARTIN.

*John Bowron, Esq.,  
Gold Commissioner, &c., Cariboo.*

VICTORIA, 19th December, 1888.

SIR,—Your letter of the 7th instant, applying for leave of absence, has been under consideration, and I am instructed to inform you that you are granted one month's leave, to commence from and after the completion of the reduction works.

I am, &c.,

(Signed) A. CAMPBELL REDDIE,  
*Deputy Provincial Secretary.*

*E. A. Martin, Esq.,  
Assayer, &c., Barkerville.*

February 2nd, 1889.

Please wire me terms on which you will lend or sell one True Venner to the Government.

(Signed) JNO. ROBSON.

*P. C. Dunlevy.*

February 2nd, 1889.

Will loan one, if used by competent person, and returned in good condition when wanted. Will not allow Martin to use any of our machinery.

(Signed) P. C. DUNLEVY.

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February 6th, 1889.

Refusal to allow Martin to use is equivalent to refusal lend. Surely you should be satisfied with Government undertaking to return in good order or replace. Please answer.

(Signed) JNO. ROBSON.

*P. C. Dunlevy.*

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February 6th, 1889.

Am willing to loan any machinery we have to Government, to be handled by any person except Martin. Consider his remaining in charge will damn the whole quartz interests.

(Signed) P. C. DUNLEVY.



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## REPORT OF SELECT COMMITTEE

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### DEVELOPMENT OF QUARTZ MINES.

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MR. SPEAKER,—

The Select Committee appointed to inquire into the manner in which the authority granted to the Executive Council to aid in the development of quartz mines has been exercised, beg leave to report,—

That having heard all the evidence available, and examined the documents connected with the matter, they are of opinion that the Government acted wisely, and in accordance with the expressed wishes of a majority of the people of Cariboo, in declining to entertain a proposal of the Island Mountain Company to establish the test works in connection with the works of that Company.

That great care was taken in the purchase and erection of the said test works, and that the same would appear to be intelligently and economically managed.

That with respect to the guarantee of the sum of \$20,000 to the Island Mountain Company your Committee have the honour to report that the only irregularity in connection therewith was the failure of the Government to require the Government Mining Engineer to examine and report as to the financial condition of the company. This requirement, however, was impracticable, owing to the absence, from the field of mining operations, of the books and accounts of the company, and the Government acted in good faith and with a laudable desire to further the development of the quartz interests of the country in accepting the affidavit of Mr. Dunlevy, the President, as conclusive evidence of the solvency of the company.

Your Committee are of opinion, and hereby recommend, that in the future, where a guarantee or grant of moneys is to be made, the Government should ask authority to adopt the precaution of placing a representative on the board of directors, and to provide for an official audit of the accounts of the company periodically.

Your Committee report herewith the evidence taken by them, and ask the earnest and early attention of the House thereto.

D. W. HIGGINS,  
JOSEPH MASON,  
JAMES BAKER.

*Victoria, 12th March, 1889.*

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