# CORRESPONDENCE

RELATIVE TO

# THE CONSTRUCTION OF ROADS IN THE NORTH ISLAND.

PRESENTED TO BOTH HOUSES OF THE GENERAL ASSEMBLY, BY COMMAND OF HIS EXCELLENCY.

WELLINGTON.

1870.



# CORRESPONDENCE RELATIVE TO THE CONSTRUCTION OF ROADS IN THE NORTH ISLAND.

## TARANAKI.

## No. 1.

Copy of a Letter from Mr. T. Kelly, M.G.A., to the Hon. D. M'LEAN.

SIR,-Wellington, September 4, 1869. In accordance with your request, I have the honor to enclose a Memorandum, in reference to

the construction of roads in the Province of Taranaki, which appear to me to be desirable to provide for defence of the settlements, and to extend the occupation and cultivation of the country.

As the construction of roads into the interior is one great feature of the policy of the present Government, I have no doubt that no unnecessary time will be lost before the preliminary steps are taken to initiate this great and important work.

Had one-tenth of the money which has been wasted on unproductive Native wars been employed in the construction of roads penetrating the fastnesses of the interior, the disaster which the Colony

has suffered during the past year would have been rendered impossible.

I hope that we are entering on a new era as regards our dealings with the Native race, and while ever ready to punish aggression by means of organized forces, that we will depend more on the pick and shovel to conquer and hold the country.

The Hon. the Defence Minister, Wellington.

I have, &c., THOMAS KELLY.

The Construction of Roads necessary for Military Purposes and the Extension of SETTLEMENT IN THE PROVINCE OF TARANAKI.

Patea to Waihi—twenty-five miles.

The road from Patea to Waihi, a distance of twenty-five miles, requires but little outlay to make it fairly passable, if bridges are made over the Tangahoe and Manawapou Rivers, with the addition of side cutting to make the approaches easy. Simple lattice bridges, such as have recently been in the course of construction in the New Plymouth district, if built on piles of heart of matai or totara, would last with little repairs for many years, at a cost not exceeding £5 per foot forward on roadway. Before the disturbances occurred at Patea the Provincial Government had sections taken of both rivers with a view of bridging them, the General Government at that time being inclined to contribute to the cost, which was estimated at £1,000. No ford can be found on the main line as laid down on the map, as the river bottoms and the banks consist of a soft clay, which soon cuts up and renders dray traffic impossible.

Coast Road, Waihi to Stony River—fifty miles. Stony River to New Plymouth—twenty miles. The coast line from Waihi to the nearest New Plymouth settlement at the Stony River is from fifty to sixty miles, and could be made practical for ordinary dray traffic at a comparatively small expense. I venture to state that £1,500 would be sufficient for the purpose if the Natives living along the line could be induced to take the work on contract, when laid out by a competent road surveyor. The road from thence to the town of New Plymouth, twenty miles, is made, and the rivers bridged.

Mountain Road, Waihi to Mataitawa—forty miles.

The construction of a line of road through the forest in the rear of Mount Egmont, from Waihi to Mataitawa, is of importance as a military work, as, if constructed, it would cut off from the interior the disaffected Taranaki tribes under Te Witi. This line would be about forty miles in length, of which thirty-five would be through dense forest. Before the construction of this line was commenced, it would be desirable that the country should be well explored by a competent surveyor, as such a would be desirable that the country should be well explored by a competent surveyor, as such a proceeding would tend to greatly reduce the expenditure, and result in the production of a better road. It is often found, in laying off roads in the forest, that if great care is not exercised by the surveyor, unnecessarily steep gradients have to be used. This is especially the case around the base of Mount Egmont, as the land is cut deep by numerous rivers; and great care is required in selecting crossing places to avoid steep banks, which involve heavy cuttings to make a passable road. The forest should be felled for a width of two chains, and a track cleared, free from logs and stumps, a width of twenty feet. According to the cost by contract of similar work at New Plymouth, this could be done for about £60 per mile, and to make the necessary cuttings, culverts, and fords, would take about £40, making a total cost of £100 per mile for a rough dray road through forest land.

Waitara to White Cliffs—twenty miles.

The coast road from Waitara to the White Cliffs, in the direction of Mokau, requires a small

expenditure to make it easier for dray traffic. The beach forms a good means of communication for a portion of the distance; but as little or no work has been expended on the approaches to it, there exist many dangerous obstructions. The expenditure of some £50 in quarrying through a rocky point on the beach would make a greater length of it available at half-tide. There are two rivers, the Urenui and the Mimi, which are great obstacles to dray traffic,—the former owing to the ford being deep, and the approach to it a wide flat of soft mud, covered at half-tide. The latter can only be crossed at the mouth on the beach at low water, and is dangerous in consequence of numerous quicksands. would cost about £300 each to bridge these rivers, and the improvement of the road would cost about £400.

Road to Waikato and Taupo—ninety miles.

The line of road from Taranaki to Waikato and Taupo will be found to lie between the Waitara and Wanganui Rivers, and would branch off from the road in the rear of Mount Egmont about midway, and strike about due East at its commencement, afterwards trending to the North-east. As this country is very little known to either Natives or Europeans, it would require to be very carefully explored before any definite route was decided on. As this line would penetrate the very heart of the country, there is no doubt that it would be of vast importance as a military work, and would ultimately be equally important in extending the settlement of the country, as it would open up a large tract of rich land. The cost of constructing this line would, from its position, be greater than that in rear of Mount Egmont, as supplies could not be so easily obtained. It would be at least £150 per mile, and if more than ordinary difficulties occurred, it would exceed that sum.

Forest Land for Settlement on Conditions.

At the termination of the mountain road, on the New Plymouth side, there is a considerable quantity of forest land fit for immediate settlement. It is distant about eight miles from the Waitara township, which will at no distant period be the outlet for a large district. Ten thousand acres of this forest land has been awarded to the Puketapu, a hapu of the Ngatiawa Tribe; and if it could be purchased from them, at say 1s. per acre, it would be a good policy to give it way along with the adjoining land to actual occupiers, on the condition that they made the road along one-half the length of their frontage at once, and within two years to fell and clear the bush on their land abutting on the road to the depth of say five chains, and lay it down in grass before they received a grant. There are numbers of enterprising settlers, both in Taranaki and Nelson, who would take this land on these or similar conditions; and as the actual value of the land to the Government does not exceed 5s. per acre, I think it would be exercising a wise discretion to consolidate the settlement of the district, and extend the progress of cultivation, at such a small cost to the revenue.

Recapitulation of Road Work.

recapitation of reduce in orn.											
			cost, with two bridges		£1,500						
Waihi to Stony River	50	,,	earthwork and culverts		1,500						
Waihi to Mataitawa, in rear of		• •									
Mount Egmont	40	,,	felling forest, culverts, &c.		4,000						
Waitara to White Cliffs	20	,,	two bridges	• • •	1,000						
Mountain road to Taupo and			-								
Waikato	90	"	felling forest, culverts, &c.		15,000						
Total	225				£23,000						

A large portion of this work would extend over more than one year, especially the road in the direction of Taupo and Waikato. The road from Patea to Waihi, and thence by the coast to New Plymouth, would be the most immediately beneficial for the advancement of the settlement of the confiscated lands. The mountain road partakes more of the nature of a work of defence, and though tending to the advancement of the settlement of the country, its immediate effect would be a military one. The whole of these lines offer the opportunity of securing the co-operation of the Natives in their construction; and by giving them, on contract, specific portions of road, great economy would be effected in their construction. There are also portions of the work on which the European settlers could be employed with advantage when greater expedition was required. The time for commencing this work appears to me, as regards the attitude of the Natives, singularly propitious, and the opportunity should not be sacrificed. The time of year is also approaching when work of this nature can be most advantageously proceeded with. I have therefore little doubt that, by the exercise of judicious promptitude, before the next Session of Parliament such progress shall have heen made in this direction towards the permanent pacification of the Taranaki Province, by means of roads, as will be a source of gratification to the settlers immediately concerned and to the Colony generally.

## No. 2.

Copy of a Letter from the Hon. D. M'LEAN to Mr. KELLY, M.G.A. Colonial Defence Office,

Wellington, 7th September, 1869. SIR,— I have the honor to acknowledge the receipt of your letter of the 4th instant, on the subject of the formation of roads in the Province of Taranaki, and to thank you for the valuable suggestions therein contained; and I beg to inform you that the officer in command of the Armed Constabulary will be instructed to commence the road works you refer to, as it is the intention of the Government to employ them in this direction when not actually engaged in other duties.

I have, &c.,

Thos. Kelly, Esq., M.G.A., Wellington.

DONALD M'LEAN.

## No. 3.

Copy of a Letter from the Hon. D. M'LEAN to Inspector TUKE. Colonial Defence Office,

SIR-

Wellington, 8th September, 1869.

It having been represented to the Government that it would be a great advantage to the Taranaki Province to effect a cutting near the Onaero River, which would open up the beach road for about three miles at half-tide, and as the Government are desirous of employing the Armed Constabulary Force in this direction when not actually employed on other duties, I have to request you will be good enough to give the subject your earliest attention, and inform me without delay.

Ist. Of the number of men you are likely to be able to spare for this work during the next two

months, having regard to your more legitimate duties.

2ndly. The expenditure for tools, &c., you consider necessary.

3rdly. Whether you will require professional advice in the first instance, in which case the Government will be prepared to ask the Provincial Government to afford it.

I have, &c.,

Inspector Arthur Tuke, A.C., Taranaki.

DONALD M'LEAN.

## No. 4.

Copy of a Letter from Major STAPP to UNDER SECRETARY DEFENCE.

Taranaki Militia and Volunteer Office,

SIR,-New Plymouth, 13th September, 1869. I have the honor to forward the enclosed letter from Inspector Tuke for the information of the

Honorable the Minister for Colonial Defence, and in reference thereto I shall consult with a practical man (Mr. Kelly, Provincial Secretary), as to what work it is most desirable to carry out which will most benefit the district.

Tools will be supplied from the militia stores as far as practicable. If more are required they can be purchased here, although I do not consider at all times the Government get the best articles, from the number of breakages that constantly take place.

I would again point out that if a blockhouse or barracks was constructed at the White Cliffs we should be able to reduce the force considerably at that place, which would go a long way to cover the expense by striking men off pay. I presume this will be one of the contemplated police stations for years to come.

The Under Secretary. Colonial Defence Office, Wellington. I have, &c.,

C. STAPP, Bt. Major Commanding District.

## Enclosure in No. 4.

Taranaki Militia and Volunteer Office.

SIR,-

New Plymouth, 13th September, 1869. I have the honor to acknowledge receipt of your letter No. 566-1p of the 8th inst., relative to the employment of a part of the constabulary under my command being employed on a cutting near

Onairo. I have the honor to state that owing to my present advanced position, and the large reduction lately taken place in my division, I should not at present consider it advisable to detach more than a sergeant's party of from fifteen to twenty men to be employed at Onaero. This would leave me about

seventy effective as a garrison, in addition to the local corps under Captain Messenger, who garrisons a redoubt a short distance from mine, commanding some inland tracks,

The numbers and intended movements (if any) of the enemy at Mokau being very uncertain, and this position being about fourteen miles from us—in fact, they have by all accounts fortified an old kainga still nearer, renders it necessary to keep a close watch on the frontier at White Cliffs, and though

personally I do not anticipate any forward movement on their part, were my garrison much reduced at present it might offer a great temptation for them to advance and annoy us.

I am unable at the moment to furnish an estimate for the engineering tools, but will do so on the first opportunity.

I consider it would be advisable to get the assistance of a professional man to take the level, &c., as the road should be permanent.

I have, &c.,
ARTHUR TUKE, Inspector Commanding No. 7 Division A.C.

The Hon. Defence Minister, Wellington.

# No. 5.

Copy of a Letter from Honorable D. M'LEAN to Inspector Tuke.

Colonial Defence Office,

Wellington, 20th September, 1869.

I have the honor to acknowledge the receipt of your letter of the 13th September, relative to SIR. the employment of the constabulary in constructing roads, and to inform you that I concur in your proposal to place twenty men only at work in the first instance, and during any period that an attack is threatened.

In forming a redoubt, or carrying out public works, you are to abstain from erecting any for

the present on territory to which the Ngatimaniapoto adduce a claim; but on this subject I will see you personally. In the meantime, the work alluded to in your letter is to be proceeded with, and if the men work honestly and earnestly, as they are expected to do, an allowance of one shilling per diem will be given for a full day's work, or sixpence for half a day, the time to be certified by the person in charge of the works.

Mr. Kelly, M.H.R., who takes considerable interest in the matter, will be able to put you in the way of obtaining professional aid, if such is necessary; but it does not appear that for so simple a work any assistance of the kind will be required.

Major Stapp will supply you with tools, &c., on your requisition.

I have, &c.,

Inspector Tuke,

SIR,

Commanding A.C., Taranaki.

DONALD M'LEAN.

## No. 6.

Copy of a Letter from Hon. D. M'LEAN to Mr. PERCY SMITH.

Auckland, October 5th, 1869.

I have the honor to request that you will be good enough to lay out the best line of road from Waingongoro to Stony River or Hangatahua.

It is considered that this work will not occupy much time in exploring, as the country is so open; but it is desirable that every care should be taken to lay off the best and least expensive route for dray traffic.

It will be necessary that you should accompany Mr. Commissioner Parris, who will negociate, where necessary, with the Natives for the carrying out of the work, and it would be advisable to employ a few intelligent Natives as laborers.

You will be good enough to report your proceedings to Mr. Octavius Carrington, the Chief Provincial Surveyor, whose advice and instructions in reference to the direction of the line of road you will be good enough to attend to.

A line should be cut and posts put up to indicate the direction of the road.

Where necessary, it would be well to take the road as far inland as practicable, more especially if by doing so the distance can be shortened.

I have, &c.,

Mr. Percy Smith, New Plymouth, Taranaki.

DONALD M'LEAN.

## No. 7.

Copy of a Letter from the Hon. D. M'LEAN to Mr. Civil Commissioner Parris.

SIR. Auckland, 6th October, 1869.

As it is of great importance that the road from Patea to Taranaki should be opened up and improved, I have to request that you will take an early opportunity of conferring with the natives of the districts through which the road is to pass between Waingongoro and Hangatahua, or the Stony River. Having conferred with the natives along the line of road and ascertained their willingness to assist and co-operate in this undertaking, Mr. Percy Smith will explore and lay off the most suitable and easily formed route for dray traffic: instructions to this effect have been furnished to Mr. Smith.

It is the desire of the Government to employ the natives in making the roads passing through their lands, but in every instance it should be performed by contract, and at as reasonable a rate as possible. The worst parts of the road, such as bad creeks, swamps, or other difficulties, should be first improved; the natives made to understand and feel that the roads are of quite as much, if not more, advantage to them than to the Europeans, and that in forming roads through their district they are not only improving the value of their own property, but discharging a duty which devolves upon all good and loyal citizens. It is desirable that the natives should be employed at such seasons of the year when their

attention is not required to planting and harvest operations.

The Chief Provincial Surveyor, Mr. O. Carrington, will exercise such supervision over Mr. Smith's

survey as his time and other avocations will permit.

 $\dot{ extsf{I}}$  shall be glad to receive from you an estimate of the amount required to form the road between Waingongoro and the Stony River by means of native labor. The chiefs in each district should be employed as overseers, and entrusted with the work very much as if they were doing it for their own benefit and of their own accord.

The utmost economy must be practised in conducting this work, which can only be continued if the results, after examination by an officer of the Government, are found adequate to the expenditure.

It is necessary that when the line passes through native districts you should first make all necessary arrangements with the natives required to carry out the views expressed in this letter; but all details of the work and general supervision should be left to Mr. Smith, whose knowledge of Maori will enable him to discharge the duty effectually.

I have, &c.,

R. Parris, Esq., Civil Commissioner, Taranaki.

DONALD M'LEAN.

## No. 8.

Copy of a Letter from Mr. Commissioner Parris to Hon. D. M'Lean.

New Plymouth, October 26th, 1869. SIR. I have the honor to acknowledge the receipt of your letter of the 6th inst., conveying instructions relative to the opening of a line of road between Hangatahua and Waingongoro, together with a copy of

a letter from you to Mr. Percy Smith, appointing him as surveyor to superintend the work.

Acting upon your instructions, I left New Plymouth on the 12th instant, for the purpose of conferring with the natives along the coast, in order to ascertain if they were willing to assist and

co-operate with the Government in opening a line of road through their respective districts.

When you were at New Plymouth I told you that I considered the negociations had better be commenced first south of Umuroa, and in this view of the matter I commenced with W. King Matakatea and his people, with whom I remained from Tuesday, about noon, till Thursday morning, talking over the question of the road, and also the flax question. At Umuroa, Mr Kelly, M.H.R., and his brother joined me, and from thence we went on to Opunake, where I assembled all the natives for a discussion of the same questions; after which, in the evening, we went on to Oeo, where, on my arrival, I warned the natives to meet me the next morning (Friday), which they did, and in addition to the road question I explained to them the object of Mr. Kelly's visit to make arrangements with them for working the flax between Opunake and Oeo, which had been sanctioned by the Government.

At Oeo, Mr. Percy Smith and Ropata Ngarongomate joined us, and from thence we went on to Kaupokonui to confer with Manaia (Wi Hukanui) and his brother Reihana te Wharehuia and their followers, a section of Titokowaru's tribe (Ngaruahine) who have been friendly for several years. explained to them, the same as I had done at the other places, the object of our visit; but, as no one has applied for any part of their district for working flax, my chief business with them was the road question, which at every place where I had conferred with the natives was cheerfully entertained, with promises to assist and co-operate with the Government in the prosecution of the work, which I explained to them would give them employment, to which all were to be admitted who had not been guilty of unpardonable offences, but that the work would have to be done by contract, and each respective district would have to

be estimated for, subject to the approval of the Government.

We were at Kaupokonui from Saturday evening until Monday morning, the 18th inst., when we left to explore the district for a road. I took with us three chiefs, and rode across the country to the Waingongoro River, to a point where a main line of road from Patea strikes the river on the opposite bank, and from thence we traversed on horseback the proposed line for the road so far as Umuroa. From Waingongoro to Omuturangi, the tribal boundary division between the Taranakis and Ngatiruanuis, I took a party of natives from Kaupokonui to traverse the line. From Omuturangi to Opunake I took a party of natives from Oeo. At Opunake W. King Matakatea joined us, and pointed out the best line from that place to Umuroa, an arrangement I deemed advisable, to avoid jealousies which frequently arise when natives are engaged for that sort of work on land where they have no tribal rights.

The natives with whom I communicated at the different places mentioned number altogetherwomen, and children-from three to four hundred; and during the conference held with them relative to the proposed road and utilisation of the native flax, there was not an angry word spoken, but on the contrary a cheerful acquiescence manifested by all. But although the proposed undertaking appeared very acceptable to the natives referred to, I wish to guard myself against leading the Government to believe that the same good feeling prevails with those sections of the different tribes who keep aloof from the Government, and with whom there has been no communication: I mean those who are allied to Te Witi, who controls the district between Umuroa and Warea, where I recommend nothing should be

done at present if the Government is not prepared to enforce it.

As I was on my way back I received a message from the Chief Tipene Ngatairakaunui, requesting me to go to Pariaka to consult with Te Witi and his people; but in consequence of a number of Titokowaru's people being there, I refused to go, which I have done on several occasions before, and shall continue to do, unless instructed by the Government to visit them. Without doubt they are opposed to road-making by the Government, but whether or not that feeling is strong enough to induce them to resist the work by force, I am not prepared to say; but so long as the working party is strictly confined to natives interested in the respective districts nothing serious would be likely to occur.

A report appears to have reached the Government at Wellington to the effect that much uneasiness exists among the natives, friendly and Hau Hau, at the idea of a road being forced through. Whatever the views of the so-called Hau Hau may be, I myself heard nothing of anything unpleasant during my

stay in the district, and certainly there was no uneasiness manifested by the friendly natives.

I have requested Mr. P. Smith to prepare a report and sketch map from his field book, shewing the line of road traversed, together with the rivers, streams, and swamps to be crossed, which I will forward

to you when finished.

SIR.

No further action will be taken in reference to the road until I receive definite instructions from the Government as to whether the work is to be commenced or not. If it is to be commenced, I should require authority to purchase the tools required, as the natives have none themselves.

The Hon. the Defence Minister, Auckland.

R. PARRIS, Civil Commissioner.

## No. 9.

Copy of Telegram from the Hon. W. Fox to Mr. Commissioner Parris, Taranaki. Nelson, 21st October, 1869.

Reports have reached the Government that much uneasiness exists among the Natives, friendly

I have, &c.,

and Hau Hau, at the idea of a road being forced through between New Plymouth and Opunake.

The greatest care must be taken not to provoke any ill-feeling on this subject, and not to create any distrust in the Native mind as to the objects of the Government. If any symptoms of serious dissatisfaction appear, cease at once to press matters. You will report to me immediately what is doing.

WILLIAM FOX.

## No. 10.

Copy of a Letter from Mr. Commissioner Parris to Hon. W. Fox.

Sir,— New Plymouth, 25th October, 1869.

With reference to your telegram, dated October 21st, conveying instructions to me to report to you what I am doing in the matter of opening a road between New Plymouth and Opunake, reports having reached the Government that much uneasiness exists among the natives, friendly and Hau Hau, in consequence thereof, I have the honor to inform you that I received written instruction from the Hon. the Minister for Native Affairs, dated Auckland, October 6th, 1869, to take an early opportunity of conferring with the natives of the districts between Waingongoro and Hangatahua, or the Stony River, for the purpose of ascertaining if they were willing to assist and co-operate in the undertaking to open the said line of road.

Accordingly, on the 12th inst., I left New Plymouth, accompanied by Mr. Percy Smith, surveyor, who has been appointed by the Hon. Mr. M'Lean to superintend the work. Mr. Kelly, M.H.R., and his brother, also accompanied us, for the purpose of making arrangements for the commencement of flax working at Opunake, having obtained from the Government a grant of the flax growing on the township at that place.

The different sections of natives with whom I conferred on the subject of the road were-

First. The chief, W. King Matakatea, and his followers, at Umuroa.

Secondly. The natives living at Opunake.

Thirdly. The chiefs Hone Pihama, Rameka, Ngahina, and their followers living at Oeo, including

the Tangahoe, who surrendered in June last.

Fourthly. The chiefs Manaia, Reihana, Paora, and their followers, living at Kaupokonui. This last party is a section of the Ngaruahine (Titokowaru's tribe), who have been friendly for several years past. Altogether, those natives number over three hundred (300) men, women, and children.

Each party expressed their willingness to assist and co-operate with the Government in the proposed undertaking to make the road, which, having ascertained, we then proceeded to explore the country for the purpose of finding out the best line for the road. From Kaupokonui, I took a party of natives interested in the district between Waingongoro and Omuturangi, which we traversed on horseback. For the district between Omuturangi and Opunake, I took a party of natives from Oeo and Opunake, which we traversed in the same way. At Oeo I was joined by W. King Matakatea, who pointed out himself the best line from Opunake to Umuroa.

During the whole journey there was not an angry word, nor did anything occur which could be construed to imply uneasiness or ill feeling so far as the natives with whom I conferred were concerned, nor did I hear of anything whatever from the so-called Hau Haus who keep aloof in the bush, having with them some of Titokowaru's immediate followers, in consequence of which I refuse to visit them, or hold communication with them without express instructions from the Government to do so. This applies chiefly to the natives living at Pariaka, among whom there are a number of Titokowaru's people, under the young chief Te Witi, who controls the district from Umuroa to Warea, where I recommend no action should be taken in road-work at present, until a more satisfactory understanding is arrived at with Te Witi and his party. The coast line is always available, but in some parts it is bad for carts.

I wish the Government clearly to understand that I am of opinion that those sections of the different tribes who keep aloof from us are not favorable to road-making, and that it is necessary to keep in view any possible eventualities that may arise out of it. If, by the employment of a large proportion of the natives who are in favor of the work, the others should be induced to regard the matter more favorably, and to join their relatives in the work, a great point would be gained. If, on the other hand, by opposing the work they found they could stop it, they would become more untractable hereafter.

Before doing anything more in reference to the road, I intend to report to the Hon. the Minister for Native Affairs, and shall wait for instructions from the Government as to whether the work is to be

commenced or not.

SIR,-

I have, &c., R. Parris, Civil Commissioner,

The Hon. the Premier, Wellington.

# No. 11.

Copy of a Letter from the Hon. D. M'LEAN to Mr. Civil Commissioner Parris.

Sir,—

Auckland, 19th November, 1869.

I have the honor to inform you that your letter to the Honorable the Premier, dated the 25th ultimo, has been received, and that the explanation therein given of the course you are pursuing with the natives respecting road-making is satisfactory.

I have, &c.,

R. Parris, Esq., Civil Commissioner, New Plymouth. Donald M'Lean.

## No. 12.

Copy of a Letter from Mr. Civil Commissioner Parris to the Hon. D. M'Lean.

New Plymouth, 29th October, 1869.

In further reference to my report of the 26th instant, relating to my visit to the South for the purpose of negociating with the natives for a line of road, I have now the honor to forward herewith for your information Mr. Percy Smith's report on the line of road we traversed, together with his estimate of the expense, and a sketch map showing the proposed line marked red.

## CONSTRUCTION OF ROADS IN THE NORTH ISLAND.

The estimate is but an approximation, no minute examination of the proposed cuttings having been made on which to base a correct estimate of work, but it is believed it will be sufficient to open the road and make it available for traffic.

I have, &c.,

The Hon. the Defence Minister, Auckland.

R. PARRIS. Civil Commissioner. A.-No. 17.

## Enclosure in No. 12.

Copy of a Letter from Mr. Percy Smith to Mr. Commissioner Parris.

New Plymouth, 28th October, 1869. SIR.-In accordance with your request, I have the honor to forward herewith an approximate estimate of the cost of that portion of the proposed line of road from Waingongoro to Hangatahua, which lies

between the former place and Umuroa, a distance of about 28 miles.

In submitting this estimate, I wish it to be distinctly understood that it is only a rough approximation, no survey having been made of the line; the data upon which I have based my calculations have been obtained by riding over the line with yourself, and estimating the quantities of cutting and distances. In a great many of the cuttings it will be found that a hard volcanic conglomerate has to be excavated for the road, which of course makes it more expensive than if ordinary clay or earth had to be dealt with. I have, therefore, in the estimate taken an average of 9d per cubic yard for the whole of the work. In the clearing of the line a good many miles of scrub and heavy tutu will be met with, though the greater part of the road consists of low fern, flax, &c.

I have taken an average of the whole distance at the rate of 2s per chain, or £8 per mile, the road way to be cut 20 feet wide, stumps rooted out, and all the inequalities of such a size as would prove obstructions to a cart, to be levelled.

It will be absolutely necessary to make the line passable for carts, to construct culverts over such of the streams and swampy places as have not a sufficient hard bed to dispense with them; I have allowed an average of £5 for each such culvert. Part of the country lying between Opunake and Umuroa is in places very swampy, and it will be necessary to cut side drains to carry off the water, to secure anything like a dry road, and even then in winter such parts of the road are likely to be much cut up by traffic, unless they are metalled or fascined, for the former purpose it may be observed that there is generally abundance of material, in the shape of shingle beds all along the line in the courses of the streams.

I have estimated for the drains at the rate of 7s a chain; such drains to be 3 feet deep and 3 feet wide at top, though of course in places they will be much deeper, owing to the inequalities of the ground.

There can be no doubt but that the line of road explored by us will be a very much better one than the bridle track at present in use, which generally follows the sea coast. The proposed line, by keeping more inland, will be more direct, and what is of more importance, it will avoid the deep valleys at the mouths of the streams, thereby obviating any heavy cuttings, and in no case will the gradient be more than 1 foot in 8.

All the principal streams crossed by the line have good fords, and good sites for bridges may be obtained in the immediate vicinity, in every case with the exception of Kaupokonui, where it would be advisible to place the bridge below the junction of that river with Waiangauhero.

The reason that the proposed line does not cross at that place (as you are aware) is, that there is no available ford near it, and also that the streams may be more easily crossed before than after their junction

during freshets. APPROXIMATE ESTIMATE

R. P.		Civil Co Plymouth	ommissioner,	I have, &c	••	PE	RCY		итн, Surveyo	or.	
Fre	om Waingon	goro to T	Umuroa, about 28 miles	• •	••	• •			£1088	0	0
						340	10	0	340	10	0
	•						10				
. /		,,,	4 miles of drains, at			112	0	0			
	•	79	7 miles' clearing, at			56	0	Ó			
	,	, maroa, ,	12 culverts, at £5	,	• • •	60	0	ő			
From Tan	ngatara to F	Imuros s	about 3000 yards' cutting	at 9d		112	10	0	356	0	0
						356	0	0	050		
,	,	"	7 miles' clearing, at £		•••	56	0	0			
. ,	,	,,	15 culverts, at £5	••	• •	75	0	0			
From Kay	wa to Tanng	atara, ab	out 6000 yards' cutting,	at 9d	• •	225	0	0	391	10	0
						391	10	0		10	^
,	,	"	13 miles' clearing, a	t £8	•••	104	0	0			
,		,,	20 culverts, at £5	•••	• •	100	0	0			
From Wai	ingongoro to	Kawa, a			4.	£187	10	0			
				at 9d	i. • •	100	0	0			

No. 13.

Memo. on Mr. Percy Smith's Letter, of 28th October, 1869. It would be simpler and, I believe, more economic if the road work were given out in portions,

say between streams, to different leading men of the natives to be employed, at a round sum, without

reference, save for private consideration, to the price at per foot or per chain.

For the information of the Hon the Defence Minister, I may state that the average rate of 22 tenders for culverts (not counting bridges) in the Waikato road-making was £5 3s each culvert; and that the average rate of 168 tenders accepted for cutting and filling was 7d a cubic yard. Mr. Percy Smith's estimates are £5 for culverts and 9d for cuttings. The rate of 2s a chain appears low for clearing, assuming that there is a considerable quantity of bush and scrub, as Mr. Percy Smith states to be the case.

The average of 25 tenders for ditching gives 12s 6d per chain for ditto; Mr. Percy Smith's estimate

is 7s a chain.

Save, therefore, in the cutting and filling, 9d to 7d, Mr. Smith's estimates appear moderate.

It is right, however, in considering the subject to bear in mind that the natives run no risk, as European contractors do, in tendering for such works. Their tools will, I presume, be found them, and they will not have to lose time, as the Militiamen did, in going backwards and forwards to the work, as in such cases they generally encamp on the spot.

CHARLES HEAPHY.

## No. 14.

Copy of a Letter from the Honorable D. M'LEAN to Mr. Civil Commissioner Parris.

Auckland, 30th November, 1869. SIR.-I have the honor to acknowledge the receipt of your letter No. 262, of the 29th October, 1869, enclosing Mr. Surveyor Percy Smith's report on the proposed line of road from Waingongoro to Hangatahua, and his estimate of its cost.

I have to request you to be good enough to inform Mr. Smith that a sum of fifteen hundred pounds will be paid into the Bank of New Zealand, New Plymouth, towards defraying the expense of this work, and that he will be enabled to draw upon it from time to time as he may require, upon presentation of the necessary vouchers and requisitions to you.

I have, &c.,

R. Parris, Esq., Civil Commissioner, New Plymouth.

# DONALD M'LEAN.

## No. 15.

Copy of a Letter from Hon. D. M'LEAN to His Honor the Superintendent of Taranaki.

SIR,-Auckland, October 12th, 1869. I have the honor to enclose herewith for your consideration copy of a letter I have sent to Mr. O. Carrington relative to the proposed survey of the best line of road from Waingongoro to Stony

With a view of securing a greater accuracy of the work, and as low a scale of expenditure as possible, I have thought that a general supervision at the hands of the Provincial Surveyor might be

permitted by your Honor.

I have, therefore, to request you to be good enough to allow Mr. O. Carrington to give Mr. Percy Smith that assistance and advice in the selection of the most suitable line, for an inexpensive and passable route for dray traffic, which his long experience cannot fail to prove useful in attaining the object in

I have, &c.,

His Honor the Superintendent Taranaki.

DONALD M'LEAN.

## Enclosure in No. 15.

SIR. Auckland, October 11th, 1869.

I have the honor to enclose for your information a copy of instructions I have forwarded to Mr. Percy Smith\* relative to the survey of the best line of road from Waingongoro to Stony River.

By this mail I write to His Honor the Superintendent of Taranaki, furnishing him with particulars of the proposed work, and requesting that you may be allowed to assist and advise Mr. Smith in the selection of the most suitable line for the purpose indicated, viz., a passable and inexpensive route for dray traffic.

I have, &c.,

O. Carrington, Esq., Taranaki.

DONALD M'LEAN.

## No. 16.

Copy of a Letter from His Honor the Superintendent of Taranaki to Hon. D. M'LEAN. Superintendent's Office, New Plymouth, Taranaki,

19th October, 1869. SIR,-

I have the honor to acknowledge the receipt of your letter of the 12th inst., together with the copy of the letter addressed to Mr. O. Carrington in reference to the proposed road-making from Waingongoro to Stony River, and in reply beg to assure you that I will do all in my power to carry out the desirable work you have so promptly and kindly sanctioned.

FRED. CARRINGTON,

The Hon. the Defence Minister, Auckland.

Superintendent.

#### CONSTRUCTION OF ROADS IN THE NORTH ISLAND. 11 A.—No. 17.

## No. 17.

Copy of a Letter from the Hon. D. M'LEAN to His Honor the Superintendent of Taranaki. Auckland, 25th October, 1869. SIR.

I have the honor to acknowledge the receipt of your letter No. 6, of the 19th October, 1869, and to thank you for your kind assurance to further in every way in your power the road work sanctioned by the Government.

I have, &c..

His Honor F. A. Carrington,

Superintendent, Taranaki.

DONALD M'LEAN.

## No. 18.

Copy of a Letter from Mr. Civil Commissioner Parris to the Hon. D. M'Lean.

New Plymouth, 26th October, 1869.

Enclosed herewith I have the honor to forward a letter received from Hapurona, in reference to a report which has reached them, that the Government was intending to make roads in the Waitara District and at the back of Mount Egmont.

I have, &c.,

The Hon. the Defence Minister, Auckland.

R. PARRIS, Civil Commissioner.

## Enclosure in No. 18. [TRANSLATION.]

Te Kawau, 4th October, 1869.

To the Governor.

SIR,

To Mr. M'Lean and Mr. Parris. My friends, salutations to you. Sir, O Governor, salutation. Although this voice is a stranger to you, listen patiently. This is what I have to say to you. Waitara is become an old woman, and it is not right that she should return to her girlhood. She is kneeling, and I also am bent. Waitara is invalided, and all her places. I have heard of your intention to make roads, the road to Te Wera (back of Mount Egmont) and other place in the magnitude of your thoughts. You listen, friend be clear; I am good and clear. The clearness of my goodness reaches the Europeans, and also the town. A small word to you. Stop! If this is clear answer it. answer it.

From Tuahutarangi Hapurona.

## No. 19.

Copy of a Letter from the Hon. D. M'LEAN to HAPURONA. TRANSLATION.

To HAPURONA,-

Akarana, 13th November, 1869.

Friend, salutations to you. I have seen your letter of the 4th day of October, relative to the news that had reached you, that I shall open the road to Te Wera and to some other places. But my word to you is this, that notwithstanding yours is a new or strange voice to some, it is not a new voice to me (i.e.. that we are old acquaintances).

Friend you do well to write to me, so that I may understand your wishes and thoughts. Do not be startled by the report you have heard. What I am doing I know to be right. Let your thoughts

be clear also.

From your Friend,

NA TE MAKARINI.

## No. 20.

Copy of a Letter from Mr. Civil Commissioner Parris to the Hon. D. M'LEAN.

New Plymouth, 18th December, 1869. SIR,-

I am happy to be able to report to you that, from information which I have received this morning, the road work is progressing quietly, and no further obstruction has occurred since my last report.

A party of thirty Natives has just arrived on horseback for more tools, such is their determination to carry on the work. If I find they wish me to go to the district, I shall leave on Monday next.

Titokowaru is holding a Runanga at his place at Ngatimaru this week, and Hapurona has sent his son to be present, and, on his return, has promised to report particulars to me.

I have, &c., R. Parris,

The Hon. the Defence Minister, Auckland.

Civil Commissioner.

## No. 21.

Copy of a Letter from the Hon. D. M'LEAN to Mr. Civil Commissioner Parris.

SIR,---Auckland, 20th December, 1869. I have the honor to acknowledge the receipt of your letter of the 18th instant, in which you inform me that the road works in your district are progressing quietly, and that no further obstruction has occurred since your last report. I am much gratified to hear that the work is succeeding so well.

I shall be glad to learn the result of Titokowaru's Runanga.

I have, &c.,

DONALD M'LEAN.

R. Parris, Esq., Civil Commissioner, New Plymouth.

## No. 22.

Copy of a Letter from The Hon. D. M'LEAN to Mr. Civil Commissioner PARRIS.

Auckland, 16th November, 1869. SIR.

Provided there is no difficulty in the way, I have the honor to request that you will be good enough to call for tenders for erecting a bridge across the Stony River, the lowest or any tender not necessarily accepted.

Having issued this contract, you will relieve yourself of all details connected with road making, and hand them over to Mr. Percy Smith, who will in future be responsible for the proper conduct of I have, &c.,

R. Parris, Esq., New Plymouth.

DONALD M'LEAN.

## No. 23.

Copy of a Letter from the Hon. D. M'Lean to Major Stapp.

Auckland, 23rd November, 1869. SIR, I have the honor to request that you will be good enough to furnish me, at an early date, with a return of the number of men of the Armed Constabulary employed on road works in your district, the extent and description of roads they have made, and the localities where such works are being carried I have, &c.,

Major C. Stapp, New Plymouth.

DONALD M'LEAN.

## No. 24.

Copy of a Letter from Major STAPP to the Hon. D. M. Lean.

Taranaki Militia Office, New Plymouth, 30th November, 1869. SIR, In reply to your letter, dated the 23rd instant, I have the honor to forward the enclosed report Inspector Tuke, Commanding A.C., and to state that I inspected the works last week, and am perfectly satisfied with what has been done and the work they are engaged on at present.

esent.
I have, &c.,
C. Stapp, Brevet Major Commanding District.

The Hon. the Defence Minister, Auckland.

## Enclosure in No. 24.

Inspector Tuke to Major Stapp, Commanding District Taranaki.

Taranaki, 26th November, 1869.

SIR, I have the honor to acknowledge receipt of your letter of 25th instant, requesting me to inform you on what work the Armed Constabulary were employed, and how long they had been so employed, and also as to what number of men I had engaged in road making.

In reply I have the honor to inform you that a detachment of 20 men and non-commissioned officers have have been employed in road making for nearly two months, and are now stationed on the

south side of the Mimi River, making good the approaches to the Ford.

The road from Wai-iti to Mimi has been put into a state of repair, and several heavy cuttings made. The hills on the north and south banks of the Mimi, formerly all but impassable, are now thoroughly practicable, and great satisfaction is expressed by draymen and others at the improvements effected already.

Should the negociation commenced in the Waikato by the Hon. the Defence Minister, tend to remove all doubt as to the action likely to be taken by the Mokau tribe (Ngatimaniapoto) I shall be able at once to increase the working party, simply requiring a further supply of tools.

Major Stapp, Commanding District, Taranaki.

I have, &c., ARTHUR TUKE.

## No. 25.

Copy of a Letter from the Hon. D. M'LEAN to Major STAPP.

Auckland, 1st December, 1869. SIR.-I have the honor to acknowledge the receipt of your letter No. 511, of the 30th November, 1869, enclosing Inspector Tuke's report upon the manner in which the men of the Armed Constabulary under his command have been employed upon the making and improvement of roads in your district.

It is satisfactory to find that the work in question is progressing so favourably, and I should be glad to have it conveyed to Inspector Tuke that his endeavours in that direction meet with my approval.

I have further to request you to be good enough to inform that officer that he may increase the road party to, say, thirty-five or forty men, and that whatever tools he may require will be supplied him upon requisition.

I have, &c.,

Major Stapp, Commanding Taranaki District.

DONALD M'LEAN.

## No. 26.

Copy of a Letter from Mr. Civil Commissioner Parris to the Hon. D. M'Lean. New Plymouth, 5th January, 1870. SIR.

I have the honor to inform you that Mr. Percy Smith was in at Christmas, and an advance of

### CONSTRUCTION OF ROADS IN THE NORTH ISLAND. 13 A.-No. 17.

two hundred and twenty pounds was paid to the Opunake and Oeo Natives, on account of work on the road, which has been opened as far as the tribal boundary of Taranaki and Ngatiruanui at Omuturangi or Kawau, from whence the Ngaruahine Natives, under Manaia and Reihana, are prepared to take up the work and carry it to Waingongoro.

I have, &c., R. Parris, Civil Commissioner.

The Hon. the Defence Minister, Auckland.

SIR,-

No. 27.

Copy of a Letter from Mr. Commissioner Parris to the Hon. D. M. Lean.

New Plymouth, 31st January, 1870.

I have the honor to report for the information of His Excellency's Government, that last week I went through the Taranaki district, having received a letter from Mr. P. Smith, informing me that some of William King's people were opposing the road work between Umuroa and Opunake, and that he wished me to visit them.

Ruakere (son of the Warea chief Aperahama te Reke), and Te Rake Reretanangawanga (William King te Rangitake's grandson) having come in from Pariaka on the 22nd inst., and on hearing that I was going to the district the following Monday, the 24th inst., they stopped at my house two nights to accompany me as far as Ikaroa. We stopped at Taihua, a village of the Ngamahanga's near Warea, on Monday night, where about fifty of that tribe assembled to meet me, to lay before me some questions about the occupation of the land between Stony River and Waiweranui, which was returned to the tribe, and about which they had been quarrelling, the party which came in with Motu last year having cut down some karakas at the old pa of notoriety, called Matanuinui, at which the old chiefs Iharaira, Pohutu, Paora and their party, who came in 1864, had taken offence, and the threatened that but for their having put themselves under the "Ture" of the "Kawanatanga" they would have driven Motu and his party off the block of land. Motu and his party taunted them with having surrendered all the lands to the Government when they came in in 1864, and that in consequence thereof there were no "poupaengas" (landmarks) now. This was a correct view of the question, but having been used as a taunt, was not palatable to the old chiefs, who would sanction a subdivision of the whole block. We had a warm discussion great part of the night, which subsided favorably by their promising to cease quarrelling, and to cultivate the lands peaceably.

Tuesday morning I left Taihua, accompanied by Ruakere and Rako so far as Ikaroa, where we met a party of Pariaka natives, with whom I had a conversation about road-work and things in general; and then went on to Umuroa, where I stopped for the night, and the following morning (Wednesday) went on South, accompanied by William King, to visit the working parties, who, I am happy to be able to

report, are progressing favorably and satisfactorily.

Thursday morning we returned to Umuroa, where Heremaia, the young man who has been opposing the road-work, met me, with whom I had a long discussion relating to flax and road-work. I advised him to discontinue his opposition, as it was useless for him to oppose his own relatives, who were determined to finish their contracts, and afterwards turn their attention to flax-work.

By the end of this week the line will be opened the full extent of the contracts from Umuroa to Waingongoro, and the heaviest cuttings at the deepest rivers—Waiaua, Taungatara, Punehu, and Ouri are nearly finished. I have, &c., R. Parris,

The Hon. the Defence Minister, Auckland.

Civil Commissioner.

No. 28.

Copy of a Letter from His Honor the Superintendent of Taranaki to the Hon. Mr. Gisborne. Wellington, 7th February, 1870.

Referring to the conversation which I had this morning with the Hon. the Premier and yourself respecting the making of the first portion of the road so urgently required to command the forest district inland of the Town of New Plymouth and Waitara, which road will be the beginning of the line that must at no distant date be made at the back of Mount Egmont, to join the Waimate and Wanganui Road, I have now the honor to solicit your consideration and kindness in aiding the carrying out of this most needful and important work, and I trust that you will be pleased to authorise the expenditure of such an amount on this road as will ensure the object in view.

I have, &c.,
FRED. A. CARRINGTON,
Superintendent of Taranaki.

A discharged soldier se The Hon. the Colonial Secretary, Wellington. P.S.—I beg to enclose a letter on this subject from Sergeant James Hill, a discharged soldier settled in Taranaki, which, in my opinion, is worthy of the consideration of the Government. F. A. C.

Enclosure in No. 28.

New Plymouth, 31st January, 1870. Sir,-

Your Honor will remember a remark I made to you about two months ago in presence of Mr.

Bosworth about a portion of bush land (Government Reserve) in No. 20 Road District.

It is situated about eight miles inland from the Devon line on the Egmont Road, and extends from the Waiwakaiho to the Mangoraka River, containing, I believe, about 170 acres, being suitable for a township. By giving each discharged soldier a town allotment of half an acre, it would connect the three districts into one.

4

Establishing a town on this reserve would, in my opinion, be a great and permanent benefit to the Province, to the old settlers, as well as to the discharged soldiers (now settlers), who are anxious to remain in the settlement if it is possible for them to do so with safety to life and property.

The greatest number of us obtained our discharge before we were aware that self-protection was to be the rule in New Zealand. I am sure had we known before hand that the troops were to be removed from this country we should never have thought of remaining here in an unprotected state, not knowing the day that some of us and our children may be tomahawked (as my brother was some years ago), or at least all we possess burned and destroyed.

Since the Imperial Government have withdrawn the troops, as a remedy to some extent I would recommend that a township be formed by the authorities, by falling a few acres of bush on the reserve, and erecting a blockhouse on it without delay, and select at least twenty-eight men, discharged soldiers, belonging to the three districts, one sergeant and three corporals appointed from the twenty-eight men chosen, to be employed in opening up the roads in the 12th, 13th, and 20th Road Districts, when not employed for defence purposes.

What I have proposed, if carried out, would lead to good results.

1. The blockhouse would be a safe place to run to in case of alarm.

2. Men out of employment could reside in the blockhouse, and work on their own land.

3. A store could be established, where men employed back in the bush could obtain requisite necessaries without losing time going into town for them, and perhaps spend their hard earings otherwise? besides it would induce them to remain in the district together.

I am fully persuaded if a town be established, as was promised by Mr. C. Brown, when Superintendent of the Province, your Honor and I, if alive, will hear and see that before the end of two years from this date of between 120 and 160 men being settled on their land, and industriously employed clearing and cultivating the soil. All that is wanted is a little help and encouragement. On reference to the Treasury Books you will see that in 12 and 20 Road Districts we have rated ourselves very heavy, so we might get roads to our land.

Hoping your Honor will do your best (as I know you have our interest and that of the Province at heart) with the General Government to have it carried out. Being well acquainted with nearly all the discharged soldiers in the Province, I know their view of the matter pretty well. They are ready and willing to protect the settlement from rebel natives.

I venture to state if roads had been made four years ago, by this time we should have had many prosperous farmers in our district.

Hoping you will excuse the liberty I have taken in writing to you on the subject,

I have, &c.,

JAMES HILL,

To His Honor the Superintendent Taranaki.

A Discharged Soldier.

## No 29.

Copy of a Letter from the Hon. Mr. GISBORNE to His Honor the Superintendent of Taranaki. Colonial Secretary's Office, Wellington, 18th February, 1870. SIR,

I have to acknowledge the receipt of your Honor's letter of the 7th instant, requesting the assistance of the Government in making the first portion of the road which, when completed, will lead from New Plymouth, at the back of Mount Egmont, to the Waimate and Wanganui Road.

The Government regard the work to which you refer as part of the great inland roads towards the formation of which the General Assembly appropriated the sum of £30,000, and will authorise the expenditure of five hundred pounds (£500) out of that vote under the direction of the Provincial Government (subject, of course, to the approval of the General Government), for the purpose.

The desire of the Government is that this sum should be expended so as to open as much inland country as possible by a traversable though unfinished dray-road, and not to confine it to the construction of a short and expensive road within the close vicinity of the town.

I have to request your Honor to be good enough to forward to me your proposal for this purpose. will address your Honor in a separate letter as to the departmental arrangements for the expenditure of this money.

No time should be lost in the commencement and prosecution of this work, which should be done by contract or piece-work. I have, &c., W. GISBORNE.

His Honor the Superintendent, Taranaki.

## No. 30.

Copy of a Letter from Mr. Civil Commissioner Parris to the Hon. D. M'LEAN. New Plymouth, 2nd March. 1870. SIR,

I have the honor to acknowledge the receipt of your letter of the 14th February, in reference to two reports of Mr. P. Smith's on the subject of additional work on the line of road between Umuroa and Waingongoro, and authorising a further expenditure thereon as recommended by that gentleman, and calling for a further report from him, a copy of which I have the honor to forward herewith.

I have, &c., R. Parris, Civil Commissioner.

The Hon. the Defence Minister, Auckland.

## Enclosure in No. 30.

Mr. Percy Smith to Mr. Commissioner Parris.

New Plymouth, 28th February, 1870. SIR,-

In accordance with a letter received from the Hon. D. M'Lean, of the 17th February, inst., I have the honor to report upon the road works under my charge in the Taranaki district.

The portion of the New Plymouth and Patea road, at present undertaken by the Natives, is about 28 miles in length, extending from the Waingongoro River to the Umuroa Settlement; this has been divided into three sections, the first of which was undertaken by the Opunake Natives, the second by

the Oeo people, and the third by the Natives of Kaupokonui. The first section has been completed with the exception of about a mile, and is available for cart traffic; now that the opposition of Heremaia and others to the road has been overcome, there will be no

difficulty in completing the remaining mile of this section.

The works on No. 2 section have been completed and the road is open for traffic, whilst the road line in No. 3 section has been cleared a width of 20 feet the whole length as far as Waingongoro, but no cuttings of culverts have as yet been made; the Natives will go on with this portion as soon as they receive an advance upon the work already done. There are, therefore, about twelve and a half miles open for cart traffic from Opunake southwards, and the whole distance to Waingongoro ought to be completed in about six weeks time.

With reference to the requirements of the road over and above the works covered by the first estimate, the Government have already approved of the expenditure of the sum of £20 upon a swampy portion of the road through the township of Opunake, and also a sum of £14 upon drains near the Punehu River. There will also be required an additional sum for the purpose of making a causeway Punehu Kiver. There will also be required an additional sum for the purpose of making a cause of across a swamp in the vicinity of Umuroa, but until the road is cleared and the side drains cut, it is impossible to indicate the sum required to make it good. A sum of £50 has also been approved to be expended upon the road on the southern side of Waingongoro to the Waihi stream, a work which it is very necessary should be completed to make the rest of the road available. In reference thereto, I would beg to suggest for the consideration of the Government, that the Ngatiporous stationed at Waihi would be able to do this work very conveniently from their present camp; a saving of time, and probably of expense, would be thereby effected.

I think it a matter of great importance that the Waingongoro and Taungatara streams should be bridged, as both of them are subject to heavy freshets, and are therefore very dangerous to cross, although the fords at the crossings of the new line of road are very much superior to the old ones on the Native Were these two streams bridged, as also Hangatahua (for which the contract has been taken), I think there would be little fear of detention to travellers along the road from the other streams, excepting of course in exceedingly bad weather, when many of them would be impassable. The cost of the bridges would probably, be in the case of Waingongoro about £500 (70 feet span), and Taungatara £350 (50

feet span), that is for permanent bridges, on the lattice girder principle.

It is very desirable that the present road should be continued northwards, as far as Kurukohatu at least, as soon as possible, as the Native track along that part of the Coast is exceedingly bad in winter, and is likely to have a very considerable traffic on it this year. I am unable to make an estimate as to the cost of doing this work, as the line would have to be carefully gone over first.

R. Parris, Esq., Civil Commissioner, New Plymouth.

I have, &c., S. Percy Smith, Surveyor.

## No. 31.

Copy of a Letter from Mr. PARRIS to Hon. D. M'LEAN.

New Plymouth, April 15th, 1870. SIR,-I have the honor to report for the information of His Excellency's Government that having received from the Paymaster-General the sum of twelve hundred pounds for roadworks in the Taranaki and Ngatiruanui Districts the end of last month, made available on the 1st inst. for the current financial quarter, I sent for a leading man from each section of the working parties to come in for the payments promised them by Mr. Percy Smith in January last. On the 4th of the month, Hone Pihama, Ngahina, Manaia (Wi Hukanui), Ruka, and Mira, arrived in town, and the following day they went with me to pay a formal visit to the Puketapu, who had a great feast that day at Oropuriri. After returning, I paid them an advance of five hundred and twenty-six pounds ten shillings, the amount recommended as a second payment by Mr Smith for the three sections—W. Kingi's, Hone Pihama's, and Manaia's. On Wednesday morning, the 6th inst., I left for the South with them, for the purpose of recommencing the work which had been unfortunately delayed by the non-receipt of money due to them at the time Mr. Smith was removed to Auckland, and two months of the very best season of the year for roadworks lost.

I took Mr. Nelson Carrington with me to put him in charge of the works, and before handing over the money to Manaia's party (£150, the first payment for the contract between Omuturangi and Waingongoro), we rode through to Waingongoro to see the road had been opened. As it was not finished when Mr. Smith left, and on finding the work of clearing the road had been faithfully performed, I assembled the Natives at Kaupokonui to go into the question of the resumption of the work, which they wanted to defer to next spring; but after a long consultation, during which I explained to them that they would want to plant their crops in the spring of the year, they agreed to go on with it, and commenced before I left the district.

The contract taken by Hone Pihama's party between (Rawa) Omuturangi and Taungatara is finished very satisfactorily, and the balance (two hundred and fifty pounds) paid for the same.

That part of the contract taken by W. Kingi's party between Taungatara and Otahi is also finished

satisfactorily, and a second payment of one hundred and twenty pounds ten shillings made to them on account of the same, leaving a balance of one hundred pounds for that part from Otahi to Umuroa, which was stopped by Heremaia and party, but which is now being done, and will, I hope, be finished this month. Heremaia has withdrawn his opposition, and is now carrying the mail from Opunake to New Plymouth, a policy I have adopted to draw them off from their isolated habits of keeping aloof in the bush.

The additional work recommended by Mr. Smith on the road across the Opunake township, and near Punehu, is also commenced; and when the whole of the contracts between Umuroa and Waingongoro are finished, the Chief Surveyor (Mr. O. Carrington) will inspect the work and report upon it, if you

consider it necessary, before the balance which will then become due is paid.

That part of the road which is finished does credit to the natives who undertook the work, and the testimony of travellers who have passed over it bears witness thereto, as all speak very commendably of the work; but unless some attention is paid to the line when the wet weather sets in, the drains which have been opened where necessary will in all probability choke up, and render such parts impassable. Of course, all new lines of road opened for traffic involve a yearly expenditure to keep them in repair, and I would respectfully suggest for the consideration of the Government whether it would not be advisable to employ a few natives constantly to attend to the road, giving each a defined district to attend to.

At the river Oeo there is a very heavy side cutting both sides, and a good road was made, but since the contract was finished the bank below the road on the south side gave way, when the disruption took with it about half the width of the road, and made it very dangerous for a cart to pass. Soon after it occurred, a Patea settler (Mr. Joseph Hawkins) came through from Patea, on his way to New Plymouth, with a cart, and fortunately passed without an accident; and Hone Pihama, who considered Mr. Hawkins had incurred too great a risk in passing the place, immediately sent a party to fill up the chasm which had been made, sufficient for carts to pass for a time. An outlay of twenty-five pounds is absolutely necessary to repair the damage caused by the disruption, which I recommend for approval to avoid danger to travellers along the line. Mr. Hawkins was a new Plymouth settler, but having bought land in the Patea district, he purposes settling there, and on Tuesday last I met him at Opunake, with his wife and family, taking them to Patea. He spoke of the dangerous state of the road before referred to at Oeo when he came up from Patea, and expressed a hope that something would be done to it.

Having satisfactorily concluded my business south of Umuroa, I left that place Wednesday morning and came on as far as Mokotunu, where I went inland to Wakarewa to arrange for a meeting of the Ngamahangas the next day to decide the question about commencing the road from Stony River south-

wards.

The following day a number of Natives assembled, with the principal chiefs, and after a long discussion about various questions, they agreed to commence the opening of the road as soon as I can accompany them to traverse the line—across their block to Waiweranui, close to Warea—which I hope to be able to do next week, after I return from attending a meeting which is to be held at Pariaka on

Monday next and following days.

After the Pariaka meeting was over last month, I gave Mr. Rundle, the contractor for the erection of the bridge over the Stony River, notice to go on with his work, and soon afterwards he went, accompanied by His Honor the Superintendent and the Chief Surveyor (Mr. O. Carrington) to look at the site, and whilst there the Superintendent unfortunately engaged a European to clear the road at the approach to the bridge site; and whilst the European was there, Te Motu and three others came along accidentally and told him to discontinue the work, which he did, and came at once in to the Superintendent to report it. The Superintendent came with him to me, when I explained to him it was a pity he should have put a European to do the work without speaking to me, and requested them not to do anything more to it, as it would only create jealousy and opposition, and that I hoped to get the work done by the Natives.

I should not have referred to this matter only that there has been an article in the "Taranaki

Herald" making more of it than there was any occasion for.

It is desirable that the ford at the Waingongoro should be made available without delay by making the road down to the river on the Patea side. When I was in Auckland you told me you intended the Ngatiporous to do it.

I have, &c.,

The Hon, the Defence Minister, Auckland.

R. Parris, Civil Commissioner.

## PATEA.

No. 32.

Copy of a Letter from the Hon. W. Fox to Major NOAKE.

Government Offices, Wellington, 24th November, 1869.

Sir,—

24th November, 1869.

The bearer of this, Captain Morrison (late of the Taranaki Militia, and otherwise engaged in the Government service for some years past), has a knowledge of engineering and practical construction of roads. You will please to give him charge of the work, referred to in the enclosed papers, at Patea

### CONSTRUCTION OF ROADS IN THE NORTH ISLAND. 17 A.—No. 17.

Ferry and approaches. If any reason prevents the immediate proceeding with the work in question, let Captain Morrison employ himself in examining the line of road between Patea and Wanganui, and preparing sections and report.

I have, &c..

To Major Noake, Commanding, &c., Patea.

WM. Fox.

## No. 33.

Copy of a Letter from Mr. Cooper to Captain Morrison.

Colonial Defence Office, Wellington,

24th November, 1869.

I am instructed by Mr. Fox to request that you will proceed in the "Sturt" to Patea, and SIR,-

report yourself to Major Noake, commanding that district.

You will be employed in examining and laying off the approaches to the Patea Ferry, and in supervising such works as may be necessary to the removal of the ferry from its present site to the town of Carlyle, and otherwise in such works in connection with road-making as you may be instructed by Major Noake to undertake.

I have, &c., G. S. Cooper, Acting Under-Secretary,

Captain W. J. Morrison, Wellington.

## No. 34.

Copy of a Letter from Major Noake to Hon. the Premier.

Patea, 28th January, 1870. SIR. I have the honor to report for your information that the road will be open for Cobb's coach on the 1st of February, and that I have notified the same to the proprietors.

Praise is due to all concerned in this work, the men have worked well under adverse circumstances. I have, &c., W. Noake, Major.

The Hon. the Premier, Wellington.

## No. 35.

Copy of a Letter from Mr. Cooper to Major Noake.

Colonial Defence Office, Wellington, 2nd February, 1870.

SIR. I am instructed by the Hon. the Premier to acknowledge receipt of your letter of the 28th ult., reporting that the road from Wanganui to Patea would be open for Cobb's coaches on the 1st inst., and to inform you that the Government is highly pleased to learn that the road is now available.

From what Mr. Fox saw when he was on the spot he feels certain that everybody must have exerted themselves most zealously in the cause, and I am to request you will convey the substance of this letter to the several parties engaged in the work.

Major Noake, Commanding Militia District, Patea.

I have, &c.,
G. S. Cooper, Acting Under Secretary.

## No. 36.

Copy of a Letter from Major Noake to the Under Secretary Defence.

Patea, 17th March, 1870. I have the honor to forward for the information and approval of the Hon, the Colonial Secretary the enclosed report from Captain Morrison.

The Under Secretary Defence, Wellington.

I have, &c., W. Noake, Major.

## Enclosure in No. 36.

Copy of a Letter from Captain Morrison to Major Noake.

Patea, 15th March, 1870. SIR, I have the honor to report for your information the progress of the road-work in this district,

and the steps which, in my opinion, appear necessary to be taken to protect the work already done, so that the road may be kept open during the ensuing winter.

Commencing at Patea, there are about forty-two chains of earthwork, constituting the approaches to the river. Of these it will be absolutely necessary that some thirty-eight chains should be gravelled. There is an excellent bed of gravel, of very easy access, about four miles up the Patea river. A strong punt, capable of carrying twenty yards, should be procured. One of this tonnage built here would cost about fifty pounds, and could be made in about a month.

From the Patea to the Whenuakura a good track has been cleared and improved, but the approaches to that river, as in the case of the Patea, and indeed of the Okehu and Kai-Iwi, must all be protected if possible by gravel, or it will be very difficult, and perhaps impossible, to keep the road open during the winter; there are about 30 chains of earthwork to protect at the Whenuakura. I have not yet succeeded

in finding gravel nearer than Patea; I will, however, shortly, carefully prospect this district.

From the Whenuakura to the Waitotara little beyond ordinary repairs, such as filling up ruts and perhaps in places temporarily diverting the road, will probably be required, as from the open nature of

5

the country and that no fencing has as yet been put up, the traffic may be taken almost anywhere; but at the Waitotara there will be about 40 chains of cutting to protect. A bed of gravel has been found within a few hundred yards of the side cutting on the south side of the river, and I recommend that this cutting, some 20 chains long and which has just been finished, should at once be gravelled. This, I think, could be cheaply and expeditiously done, if let by contract. The other portions of the earthwork will not be ready for gravelling until the end of next month. From the Waitotara to the Okehu stream the present tracks will serve very well until there is time to complete the permanent way, on which there will be no cutting of any importance.

At the Okehu there will be about 40 chains of earthwork, which will, I expect, be finished by the Wairoa Rifles, who are now at work upon it, in about five weeks; from thence to the Kai-Iwi a good track about 100 chains in length, being the centre of the permanent line of road, has been opened and improved. I think in this district that there will be little difficulty in getting gravel within a reasonable

distance of the road.

At the Kai-Iwi the earthworks on the approach to the river on the Patea side will be unimportant, but not so those on the Wanganui side, where a considerable amount of work will have to be done before the road can be made available for ordinary traffic.

As you are aware, steps are being taken to erect bridges over the Okehu and Kai-Iwi streams,

tenders for which purpose will be immediately called for.

With the exception of the approach to the Patea on the south bank, I am in hopes that the force at present employed will be able to finish the work already laid off, in time for the gravel to be laid before winter, but the party of Armed Constabulary under Mr. Forster is much too small for the work necessary to be done at Patea, and more especially as there is much yet to be done at Oika, on the Whenuakura River.

Referring to the southern approaches to the Kai-Iwi, some few weeks since I proposed to the Waitotara Board, through its chairman, Mr. E. Lewis, that it should construct the bridges over the Okehu and Kai-Iwi streams, the Government in exchange undertaking to remove earth of equal value on the proposed new line of road from Wanganui to Kai-Iwi, less the gift of fifty pounds promised by Mr. Peet towards the erection of a bridge over the Kai-Iwi. I was principally desirous of entering into this arrangement that there might be no delay in making the approaches on the Wanganui side, and to protect if possible the Government from being compelled to undertake this work or else have the road closed. I regret to report that the Board, after consideration, has declared its inability to accept my proposal, and thus a considerable amount of work has to be undertaken by a force hardly strong enough to complete that which legitimately belongs to it.

In a day or two I propose to proceed to Hawera to lay off work in the neighbourhood of the Tangahoe and Inangahape streams, to be done by contract by the settlers in the district, and as soon as the works previously referred to are completed I intend, subject to your approval, to let nearly all the work connected with the completion of the permanent line of road, and which will consist principally of clearing

fern and flax and rounding up, by contract.

I may here remark that when the present cuttings are all completed there will be little more to be done, between Patea and the Kai-Iwi, beyond cutting the permanent line of road and rounding it up.

About 16 yards of metal to the chain, which would give a depth of gravel of 9 inches and a width of 9 feet, would be sufficient to protect the earthworks.

Major Noake, Commanding Patea.

I have, &c., WALTER J. MORRISON. Captain.

MEMO. OF EARTHWORK IN CHAINS REFERRED TO IN ACCOMPANYING REPORT.

Approaches to River, Patea Whenuakura ... 42 chains ٠. ... 30 ... ,, Waitotara 28 ,, 25 Okehu, in progress

Also in progress, Kai-Iwi and Okehu Bridges, and laying off road between Patea and Hawera. Patea, 15th March, 1870. W. J. Morrison, Captain.

## No. 37.

Copy of a Letter from Mr. Cooper to Major Noake.

Colonial Defence Office Wellington, 24th March, 1870.

SIR,-By direction of the Hon. Mr. Gisborne I have the honor to acknowledge the receipt of your letter of the 17th instant, forwarding a report from Captain Morrison on the progress of the roadworks at Patea, and remarks thereon.

In it the building of a punt for the purpose of transporting road-metal for a portion of the approaches to the river at Patea, and the purchase of two carts and two first-class horses, with necessary harness, and that about sixty chains of cutting at Waitotara should be metalled, and the work done by contract, as well as forty chains of earthwork at Okehu, are suggested by Captain Morrison, and recommended by you. You also inform the Government that the Waitotara Road Board have declared their inability to accept aid in the construction of bridges over the Okehu and Kai-Iwi stream, thus leaving the work to be done by the General Government.

In reply, I am directed to inform you that Mr. Gisborne approves the purchase of a punt at a cost of fifty pounds; also the purchase of the carts, horses, and harness, as well as the metalling necessary to protect the newly-made cuttings on the road, which should be done by contract.

With reference to the Waitotara Road Board declining to build the bridges over the Okehu and Kai-Iwi

# CONSTRUCTION OF ROADS IN THE NORTH ISLAND. 19 A.—No. 17.

streams, on the understanding proposed to the Chairman by Captain Morrison, I am directed to inform you that the General Government cannot make a road or build bridges south of the Kai-Iwi, and to beg that you will notify to the Road Board the determination of the Government to that effect. Should the Road Board still refuse to do anything, you will be good enough to let me know, in order that the Provincial Government may be at once communicated with.

Captain Morrison's report does not say if, in the construction of the Patea Road, he has required the aid of an engineer—If it be necessary, he should be furnished with such assistance; for it appears desirable that one or more general principles should be observed in the work that he is superintending:—

1. That no work should be commenced without a plan and section (however slight in character) showing cuttings, fillings-up, check-drains, and the necessary culverts to lead the rainfall to the lowest level

2. That a check-drain, a foot or eighteen inches wide, should be made in the ground three or four feet above the road, to prevent the rainfall degrading the face of cuttings or flooding the road, connecting it with the culverts demanded by the nature of the ground. In most cases this should be done before the surface ground of the intended road is broken.

3. The crown of the road intended to be metalled should be laid very high at its first formation, and rendered solid by traffic, or by a heavy timber roller, easily made upon the spot, so as to throw off the rainfall on each side, otherwise the common allowance of a depth of metal of nine inches would be

swallowed up on the heavy winter rains and ordinary traffic occurring.

4. The fundamental principle of all road-making—to make the road as dry as possible—should always be kept in view; therefore, any obstruction to the action of the sun and wind should be removed, and no water other than what falls in the shape of rain should be allowed to find its way npon the surface of the road.

I have, &c., G. S. Cooper,

Major Noake, Commanding Militia and Volunteers, Patea.

Acting Under Secretary.

## No. 38.

Copy of a Letter from Major Noake to Under Secretary Defence.

SIR,—

I have the honor to enclose copies of correspondence with the Chairman of the Waitotara Road Board, by which it will be perceived that little assistance is to be expected from them.

M. NOAKE, Major.

## Enclosure 1 in No. 38.

Sir,— Wanganui, 4th April, 1870.
I have instructions to inform you that the General Government will not undertake the

construction of the road south of the Kai-Iwi stream.

I have now, therefore, the honor to request to be informed if the Road Board, of which you are Chairman, intend to construct the road south of the Kai-Iwi, in order that the communication may be opened between your district and Waitotara.

E. Lewis, Esq., Chairman Road Board, Kai-Iwi. I have, &c.,
M. NOAKE,
Major Commanding Patea District.

## Enclosure 2 in No. 38.

Sir,—

I have the honor to acknowledge receipt of your favor of 4th inst., and in reply beg to inform you that the Board of Wardens of the Waitotara Road District have had a line from the town of Wanganui to the Kai-Iwi stream surveyed for the construction of a road, and are anxious to complete the work as soon as possible. At the same time I do not think there is much prospect of the whole of the line being finished very rapidly for want of funds.

I have, &c.,

Major Noake, Commanding Militia District, Wanganui.

EDWARD LEWIS, Chairman Waitotara Road Board.

## Enclosure 3 in No. 38.

Wanganui, 6th April, 1870.

I have the honor to acknowledge the receipt of your letter of this day's date, in which you inform me that a road has been surveyed from the town to Kai-Iwi stream, but that you do not think there is a prospect of the line being completed very rapidly for the want of sufficient funds.

Would it not be advisable at once to connect the road at the Kai-Iwi with the bridges now being erected by the General Government, so that the traffic of the public be not delayed on the completion of

these bridges?

I imagine that if your road is begun at Kai-Iwi instead of Wanganui, there will then be no delay or inconvenience to the public as soon as the General Government road is opened.

You will oblige me by returning an early answer on this subject.

I have, &c.,

The Chairman of the Waitotara Road Board.

M. Noake, Major.

## Enclosure 4 in No. 38.

Sir,— Wanganui, 7th April, 1870.

In reply to your communication of yesterday's date, I beg to inform you that the first rates collected by the Waitotara Road Board will, I think, be expended in making the portion of the line starting from the Town Belt and through what is at present known as the Swamp Road, as numerous settlers have not at present any formed road to their homesteads.

At the next meeting of the Board I shall lay your letters before the Wardens. At present I can only express my own desire that the Board should lend every assistance in their power in opening up with little delay a line of road that will be a boon to the settlers in the immediate neighborhood, and

afford facilities to the public for general traffic.

I have, &c.,

Edward Lewis, Chairman of Board of Wardens

Major Noake, Commanding Militia District of Wanganui.

Waitotara Road Board.

## No. 39.

Copy of Telegram from Mr. Cooper to Major Noake, Patea.

Wellington, 5th April, 1870.

Wanted a statement of what lines of road are in progress; length made on each; expenditure to date in round numbers, if not exact. Telegraph reply.

G. S. Cooper.

## No. 40.

Copy of Telegram from Major Noake to Under-Secretary Defence, Wellington.

Wanganui, 5th April, 1870.

REFERRED to Captain Morrison's report, forwarded with my letter of the 17th ultimo, for the progress of the roads. The pay sheets will show what troop labour has been employed. All vouchers for expenditure for road have been sent on to Defence Office, charged to the road fund. The blockhouse expenditure will be covered by £700 or £800. I could give more information, but all my papers are in Patea. All that is required can be obtained in the office in Wellington. Will telegraph to Patea in the meantime. The Wairoa Rifles at work at Okehu and Kai-Iwi, Veterans at Wereroa, A. C. at Patea, and Militia at Tongahoe, between Hawera and Manutahi.

M. Noake, Major.

## No. 41.

Copy of a Letter from Major Noake to Under-Secretary Defence.

Sir,—
Patea, 12th April, 1870.

I have the honor to report, for the information of the Government, that I have received tenders for the construction of bridges over the Kai-Iwi and Okehu streams, as follows:—

£392 10 0 To be erected in 2 months. Goodall . .  $2\frac{1}{2}$   $2\frac{1}{2}$ £5840 Marshalls . . ... £520 0 - 0M'Neil  $\begin{smallmatrix}0&&0\\0&&0\end{smallmatrix}$ £5253 Coleman and North ... . . £550Bell and Robertson ... 3

Mr. Goodall is the lowest tender, and the time for erection the least, consequently I accepted it.

Since then Captain Morrison has informed me that the piles for the bridge as described in the specifications will be too weak, and insists they must be stronger; consequently the contractor makes an extra charge of £44, as the timber will have to be brought from the Sound. However, with this addition, the bridges will cost £436 10s, being very much cheaper than any of the other tenders.

I have, &c.,

The Under Secretary Defence.

proceeded with forthwith.

M. NOARE, Major.

## No. 42.

Copy of a Letter from Lt.-Col. READER to Major NOAKE.

Colonial Defence Office, Wellington, 22nd April, 1870.

Sir,—

I am directed to inform you that Mr. Hales, the engineer of the Wanganui Bridge, has been requested to undertake the supervision of the bridges over the Kai-Iwi and Okehu streams, and other works in that neighbourhood, to whom any contracts in that district should be sent, and he will submit

works in that neighbourhood, to whom any contracts in that district should be sent, and he will submit them, with his remarks, for the approval of the Government.

With reference to the bridges in question, it will be necessary that the plans and sections, with a copy of the specification, be at once sent to Mr. Hales, with a request that he will remark upon them and submit them to this office for the approval of the Government, in order that the work may be

I have, &c.,

Major Noake, Commanding Militia District, Patea.

H. E. READER, For the Acting Under Secretary.

#### CONSTRUCTION OF ROADS IN THE NORTH ISLAND. 21 A.-No. 17.

## No. 43.

Copy of a Letter from Lt.-Col. READER to Mr. HALES.

Colonial Defence Office, Wellington,

SIR,-

22nd April, 1870.

By direction of the Hon. Mr. Gisborne I have to ask you to be good enough to undertake the supervision of roads and bridges in the Wanganui and Patea districts now under process of construction by the General Government.

Major Noake has been requested to send you the plans, sections, and specifications of two bridges over the Kai-Iwi and Okehu streams. When you shall have received them and remarked upon them, you will be good enough to submit them to this office, and as time goes on to act in the same manner with any other contracts that you may receive.

W. H. Hales, Esq., Engineer, Wanganui.

I have, &c.,
H. E. READER,
For the Acting Under Secretary Defence.

## No. 44.

Copy of a Letter from Mr. Hales to Lt.-Col. Reader.

Wanganui, 6th May, 1870. I have the honor to acknowledge the receipt of your letter dated the 22nd April, requesting me to undertake the supervision of roads and bridges in the Wanganui and Patea districts now under process of construction. I delayed replying thereto until I had received the plans of the two bridges. These not coming to hand for several days, I called on Major Noake at Patea, and was informed that they had been sent on to Wellington.

This day I have received from the Defence Office the specification of the bridges at Kai-Iwi and Okehu, and a specification and agreement for metalling a portion of the road near the Waitotara River, but have not received the plans. As the specification does not mention the dimensions or mode of construction of either of the bridges, nor the amount to be paid to the contractor for the execution of these works, I cannot at present form a very correct idea of their nature or extent.

I have been over and examined all the road-works now in progress between Wanganui and Patea, and am constrained to say that though I shall give all possible supervision I cannot expect (under the present system of carrying on the works) to secure their being executed with cheapness and efficiency. There are several parties of men from the various troops working at different places on the line of road under the direction of their officers, these men seem to work very well; but in consequence of the inefficient manner in which the works are set out, a great deal of labor is unnecessarily expended, and the road, when completed, is seldom of good construction. So much of my time is taken up with the direction of the Wanganui bridge works that I could not leave sufficiently long to set out any portion of the road-works myself. I would, therefore, beg to recommend that the services of some good practical road surveyor be temporarily engaged to set out and level the most important parts of the road; plans, sections, &c., could then be prepared under my direction, and the works executed by the various road parties in accordance with the plans, and in a systematic and economical manner.

There are one or two men resident in Wanganui who have had great experience in road-making; the cost of whose services, if employed, would be more than compensated by the saving of labour alone, and the work would be done in a superior manner.

The report upon the Kai-Iwi and Okehu Bridges will be forwarded as soon as I have received and examined the plans.

I have, &c., Wm. H. Hales, Engineer.

The Acting Under Secretary for Defence, Wellington.

## No. 45.

Copy of a Letter from Lt.-Col. READER to Mr. HALES.

Colonial Defence Office, Wellington,

SIR-

11th May, 1870. By direction of the Honorable Mr. Gisborne, I have to acknowledge the receipt of your letter of the 6th instant, respecting the road works at Patea; and in reply, to inform you that your suggestion of employing professional aid in setting out the work in a proper manner is approved, and the Government

rely upon your using every means in your power to forward the works.

The plans of the bridges and the telegrams respecting the punt should have reached you by this, and will enable you to report upon them forthwith, as no time should be lost after the delays that have occurred,

in putting everything connected with the traffic of the country in such a state of preparation for the winter, that the works may be resumed with the least possible loss to the Government in the spring. At the same time, every day of this fine weather should be made the most of, and the greatest force directed on those spots on the road where the rain or floods are likely to do the most damage, if you are not able

Again, I can only repeat that the Government rely upon your exertions in expending the means at your command in the most economical and efficient manner.

I have, &c.,

W. H. Hales, Esq., Engineer, Wanganui.

H. E. READER, For the Acting Under Secretary.

## No. 46.

Copy of a Letter from Mr. Hales to Mr. Cooper.

S1R,---

Wanganui, 14th May, 1870.

I have the honor to acknowledge the receipt of your letter dated the 11th inst.; also plans and specifications of Kai-Iwi and Okehu Bridges, and a telegram in reference to a punt at Patea.

As directed, I have examined the plans and specifications of the Kai-Iwi and Okehu Bridges, and also the ground upon which they are to be erected, and beg to report that I consider the sites of the bridges to be well selected, but the bridges are not of the best design, and much better structures might have been provided without increasing the cost of the works. The principal objections are, that the main spans of both the bridges are unnecessarily long, consequently requiring beavy trussed oirders in the Kai-Iwi Bridge, and long beams of large section in the Okehu. The intermediate beams are not placed so as to give the greatest support to a rolling load; being placed immediately in the centre of the roadway, they do not support the flooring planks in the places where the wheels of carts will bear heaviest upon them. Ends of trussel girders do not take a good bearing over wheels of carts will bear heaviest upon them. Emus or erussor graces at the piers, and the beams are not continuous throughout the whole length of the bridges. There are no The railings of bridging blocks or other contrivances for supporting the girders laterally over the piers. The railings of the Kai-Iwi Bridge are too slight. In my judgment, both the bridges are unnecessarily high, causing heavy earthwork embankments to be required at each end. The specifications of the works are not very well drawn: they are vague, and do not sufficiently explain the details: with a sharp contractor to deal with, a good many disputes, and perhaps some extras, will be likely to arise in consequence.

In reference to the telegram, I beg to say that the punt has been affoat about a week, and cannot be made available for any purpose unless furnished with sweeps; an anchor and chain are also required for securing her when affoat, and working in the river. I estimate the cost of this gear (two 20 feet sweeps, 1 cwt. anchor, and 15 fathoms of  $\frac{1}{2}$  inch chain) at £8, but at the same time I am of opinion that the operation proposed of bringing down gravel in the punt for metalling the roads between the Patea and Whenuakura Rivers, will prove such a tedious and expensive affair, that the scheme will soon have to be abandoned. The place where it is proposed to obtain the gravel is situate about four miles above the landing place at the ferry, where a stage has been erected for receiving the gravel when landed from the I estimate the greatest quantity of gravel that can be brought down at one time at about eight cubic yards; the punt will not carry more, and, as she can only be taken up and down the river with the tide, it will not be possible to make more than one trip each day, if so much, and when there is any fresh in the river it will not be easy to take the punt up to the gravel pits. On my last visit to Patea, ticed indications of gravel in one or two places near the line of road, and directed Sub-Inspector Forster to allow three or four men of his party to examine the different gullies, and endeavour to find a seam of gravel. I am confident they will succeed, and in a few days a sufficient quantity of gravel will be found to metal the roads cheaply and efficiently. The punt will probably be useful for carrying timber from the bush up the river.

I have engaged the services of Mr. James Hogg, who was for many years a District Engineer for the Wellington Provincial Government, to set out the roads in the Patea District. I was over a portion of the line with him to-day, and pointed out the work most requiring to be done. I hope in a few days to have the road works proceeding in a systematic manner, and, with the force now employed, to have the most difficult portions of the road opened up before the winter rains set in, so as to materially retard the works.

The contractor has signed the plans and specifications of the Kai-Iwi and Okehu Bridges, and says he has ordered the timber and ironwork, and expects to commence the erection of the bridges in about a week from this.

The contractors for the metalling at Waitotara have commenced operations, and have completed about four chains of the work.

I will return the plans of the bridges as soon as I have made copies for my own use in supervising the erection.

The Acting Under Secretary for Defence, Wellington.

I have, &c., WILLIAM H. HALES, Inspector of Roads, Wanganui.

## WANGANUI—TAUPO.

No. 47.

Extract from a Memorandum by the Hon. the Premier, dated 31st January, 1870.

I have also authorised the cutting of a horse track from Wanganui to Muri Mutu (Taupo country) by native party, under the superintendence of Mr. C. Field, C.E.; Mr. Buller, R.M., will certify to progress and completion of this work, which may extend over six weeks, and involve an outlay of £300.

W. Fox.

## CONSTRUCTION OF ROADS IN THE NORTH ISLAND. 23 A.-No. 17.

## No. 48.

Copy of a Letter from Mr. Buller, R.M., to the Hon. W. Fox.

Wanganui, 12th January, 1870. SIR,-

I have the honor to report for your information that in pursuance of your instructions I have made arrangements for starting the Mangawhero-Taupo party.

I have made a provisional arrangement with Mr. Field, subject to your approval, provided he can obtain leave of absence from the Town Board, and I have engaged a party of ten Maoris, at the rate of

five shillings per diem each (finding their own provisions), to cut the line and construct the road.

Mr. Field is willing to undertake the work of laying off the line and superintending the road party at the rate of two guineas per diem. As it will be necessary for him to find a substitute in town, and as he will sacrifice his private business as a surveyor during his absence, I do not consider his demand by any means unreasonable.

It will be necessary to engage one (or perhaps two) Europeans to assist the surveyor, at the rate of

six shillings and sixpence per diem, inclusive of rations.

The road party will be in charge of Aperahama Tamanuiarangi, who will act as overseer, and ought

to be paid at an advanced rate, say seven shillings and sixpence per diem.

The natives have begged for a few days' grace, for the purpose of getting in their ripe crops. But, if Mr. Field's relations with the Town Board do not cause further delay, I hope to have the road party ready to start on Monday morning next.

I have satisfied myself that no difficulties as to tide will present themselves, the natives being extremely eager to see the road commenced, and the overseer of my road party (Aperahama) being one of the principal owners.

The Hon, the Premier.

I have, &c., W. Buller, R.M.

No. 49.

Copy of a Letter from Mr Cooper to Mr. Buller, R.M.

Colonial Defence Office, Wellington, 15th February, 1870.

SIR,-I am instructed by Mr. Gisborne to acknowledge the receipt of your letter of the 12th ult., addressed to the Hon. the Premier, detailing the arrangements made for starting the Mangawhero-Taupo road party, and to request you will be good enough to report from time to time as to the progress of the work, and also to desire Mr. Field to do the same through you.

I am to add that the Government is anxious the works should be pushed on as much as possible

during the fine weather.

I have, &c., G. S. Cooper, Acting Under Secretary.

W. Buller, Esq., R.M., Wanganui.

No. 50.

Copy of Telegram from Mr. Buller, R.M., to Hon. W. GISBORNE.

Wanganui, 14th February, 1870.

REQUIRED authority to engage a second party of ten natives for the Mangawhero-Taupo roads. The party already engaged having been absent for ten or twelve days, the road-cutters are some two miles behind the engineer who is laying off the line. As we are paying the latter two guineas a day, and two assistants 7s. 6d. each, it will be more economical to increase the road party. The Hon. Mr. Fox left the matter very much to my own discretion, but I would prefer specific orders. Mr. Field asks for Europeans, but I consider it better, on grounds of policy, to engage natives claiming an interest in the land.

W. Buller, R.M.

No. 51.

Copy of a Telegram from Hon. W. GISBORNE to W. BULLER, Esq., R.M.

Wellington, 14th February, 1870.

I QUITE agree with you as to the policy of employing natives having interest in land on roads traversing it. I authorise you to engage a second party of ten natives for the Wanganui-Taupo road.

W. GISBORNE.

No. 52.

Copy of a Letter from Mr. Buller, R.M., to Mr. Cooper.

Resident Magistrate's Office, Wanganui.

19th February, 1870. SIR. I have the honor to acknowledge the receipt of your letter of the 15th instant, instructing me to report from time to time on the progress of the Mangawhero-Taupo Road.

I have the honor to forward herewith two interim reports from Mr. H. C. Field, the Engineer in charge.

The Under Secretary for Defence.

I have, &c., W. Buller, R.M.

## Enclosure 1 in No. 52.

Copy of a Letter from Mr. FIELD to Mr. BULLER, R.M.

SIR,-Wanganui, 14th February, 1870.

In the event of a second working party being employed on the Mangawhero-Taupo Bridle Road, a further supply of tools will be required for their use, and another overseer to take charge of the party. I think either Mr. G. Brooking or Mr. W. Hurley would be willing to undertake the duty. They are both steady, reliable men. The former has had some experience in making roads to his old residences at the Goat Valley and Tauraroa; and the latter was for a long time engaged in gold digging, and is a good hand with pick and shovel. Both of them, from having lived at Turakina, are known to the natives, who would be likely to form the working party, and both speak Maori sufficiently to be able to make themselvee well understood.

I have now got such a start of the present working party, that I feel no doubt of being able to keep two parties fully employed right up to the plains.

I have, &c., H. C. FIELD,

W. Buller, Esq., R.M., Wanganui.

Engineer in charge of Mangawhero-Taupo Road Party.

## Enclosure 2 in No. 52.

Copy of a Letter from Mr. FIELD to Mr. BULLER, R.M.

Upper Huripari, near Te Pukohu, 5th February, 1870. SIR,-

During the past week the Waipaika side cutting has been finished, and the line widened and levelled

for more than a mile this side of it, over some of the worst ground along the whole route.

I met with an unexpected check at the Huripari Stream. When Mr. Pilmer and I came up, we crossed it easily, there being a very good descent on the South side, and a fair average ascent on the North. As we crossed the stream just where we happened to strike it without having to search for a crossing, and there was nothing to indicate that the spot differed from the rest of that part of the gully, I took no particular note of its position, or of the approach to it, and took the road line towards it, just according to the inequalities of the ground, expecting to be able to cross anywhere. I was much surprised, therefore, on Tuesday, at being told that there appeared to be no practicable crossing whatever, and that the stream seemed to run everywhere between precipitous banks 40ft. or 50ft. high. I found, however, that it did so, and it was not till Thursday morning that I found our crossing-place nearly half a mile above where I had supposed it to be. We have got a good line over it at that place, with easy gradients and very little side cutting, so that the time has not been wasted. I have cut the line right across to the flat on the Te Pukohu side, and yesterday afternoon burned off the fern up to Te Pukohu, between which and the Mangawhero I shall burn it to-day, and so cut the line through to the river on Monday

It would, I think, be well if you could ascertain the intentions of the Matatera natives as regards returning, and if they are not likely to do so soon, to put on another party in their place, or I shall be getting so far ahead of the work as not to be able to see to it as I could wish. It is true I might leave off the marking of the line for a time at the Mangawhero, and return and help with the widening and levelling; but this seems hardly worth while, except as a last resource. Our present camp is fully a mile beyond the work, and by Tuesday, at furthest, I shall have got the line three miles beyond the camp, and shall be wanting to shift to the other side of the river. It seems a pity that more Europeans cannot be put on at the work, as they not only do far more than Maoris, but the latter are as it were put on their mettle, and work far more steadily and better when mixed with white men than when working by them-No amount of mere overlooking will produce the same effect, and a mixture of work and overlooking seems, I think, to have rather an opposite tendency. Mr. Pilmer is a very hard and steady worker, but the mere fact that he had constantly to leave off to look to the Maoris and give them directions, appeared to set them an example of taking frequent rests, of which they were not slow to avail themselves.

I hope the matter will be arranged somehow so as to let the work be pushed on, as I should not like to lose the benefit of this fine weather for carrying on the line.

I have, &c., H. C. FIELD,

To W. Buller, Esq., R.M., Wanganui.

Engineer in charge of Mangawhero-Taupo Road Party.

## No. 53.

Copy of a Letter from Mr. Buller, R.M., to Mr. Cooper.

Wanganui, 23rd February, 1870. SIR,-Referring to my letter of 19th instant, I have now the honor to forward an interim report from Mr. Field, together with a letter from Aperahama, claiming compensation for the losses sustained by the road party.

I have further to report that I have (through Aperahama) engaged the services of an extra party

of ten men, as authorised.

SIR,-

The Under Secretary Defence.

I have, &c., W. Buller, R.M.

## Enclosure 1 in No. 53.

Copy of a Letter from Mr. FIELD to Mr. BULLER, R.M.

Huripari, 19th February, 1870. The Maoris have worked pretty well this week, and the road is completed as far as the crossing

## CONSTRUCTION OF ROADS IN THE NORTH ISLAND. 25 A.-No. 17.

of the Huripari stream, and the side cutting down to which is more than half finished. Beyond the stream the line is cut to its full width to opposite Te Pukohu, and wants no more than a little levelling to complete it; and yesterday I was across the Mangawhero at Te Mai, burning off some patches that my former fires had left, and marking off the crossing.

The Maoris had a great misfortune yesterday. Two of them went back to their where to dinner, and carelessly left too large a fire burning. The result was that on the return of the party in the evening they found the hut and all its contents destroyed.

They have lost their blankets, clothing, food, a double-barrelled gun, ammunition, &c., &c., and are in great tribulation accordingly.

I have seen or heard nothing of Aperahama and the other natives.

I have, &c.,
H. C. Field, Engineer in Charge of Mangawhero-Taupo

Road Party.

W. Buller, Esq., R.M., Wanganui.

P.S.—With our present strength a man will be able to ride through to Mangawhero by the end of next week, or sooner if the second party comes.

# Enclosure 2 in No. 53.

TRANSLATION.

To Mr. Cooper,-

Matatera, 23rd February, 1870.

Friend, salutations. I write to you respecting the burning out of my men engaged on the All their clothes were lost; also, a double-barrelled gun, a cheque for £6, fifteen blankets road-work. four shawls, four blue shirts, three coats, twelve pairs trousers, ten flannel shirts.

Friends, the Ministers of the Government, I beg your sympathy for us in this matter. Decide quickly, because these men are now quite without clothes. Ended. From your friend,

APERAHAMA TAHUNUIRANGI.

## No. 54.

Copy of a Letter from Mr. Cooper to Mr. Buller, R.M.

Colonial Defence Office,

Wellington, 25th February, 1870. I have the honor to acknowledge receipt of your letter of the 19th inst., covering two interim reports from Mr. Field on the progress of the Mangawhero-Taupo road, and by direction of Mr. Gisborne to request you will be good enough to inform me if the work is being performed by job or piece; as, if not the latter, the Government is anxious that it should be so arranged, if practicable.

I have, &c.,

G. S. COOPER,

W. Buller. Esq., R.M., Wanganui.

Acting Under Secretary.

## No. 55.

Copy of a Letter from Mr. Buller, R.M., to Mr. Cooper.

Wanganui,

SIR,-

28th February, 1870.

I do myself the honor to forward herewith a further report from Mr. H. C. Field.

The Under Secretary for Defence, Wellington.

I have, &c., W. Buller, R.M.

## Enclosure in No. 55.

Copy of a Letter from Mr. FIELD to Mr. BULLER, R.M.

Mangawhero, opposite Te Mai, 26th February, 1870.

SIR.-

Of the new working party one, a mere boy, arrived last Sunday, and another came with Apera-

hama on Wednesday; two more are promised on Monday, and the remainder in the course of next week. During this week the Huripari cutting has been completed, as well as that along the ascent to the high broken plateau beyond; about a mile across the plateau has also been finished, and the Maoris are now at work at the ascent to a low saddle, a short distance this side of Te Pukohu. About a mile only of line has been widened, as there were so many roots to grub on the rise from the Huripari that I left the cutting party with Mr. Pilmer since Tuesday, while my son and I went on with burning off and selecting the line up the Mangawhero Valley. This is now done as far as the third crossing of the river, just below a place called Tahungatutu, the ground proving even easier than I had anticipated between the second and third crossings.

Persons can now ride right through to Mangawhero, and pack-horses have gone through for loads of peaches on Thursday evening and this afternoon, though several days will still elapse before the road is completed to this point, there being a considerable amount of pig rootings to level, and tutu stumps to remove on the last two miles, as well as some bits of light side cutting to do on the descent from Te Pukohu to the river, to make the road thoroughly practicable for pack-horses.

I have, &c.,
H. C. FIELD,
Mangaw Engineer in charge of the Mangawhero-Taupo Road Party.

W. Buller, Esq., R.M., Wanganui.

No. 56.

Copy of a Letter from Mr. Buller, R.M., to Mr. Cooper.

Wanganui,

1st March, 1870. SIR,-

I have the honor to acknowledge the receipt (to-day) of your letter of 25th ultimo, relating to the Mangawhero-Taupo road-work.

I lost no time in communicating with Mr. Field on the subject of your letter, and I forward herewith a letter from that gentleman, explaining the difficulty of arranging for piecework till the line has been cut. The future widening of the track might advantageously be done by contract.

Mr. Field has, however, assured me that he will use his best exertions to give effect at once to the

suggestion conveyed in your letter, if practicable.

I have, &c., W. Buller,

The Under Secretary for Defence, Wellington.

Resident Magistrate.

Enclosure in No. 56.

Copy of a Letter from Mr. FIELD to Mr. BULLER, R.M.

Wanganui.

SIR,

1st March, 1870.

In reference to the wish which you have informed me has been expressed by the Colonial Secretary that the work on the Mangawhero-Taupo road should as far as possible be done by contract or piecework, although I will endeavour to carry out that wish in any case where I can see a possibility of

doing so, yet I do not at present consider it feasible. In the first place, the terms on which the natives have been engaged seem to stand in the way of

any such arrangement; and in the next, Maoris are so different from Europeans, both in their mode of working and in their ignorance of the fair price of road-work, that it would be very difficult to make a bargain with them in respect of earthwork, or to get them to complete a job quite as it should be done, or within reasonable time. From my own experience of natives I think that they would be very apt to take their time over piecework, and that thus the time occupied in the construction of the road might be considerably lengthened. So long as they are paid by the day, the overseers can always insist on their doing a reasonable amount of work; but if they took a contract for a certain length, to be paid for on completion, they would regard it as entirely their own affair whether they worked or not, and would be

always wanting advances of money on account of the work in some form or other.

Another difficulty in the way of getting the work done by contract arises from the nature of the work. This is not an ordinary case where a road line is pegged off, sections taken, and specifications prepared in the ordinary manner; but the natives follow along the line as my son and I select it, and cut it through, widening and levelling it so as to be practicable for pack-horses. The dense nature of the vegetation would at present make the ordinary routine almost impossible, and under any circumstances such routine would delay and lengthen the work to an extent which would more than swallow up any small saving that might be effected by contract work on a job of such trifling magnitude. The case will be different when the road comes to be widened and properly graded so as to be practicable for drays, as the cost of the work would be sufficient to justify the expense of regular sections and specifications being prepared, and the experience the Maoris are gaining as to the quantity of work they can perform in a given time will make it far easier to let the work to them by contract.

I have, &c.,

H. C. FIELD, Engineer in Charge of the Mangawhero-Taupo Road Party.

W. Buller, Esq., R.M., Wanganui.

No. 57.

Copy of a Letter from Mr. Buller, R.M., to Mr. Cooper.

Wanganui, 6th April, 1870.

SIR,

I have the honor to forward the accompanying report from Mr. Field.

I have, &c.,
W. Buller,

The Under Secretary for Defence, Wellington.

Resident Magistrate.

Enclosure in No. 57.

Copy of a Letter from Mr. FIELD to W. BULLER, R.M.

Mangawhero, opposite Te Mai,

5th March, 1870.

SIR. Mr. Booth's return to town affords me an opportunity of sending a few lines, to inform you of

our week's proceedings.

Our progress this week has been comparatively small. The rain in the beginning of the week, which was far heavier here than in town, stopped the work during the half of Monday and the whole of Tuesday, and caused several soakages to show along the road at places which were dry when we formed it. I saw them on my return on Wednesday, and sent Mr. Pilmer back with a party next day to put in drains at them before they should become soft with the traffic, of which there is even now far more than could have been supposed, owing to Natives coming up to see those employed, and to have a look at the road. Lockett only arrived yesterday, so I had to look after most of the Natives during the day, and yesterday had to accompany him and his gang to point out the line, and show him how I wanted the work done. By to-night, however, we shall have the line completed to this place, and cut to its full width to the next crossing at Ongahi one and a half miles further on.

The new men are dropping slowly in; five of them came on Wednesday, and two more yesterday. The former, however, came without tools and had to go back for them, so only commenced work yesterday. Some of the new hands are such mere boys that I have refused to give them men's pay, and have only agreed to allow them 3s or 4s per day, according to their working steadily or otherwise. Their relatives seem annoyed at this, but I think the rest approve it, so that no dissatisfaction injurious to the work is likely to arise out of it.

I took the opportunity on Thursday of sounding the men as to the contract project, and found a further difficulty arising out of the work being restricted to the owners of the locality. They at first seemed to like the idea, but when I explained that the contracts would be marked off and tenders from them invited, so that the lowest tenderer would get the job, they at once declined to compete in any such way, and said they were all brothers, and must take the contracts in a body, at prices to be agreed on between me and the whole. It is evident that this would render any saving by the piecework plan almost impossible.

Mr. Booth will be able to inform you as to the style of the country we have now got into, and the practicability of the line as far as we have gone, so that there is no necessity for me to say anything more than I have already done on that score.

1 have, &c.,

H. C. FIELD, Engineer in charge of the Mangawhero Taupo Koad Party.

W. Buller, Esq., R.M., Wanganui.

P.S.—Haimona Hiroti came here yesterday to see Aperahama, and arrange that, as there are only a few old men at present at Koriniti, the hands now at work shall go right through, the only change being that after their boundaries are passed he will take the charge instead of Aperahama.

H. C. FIELD.

## No. 58.

Copy of a Letter from Mr. Buller, R.M., to Mr. Cooper.

Wanganui,

SIR,-

14th March, 1870.

I have the honor to forward herewith the accompanying report from Mr. Field.

The Under Secretary for Defence, Wellington.

I have, &c., W. Buller, R.M.

## Enclosure in No. 58.

Copy of a Letter from Mr. FIELD to Mr. BULLER, R.M.

Tahuangatu, Mangawhero, 12th March, 1870.

SIR.

Aperahama returned here on Tuesday with some more men, and remains here still. We have now twenty-one working hands, but as some of these are boys at a lower rate of pay, and the extra man is a Ngatimaniapoto Kingite, whom Aperahama claims great credit for having induced to abandon the error of his ways and serve the Government, I have thought it best not to object to our being overnumbered, though it makes it very hard work for my son and myself to keep work marked out for them.

Aperahama has expressed a wish that the question of remuneration for his services should be left to be settled between him and the Government directly. He represents, what is doubtless to some extent correct, that he is entitled to be paid for his time occupied in engaging men for the work, and arranging for supplying them with provisions, as well as for the days when he is here, of which alone I have of course any account; and I have therefore referred him to you on the subject.

During the week we have made good progress. The road is now completed as far as the third crossing, and the men are working to-day at the ascent from the river to this place; and the ground is cleared, and the line marked out, nearly to the Wetaweta stream, about two miles further on.

I am also glad to be able to report that during the week we have met with four small seams of gravel. Although such an article is more likely to be met with in this locality, where the flats are everywhere strewn with large waterworn stones, than it would be a few miles further on, yet the discovery is important, not only as affording incontestable proof of the existence of a material, the apparent absence of which is the only objection to the line, and affording reason to hope that a regular search for it might lead to the finding of larger quantities, but because what we have met with is sufficient in amount and favourably situated for supplying metal for the approaches to the crossings, which but for this would have had to be carted a distance of from twelve to fifteen miles over hilly ground, or obtained by the equally expensive process of collecting and breaking up the stones scattered over the surrounding lands.

Aperahama spoke to me about an arrangement which he wished to make to put on four men permanently to procure food for the workers, but I turned a deaf ear to it, considering that the means we have already taken of working an hour earlier during the last four days of each week, so as to leave the Saturday afternoon free, and the arrangement which was made when Mr. Booth came up of sparing three boys during the whole of each Saturday for the purpose of taking pack-horses to bring up potataes or other articles from a distance, were sufficient for the purpose of

## A.—No. 17.

## CORRESPONDENCE RELATIVE TO THE

keeping the party supplied with provisions, particularly when taken in connection with the immense number of wild pigs and birds along the line, and the abundance of eels in the Mangawhero river. can, however, talk over this and any other matter connected with the work when we meet.

I have, &c.,

Road Party.

H. C. FIELD, Engineer in charge of the Mangawhero-Taupo

W. Buller, Esq., R.M., Wanganui.

No. 59.

Copy of a Letter from Mr. Cooper to Mr. Swainson.

Colonial Defence Office, Wellington, 26th March, 1870.

SIR,-

By direction of the Hon. Mr. Gisborne, I beg to refer you to a reduced copy of your sketch map of Lower Taupo, Kaimanawa and Rangitikei, showing the route of the Wanganui Union Company's exploring party, and the printed copies of reports by yourself and Messrs. Field and Hogg upon roads in that district.

As it appears desirable that the information on the subject of roads now being prepared for Parliament should be as clear as possible, the reports by yourself, Mr. Field, and Mr. Hogg, with your plan, should be so full and distinct as to enable the Government to point out the best line of road, and any other information that an exploration of the country should supply.

Will you, therefore, be good enough to mark on the sketch now enclosed, in carmine, the line from Major Marshall's to Messrs. Birch's station, described in your report\* addressed to the Hon. Colonial Secretary, dated 29th January, 1870, and to say if you explored a line from Pakihiwi to Taupo, and if so, to mark that as well in carmine upon the sketch now referred to you, at the same time informing me if you reported upon the latter mentioned line, and whether that report was transmitted to the Government. The line referred to by Mr. Hogg should be marked in blue; and if it is in your power, after reading the report by Mr. Field, to make your plan still fuller by such additions, in colour or otherwise, as you may think fit, I shall feel obliged. If the names of the rivers where they reach the sea, and their courses in firm blue lines were distinctly marked, the reports could be read with greater facility by strangers to the district; and still further help would be afforded if the highest point between the West Coast and Taupo were shown, with the water-sheds in different colours, pale yet distinct, so as not to interfere with other natural features.

I have, &c.,

G. S. COOPER,

G. F. Swainson, Esq., Rangitikei.

Acting Under Secretary.

No. 60.

Copy of a Letter from Mr. Swainson to Mr. Cooper.

Tutu-Totara, Rangitikei,

STR,-

14th May, 1870. I have the honor, in compliance with your letter of 26th March, 1870, to return the map of the Lower Taupo, Kaimanawa, and Rangitikei Districts, referred therewith to me, and have, in accordance with your request, marked in distinguishing colours my own route in company with Mr. Hogg, and also the general course of Mr. Hogg's return track by Turakina.

With reference to the road from Pakihiwi to Taupo, I beg to inform you that no special report was

made by me thereon.

Our route was by the general native track, which, with a few trifling deviations, requires little alteration. It is through an open though rather broken country, passing through only one small piece of bush (about twenty chains) at the Turangarere Falls, on the Hautapu.

It falls into Mr. Hogg's proposed road a mile or two North of Ohautupaka, thence through the Rangipo Plain, until the Wai-hohonu is reached, a stream running in a rather deep ravine, which com-

pletely divides the Northern base of Ruapehu from the Southern base of the Tongariro group.

The Wai-hohonu is the first of a series of similar gullies whose streams run into the Waikato, cutting across the track at intervals of about  $\frac{1}{4}$ ,  $\frac{1}{2}$ , or 1 mile, until within three or four miles of Poutu. offer no great impediment—simple side-cuttings only are required; a little bush is generally found at the bottom, but the sides are quite open.

From Poutu to Tokanu, the road skirts the base of Pihanga, and requires only a few small bridges

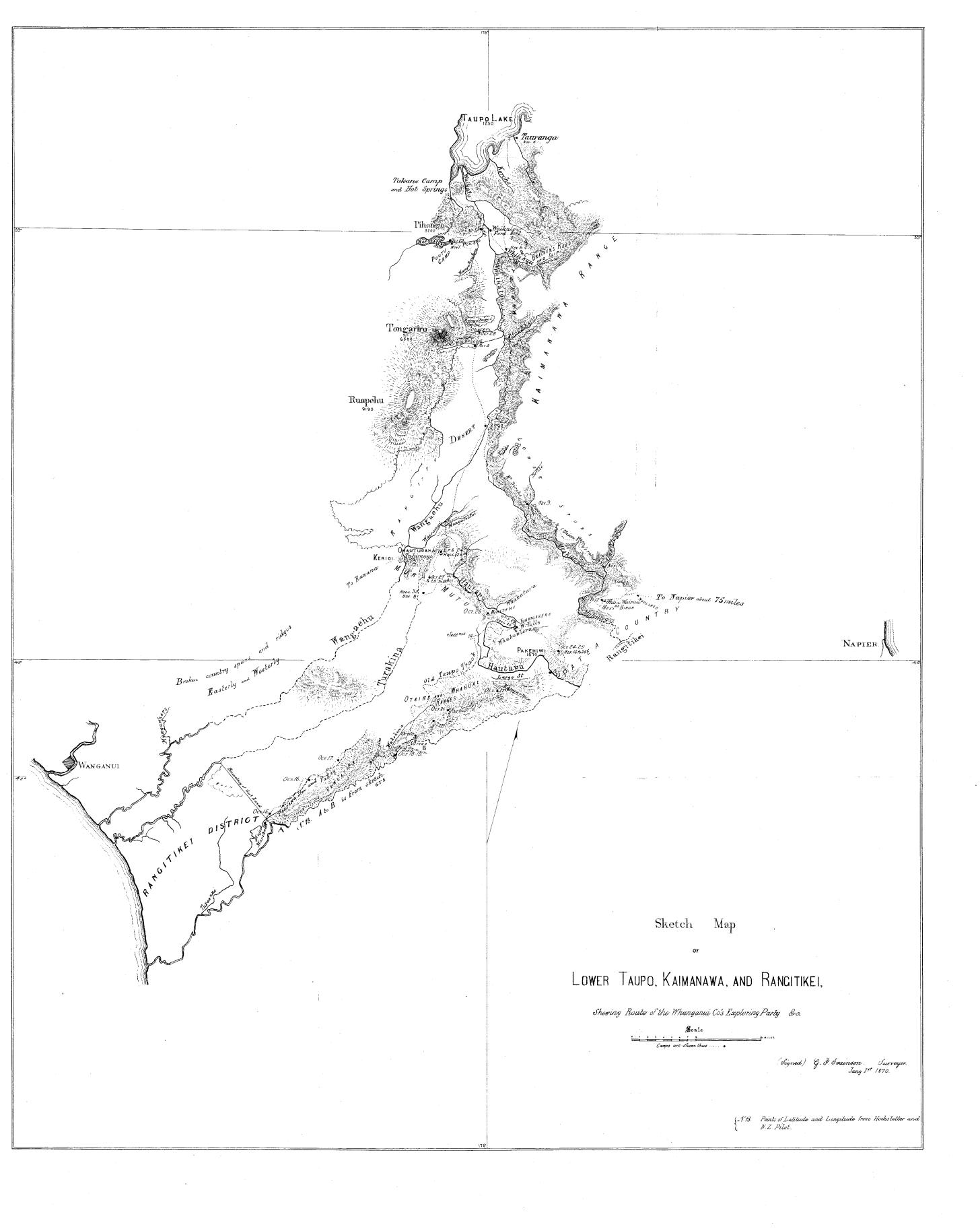
or culverts.

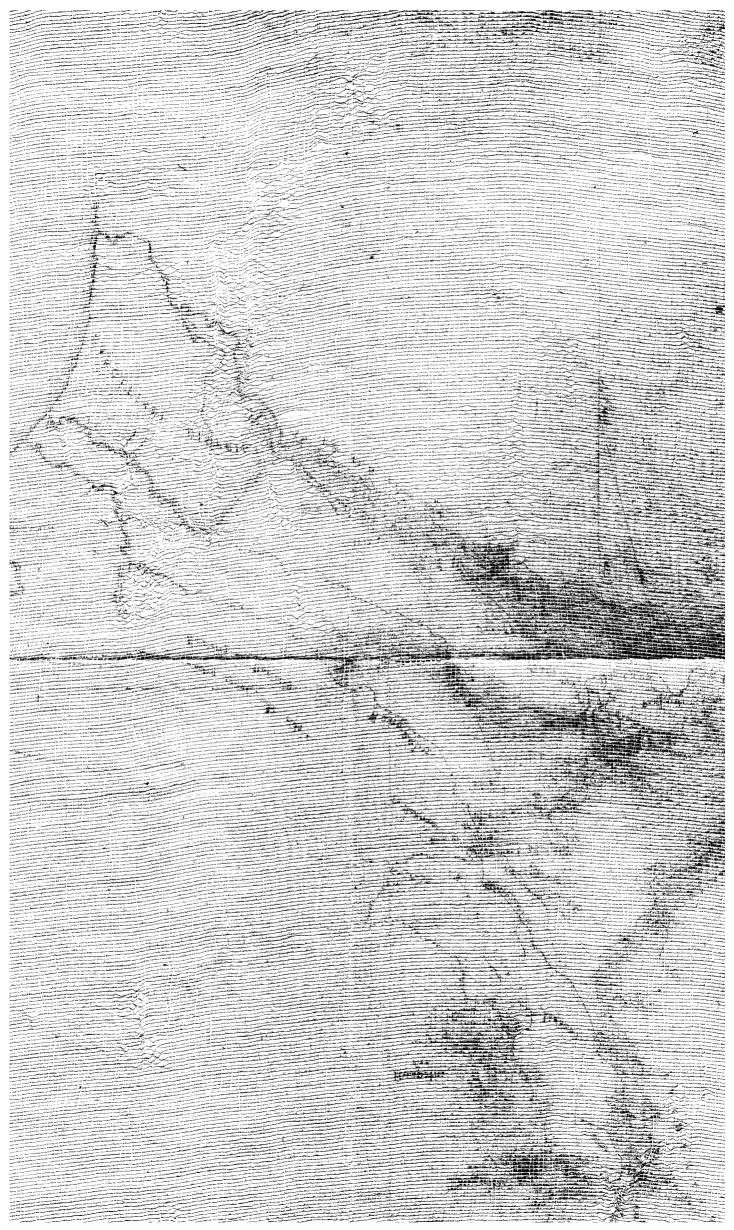
The highest point of elevation between the Rangitikei boundary line and the Northern and Southern watershed line at the sources of the Wangaehu and Waikato, is the Whakanae main hill, presenting, from a distance the appearance of a long flat table-top; 2nd in point of elevation is the Otairi, and 3rd Rangatira, all presenting the same appearance.

I regret that, from the extreme vagueness (at least in my opinion), of Mr. Field's report, I am unable to make any additions to the map in that direction. I believe he intends to emerge from the bush

at Kereoi.

In conclusion, I would beg to record my opinion that, of the three lines, that of Mr. Hogg, by





## CONSTRUCTION OF ROADS IN THE NORTH ISLAND. 29 A.-No. 17.

Turakina, is undoubtedly the best for a permanent road. Every native who was able to give bona fide information on the subject, said, "Go down Turakina until you come to Mangapapa (which I have shown on map), and from thence cross to the junction of the Mangawhero and Wangaehu." Mr. Hogg has omitted Mr. Hogg has omitted to mention in his report that in one place he came on to this native track, which had been traversed by some one not very long ago.

On the other hand, I considered that, if the requirements of the country had been such (or even yet may be such) as to render immediate access to Taupo from the West Coast necessary, a comparatively small sum of money would be sufficient to affect that object by opening the Rangitikei line.

A body of Constabulary, mounted or on foot, might by this route be quickly located in the district.

I have omitted to state that, when I was in that part of the country, surveyors from Napier, under Mr. Tiffen's direction, were exploring for road purposes our return tracts by Southern spurs of the Kaimanawa, crossing the Aoranga at camp of 10th November to the North of Mr. Birch's woolshed. road, from Napier, would fall into that by Turakina, at camp of 27th October.

I have, &c.,

GEORGE F. SWAINSON,

The Under Secretary for Defence, Wellington.

Surveyor.

No. 61.

Copy of a Letter from Mr. Woon to Mr. Cooper.

SIR.—I have the honor, in the absence of Mr. Buller, R.M., to forward herewith the accompanying report from Mr. H. C. Field. I have, &c., R. W. Woon.

The Under Secretary for Defence, Wellington.

Enclosure in No. 61.

Copy of a Letter from Mr. FIELD to Mr. BULLER.

Mangawhero, 25th March, 1870. SIR,-On my return here I was glad to find that the natives had finished the work I had marked out for them on Friday evening, and on Saturday were putting in drains at some places on the Kaiwaka flat, which I had pointed out to Mr. Pilmer as spots where water lay in winter. The necessity for marking off more work at once prevented my having time to burn off and examine the ground sufficiently, and thus caused me to take a somewhat longer and worse road than I need have done. It would in fact have been better to have taken the pack-road across the river twice more to save labour and distance, though no doubt the ultimate cart road would follow our present line, which crosses two streams with rather deep channels (the Wetaweta and Otutapu), and makes a circuit of about half a mile to avoid the river.

We had very heavy rain all day on Thursday, and some of the natives have been away for several days at some meeting at Parikino, but we have completed the line to the Wetaweta, and are to-day cutting the descent to it.

W. Buller, Esq., R.M., Wanganui.

I have, &c.,
H. C. FIELD, Engineer in charge of the Mangawhero-Taupo Road Party.

No. 62.

Copy of a Letter from Mr. Cooper to Mr. Field.

Colonial Defence Office,

SIR.

Wellington, 6th April, 1870. By direction of the Hon. Mr. Gisborne, I do myself the honor to acknowledge the receipt of your letter of the 25th ult., addressed to W. Buller, Esq., R.M.

H. C. Field, Esq., Engineer in charge of the

Mangawhero-Taupo Road, Wanganui.

I have, &c., G. S. Cooper, Acting Under Secretary.

No. 63.

Copy of a Telegram from Mr. Cooper to Mr. H. C. Field, Wanganui.

Government Buildings,

Wellington, 5th April, 1870.

Wanted statement of what lines of road are in progress-length made on each-expenditure to date in round numbers if not exact. Telegraph reply.

G. S. COOPER.

No. 64.

Copy of a Telegram from Mr. FIELD to Mr. COOPER.

Wanganui, 5th April, 1870.

Only road in my charge Mangawhero-Taupo packhorse road, from Wanganui to Taupo Plains. Total length, about 50 miles, of which 30 now passable; has cost, from 17th January to end of March, about £360, including superintendence.

H. C. FIELD.

No. 65.

Copy of a Letter from APERAHAMA to Hon. Mr. Fox.

TRANSLATION ]

To Mr. Fox.

Wanganui, 27th March, 1870.

O friend, this is to inform you about the road. Twenty miles of it have been completed, but the rest will perhaps not be done on account of the lack of food for the men, because the place where the food is, is a long way off. We consider that you ought to let us have another shilling a day, that is to say, six shillings a day, and then perhaps the men will be able to work; for the men are much inconvenienced by having to carry food, and their horses are knocked up with having to go and fetch it. But you had better appoint some men to carry food, so that the work of carrying food may be performed by them. However, they will have to be paid. If you agree to our proposal, our road will soon be finished; but if not, it will stop short in the middle. That is all.

From your loving friend,

APERAHAMA TAHUNUIARANGI.

No. 66.

Copy of a Letter from Mr. Woon to Mr. Cooper.

Wanganui,

Mr. Field.

SIR.

5th April, 1870. In the absence of Mr. Buller, R.M., I have the honor to forward herewith a report from

The Acting Secretary for Defence, Wellington.

I have, &c., R. W. Woon.

Enclosure in No. 66.

Copy of a Letter from Mr. FIELD to Mr. BULLER.

Mangawhero, 2nd April, 1870.

The Maoris mentioned in my last report as having gone to Parikino have remained there to harvest their corn and potatoes, and have sent me word that they will be back in the course of next Several others have since left for the same purpose, and say they will return shortly; and the bulk of the remainder, including nearly all the original working party, who were getting efficient at the work, have gone to make preparations for a meeting which is to be held shortly at Matatera. As by the time the meeting is over we shall have got beyond their tribal boundary, they do not intend to return, and Aperahama promised to send up other men in their stead. These substitutes, however, have not yet arrived, so that I have now only three natives at work, and have written to Aperahama, urging him to engage the new hands at once. It is unfortunate that the men should have left at the present time, as we are engaged on a rather heavy bit of side cutting in the material which I spoke of in my report to Mr. Fox as "hard blue clay" or "clay-stone," but which proves on working it to be rather a sandy cement, which has formed at some time the ocean bottom. It is full of fossil shells, changed into a substance like flint, and large masses of it, often many hundreds of pounds in weight, have become indurated to almost the hardness of granite, so as not only to blunt but actually to break the picks. Our progress, therefore, is very slow. During the last fortnight we have met with several more seams of gravel, and in the upper part of the hill, on the left of the line, between the Wetaweta and Otutapu streams, there is a bed of it several feet in thickness in such a situation that it can be easily worked and carted on to the road.

From the immense quantity of stone and boulders lying about among the fern, and the fact that, as you will see by the specimens of shell and hardened cement which I send herewith, the supposed clay will yield a considerable amount of available material, there will be no difficulty in metalling this part of the road whenever it is formed.

I have now got the line cut to its full width as far as the Otutapu or Mangaowhanga stream, and the ground cleared and the leading line cut as far as the next stream—the Paheru. Both these streams have comparatively easy crossings, and there is very little earthwork between them; so that we shall be able to push on rapidly when the natives return, unless hindered by the weather, which seems breaking. All through the week we have had numerous heavy showers, and on Thursday it rained during the greater part of the day, though we kept the men working between the squalls.

I have, &c., H. C. FIELD,

W. Buller, Esq., R.M., Wanganui.

Engineer in charge of the Mangawhero-Taupo Road.

No. 67.

Copy of a Letter from Mr. Buller, R.M., to Mr. Cooper.

Wanganui,

SIR,

21st April, 1870.

I have the honor to forward two reports from Mr. Field, dated 16th and 19th inst. The Acting Under Secretary for Defence, Wellington.

Enclosure 1 in No. 67.

Copy of a Letter from Mr. FIELD to Mr. BULLER, R.M.

Mangawhero, 16th April, 1870. SIR. Some of the men who had left came for their money on Sunday, and Aperahama accompanied I took the opportunity of insisting on his at once sending up the substitutes, when he said that, owing to so many of the natives being away with Kemp, and the rest busy getting in their crops, he had not been able to get the new hands as yet. Ultimately, four of those who had come for their pay agreed to stay till relieved by others, and, as Aperahama was himself going to the Horowhenua meeting, he left another man to hunt up substitutes, four of whom made their appearance on Thursday, and some others are daily expected. I also, in conversation with Aperahama, objected to the men leaving, as they have hitherto done, without leave, and often without even any notice, and he promised that in future he would arrange so that my permission must be obtained for any man's leaving.

During the week we have completed the cuttings at the streams, and are engaged in forming the road to the Paheru, most of which will be completed to-day. On Wednesday, we found a splendid seam of gravel right over the road. A soft place at the base of a cliff about 40 feet high required to be made good with fascines and earth, and, as the easiest way of obtaining the latter material, I sent a few of the men to throw it down from the top of the cliff. On removing the surface soil, we found the gravel immediately below it, and not only got what we wanted for the soft place, but gravelled several chains of the cutting which seemed likely to cut up with traffic. The seam has been excavated to the depth of six feet without reaching the bottom. In fact, I think it will prove to be from 15 to 20 feet thick, and, as it is so situated that the gravel on being dug falls at once on to the road, it will be very valuable.

There have been constant heavy showers during the whole week, which have not only impeded the earthwork, but have prevented my burning off the fern, &c., beyond the Paheru. It appears to be clearing, however, so that I hope to be able to carry on the leading line in the beginning of the week, so as to

get fairly into the bush.

I have, &c.,

W. Buller, Esq., R.M., Wanganui.

H. C. FIELD. Engineer in charge of Mangawhero-Taupo Road.

## Enclosure 2 in No. 67.

Copy of a Letter from Mr. FIELD to Mr. BULLER, R.M.

Mangawhero,

19th April, 1870. SIR,-

We have now got the road completed to about 30 miles from town, and have between 15 and 20 miles more to reach the plains. It is not easy to say how long it may take to finish this, for though it is far less difficult than most of what we have done, there is no telling what number of hands we may have to do it with. At the beginning of this month our 20 men had melted away to three. The following week we had five. For three days at the end of last week there were eleven; and now there are only six, and some of these may take it into their heads to start off to welcome the taua. It is most annoying, and sets all calculation at defiance. My son and I can select and cut through about half a mile per day, and 20 men steadily working ought to be able to keep close behind us; but when we are short handed it hinders us every way, as I cannot push on with the line without getting too far off to overlook the work, so have to slacken my speed, and set my son to help the men, in order to be able to attend to

I shall be in town, weather permitting, on Monday week, and shall be glad if you can make it convenient to come up with me on my return, so as to see the line and the country yourself.

W. Buller, Esq., R.M., Wanganui.

I have, &c., H. C. Field, Engineer in charge of Mangawhero-Taupo Road.

No. 68.

Copy of a Telegram from Mr. Booth, R.M., to the Hon. W. Fox.

Wanganui, 5th April, 1870.

LEFT Kennedy's Upokonga Hotel for Mr. Field's camp at 6 a.m., Saturday, 23rd ult.; reached the camp at 9.45 a.m., distance 18 to 20 miles. Length of cutting done 15 miles; the most difficult part of the road is the first eight or ten miles. There are two or three bad gorges, one in particular, Huripari, is all but impassable, and will in winter be quite so, unless something is done to improve it. The cuttings through stiff blue clay, which has worked up into tenacious mud, up to the horses' knees. An attempt has been made to corduroy the cuttings in one place with fern trees, but a stream which has burst out in the middle of the road has carried the foundation away. I think the cuttings through the gorges will have to be widened, and perhaps fascines of manuka will be better than fern trees. There is no metal in the gorges I have mentioned. I think Mr. Field has taken a great deal too much pains with the road in places where it required little or nothing doing to it. In the valley of the Mangawhero, there are miles of perfectly flat land which only require the fern and manuka to be cleared away, and here the road is most elaborately finished, every little hummock carefully removed, and in many places drains cut and facines laid down. I would respectfully recommend the Government to send a trustworthy man to take charge of the road party, which would leave Mr. Field at liberty to go on ahead of the rest, and to lay off his road line with proper gradients. He complains that being obliged to be constantly with the road party, he had not time to make so careful a survey as he would wish. In one place the road has been taken a mile and a half round where an easier direct track might have been found. Mr. Field says there is from 15 to 20 miles of road still to make. The road passes through a part of country which will be available for farming purposes. I do not think there will be any difficulty in having the rest of the work done by contract.

JAMES BOOTH, R.M.

No. 69.

Copy of a Letter from Mr. Buller, R.M., to Mr. Cooper.

Wanganui, 17th May, 1870. SIR. I have the honor to forward herewith the accompanying progress report from Mr. Field for the information of the Government.

The Under Secretary for Defence, Wellington.

I have, &c., W. Buller, R.M.

Enclosure in No. 69.

Copy of a Letter from Mr. FIELD to Mr. Buller, R.M.

Mangawhero, 14th May, 1870. SIR.-As my son is going to ride down to Kennedy's to-morrow for some things which we want, I

take the opportunity of writing to report progress.

I started from Huripara just after I last wrote to you, but on reaching the Mangawhero I found it still too high to cross, and though as the water fell I tried the ford three times, I was compelled to remain at Te Mai till next day, when I joined my son and Edgecombe in continuing the leading line: and on the following day shifted our camp to the edge of the bush beyond the Tahukoro stream. then we have been cutting steadily on, except on last Tuesday when it rained heavily all day, and during

a few heavy showers on some other days.

We emerged from the main bush on Thursday afternoon, and are now crossing the Koromiko Flats, which lead up to the saddle above the three lakes. The line we are taking is that indicated in my report to Mr. Fox, the only variations being that, owing to a slip which has occurred since I was here in January, I had to carry the line rather higher above the river, about a mile from Tahukoro, than I had previously intended, and on reaching the "toi" flat in the middle of the bush, I found the back of it so wet that I took the line behind it. The line comes out even better than I had expected, as several places over which we carried it, merely as affording better levels, prove to be very short cuts, a fact of which from my necessarily imperfect knowledge of the country I was previously not aware. Now that I know the various hills and gullies by sight, so as to be able to identify the various points I passed in December, I am quite amused at seeing what long and useless circuits I made through my ignorance of the country, and how greatly I have over-estimated some of the distances in consequence. Some of the points are actually only about half as far apart as I had previously supposed them, from the length of time it took us last December to pass between them.

Our progress just at present is very slow, owing to the enormous quantity of bramble overgrowing the Koromiko scrub; but if the weather continues fine, I hope to reach the lakes on Tuesday or Wednesday, and the foot of the ridge over which we pass to the plains in the beginning of the following week, or possibly even a day or two sooner. After that our course will be more rapid, as there is pretty sure to be something of a pig track along the ridge, as well as less bramble, and less time will be lost in groping my way through the bush from point to point, so as to let my son know in which direction to

cut the line.

I find there is more gravel in the country than I had supposed, as, in searching along the beds of streams to find the best crossings, I everywhere met with coarse gravel at intervals, and in cutting the line have constantly met with large blocks and boulders, which have evidently rolled from somewhere higher up the hill sides, and have come out of beds of coarse shingly gravel, such as we found in forming the road lower down the valley.

To W. Buller, Esq., R.M., Wanganui.

I have, &c., H. C. Field, Engineer in charge of Mangawhero-Taupo Road.

No. 70.

Copy of a Letter from Mr. Booth, R.M., to the Hon. Mr. Fox.

Wanganui, 23rd May, 1870. SIR. I have the honor to report that Kemp, Topia, and the rest of the Wanganui chiefs are very

desirous that the road from Ranana to Murimotu should be commenced as soon as possible, so that it may be finished and ready for use in case Te Kooti returns to Taupo. Kemp was very angry with the Ranana natives (old men) for opposing the exploration of the country for a road before his return from the East Pehi and Tahana make no opposition to the proposed road.

The Hon. the Premier, Wellington.

I have, &с., JAMES Воотн, R.M.

No. 71.

Copy of a Letter from Mr. Cooper to Mr. Booth, R.M.

Colonial Defence Office,

Wellington, 25th May, 1870. SIR, Referring to your letter to the Hon. the Premier, of the 23rd inst., respecting the road from Ranana to Murimotu, in connection with Mr. Field's line of road from Wanganui to Taupo, I am directed by the Hon. Mr. Gisborne to request you to be good enough to proceed at once to examine the best line for a permanent road, and to commence cutting a horse track.

I have, &c., G. S. Cooper,

James Booth, Esq., R.M., Wanganui.

Acting Under Secretary.

#### CONSTRUCTION OF ROADS IN THE NORTH ISLAND. A.-No. 17. 33

No. 72.

Copy of a Telegram from Mr. Hales to Lt.-Col. Reader.

Wanganui, 23rd May, 1870.

Is it the intention of the Government that I shall exercise any supervision over the road works in the Upper Wanganui District now in process of construction under the direction of Mr. Field?

W. H. HALES.

## No. 73.

Copy of a Telegram from Lt.-Col. Reader to W. Buller, Esq., R.M.

Wellington, 26th May, 1870.

HON. W. GISBORNE wishes you to report as to whether it would be advisable that Mr. Hales should exercise any supervision over the road works in Upper Wanganui, now in charge of Mr. Field?

H. E. READER.

## No. 74.

Copy of a Telegram from Mr. Buller, R.M., to Lt.-Col. Reader.

Wanganui, 27th May, 1870.

I THINK it would be advisable to get Mr. Hales to make a general inspection of the Taupo line after I THINK it would be advisable to get Mr. Hales to make a general amperorm.

Mr. Field has completed his work, and before his accounts are passed at the Treasury.

W. Buller, R.M.

## No. 75.

Copy of a Letter from Mr. Cooper to Mr. Buller, R.M.

Colonial Defence Office.

Wellington, 30th May, 1870. SIR. By direction of the Hon, the Premier, I have to intimate to you that your suggestion of Mr. Hales making a general inspection of the Taupo line of road after Mr. Field has completed setting it out, before his accounts are passed at the Treasury, has been approved of, and to request that you will give the necessary instructions to that effect.

I have, &c.,
G. S. Cooper, Acting Under Secretary.

W. Buller, Esq., R.M., Wanganui.

## No. 76.

Copy of a Letter from Mr. Booth, R.M., to Hon. D. M'LEAN.

SIR,-Wanganui, 2nd June, 1870. I have the honor to report my return from Mr. Field's road, to which place I proceeded from

Wanganui on the 25th ult.

With the exception of one bad gorge (Huripari), near the Upokongaro stream, the road through which can be "eased," there do not appear to be any difficulties in the way of making a dray road by the present route. I estimate the length of road at present cut to be from fourteen to sixteen miles, and Mr. Field's surveyed line to be about six miles further on. Mr. Field and I pushed on through the country on Saturday last, 28th, and came near the dividing ridge between the Mangawhero and Wangaehu After ascending the ridge by an easy gradient, the distance, according to Mr. Field's statement, is very trifling, but that the Wangaehu will have to be crossed. Some natives, however, who were with us say this can be avoided by taking the road higher up the Mangawhero Valley to where the Karatia-Ikurangi road comes out.

Our present difficulty on the road is the Mangawhero River, which has to be forded three times. It is liable to heavy floods. Whilst I was at Mr. Field's camp the river rose ten feet in one day, and on our return we were detained three days before we were able to cross. This would be obviated by having

a canoe at each ford. The two more inland fords could be kept by one man.

I have made arrangements with the natives to finish the road by contract. Some of them, however, are anxious to wait until the rains are over, it being impossible to take out provisions when the river is flooded. A native named Komene, owner of the land through which the road is at present being cut, has agreed to go up with Mr. Field on his return, and to assist him in finding the easiest way to the plains, he (Komene) being well acquainted with the country. He is also to work at clearing the bush for the road, for which services I have promised him 7s. 6d. a day, the same as was given by Mr. Buller to Aperahama, of Turakina. Komene's son, a young man, is to accompany his father, to be employed by Mr. Field in widening his lines, and to have 3s. a day.

The Hon. the Defence Minister, Wellington.

I have, &c., JAMES BOOTH, R.M.

## No. 77.

Copy of a Letter from Mr. FIELD to the Hon. W. GISBORNE.

Wanganui, 2nd June, 1870. SIR. By direction of Mr. Buller, R.M., I have the honor to submit to you the following detailed report on the subject of the pack-horse road from Wanganui to Taupo, via Mangawhero :-

The work was commenced on 17th January, under directions from Mr. Buller, my instructions being to cut the line throughout of a width of 8 feet, and to perform such earthwork as might be necessary to make

9

34

the track passable for pack-horses. The arrangements made were that I, with my eldest son as assistant, should go before to select the line, and cut it through after the manner of a survey line; and that a number of Maoris, to be supplied by the chiefs interested in the lands traversed by the road, should follow, under the supervision of one or more European overseers, to widen the line and execute the earthwork according to my directions. Great difficulty has been experienced in carrying out this plan, from causes which it was impossible to guard against, and the work is thus still incomplete. From so many of the natives hereabouts being away with Kemp and Topia in pursuit of Te Kooti, those at home were barely sufficient to perform the necessary work of harvesting the crops. There was consequently such difficulty in procuring hands for the work that of those who were employed several were fetched from beyond Rangitikei, and a large proportion were mere lads, whose services under ordinary circumstances I should at once have declined. From the same cause, it was impossible to retain the hands for more than a few days at a time, and thus when there were twenty nominally engaged there were seldom more than half a dozen actually at work, and at the time of the wheat harvest the whole were absent for several weeks. The want of an organised commissariat, the wasteful and improvident manner in which the natives consume food when it is abundant, and the fact that the whole country through which the road passes has for many years been entirely uninhabited and uncultivated, caused great further loss of time in procuring supplies; and this difficulty was increased by the presence of the women and children who accompanied the workmen. The work of widening and levelling the track thus proceeded so slowly, that I was constantly obliged to delay the cutting of the leading line, to avoid getting too far ahead to be able to direct and superintend the work of the natives. These constant delays had the further ill effect of increasing the cost of laying out and overseeing the work to a sum utterly disproportionate to that of the work itself; and at the end of April, therefore, Mr. Buller decided on discharging for the time the few natives then employed on the work, and leaving the widening and levelling to be done after the leading line was cut through; and during the last month I have been engaged in the latter work, which, not-

withstanding hinderance from the autumn rains, is now nearly completed.

The route we are following is that indicated in my reports on the practicability of a road in this

direction, addressed to the Hon. the Premier in November and December last.

Leaving the road which runs up the east bank of the Wanganui River at a point about 7½ miles miles from town, and half a mile above the mouth of the Upokongaro Stream, it crosses into the Upokongaro Valley by a metalled road about half a mile long, constructed several years ago by the Makirikiri Road Board. Up this valley (which is about a quarter of a mile wide, level, and well grassed, and is bounded on the east by high fern ridges, and on the west by well timbered land) there is a dray track running for nearly a mile through Mr. A. Caines' land to the boundary of the Wanganui Block, and thence for two miles farther through the dairy farms occupied by Messrs. Erwin and Giorgetti to the homestead of the latter, situated at the junction of the Upokongaro and Matatara Valleys. use of the dray track, which runs in a north-easterly direction to this point, but have cut a side track for about a quarter of a mile through a belt of scrub a little below Mr. Giorgetti's, in such a manner as, by slight detour, to enable travellers to avoid crossing the Upokongaro during floods. This side track is also about in the place where it will be desirable to construct the permanent road, so as to do away with all the crossings of the Upokongaro, except one some distance higher up. Leaving Mr. Giorgetti's, the line continues up the Upokongaro Valley (which now runs northerly, but still preserves the same character, though it is rather narrower) along the native bridle track leading to Parikino for about two miles, to a place called Te Angaanga, at which that track strikes suddenly to the left up a steep ridge, leading over lofty hills towards the Wanganui River. On this track we again expended a little labor in easing the descents to fords and slight hollows, and in cutting a side track, so as to enable persons to avoid the fords when flooded. At Te Angaanga our continuous work commences, and our line proceeds for about a mile and a half up the Upokongaro Valley (which still retains the same direction and character, except that it is not so well grassed), crossing the stream once, and skirting it for about 200 yards in another place, to the Wai-mata Stream. At this stream there are two short side cuttings, and the line then rises for about half a mile along a natural ascent to a low saddle, from which it descends again in a north-easterly direction along the Huripari Valley, for about half a mile farther, to a stream called by some natives the Waipaika, and by others the Kiwitahi. The Huripari Valley is somewhat similar to that of the Upokongaro, except that the flat is covered with fern and koromiko instead of grass, and that it is not quite so level; and, as well as the Kiwitahi Gully, contains some fine timber, which till now was not accessible. Crossing the Kiwitahi, at which there are two rather heavy side cuttings, the track rises again for about half a mile along a natural slope, to a sort of terrace on the south-east side of the Huripari Valley, and proceeds for about a mile and a half along this terrace, partly on the level, and partly by means of side cuttings across or round the heads of some hollows which break the terrace. then come to a deep stream with precipitous sides, called the Otuakura, which flows into the Huripari from the southward out of a deep and heavily timbered gully among lofty hills, and, as the country beyond, on the south-east side of the Huripari for a considerable distance farther, is covered by dense bush, through which several other streams descend from the hills, we strike Northwards across the gully of the Huripari itself. From the depth and precipitous character of this gully, and to save earthwork as far as possible by taking advantage of some natural slopes, we were obliged to make the ascent and descent rather steep, but by bridging the stream at a high level (for which its precipitous sides afford facilities), and making longer and somewhat heavier side cuttings on both sides, very easy gradients can be got for a permanent road. After crossing the Huripari, the line proceeds for about two miles, first in a northerly, and afterwards in a north-easterly direction, across an undulating plateau, covered by fern and koromiko scrub, till it reaches the watershed between the Upokongaro and Mangawhero Valleys, close to an old native settlement called Te Pukohu. The land hereabouts is very fertile, and since the road was commenced a large block of over 1,200 acres has been purchased by an old Wanganui settler, Mr. J. M'Gregor, and several others have already been surveyed, or are about to be so, with a view to their being adjudicated in the Native Lands Court, and afterwards sold or let to parties who are in treaty for

them. From Te Pukohu the track descends nearly in an easterly direction for about a mile and a half, first along a fern ridge, and afterwards across a beautiful flat, to the Mangawhero River, which it reaches opposite to an old kainga known as Te Mai. There is about half a mile of side cutting, mostly light, on this descent; and on those which lead to the ford, and ascend from it, there was some rather heavy work, the character of the ground necessitating not only rather deep side cuttings, but the formation of deep under drains, and the protection of the immediate descents to the water by means of fascines covered with coarse shingle from the river bed. The ford itself is about a chain and a half wide, and ordinarily rather more than knee-deep at the deepest part, and, like the others, has a hard, even, shingly bottom, free from large blocks, snags or boulders. From Te Mai the line proceeds, still in an easterly direction, for about a mile and a quarter, across a beautiful flat to the second crossing at another old kainga called Ongahi, where there was again some rather heavy work in the shape of side-cutting and drainage. Some drains and fascine work were also put in at four slight hollows on the flat, where I knew the water lay in winter. The ford at Ongahi is ordinarily about knee-deep at its deepest part, and about the same width as that at Te Mai; and after crossing it the line ascends, first along a natural rise, and afterwards by a short side-cutting, to a flat covered by flax and toi-toi, which it crosses in a northerly direction, and beyond which it descends again, first by a side cutting, and then across a manuka flat to the third crossing at a place called Te Uri. The distance from Ongahi to Te Uri is about three-quarters of a mile, and the ford at the latter place is rather wider and shallower than the others. Beyond this ford there is a narrow belt of swampy ground, where we had to employ drains and fascines in forming the track; but after rising from this the line goes north-easterly for about half a mile across a fern flat, and then for about three-quarters of a mile further it winds round the base of a low hill, and thence across a toi flat to a ridge called Tahungatutu, to a low part of which it ascends by a side cutting. Descending from this, it crosses a small manuka flat, and then passes over a slight rise covered with fern and koromiko into the valley of a stream, called by some natives Otutapu, and by others Mangaowhanga, the precipitous character of whose channel obliged us to run for some distance up it before we could find a practicable crossing. The descent to this crossing, which is about a mile and a half from Tahungatutu, is by a rather heavy side cutting, the lower part of which had to be laid with fascines, and the ascent by the heaviest bit of work we have had to do on the whole line. It is a deep side cutting in blue clay stone, so hard that a pick will hardly touch it; but as we had found by experience at Huripari that this apparently sound material worked up into a perfect puddle under traffic in wet weather, and there was a bed of excellent gravel immediately above the road, I had some parts of it fascined, and the whole metalled at once, so as to preserve it. The line then crosses a manuka flat for about a mile to the Wetaweta stream, where again there are some heavy side cuttings in hard soil at the descent and ascent, and afterwards crosses a grassy hollow, and rises along a gentle slope covered with koromiko to a flax flat. Beyond this we ascend another slight rise, and after traversing a manuka flat, and crossing two slight hollows, descend into the Paheru gully by a light side cutting. The Paheru stream is crossed by a subhollows, descend into the Paheru gully by a light side cutting. The Paheru stream is crossed by a substantial bridge, beyond which there is a considerable length of side cutting in the ascent from the gully and round the head of a small hollow, to the flat behind an old kainga called Kaimoho. The line had been carried nearly across this flat, which is covered with manuka scrub, when the natives were discharged. From Wetaweta to Paheru is nearly a mile and a half, and from Paheru to the end of the widened line about three-quarters of a mile, which would make the total distance from the town of Wanganui to the end of the completed work 29 miles, and from where we leave the Wanganui River From having repeatedly traversed the whole distance on foot I believe it to be fully a mile more than this, and others who have also travelled along it estimate it as even longer; yet the total sum paid or due to the natives for executing the work (including some repairs at Huripari) is under £230.

From the end of the completed work the line descends for hearly half a mile across a fern flat to near the mouth of the Tahukoro Stream, which will require to be bridged, partly on account of the precipitous nature of its channel, and partly to keep the road above the flood level of the Mangawhero River. A few chains further on there is another very small stream, after crossing which the line ascends for about a quarter of a mile along a fern flat, and then descends a few feet into the bush. After passing for nearly half a mile along a flat full of fine sawing timber and enormous ratas, we ascend slightly, and then descend again, for more than half a mile to a small stream called Te Wheunga, beyond which we continue for about a mile further along similar flats, on which there are some of the finest groves of kahikatea and rimu I ever saw. At one part along here the river comes so close in under the hill foot as to oblige us to pass for about eight or ten chains over some rather wet ground, but the rest of the bush is perfectly dry and sound. We then ascend easily to a higher flat covered with scrubby bush, and after passing behind a toi flat, continue to rise along a hollow to a saddle, about a mile from the river side flats. At this saddle a through cutting, about half a chain long, and with a greatest depth of about six feet, will be required, and beyond this the line descends for about half a mile along a hill face, which for the first few chains is rather steep, but afterwards easy, to a small stream called the Totete. Beyond the mouth of this stream the Mangawhero makes a considerable circuit to the westward, round some very broken ground covered with splendid timber. Our line, therefore, ascends slightly for a quarter of a mile or so through a hollow covered with sawing timber and tawa, and then emerges on a terrace of koromiko and grass on the eastern side of a large stream called the Pahihi, along which it runs for about half a mile further, and then descends for another quarter of a mile through koromiko scrub and scrubby bush to the stream itself. Crossing this it rises for another quarter of a mile through fine timber and tawa bush, and then emerges on a koromiko table on the eastern side of the Mangawhero, and at a considerable height above it, along which, and afterwards downwards across two grassy hollows and a flat of high manuka scrub, it runs for about a mile and a quarter to a small stream called the Aorangi, which will require a bridge. We then rise again for about a quarter of a mile through a hollow clothed with tawa and sawing timber, to a low saddle on a ridge called Te Kuku, which overlooks three small lakes called Mataora. At this ridge a through cutting, about a chain long, and with an extreme depth of about 10 feet, will be required, and the line then

descends for about 10 chains along a rather steep face, and then for some half mile further through undulating bush, partly scrubby and partly well timbered, till it reaches some black birch ridges, which descend from the Kuku towards the river. I had some trouble in selecting the line among these for about descend from the Kuku towards the river. I had some trouble in selecting the line among these for about half a mile to a large stream called the Putaringa, owing to their steepness and their terminating in a succession of bluffs overhanging the river and stream, and the difficulty was not lessened by the work of examining the ground having to be done in excessively wet weather. I succeeded, however, in getting a very fair line with little earthwork on it for the pack road, by rising to a small flat from which several of the ridges fork, and then descending along the principal ridge and through some tawa bush to the stream side; a line for the permanent road with an easy gradient can be got lower down, by means of several short through cuttings at the several ridges. From the Putaringa the line rises easily through heavy bush for about a quarter of a mile to a koromiko table, from which it descends again a few feet to the first of the large manuka flats, which for the most part occupy the valley for many miles further; and after crossing this flat it passes over a slight koromiko rise, and down through some kahikatea bush to another large stream called Otuhangatoi, at the mouth of which there are the remains of an old fortified pa called Wereia, where the late Hori Kingi's father formerly resided, but which is now overgrown with trees as thick as a man's body. From the Putaringa to the Otuhangatoi the distance is about a mile and a quarter, and beyond the latter the line again passes over a flat of koromiko and manuka scrub for half a mile or so to a small stream called Mokomoko, and then along a similar flat for about a quarter of a mile farther to a place where the river washes the foot of a rather steep hill side. When I left Mangawhero with Mr. Booth, R.M., on Sunday, the leading line was cut nearly to the Otuhangatoi, and I left the necessary directions for continuing it to the hill face, and examining the ground along and immediately beyond it, a distance of about a quarter of a mile. Beyond the hill face the line will continue along the river side across manuka and koromiko flats for about two miles farther, crossing in its course a small stream called the Kakatahi, and a large one called the Tarakoi, to the foot of a ridge called Otahuanga, which was at once identified by Haimona Hiroti and some other Maoris who went up with Mr. Booth last week, as the one along which an old native track called the Parapara passes on its way from Koriniti to the Taupo plains. They also pointed out the sites of two old pas on either side of the river where the track crossed it. From Tahungatutu to the Otuhangatoi Stream the general course of the road is nearly due north, and from thence to the foot of the Otahuanga ridge a little more westerly. The ridge itself, which is about four or five miles long, rises gradually to the dividing ridge, which forms the watershed between the Mangawhero and Wangaehu Rivers, and has a direction a little to the eastward of north; and the dividing ridge, which is called the Waokura, immediately overlooks the end of the Taupo plains, which goes by the name of Mataitira, the descent being easy and not more than from two to three miles in length. The native track descends at once to the plain, and I had intended to take the road the same The native track descends at once to the plain, and I had intended to take the road the same way; but as the track crosses the Wangaehu by a rather bad ford, and after passing for some distance through a bush on the eastern side of the plain, re-crosses the river higher up, Haimona argued that there must be some obstacle, arising from the windings of the river or its tributaries, which prevented the track, and would probably hinder the road also, from being taken directly northward along the plain on the western side of the river. I saw nothing when I overlooked the plain from the hill-top last December to indicate any such obstacle, and some other natives, who seem to know the ground, say that none exists, and that the track merely crossed the river to save distance and to join another track from Turakina, which comes up the eastern bank. Of course, till I have gone over the ground I cannot tell whether any obstacle exists, but if it does it will merely necessitate our following the dividing ridge northward, so as to descend beyond it; and will not increase the distance to Taupo to any appreciable extent, though it may add a little to the length of the road itself.

In laying out the pack-road, I have been careful, wherever its position would be identical with that of the permanent road, to employ gradients suitable for the latter. This has, of course, added a little to

the cost of the present work, but will effect an ultimate saving,

In reference to the country traversed by the road, I may remark that from Upokongaro to Te Pukohu we follow the shortest route by which a line can be taken over open ground at a low level. On the south of the road the hills are of the elevated table character common near the coast in this part of the colony; and inland of it there are bush ridges and gullies extending across to the valleys of the Upokongaro and Parihauhau streams, which contain a considerable extent of level land easily accessible from the road, and inland of these again there is high broken bush land extending as far as the eye can The soil at this part of our line is very good, and all the ground in its immediate vicinity admirably adapted for grazing and dairy farms, though mostly scarcely level enough for agricultural purposes. subsoil varies from hard sandy clay to a soft sandstone (except in the very bottoms of the Kiwitahi and Huripari gullies, which descend to the blue clay level), and therefore affords a sound bottom for a road, though there appears to be a great deficiency, if not the utter absence, of gravel or other road metal. From Te Pukohu to the entrance of the bush, the valley of the Mangawhero varies from half a mile to three-quarters of a mile in width, and is admirably adapted for small farms, the river and its tributaries winding along between steep banks in such a way that at every bend from 50 to 100 acres may be enclosed with only a few chains of fencing. The soil is very rich, but not so much so as farther inland. The subsoil is dry, and there is everywhere plenty of gravel, as well as immense quantities of large stones and boulders lying about among the fern or embedded in the ground. both sides of the valley, both here and farther inland, there are lefty wooded ranges, the highest peaks of which must be from 1,000 feet to 1,200 feet above the sea level. In the valleys which descend from these towards the river there are many nice strips of level land, and a large area of fine bush; and in traversing the ridges when exploring the country, I constantly found flats, ledges, and gently sloping hollows of rich available land among them up to their very summits. The general direction of these ridges is from east to west, and the northern face is invarially steep and covered with fern or scrub, while the southern slopes tend gently downwards, clothed in bush, and broken by small gullies. From the entrance of the bush bush to the Putaringa Stream the valley is narrower, but there are fine flats of bush and scrub at various

#### CONSTRUCTION OF ROADS IN THE NORTH ISLAND. A.—No. 17.

levels, and the soil is very rich, with for the most part a dry subsoil and plenty of gravel. of the Putaringa the valley opens again, and forms a succession of fine flats, some of them many hundreds of acres in extent, on which the soil is of the richest possible description. A grey-headed native who accompanied Mr. Booth told us that when a boy he was one of the party who took the first pig into that part of the country. At that time, he said, the flats and adjacent hills were covered with fern, but of this there is now scarcely a trace remaining, the vegetation consisting of koromiko, which is now dying out, and giving place to scrubby bush, among which trees of larger kinds are springing up. The subsoil of these flats is dry, and there is gravel in the bases of all the hills. At the bottoms of the ridges the vegetation consists mostly of koromiko, but in ascending this gradually changes to scrubby bush, and this again on the high flats and dividing ridge, to tawa and manuka bush. On the Wangaehu side the scrubby bush descends apparently to a somewhat lower level, and changes abruptly to the grass and rushes which cover the plains.

I hope very shortly to be able to report the completion of the leading line.

I have, &c.,

H. C. FIELD,

The Hon. the Colonial Secretary.

Engineer in charge of the Mangawhero-Taupo Road.

No. 78.

Copy of a Telegram from Mr. Woon to Mr. Cooper.

Wanganui, 3rd June, 1870.

Mr. Booth is at Putiki. He and Mr. Field arrived yesterday from the extreme end of Taupo Road, having been detained three days by the floods. He is engaged in paying road party. Mr. Field is drawing up a report about the road. Haimona Hiroti highly approves of the course taken by the road. Natives here most anxious the same should be completed, as it will open up much fine country which they wish to lease.

RICHARD W. WOON,

### MANAWATU.

No. 79.

Copy of a Letter from the Hon. the PREMIER to Mr. BURR.

Foxton, Manawatu,

28th January. 1870. SIR. It being the intention of the Government to complete the portion of road between Ngawhakaraua and Oroua Bridge on the same plan as the bush road already constructed to Palmerston, I wish you to undertake the work under the general superintendence of Mr. Stewart, C.E. He will lay off the work for you, and direct what is to be done, and you will submit your pay-lists to him for certification; the work, as far as possible, to be constructed by Maori labour, which you will organise and control, paying monthly on requisition and pay-list forwarded to the Colonial Secretary, Wellington. You will attend personally during the work, and give your whole time to it. You will receive pay at the rate of twelve shillings and sixpence per diem; to find and keep your own horse at your own expense; your engagement to construct the appropriate from the 17th light. ment to commence from the 17th inst.

Mr. A. Burr.

WILLIAM Fox, Premier.

No. 80.

Copy of a Letter from Mr. Burn to the Hon. W. Fox.

Foxton, Manawatu,

2nd February, 1870. SIR,-

I have the honor to acknowledge the receipt of your letter of the 28th ult., enclosing instructions to commence the Foxton and Oroua road, subject to conditions and the approval of Mr. J. T. Stewart, C.E., I have explored the line for the road with Mr. Stewart, and find it very good. According to your instructions I have commenced the Ngawhakaraua road.

I have, &c.,

Hon. the Premier, Wellington.

Amos Burr.

No. 81.

Copy of a Letter from Mr. STEWART to the Hon. W. Fox.

Manawatu, 5th February, 1870. SIR. I have the honor to acknowledge receipt of your instructions of the 28th ultimo, in regard to road between Foxton and Oroua.

As soon as I have laid out the line, I shall, as you request, furnish you with a statement of the character and extent of the work.

I have, &c.,

The Hon. the Premier, Wellington.

JOHN T. STEWART.

10

No. 82.

Copy of a Letter from Mr. Cooper to Mr. Stewart.

Colonial Defence Office.

SIR.

Wellington, 16th February, 1870.

In reference to the instructions you have received from the Honorable the Premier for the construction of roads at Manawatu, I am instructed to inform you that advances to meet the expenditure will be made to you through the paymaster here, of such sums as you may require during the progress of

If the work is done under contract, the contracts are in the first instance to be submitted through this office for approval. If under daily wages, you will be good enough to report (for approval) the arrangements (if any) you have entered into.

J. T. Stewart, Esq., Manawatu.

1 have, &c.,
G. S. Cooper, Acting Under Secretary.

No. 83.

Copy of a Letter from Mr. STEWART to Mr. COOPER.

SIR,-

Foxton, Manawatu, 24th February, 1870.

I have to acknowledge receipt of your letter of the 16th instant, and in reply to state that I shall, if possible, furnish you with the amount required for the Manawatu roads at the end of the present month, with particulars thereof, by the next mail.

I have, &c.,

The Acting Under Secretary for Defence, Wellington.

JOHN T. STEWART.

No. 84.

Copy of a Letter from Mr. STEWART to Mr. COOPER,

Foxton, Manawatu,

Sir,—

In reply to your letter of the 16th February, I have now to apply for the sum of £181 to be advanced to me in order to pay for road works at Manawatu up to end of February. In explanation, I may state that it was arranged by Mr. Fox that the works should be gone on with in a similar manner

to those formerly done under my charge by the Provincial Government.

The work is let out under written agreement by Mr. Burr, the overseer, to the Natives for a certain number of chains, at a rate approved of by me and similar to what was formerly paid, and not called for by tender. You will observe by the accompanying list the small amount of some of these contracts. To refer each of these to Wellington for approval would be almost impracticable, as the Natives would probably be away before a reply was returned.

The few men employed at day wages are getting timber for culverts in the bush, fixing it, and on

sundry works which it would be difficult to give out by contract.

A portion of the work in the more open country near Foxton I am now getting ready, and propose in a few days calling for tenders for small contracts from either Europeans or Maoris, as authorised by Mr. Fox to do in this part of the road line, and to accept the lowest. Should you wish it, I shall before accepting any tenders refer them to you, but any delay now is very important and would affect prices given, as only a short time of dry weather may be expected at this season.

I have, &c.,

The Acting Under Secretary for Defence, Wellington.

JOHN T. STEWART.

No. 85.

Copy of a Letter from Mr. STEWART to Mr. COOPER.

Manawatu, 24th March, 1870. I have to inform you that I have accepted the following contracts for works upon the Manawatu roads-branch, Oroua bush to Foxton-they being the lowest tenders received, and within the estimated amount, viz.,

Contract No. 1, Thos U. Cook Contract No. 2, Thos. U. Cook £103 61 Contract No. 3, Rangimarehau, Epiha, and other natives 55

£219 9

These contracts extend over  $2\frac{3}{4}$  miles. Full particulars of the same will be furnished as the works proceed.

I have, &c.,

The Acting Under Secretary for Defence, Wellington.

JOHN T. STEWART.

No. 86.

Copy of a Letter from Mr. Cooper to Mr. Stewart.

Colonial Defence Office,

SIR,-

Wellington, 6th April, 1870.

By direction of the Hon. Mr. Gisborne, I do myself the honor to acknowledge the receipt of

#### CONSTRUCTION OF ROADS IN THE NORTH ISLAND. 39 A.-No. 17.

your letter of the 24th ultimo, informing me that you had accepted contracts upon the Manawatu Road, Oroua Bush to Foxton, to the amount of £219 9s 6d; and in reply beg leave to inform you that the said amount has been approved of by the Government.

I have, &c.,

John T. Stewart, Provincial Engineer, Manawatu.

G. S. COOPER.

No. 87.

Copy of a Telegram from Mr. Cooper to Mr. Stewart.

Government Buildings, 5th April, 1870. length made in each. Expenditure to date in Wanted, statement of what lines of road are in progress—length made in each. round numbers if not exact. Telegraph reply.

G. S. Cooper.

No. 88.

Copy of a Telegram from Mr. STEWART to Mr. COOPER.

Otaki, 6th April, 1870.

THE lines of road in progress are:-1. Ngawhakarau and Oroua bush, two miles bush, rather heavy work, still incomplete; expenditure to date, £410. 2. Oroug bush to Foxton, 12 miles, open country, light work, two and three-quarter miles partly done; expenditure to date, £100.

JOHN T. STEWART.

No. 89.

Copy of a Letter from Mr. THYNNE to the Hon. W. Fox.

Manawatu, 22nd April, 1870.

SIR, Having been round the Upper Manawatu block, I would desire to obtain your assistance in a matter which I well know is purely a Government undertaking, but as it tends at the same time to

materially assist a number of energetic settlers, I trust you may take a favorable consideration of it.

The assistance I would ask is, that more men may be put on the works now being carried on in forming a road from the Oroua bridge to the Palmerston road, so that it may be finished before the wet weather sets in, which unless it is, will be next to impassable.

I would with all due deference urge this on many points:-

That it would be connecting the communication with the port a year earlier. That it will be both cheaper and better work, if done during the dry season.

That, as all the contracts are held by Maoris, their character does not insure the work, should it become more difficult and expensive, being carried out, and to renew them would cause a greater outlay.

That it will be impossible to cart sand as proposed along the road, therefore rendering it useless for draying.

And that unless more men are put on, it cannot possibly be finished before the wet weather sets in,

as very nearly half remains untouched.

Knowing the interest you take in the settling of the country, I trust I may be excused in speaking of a matter which does not come within my duties, and that you will try to meet the wishes of the settlers as far as possible in this matter.

The Hon. the Premier, Wellington.

I have, &c., ERNEST S. THYNNE.

No. 90.

Copy of a Letter from Lieut.-Colonel READER to Mr. THYNNE.

Colonial Defence Office, Wellington, 4th May, 1870.

SIR,-By direction of the Hon. Mr. Gisborne, I beg to acknowledge the receipt of your letter of the 22nd ult., urging on the Government the importance of putting on a greater force in order to complete the roads in the Manawatu district as far as possible before the winter sets in, and in reply to inform you that instructions have been given to push on the work by every means available to the officer in charge of the roads.

Ernest S. Thynne, Esq., Foxton, Manawatu.

I have, &c.,
H. E. READER, For the Acting Under Secretary.

No. 91.

Copy of a Letter from Lieut.-Colonel READER to Mr. STEWART.

Colonial Defence Office,

Wellington, 4th May, 1870. SIR.

By direction of the Hon. Mr. Gisborne I have the honor to request that you will be good enough to employ all the available means at your disposal, so as to push on the construction of the roads under your superintendence before the winter sets in; and in all cases where you are not able to complete culverts or check drains, that you will take such measures of preparation that the winter rains may do the least possible damage, with a view to the resumption of the work in the spring.

John T. Stewart, Esq., Provincial Engineer, Manawatu.

H. E. READER. For the Acting Under Secretary.

### No. 92.

Copy of a Letter from Mr. Stewart to Lieut.-Colonel Reader.

Sir,-Manawatu, 10th May, 1870. In answer to your letter of 4th instant, requesting me, by direction of the Hon. Mr. Gisborne, to push on and secure the road-works as far as possible before winter sets in, especially as regards culverts

and check drains, I have the honor to report for his information, that in the branch of the road-works at Nga-whakaraua and Oroua Bush, which is the part most liable to floods in winter, the whole of the remaining unfinished lengths of formation of road have been taken up by parties of natives on the spot. The culverts are complete, and the various drains for taking off the surplus water from the road have been cut and finished to their outlets.

I expect the remaining formation so taken in hand will be completed before the end of next month. I have called for tenders for cutting the sand hill at the west end of the bush road and spreading the sand over the formation.

In the branch of road works, Oroua Bush to Foxton, (mostly open country and not liable to be affected so much by winter rains) the work is also in a state of forwardness, a great part of the works approaching completion both as regards formation and culverts; and the remainder I hope to put in hand this month, so as to get nearly all of them done about the same time as the other branch.

I have given instructions to the overseer to urge on the different parties at work. With native labour the same dispatch is not always practicable as with European labour, but the natives here are on the whole doing the work in a very satisfactory manner.

I shall subsequently report upon both these branches of the road works at Manawatu.

I have, &c.,

The Acting Under Secretary for Defence, Wellington.

JOHN T. STEWART.

### No. 93.

Copy of a Letter from Mr. STEWART to Lieut.-Colonel READER.

Manawatu, 14th May, 1870. SIR, I have the honor to report that I have accepted the tender of Mr. Peter Stewart for cutting sand-hill at Oroua Bush on the road line, and covering the adjoining 70 chains of new road formation with sand to specified width for the sum of 35s. per chain, or a total sum of £122 10s.

The other tender received was that of Alfred Grammer, for the sum of £232.

This work is necessary both for the cutting of the sand-hill to form approach to the road in the bush, as well as to render passable the above extent of the new formation, and the rate is reasonable for the work to be done.

The Acting Under Secretary for Defence, Wellington.

I have, &c.. JOHN T. STEWART.

### No. 94.

Copy of a Letter from Mr. Cooper to Mr. STEWART.

Colonial Defence Office, Wellington, 3rd June, 1870. SIR. I have the honor to acknowledge receipt of your letter of the 14th ult., reporting that you had accepted Mr. Peter Stewart's tender (35s. per chain, or total lamp sum of £122 10s.) for cutting sand-hill at Oroua Bush, and covering adjoining 70 chains of new road with sand; and to inform you that your action has been approved by the Government.

I have, &c., G. S. Cooper,

J. T. Stewart, Esq., C.E., Manawatu.

Acting Under Secretary.

## No. 95.

Copy of a Letter from Mr. STEWART to Mr. COOPER.

Manawatu.

20th June, 1870. SIR,---I have the honor to inform you that during the week (5th to 11th) one of the heaviest freshes which has occurred in this district for some years took place. It rose to the level of the road formation in several places on the branch Ngawhakaraua and Oroua bnsh, but has done no damage, and the flood water soon

ran off, as the river fell owing to the culverts and outlet drains being all completed and in good order.

A few loose logs which had been cleared off the road line were floated by the flood into side drains of road, but the removal of these will cost only two to three pounds.

The Acting Under Secretary for Defence, Wellington.

I have, &c., John T. Stewart, Engineer in charge of Roads, Manawatu.

# HAWKE'S BAY AND TAUPO.

No. 96.

Extract from Telegram from the Hon. D. M'Lean to His Honor J. D. Ormond. Wellington, 8th September, 1869.

What do you propose to do in reference to Taupo Road? Will you ask Mr. Ross if the line inland, five miles of which is very rough, would be preferable to present line? It will be well to commence road work as soon as possible.

DONALD M'LEAN.

No. 97.

Copy of a Letter from His Honor J. D. Ormond to the Hon. D. M'LEAN.

Napier, 13th September, 1869.

In a late telegram you desired me to report what road operations I recommend should be carried

on in this district, and whether I anticipate the services of the natives will be available for the purpose. In reply, I have the honor to state that I have been in communication with Mr. Bold, the Telegraph Surveyor, who is employed on the telegraph works in progress to Taupo, and whose services for road works are available; also with Mr. Ross, the Provincial Engineer of this Province; in respect to the most desirable works to carry out on the road from here to the interior by way of Titiokura and Runanga, and that I gather from these gentlemen that the present line can be greatly improved at no very considerable expense; that the road may be opened for dray traffic as far as Te Haroto within a reasonable time, and also at comparatively small cost; and that the expenditure which the improvements in the line will entail will be amply repaid in the savings that will be effected in the present difficult and costly transport service.

Judging from the recent reports of Lieut-Colonel Harington as to the difficulty he finds in supplying a small force at Taupo from the Bay of Plenty; also from the experience of similar difficulties that were encountered in supplying the force lately in position at Forts Clarke, Galatea, and Runanga; I am disposed to believe that the road from here to Runanga can be so improved during the coming summer as to render the supply from here of any force likely to be required at Taupo less expensive, and more certain than by the other routes I have referred to. Since my return here, and the establishment of the Government Transport Service, the cost of carriage has been largely reduced, and I think even now we could supply Tapuacharuru at less cost than it is being done from Tauranga and Maketu. I do not, however, propose to take this work over at present, as the means at my disposal are quite sufficiently taxed. With the road fairly improved to Runanga, but little would require to be done beyond that to get at any of the Taupo posts by dray, the natural character of the country being most favorable.

I will have detailed reports prepared for your information by the two officers I have referred to as to the works to be carried out, and their cost; also what time would be occupied in their construction.

I will defer to another time reporting as to what extent of native labor may be procurable for any works upon this line of road, or any other military roads in this district—such, for instance, as the line to the West Coast or Wairarapa. You are aware that the Constabulary hold posts at Titiokura, Haroto, and Runanga for the protection of the district and of the telegraph works in course of erection. I propose to employ these men upon road works in the vicinity of their posts, and I trust to commence operations very shortly. Before doing so, I desire to submit for your consideration whether it would not be politic, and remunerative at the same time, to allow the constabulary a small additional pay whilst employed at road-making; in short, to treat them in this respect the same as the Imperial soldier. An allowance of say Is. per diem to the men would be ample, and I believe would make the work agreeable to them. in place of being, as now, a constant source of difficulty. I would recommend that the officers should not be employed indiscriminately for this work, but that one officer of each division of Coustabulary should be selected for the purpose, and should receive an additional allowance to oversee the works in his neighbourhood, and be responsible for the proper employment of the labour of his men, ander, of course, professional supervision. I am aware that this course, if followed, will have to be general, but I am certain it will bear adequate results to the expenditure incurred. I shall be obliged if you will inform me soon of your decision upon this subject, as I shall delay starting the road-works until I hear from you upon it.

The Hon. the Defence Minister, Wellington.

I have, &c., J. D. Ormond.

No. 98.

Copy of a Letter from Mr. Branigan to His Honor J. D. Ormond.

Colonial Defence Office,

Wellington, 23rd September, 1869.

The Hon. the Defence Minister has desired me to acknowledge the receipt of your letter of the 13th instant, relative to the proposed road operations, and to convey to you the thanks of the Government for your excellent and suggestive report.

The Government concur in your proposals, and rely upon you to carry them out; and with regard to that portion of your report relative to the employment of the Constabulary, I am to inform you that Mr. M'Lean has approved your suggestion, and will authorize the payment of one shilling a day to such men of the Constabulary as are employed in the construction of the roads.

His Honor J. D. Ormond, General Government Agent, Napier. ST. JOHN BRANIGAN,
Acting Under Secretary.

No. 99.

Copy of a Letter from His Honor J. D. ORMOND to the Hon. W. GISBORNE.

Sir,—

Napier, 27th September, 1869.

I have the honor to inform you that, on being advised by the Hon. the Defence Minister that Mr. Locke's services had been secured by the Government and were available, I sent that gentleman to visit the Natives of the Taupo district, and accredited him to them as the officer who for the future would visit their district regularly and acquaint them with the views and wishes of the Government.

I requested Mr. Locke to visit the different settlements, and acquaint himself with the feelings of the Natives, particularly at Tapuaeharuru, from which place some complaints had reached me. The general object of Mr. Locke's visit was to assure the friendly natives of Taupo that the Government would countenance and support them by every means in its power, and to encourage them to hold their own against Te Kooti or other enemies. Mr. Locke returned here last Friday, having seen nearly all the Taupo natives, from the leading men of whom he brought letters expressing their great satisfaction at his being the officer selected to communicate with them. The general tone of the Taupo natives is very satisfactory, and I gather from Mr. Locke that should the operations now in progress against Te Kooti prove, as I trust they will, successful, or should he even be only driven out of the district, the natives on the west side of Taupo Lake, who are now holding aloof, will be only too glad to come over to our side and avail themselves of any employment on road works which we may have to give them. I have already authority from the Honorable the Defence Minister to expend some money on the Taupo Road, and I shall take advantage of the present favorable state of the natives to engage them upon it directly a cessation of the present active hostilities will permit of it.

cessation of the present active hostilities will permit of it.

From a letter from the Chief Poihipi, of Tapuaeharuru, I learn that the road-making idea, if I may so call it, is likely to spread through the Taupo District, and not only is the call I made for men to work on the road from here to Taupo responded to, but Poihipi desires to be allowed to open the road between Tapuaeharuru and Tauranga, and says he can obtain the services of a portion of the Ngaiterangi natives, who are at present far from reliable, but who could be kept out of mischief by employment upon useful works. The line of road Poihipi refers to is out of the district assigned to my agency; but I feel so strongly that the true policy of the Government is to employ the native people wherever possible in the formation of main roads that will open up the country, that I have not hesitated to bring the subject to your notice.

I have replied to Poihipi's letter that the Government will communicate with him at an early date upon the subject he has opened. Very good results have attended Mr. Locke's first official visit to Taupo, and the Government may rely I will do all in my power to promote and extend the present satisfactory relations that exist with the Taupo natives.

The Hon. the Colonial Secretary, Wellington. I have &c., J. D. Ormond.

No. 100.

Copy of a Letter from His Honor J. D. Ormond to the Hon. Mr. GISBORNE.

Sir,—

Napier, 1st October, 1869.

I have the honor to enclose a copy of Mr. Locke's report of his late visit to Taupo, the results of which I have communicated to you in former letters.

I also enclose translation of a letter from the Chief Poihipi Tukairangi which shows the favourable feeling of the natives of the interior of the country to have the same opened by roads, and their desire to assist in making them.

The Hon. the Colonial Secretary, Wellington. I have, &c., J. D. Ormond.

Enclosure 1 in No. 100.

Copy of a Letter from Mr. Locke, R.M., to His Honor J. D. Ormond.

Napier, 27th September, 1869.

In accordance with instructions received from the Hon. the Defence Minister by telegram dated 9th September, and subsequently from you by letter dated 14th September, I proceeded to Taupo for the purpose of communicating with the native chiefs of that district and to assure them of the desire of the Government to afford them such countenance and support as is in its power, and to confer with them on the state of their district, and their wishes and requirements; also to endeavour to arrange with the native proprietors of the Kaimanawa Ranges, so as to open up that country for mining

and gold digging operations.

I started from Napier on the 15th instant, and proceeded by way of Runanga to Tapuaeharuru (Poihipi's Pa at outlet of Taupo Lake); from thence I went by the east shore of the lake to Tokano, and on to Rotoaira. The friendly natives of the district having all collected for the present at one or other

#### CONSTRUCTION OF ROADS IN THE NORTH ISLAND. 43 A.-No. 17.

of the above settlements. I returned to Napier on the 24th instant.

The first chief of importance in the Taupo District with whom I communicated was Poihipi Tukairangi. I found him and his followers (about twenty-five men), and about fifty Arawas under their

chief Te Kepa Tuhourangi, at Tapuaeharuru.

Poihipi has always been an advocate for opening up the interior of the country by roads &c., and expressed himself as being very desirous to have that part of the country settled by Europeans. I enclose a letter, with rough map attached, from him addressed to Mr. M'Lean, in which he sets forth his views on that subject.

I explained to him the nature of the arrangements the Government proposed respecting the Kaimanawa Gold Fields, with which he fully concurred, and in fact appeared to highly appreciate the advantages to be derived from a European occupancy of the district.

At Tokano I found Hataraka te Whetu, Paora Hapi, Hohepa Tamaumutu, and other chiefs of the Ngatituwharetoa tribe, with their followers; also Henare Tomoana, with the Ngatikahungunu.

These people showed the same friendly feeling as Poihipi, and all appeared to appreciate the prompt manner in which assistance had been rendered by the Government when they lay entirely exposed to the murderous band of Te Kooti.

At Rotoaira, which is the present head-quarters, I met Hare Tauteka and Kingi Te Herekiekie, with Te Parera, Karaitiana Te Rangi, and Ihakara, from Patea, and other chiefs of that district. There was also Renata Kawepo, with about one hundred and thirty followers.

Hare Tauteka is one of the most important chiefs of that part of the country, and as Rotoaira is likely to be about the centre of our future operations for some time, and should the Kaimanawa Ranges turn out a rich diggings, that district would soon be the scene of great excitement.

I took great pains to thoroughly explain the intentions of the Government to him and the Patea

chiefs.

Hare Tauteka and the Patea chiefs are the principal owners of the Kaimanawa country, and with them the final agreement was made for the handing over of the whole country (about 300,000 acres) to the Government, according to regulations drawn up and carefully translated into the Maori language, and explained to them in the presence of several witnesses, including Lieut.-Colonel M.Donnell, who rendered me great assistance in bringing this important arrangement to a satisfactory issue.

I feel satisfied that as soon as the all-engrossing subject which now attracts the attention of the natives of that part of the island is somewhat abated, a large amount to native labour could be obtained from that and the neighbouring districts for the purposes of making roads and other useful and important public works, not only from those tribes or hapus generally looked upon as friendly or neutral, but also, with judicious management, many of the natives who are now in a semi-rebellious state would take up the new excitement, and soon be led to appreciate the benefits to be derived from more easy communication and a friendly intercourse with the Europeans; and once having started the works, and gained their confidence, I should have no fears but that the feeling would spread throughout the island. I have, &c.,

His Honor J. D. Ormond, General Government Agent, Napier. S. Locke.

## Enclosure 2 in No. 100.

[TRANSLATION.]

Copy of a Letter from Poihipi Tukairangi to the Hon. D. M'Lean.

Tapuaeharuru,

Taupo, 20th September, 1869. To Mr. M'LEAN.

Friend, salutations to you. Mr. Locke has arrived here, and we have been talking about the conditions for mining gold. I am agreeable to lease my portion of Kaimanawa, Parinui O Ngaki, Kawatara, extending to the top of Kaimanawa, and on to the other side.

Another subject was the road-making. I have long ago consented to the road to Tauranga and Napier. Make haste with this work. Don't prolong these roads which Mr. Locke and myself have been talking about. Friend, the whole of the people are agreeable to have the roads made. The reason is my great desire that we may have light afforded to us into the middle of this island—that is, into Taupo. It is a desire that I have had of former days, from the first to the second, the third, the fourth, and even up to the present Governor, and now I am pleased with the present subjects brought to me by Mr. Locke. That is all on those subjects. I am also pleased to have Mr. Locke as a friend here in Taupo to supervise the works of this place. That is all.

From your friend,

Poihipi Tukairangi.

## No. 101.

Copy of a Letter from the Hon. Mr. GISBORNE to His Honor J. D. ORMOND.

Celonial Secretary's Office,

Wellington, 11th October, 1869. SIR.

I have the honor to acknowledge the receipt of your letter of the 1st inst., enclosing a copy of Mr. Locke's report of his late visit to Taupo, and to express my gratification at its contents.

The native letter (translated) which also accompanied your letter will be answered, with an expression of the desire of the Government to employ natives in road-making.

His Honor J. D. Ormond, General Government Agent, Napier.

W. GISBORNE.

## No. 102.

[CIRCULAR MEMORANDUM.]

Auckland, 29th October, 1869.

Officers and non-commissioned officers of Constabulary will understand that it will be a part of their duty in regard to information to send to the Defence Minister from time to time (or as may be specially ordered) reports descriptive of the topographical character of the country that they may be stationed in, with the facilities of communication by roads or rivers from their station as a centre; bearing in mind that the peace of a district cannot be permanently insured until facilities shall exist to penetrate its fastnesses.

Assuming Taupo Lake to be the centre from which lines of military road will have to diverge, officers will, as the circumstances of their ordinary duty may admit, examine the paths leading from their respective stations towards that place, with a view of ascertaining what improvement may be made in their direction. Native tracks, as a rule, follow the best lines of country, but are generally capable of being improved in detail. Inasmuch as bridges are rarely thought of by the natives, considerable detours are often made to avoid a stream that might be crossed with the exercise of a moderate amount of mechanical ingenuity. Swamps, too, are wound round which might be made passable by a small amount of work in draining.

As soon as any officer or non-commissioned officer in charge of a detachment or station is in possession of authentic information on these subjects, he will furnish to the Defence Minister a sketch with explanatory notes descriptive of the present paths leading in that direction, and the improvements that he would suggest. Officers and non-commissioned officers will in this have an opportunity of evincing their ability in a very important branch of their duty.

their ability in a very important branch of their duty.

A sketch map of the district of which their station is the centre should also be prepared, and a copy sent to the Government, the original being kept at the station for general use: this should be drawn to

scale say four miles to an inch, the north point being towards the top of the plan.

The map should embody as much information as is practicable without crowding; and to make the amount of information more ample, descriptive notes on separate sheets of paper should be attached to it under the various heads of—

1. Roads, description of existing

2. " proposed 3. Rivers " proposed navigation

3. Rivers ,, navigation
4. ,, suggestions for pontooning or bridging

5. Forests, description of

6. Mountain passes, description of

7. Native settlements and cultivations, with name of hapu and estimate of population

3. Native fortifications

9. Extent of feed for horses or bullocks

10. The extent of bush-clearing necessary to let light and air in to keep a road dry

In observing a line of country, particular attention is to be given to the existence of any parallel tracks; these may be more available for transit at certain times of the year; they are of the greatest importance in advance and retreat. Notes should be made as to how far a path continues available for carts or packhorses.

As to where banks should be broken down to improve approach to a ford.

As to how steep places or a round may be avoided or improved by a divergence.

As to how a road may be straightened by hardening a swamp or bridging a stream.

As to where a pontoon ferry should be arranged.

As to how landing-places could be improved.

As to what positions pas and villages are commanded from, and whence they obtain their supplies and water.

As to the depth of rivers, and the extent to which they may be made navigable; with the point to which the influence of the flood and ebb of tide extends.

As to the military features, the manner in which a road is commanded, the position of cross roads, the extent and character of gorges and defiles, with the length of time required to go from place to place, whether

As a messenger or scout.

As in heavy marching order.

With packhorses.

With carts, &c.

As cavalry.

Position of safe and convenient halting-places.

DONALD M'LEAN.

A copy of the above sent to His Honor J. D. Ormond, the Hon. Colonial Secretary, Lieut.-Col. Harington, Major Stapp, Major Noake, Mr. Commissioner Branigan.

### No. 103.

Copy of a Letter from His Honor J. D. ORMOND to the Hon. W. GISBORNE.

I have the honor to enclose copy of a telegram from Mr. Bold, reporting upon the road between Tapuaeharuru and Runanga, and the cost of opening the same for dray communication. I am glad to find that the amount I estimated is not far exceeded, and trust to be able during the visit I am about to make to the Taupo District to start the work. I shall prefer closing with the natives for a lump sum of

#### CONSTRUCTION OF ROADS IN THE NORTH ISLAND. 45 A.-No. 17.

say five hundred pounds for the work between the Rangitaiki and Tapuaeharuru, and the piece near Runauga can be done as suggested by Mr. Bold by the Constabulary. The saving that will be effected by the opening of this road in supplying any posts we may have on Taupo Lake will in a few months cover the whole outlay.

I have, &c.,

The Hon. the Colonial Secretary, Wellington.

J. D. ORMOND.

Enclosure in No. 103.

Copy of a Telegram from Mr. Bolb to His Honor J. D. Ormond.

Runanga, 13th November, 1869.

In accordance with your instructions, I accompanied Mr. Locke to Tapuaeharuru, for the purpose of estimating the cost of opening dray communications from here to that place. On a flying trip purpose of estimating the cost of opening dray communications from here to that place. On a flying trip it is difficult to arrive at other than a very approximate estimate, but from the notes I made I think communication could be opened between Rangitaiki and Tapuaeharuru for £500. The principal work required is side and scrub cutting between Opepe and the lake. The portion from Runanga to the Rangataiki would cost about £100, and could be done by Constabulary at this post, if available. Mr. Locke expressed his desire to conclude a bargain for a lump sum. My estimate is not sufficiently accurate to make such an arrangement, and I recommend that it would be better to let the work at per chain or cubic yard for earthwork, and per chain for scrub-clearing. The route should also be marked out, and a person left with the natives who could carry out my directions. Poihipi cannot collect his men together for at least ten days, they being at Tokano and elsewhere. Road tools should also be sent -shovels, spades, picks, billhooks, and a few axes.

I have enough cable left at Mohaka to put a canoe across the Waikato on the self-acting principal; a travelling block would be all that is required, Mr. Locke having induced Poihipi to give a canoe.

We left matters thus. That road should be marked off first, and the natives would then take the work. I am about starting through the bush from Tarawera to Maruanui.

E. H. Bold.

No. 104.

Copy of a Telegram from the Hon. W. Fox to His Honor J. D. Ormond.

Wellington, 22nd January, 1870.

CAN you give me a rough estimate of the extent to which your road operations are likely to dip into the £30,000 vote. I want to know in order to limit West Coast operations on that fund.

No. 105.

Copy of a Telegram from His Honor J. D. Ormond to the Hon. W. Fox.

Napier, 23rd January, 1870.

RECEIVED yours referring to road expenditure. I have given this subject a good deal of attention, and thought of it as the question of the day and the solution of the native difficulty. My reply consequently

must be at some length to explain what I have arrived at, and I only refer to those districts of which I have obtained a knowledge and not to the West Coast, of which I know little.

First. Re road Expenditure in this District.—I estimate about £800 has been spent under Mr. Bold in improving Taupo line for transport purposes. Poihipi's contract is £450 more. This is all I have engaged for. But Mr. Locke is now at Taupo endeavouring to secure native labour to work at the road between Runanga and here, or rather Titiokura, and it will take £8,000 to open the same for dray traffic. In reference to this work, I should mention that it will be necessary to employ the Taupo natives on roads, or otherwise to provide for them, as they have no cultivations at all and can live in no other way. roads, or otherwise to provide for them, as they have no cultivations at all and can live in no other way. If £10,000, including past expenditure, is estimated at what may be required between here and Tapuae-haruru, it will, I think, open the road for drays. I would call attention at the same time to the importance of availing of present opening to extend road from Tapuaeharuru to Cambridge; this can be done probably at a nominal cost. From what I can gather £4,000 would open that road for drays and provide dray punts at the Waikato crossings. Then the road to Tauranga from Tapuaeharuru is very important, and will require £5,000 to £6,000 to do any good. Viewing, as I do, roads as the policy of the country, I dwell on the importance of the main roads I have mentioned. The bridle track in course of construction from Wanganui is most valuable in a military point of view and I have well be accorded. of construction from Wanganui is most valuable in a military point of view, and I hope will be opened, but the difficulties after reaching the open country are great if dray road with Taupo was intended. With a little attention, I am satisfied contracts could be made with the resident Natives of those districts for roads to Cambridge and Tauranga from Tupuaehururu and connected with the road to here. I think them of the greatest importance. The road to Cambridge I connect with the telegraph. The wire should run to Tapuaeharuru in less than three months from now, and I can see no difficulty in extending to Cambridge. I have directed Mr. Locke to collect information as to the road, timber, &c., and to talk with the natives on the subject as something determined on. I will report as soon as I hear result. I am very earnest in wishing to extend telegraph and road to Cambridge, and have for some time past kept the question before the natives, so that they are used to it. Of course that is out of my district, but the question is so important I have not hesitated to assist in it so far as I can.

No. 106.

Extract from a Telegram from the Hon. W. Fox to His Honor J. D. Ormond. Wellington, 24th January, 1870. I quite agree with your views on the road question. You will, however, scarcely expend the amount

you speak of before Assmbly meets, and afterwards I hope we may have a larger sum at disposal. In the meantime go on as you propose. I do not know what Mr. M'Lean is doing with roads to the north of you. He has a party or two at work between Waingongoro and Opunake in Taranaki Province, but the work is light. It is entirely Native labour, under Hone Pihama (friendly), Hukanui and Ngahui (ex rebels). I have about 100 Volunteers and Constabulary at work between Waingongoro and Wanganui, chiefly easing the approaches to the three or four small rivers which have to be crossed. Their military pay will be charged to the £30,000 vote while they work. I have also started a party on the Manawatu to Napier road, to make passable a piece of some two miles long, and ease a few other spots, which will cost £1,500 to £2,000. This is all I intend to do (except one or two bridges, costing £300 or £400 a-piece) till the Assembly meets. I agree with Mr. Carrington, the Superintendent of Taranaki, who says, "The greater part of the roads need not be macadamized; the cuttings, embankments, and bridges are all that are necessary to make this land an abode of peace." This is particularly applicable to the country between Wanganui and Taranaki, by the open land. I am very anxious to see the road from Manawatu to Napier completed. It is the only point where east and west coasts can be united, and the road runs on this side through a magnificent country, of which 100,000 acres are surveyed, ready for sale, and free from disputes with Natives. I found the work done by the Provincial Government of Wellington much further advanced than I expected. It would be a splendid thing for your Province and this, and of great consequence in a national point of view—

WILLIAM FOX.

### No. 107.

Copy of a Letter from His Honor J. D. Ormond to the Hon. W. GISBORNE.

SIR.

Napier, 3rd February, 1870.

I have the honor to enclose a report of Mr. Bold's on the road-works that have been executed under his supervision, and a tracing of the road from Tarawera to the Taupo Plains, showing the proposed alteration in that part of the line. I should add that the telegraph will be taken by this route, which is some miles shorter. The remainder of the line is shown I believe, as Mr. Bold states, on the telegraph map which I forwarded to Mr. Lemon, and which you can refer to if necessary. I should state for your information that little has been done upon this line, from there being no labour available for the purpose, the Taupo Natives having been almost constantly engaged in the operations against Te Kooti, and the Constabulary stationed in posts along the line having been occupied in escorting the convoys of provisions.

The only work that has been done so far has been executed by a small party of Europeaus, who have been employed in improving and keeping passable the line for pack animals. A great deal has, however, been done by them, and Mr. Bold has shown considerable skill in directing the works. The line, when the proposed deviations between Haroto and Te Purupuru, and Tarawera and Taupo Plains are completed, will be a really good pack road, but a great deal will require to be done before it can be opened for drays.

The instructions I have given to Mr. Bold are, to open the new road from Te Haroto to Te Purupuru, making the same a good bridle road at first. This will involve some three miles bush cutting, and will avoid the worst part of the present road. This piece of work will, I think, be undertaken by the Natives belonging to the late Paora Hapi's hapu, and will be done by contract. These Natives are at present on a visit to the Hawkes Bay Natives, but are about to return, and I hope the work will then be arranged for, when I will report further upon the matter.

The new line between Tarawcra and the Taupo Plains is being opened by a party of about 20 Europeans. I have been unable to get Native labour as yet, for the reasons already explained, and no Constabulary have been available. I propose, however, to employ both natives and Constabulary on this portion of the road whenever I am able to obtain their services. The line is now only being made passable, and I have pushed it on in order that the extension of telegraph may not be delayed. It will, however, when sufficiently opened for dragging the telegraph poles, &c., over it, be passable for pack horses, and will avoid the worst part of the present road between Tarawera and Runanga.

Generally, I may state that I propose to employ such labour as can be procured in improving the bridle road between Te Haroto and Taupo plains, and to avail as much as possible of the services of the Constabulary. In the neighbourhood of Tarawera there is a good deal that requires to be done, and which I will report upon when in a position to have the work carried on.

With respect to the road on this side of Te Haroto, I enclose a report of Mr. Ross, lately the Provincial Surveyor, whom I employed to survey that part of the line. I should state that supplies are at present delivered by the contractors at Titiokura saddle. The road between Pohue and Titiokura is passable, but requires improvement; and between Titiokura and the Mohaka River, and thence to Te Haroto a dray road can be constructed at no very great cost; Mr. Ross estimates it at £2,500, but Mr. Bold considers much of the work proposed by Mr. Ross to be unnecessary, and I agree in thinking £2,000 would open the road for drays as far as Te Haroto. This would make a material difference to any future operations that may be necessary in the Taupo country.

I think I have explained generally what I propose to do upon the Taupo line, and have only to add that Poihipi is proceeding with his contract, and that it will not be long before the dray road between Runanga and Tapuaeharuru is open.

I have, &c.,

The Hon. the Colonial Secretary, Wellington.

J. D. ORMOND.

#### CONSTRUCTION OF ROADS IN THE NORTH ISLAND. 47 A.-No. 17.

## Enclosure 1 in No. 107.

Copy of a Letter from Mr. Bold to His Honor J. D. Ormond.

Napier, 11th January, 1870.

I have the honor to submit for your information the accompanying sketch map of the country SIR,-

between Kopitonui in the Waipunga Valley, and Moturoa at commencement of Taupo plain. The country referred to was explored by me with a view to ascertain its practicability for the construction of a permanent road, and also as to whether any advantages were to be secured over the present track should it be adopted.

My exploration commenced at the Taupo end, and the track (an old native one) travelled over is

indicated on the sketch by a black dotted line.

The longitudinal barometric section on the margin of sketch shows the relative elevations and depressions along the black dotted line before referred to. After due examination of both routes (that is to say of present track and native track on right bank of Waipunga) I am of opinion that the native track is best adapted for a permanent dray road.

The red line shows the approximate position and direction a contour line would take on a gradient

with inclination in the ratio of 1 in 16 or 17.

The earthwork required will be heavy side cutting, with a probability of rock, and will extend continuously for at least six miles; about 11 miles of bush, as near as I can estimate from flying trip, will require clearing.

The only stream crossed is the Pareranui, but as it is headed it offers no obstacle. The remaining streams are on the plain, and approach cuttings constitute all works necessary to make them passable.

According to your directions, I have initiated on behalf of the Defence Department the necessary steps for opening communication by means of a bridle track on right bank of Waipunga.

The track rises and diverges from the present track at the patch of bush named Oruakaka, about 1

mile nearer Tarawera than Kopitonui.

The last named stream will be headed. By the winding of the road in thus heading streams and preserving an uniform gradient, may increase length to seven miles.

In the absence of an actual survey and measurements it is impossible to determine what the cost of

construction will be.

To avoid crossing Waipunga and the steep hills on present track, it is, I think, worth while to proceed with bridle track in meantime; the construction of bridle track cannot be exactly determined, but it may cost £600 to £700, if no rock or like obstacle intervenes. To follow the present track with a dray road would be far more expensive and longer in distance than the route along which the bridle track is now in course of construction.

Accompanying this report I forward a large map of the telegraph line at your request, in order that When this is done I have to ask that the original may be forwarded to the General it may be copied.

Manager of the Telegraph Department.

On this map the line of telegraph from Napier to Tarawera is indicated by a black firm line, the extent and positions of the road formation (bridle track) made by a road-party according to your instructions. The first cutting commences on summit of Te Purupuru hill, and terminates near the base of Turangakumu; others marked are at Waipunga, double crossing (at horseshoe bend) at Stony, or Dudu Creek, and some near Tarawera. The approximate total length of cutting between Te Purupuru and Tarawera is three miles.

Some portions of the road have been seriously damaged by the late unusually heavy rains. This damage has since been repaired. Injury to the road like this must always be expected in pumice country,

particularly on inclines, and can only be remedied by expensive measures.

The proposed deviation between Te Haroto and Te Purupuru is shewn on the telegraph map by dotted

line in yellow.

The line courses over a leading ridge, and is not only much easier to construct, but some threequarters to one mile shorter in distance.

The Constabulary have recently been employed upon it, but owing to want of proper supervision have effected little.

A bridle track opened along this line would be of immense advantage to transport service, and save the necessity of travelling over the track by Waiparati, at present in an execrable condition.

The natives lately residing at Te Haroto were anxious for this portion of work.

Road-work contracted for by natives across plains has been delayed on account of transport not being able to take necessary tools from Te Haroto. This, however, was remedied by myself on my recent return to Napier; the works could not well have been proceeded with ealier in any case, as the natives were engaged in military operations at Oruanui until 22nd December, 1869. I trust on my return to find that some progress has been made.

His Honor J. D. Ormond, General Government Agent, Hawke's Bay.

I have, &c., EDWARD H. BOLD, Telegraph Surveyor.

### Enclosure 2 in No. 107.

Copy of a Letter from Mr. Ross to His Honor J. D. Ormond.

Engineer's Office, Napier, 25th November, 1869.

SIR,-In accordance with your instructions, I have laid out the road from Galbraith's house, Pohue, to the Church Crossing, Mohaka.

The distance from Galbraith's house to the Titiokura saddle is 300 chains, or three miles and three-Of this distance 52 chains passes through the Pohue Bush, and is heavily timbered; the quarters.

remainder of the distance is through open land, covered with fern and scrub. The distance from the Titiokura saddle to the Mohaka crossing is 345 chains, or over four miles and a quarter. The steepest gradient from Galbraith's house to the Titiokura saddle is 1 foot in 12, the general gradient being 1 in 15, or 352 feet to the mile. The steepest gradient from the saddle to the Mohaka crossing is 1 in 10. This gradient is in three sections. The total length does not exceed 40 chains. The general gradient is from 1 in 13 to 1 in 20. Along the whole length of road the line has been cut, closely pegged, with the gradient marked on each peg, a notch in the peg showing the fillings, and the cuttings are marked in figures. The expense of making a good dray road, fourteen feet wide, with good side drains, culverts, banks, and formation properly sloped, and the gradients kept as shown on the pegs will be about £2,500.

52 chains through Pohue Bush.—Formation and cutting bush, 66 feet wide, £6 per chain £312 593 chains formation, also building small bridges and culverts, at £3 per chain 1,779 ... ... 40,000 feet matai timber, at 20s. 400£2,491

Should totara be required, the price will be 25s.

With culverts put closely on the road, I do not think a back drain requisite, excepting in a few

deep side cuttings.

The surface soil is very porous, being mostly composed of volcanic ashes, through which the water permeates quickly. A good side-drain, with close culverts, will carry off the water before it acquires volume or force sufficient to cut up the road. Care should be taken that the side-drains or water-tables are sufficient to carry off the water, which, after passing through the porous surface soil, meets with stiff clay, overlying soft freestone rocks. In many places this strata will be tapped, and the water will ooze out of the side cuttings. Care should also be taken that the centre of the road where there is the most traffic should be kept well rounded till such a time as the road acquires solidity, so as to throw the water to the side-drains, otherwise the centre will, owing to the light material of which the road is formed, be worn concave, and will in inclinations form a watercourse.

Should the work be done by day labor, it will be found to cost more than the above estimate, as labour by the day is always less profitable than contract or piecework, at which each man's skill and industry receives a proportionate reward. Should hired labor be used, it would be well to have the workmen under the superintendence of an experienced roadmaker, who would be a judge of both the quantity and quality of the work. This would enable him to give the men piecework or jobs, by which they would, by hard work, earn more than their ordinary wages, with mutual profit to themselves and

the Government.

I have, &c., D. Ross, Provincial Engineer.

His Honor the Superintendent of Hawke's Bay.

No. 108.

Copy of a Letter from Mr. Cooper to His Honor J. D. Ormond.

Colonial Defence Office,

Sir,—

I have the honor to acknowledge receipt of your letter of the 3rd inst., covering Mr. Bold's report on road works, and tracings of the road from Tarawera to Taupo Plains, and to convey to you an approval generally of your proceedings, and the instructions you have given in the matter.

Will you be good enough, on behalf of the Government, to thank Mr. Bold for the valuable services he has rendered to the Colony in connection with these works.

I have, &c.,

For the Defence Minister, G. S. COOPER,

His Honor J. D. Ormond, Napier.

No. 109.

Copy of a Telegram from His Honor J. D. ORMOND to the Hon. W. GISBORNE.

Napier, 20th March, 1870.

I WANT Mr. Bold to get away on Monday morning. Please authorise Paymaster to advance on imprest the £300 for Poihipi's road work. Mr. Bold will take it with him. You know probably that the carts are working on Taupo Plain, between Runanga and Tapuaeharuru, and effect great saving in transport.

No. 110.

Copy of a Letter from His Honor J. D. Ormond to the Hon. Mr. GISBORNE.

Napier, 2nd April, 1870. I have the honor to forward for your information a copy of the translation of a very good letter received lately from the chief Poihipi, who is, and has been, a very useful man to us at Taupo. I should be glad if you would notice him, by writing that you had seen his letter, and heard of his roudwork at Taupo, on which horse-drays are now working. I have, &c., J. D. Orwond.

The Hon. the Colonial Secretary, Wellington.

## Enclosure in No. 110.

Translation of a Letter from Poihipi to His Honor J. D. Ormond.

Tapuaeharuru, Taupo,

To Mr. Ormond.

25th March, 1870.

Friend, salutations to you. I have seen your thoughts about the King, and agree to them, and also wishing all to be on their guard against Te Kooti, which is also good. I will bear it in mind, but I

will let you know my opinion also.

In the first place, this island fought against the pakehas. The chiefs were jealous of the inferior men; then followed the Treaty of Waitaugi, when some chiefs tried to do away with the power of other chiefs. That work was wrong. Hone Heke was offensive, so was Rangihaeata at Wanganui. I am not clear; I am still seeking the right. These evils were on the coast. I was in those times engaged in forwarding the works of the Government in the middle of this island, but they would not listen to me. All the chiefs of this island were against me. Then I thought, as all were quiet, about the roads, and asked for the mail from Auckland to Napier, and also for the road work, and it was all given me by the asked for the mail from Auckland to Napier, and also for the road work, and it was all given me by the Government; but as soon as this was made public it was not agreed to. A few were agreeable, but all the chiefs of this island said, "No; if the road was made, this island would be mate (dead)." This was their word. The friendly natives would not listen; they allowed me to stand alone at that time. That is the reason that fighting was prolonged. Then the King was appointed to stop road-making and the sale of land. After this fighting took place at Waikato. Then the Government wished to make peace. I took their proposal to Waikato and all the other places. I did so, knowing that peace would not be accepted. I asked the Government to have the roads made, but it was not hastened. If it had been, by the time this evil had arisen the road would have been completed, and Europeans and natives have travelled quickly and caught Te Kooti, or fighting would have ceased, as they would be divided. The King natives could not have gone over to the Urewers, nor the Urewers, to the King. This is a very King natives could not have gone over to the Urewera, nor the Urewera to the King. This is a very old idea of mine. Secondly, I asked Governor Grey to send 1,000 soldiers to be stationed at Taupo. This was the reason I went to Otago. Thirdly, you have now come and have urged the roadwork, as Te Kooti has escaped. I alone agree to this, but the friendly natives hold back. Their boast was they would follow Te Kooti, but he has escaped. If they had listened to you to open the road, to build and occupy redoubts extending as far as Tauranga, then driven him from Tuhua, he would before this have been caught, as there would have been great numbers on the watch for him. This is right that the natives should cease. Do not follow him any more; the Government money is being expended in useless journeys from one place to another, and in remaining idly in other places. This is my idea to allow Te Kooti to settle down quietly, and wait till Tapuaeharuru is completed, and Europeans are settled in their pa. Build another at Opepe, at Pahaitea, or at Moturoa; another at Tarawera, Te Haroto, Titiokura. When these are occupied, turn in the direction of Tauranga to the nearest point, so that the line may be quickly completed. Build a pa at Puketarata, and another at Te Niho-o-te-kiore, another at Horohoro, another at Ohinemutu, to be all occupied with Europeans and natives. Let the most of the men be here at Tapuaeharuru, in the centre, watching both ends. My wish is that all should assemble from Wellington, Wanganui, Auckland, Tauranga and Napier, to Taupo, here into one place to catch him. The officers of the soldiers are capable of taking charge of the drill. There may perhaps be some person who is desirous of bringing his wheat to the mill, it will rest entirely with the person in charge, as he has the directing of the water to turn it either on to the wheel, whereby the stones will be charge, as he has the directing of the water to turn it either on to the wheel, whereby the stones will be moved and the wheat ground to dust. On the other hand, if the course of the water is stopped and broken open by a flood, the whole country will be deluged. The sea will rush in, and all the Hauhaus will be destroyed. There will be no hiding-place for them. Here is an old idea of mine, which remains to the present day, that although all these tribes follow Te Kooti, namely, the Arawa, Ngatihau, Ngatikahungunu, and Ngatiporou, it will be a long while before they go over this island. It is spending your money for naught. My wish is that the money be expended in road-making, as the Hauhaus have expressed their determination to stop my road. I will be firm. Send me word. I will not go to the King. I am waiting daily for Te Kooti. This hope keeps me alive. Do not let any natives see these thoughts of mine. From thoughts of mine. From

Poihipi Tukairangi.

## No. 111.

Copy of a Letter from the Hon. Mr. GISBORNE to His Honor J. D. ORMOND.

Colonial Defence Office,
Wellington, 16th April, 1870.

I have the honor to acknowledge receipt of your letter of the 2nd instant, covering a communication from the Chief Poihipi concerning the Taupo road-works.

Will your Honor be good enough to forward the enclosed reply to Poihipi by an early opportunity.

I have, &c.,

His Honor J. D. Ormond, Esq., Napier.

SIR,-

W. GISBORNE.

## Enclosure in No. 111.

Copy of a Letter from the Hon. Mr. GISBORNE to POIHIPI.

To TE POIHIPI. Wellington, 16th April, 1870.

Salutation. Mr. Ormond has sent your letter to him to the Government, in which you point out how you have constantly striven to aid the Government in maintaining the peace of the Island and in carrying on the great work of road-making.

Your letter has been read with great pleasure by the Ministers of the Government, but it has not told them what they did not know. It is not to-day that they hear of the course which has been pursued

by the chief of the great inland sea. But ill-advised tribes could not see the advantages of the works of peace as you saw them, and so the wish of the Government to carry out their own views and yours was But at last, through the persistent energy of yourself and your friend Ormond the work has been pushed on, and horse-drays are now working on the Kaingaroa. Soon, also, the wire will be at your house. Work on, my friend. Be strong to urge the good works of peace. Though you are far off, your house. all you do is known to the Government and to the world.

GISBORNE.

### No. 112.

Copy of a Letter from His Honor J. D. Ormond to the Hon. W. GISBORNE.

Wellington, 4th July, 1870. SIR,-I have the honour to enclose a Report from Mr. Bold, Telegraph Surveyor, who has been engaged in the erection of the telegraph line to Tapuaeharuru, and who has also directed the road operations between Hawke's Bay and Taupo.

In transmitting this report it is due to Mr. Bold to state that very great improvements in the road have been effected under his direction, and that the work was performed under considerable difficulties, owing partly to the insecure state of the district, and also from the natural difficulties of the country.

The works carried out by Mr. Bold were rendered necessary to allow of supplies going up for the use of the forces lately engaged in operations against Te Kooti at Taupo, and the value of the work performed may be estimated when I state that the forces now occupying Taupo are supplied at less than half the expense they were before the road was improved.

I regret to have to report that from the long continuance of operations necessitated by Te Kooti's presence in the proximity of the Taupo district, the labour of the Armed Constabulary stationed there has not been available for road works, except in one or two trifling instances. The same reason has also operated in preventing that employment of the natives upon road works which would otherwise have taken place, and accounts for my not availing of your authority to do so. No Native labour has been employed on the line from Hawke's Bay to Taupo, except in the case of the chief Poihipi, who contracted to open the line for drays between Runanga and Tapuaeharuru, a distance of about forty miles, for £450, which work has been duly executed, and carts are now used for the transport of goods on that part of the

The present condition of the road between Hawke's Bay and Taupo will be best described by my stating the mode of transport used for the supply of the forces. Drays take the goods from Napier to Titiokura saddle, about thirty miles from Napier; from there to Runanga, a distance of about twenty miles, everything has to be packed on horses; and from Runanga drays carry goods forward to Tapuaeharuru, our advanced post at Taupo, and the site of the central telegraph station.

I hope to obtain the assent of the Government to making very considerable improvements in the road during the coming year. The cessation of war operations will enable the labour of the Armed Constabulary stationed in the Taupo district to be largely availed of for road works, and the natives are also anxious for employment.

I need not add more to Mr. Bold's report, which gives detailed information as to the works most necessarv.

The Hon. the Colonial Secretary, Wellington.

I have, &c., J. D. Ormond.

## Enclosure in No. 112.

Copy of a Letter Mr. Bold to His Honor J. D. Ormond.

Napier, June 21st, 1870. SIR,-For your information I have the honour to submit the following report on the line of communication in course of improvement between here and Taupo, and which it is proposed should form one of the main roads convergent on the latter place.

In the examinations of the various routes recently made with the object of determining the best and least expensive line of access to the Taupo plateaux, from the Hawke's Bay side, the town of Napier, as the most important scaport and centre of population on the East Coast, is suggested as the most favorable starting-point.

From Napier there may be particularized three general approaches to Taupo, viz.—"By the Ngaruroro Gorge and Patea; by Peka Peka and the Ripia Valley; or by Pohue and the Waipunga Valley." Along the last-mentioned route the telegraph line has been erected, and the road has within the last year undergone considerable improvement. It is at present occupied by a chain of posts, garrisoned by detachments of the Armed Constabulary, at intervals of from ten to twelve miles apart, which have secured the transport service, and afforded some protection to the telegraph parties.

I have as yet had no opportunity of personally ascertaining the difficulties to be encountered on the Ngaruroro route before referred to. I may, however, remark that the wide detour involved in carrying a road by this line, with Napier as a terminus, will so considerably increase the length over the distances by other routes, that for the purposes for which the road is intended, its adoption is out of the question.

The Ngaruroro route will, no doubt, become available as an approach to the South end of Taupo,

when it is decided upon to extend the road by the Forty-mile Bush track.

The second route approaches Taupo by the Ripia Stream, a left affluent of the Mohaka, rising on the Taupo plains, near Maruanui.

The only information I can collect regarding this line of route is that furnished by Mr. D. Ross, who examined and reported upon it in January, 1868.

#### CONSTRUCTION OF ROADS IN THE NORTH ISLAND. 51 A.-No. 17.

From his report I gather that the most serious engineering difficulties exist between the Mohaka and the table land of Taupo, consisting of a deep gorge 15 miles in length, with precipitous rocky sides, which for six miles are covered with bush.

The avoidance of this gorge could be secured by carrying the road at a higher level; but it appears this course would necessitate the introduction of steep gradients, and, from the needfulness of heading the numerous side streams, materially lengthen the road.

There only remains to consider the track by Pohue and the Waipunga Valley, along which the

telegraph is erected, and the various Constabulary stations established.

This line is practicable for drays to Titiokura, and no striking difficulties are met with up to Oruakaka, about one mile past Tarawera, to which place a bullock dray has been driven. The Mohaka is the only river to be crossed, and it is spanned by a wire cable, on which a self-acting canoe works, convertible at a small expense into a punt capable of ferrying over drays, should occasion demand. The distance from The distance from Titiokura to Tarawera is about 20 miles, and the works principally required are a few small bridges, some three miles of bush clearing, and with one exception shallow sidings—the exception is at the Mohaka, where the approach to the ferry will involve a heavy cutting for a length of about a half mile.

The best approach to Titiokura from Napier is, in my opinion, along the line diverging from the road near Puketapu, passing Warerangi thence along the low easy sloped range which separates the Mangaone and Mangakopikopiko Streams to Rongomaipapa, then joining the dray road from Petane, which, with some inconsiderable improvements and minor deviations, would be generally followed to

Titiokura.

The advantages this line offers over those of either Petane or Peka Peka and Inangatahi are palpeble. In the former instance the crossing of the harbour (which in the absence of a bridge is a drawback) is avoided, as well as the very many fords of the Petane River.

The unsuitableness of the Inangatahi route I discovered on a recent occasion when exploring that

stream.

I have also inspected the Peka Peka route, with a view to cross from Waipuna to Pohue. Mangaone gulch, however, forms an insurmountable barrier to the formation of a dray road by this line, and cannot be successfully dealt with except by the erection of a suspension bridge of long span. This road is used by the Commissariat contractors, who, with the aid of a small subsidy, have made it passable for drays from Waipuna to Mangaone, from which place they pack.

The work already executed has been of great utility to the transport, and the contractors have it in

contemplation to sling their goods across by means of wire cable stretched over the chasm.

Reverting to the road beyond Titiokura; the three miles of bush mentioned extends from Te Haroto to Te Purupuru. Between these places a deviation has been surveyed which shortens the track about a mile, and overcomes what was formerly considered to be one of the great objections to the Waipunga route, viz., the hill Turangakumu. The deviation is laid out along an even ridge, and descends Turangakumu by inclines and curves practicable for drays. At present a bridle-track only is constructed in the open portions, but arrangements have been made with the native owners of the land for the construction of the bush portion. The sections of road which have hitherto been constructed, although at present only passable for pack-animals, are so laid out that by simply widening they become convertible into dray-tracks.

The portion of the Waipunga route offering the greatest difficulty lies between Tarawera and Runanga (the commencement of the plains). Between these places must be encountered the same belt of broken country which obstructs the Ripia route, with the difference that on the Waipunga line the obstacle is less, the total length of rough country intervening being only about eight miles, four of which are wooded. The heaviest expenditure on the whole route will be incurred in getting over this section

with a dray road.

To add to the complexity of the matter, no less than three alternative routes present themselves, each possessing advantages and disadvantages so evenly balanced that without track lines cut through no approximate estimate of cost can be made.

The three alternatives just named are divergent from a point near Tarawera, and the course of each

is delineated on the sketch accompanying this report.

The first of the alternative lines crosses the Waipunga about one and a half miles north of Tarawera Fort. At this crossing is required a bridge of 100 feet span, at a sufficiently high level to be clear of snags and trees in time of floods. The line keeps then the left bank of the river, and courses near the present bridle-track for a distance of seven to eight miles, crossing transversely the numerous deep side streams and rivulets feeding the Waipunga.

Near Runanga the river is re-crossed at a place where a second bridge is requisite of 35 feet span.

The chief drawbacks to the line by the present track are the inclines, which are unavoidably steep and severe, and, although answering for a bridle track, would be impracticable for drays.

. To secure gradients of less inclination, heavy cuttings through basalt rock become necessary.

A number of lines, deviating from the track in what I considered the worst places, have been cut, in order, if possible, to utilise the present track, but none prove practicable except at great cost.

The next line is that keeping on the proper right bank of the Waipunga, and of which I have made an examination and sketch.

A line was commenced on this side, contouring the hills on an easy gradient, with a view of constructing a bridle track to be afterwards converted into a dray road; on a more minute survey it was discovered that the side streams run much further back than on first inspection appeared likely, and it was deemed advisable to suspend operations, pending the examination of a third route up the Waipunga Gorge itself, suggested by Mr. Rochfort, the Provincial Engineer, with whom I considered it necessary to solicit a consultation on this important question.

Without doubt, the easiest gradients could be procured by following up this line, but at what expense

is a question which can only be solved on completion of the trial lines recommended. The valley is wooded, and presents apparently a succession of rocky precipitous bluffs.

A dray road can be made with little difficulty to Oruakaka, one and a half miles past Tarawera;

and while this is in course of formation, the trial lines mentioned could be examined and reported upon, and an accurate estimate returned of the outlay required. In the meantime the present bridle track will continue to answer the immediate requirements of general traffic. The cost of extending dray communication from Titiokura to Oruakaka (a distance of 21 miles) will most likely amount to £7,000. This sum, however, by the employment of Constabulary labour for a few miles on either side of the posts at Te Haroto and Tarawera, might be reduced to £5,000.

Road, Runanga to Tapuaeharuru.—The cuttings and earthwork necessary for opening dray communication for the first four miles of this road have been performed by the detachment of the Armed

Constabulary stationed at Runanga.

From Orongateahu to Tapuaeharuru, the northern extremity of Lake Taupo, the road has been

opened for drays by native contract labour.

The total length of dray road open on this section is about 32 miles; and all the transport service is now performed by the drays (four in number) brought through from Napier. The drays have proved of great service in the transport of telegraph material during the erection of the wire across the plain.

Contracts have been entered into for the supply of timber for two bridges on this section—one a bridle bridge across the Waipunga, near Runanga, of 35 feet span, and the second a dray bridge of 40

feet span, across the Rangitaiki.

The superstructures designed are trussed beams of matai, with iron tension rods—the beams resting

on totara sleepers.

In the survey of the road across the Plains, the old track has generally been followed to the foot of Tauhara; here it has been shortened and rendered much easier, by taking a leading spur to Waipahihi. The heaviest earthwork has been performed at Opepe, and the cuttings there are very well executed.

### DEFENCE WORKS.

Besides the road formation and improvements performed during the past year, I may mention the erection at Te Haroto of a blockhouse capable of holding forty to fifty men. The blockhouse consists of two floors, the upper of which is twenty-four feet square, so as to perfectly flank the lower story. Underneath the lower story is a cellar, from which a covered way, slabbed and roofed, conducts to a well containing a constant supply of water.

The position is uncommanded and unapproachable. Several important tracks radiate from this place, one of them to Waikare-moana by way of Putere. The erection of the blockhouse was much retarded on account of unfavourable weather, scarcity of labour, and tardiness in delivery of timber.

Some small additions have been recently made by the detachment of Armed Constabulary at present

in occupation.

Tarawera has been rendered defensible by the erection of a palisading and parapet, enclosing an area of about 10,000 square feet, and the whole of which is flanked by two block-houses, with bullet-proof ceilings. Each block-house is 16 feet square, and is built in the American fashion, of squared timber, 10 inches thick. One of them has been shingled by the detachment of Constabulary stationed here.

A large store for the commissariat, and minor buildings for accommodation of telegraph, have been erected inside the redoubt. The Constabulary have also erected a substantial building for officers'

quarters and orderly room.

The time and labour expended upon the works at Tarawera are fully warranted, on account of its importance as the chief intermediate depot; also as the station for telegraph maintenance. The position is midway between Te Haroto and Runanga, in the Waipunga Valley. It is entirely surrounded by partially wooded hills, and the whole length of road between Te Haroto and Runanga may be considered the south-western frontier of the Urewera country. Tracks, said to lead into this country from Tarawera, were recently explored by one of my assistants, but no trace of their having been travelled for years was discernible.

Substantial stockades and buildings have been erected at Runanga, Pahautea, Opepe, and Tapuaeharuru by the several detachments of Constabulary stationed at each place.

At Runanga and Tapuaeharuru buildings for the accommodation of the the telegraph have been

erected, which will prove of great utility for the purposes of maintenance.

At Pahautea a well has been sunk 46 feet deep through pumice drift, and terminating in compact rock; the shaft is slabbed throughout. Pahautea is situated about half-way between Runanga and Opene; and to enable bullocks and horses to work across the plains in dry weather this well was absolutely required. Its completion has proved of infinite service, as the place was before entirely devoid of water supply.

An excellent well has likewise been sunk by the Constabulary stationed at Opepe, at which place,

also, water was much needed.

Across the Waikato a self-acting ferry is about to be established, the materials for which are now on

the ground.

The various works described have been mainly performed (unless when otherwise specially stated) by the party under my directions, during periods when from alarms or other causes they were unable to proceed with telegraph or road constructions.

His Honor J. D. Ormond, General Government Agent, Napier. I have, &c., Ed. H. Bold, Telegraph Surveyor.

#### CONSTRUCTION OF ROADS IN THE NORTH ISLAND. 53 A.-No. 17.

## BAY OF PLENTY.

### No. 113.

Copy of a Letter from Mr. Commissioner CLARKE to Mr. COOPER.

Civil Commissioner's Office,

SIR,-

Tauranga, 4th October, 1869. I have the honor to acquaint you that the Ngaiterangi (Tauranga) natives are very anxious to

be employed in forming roads through this district, and, as it appears to me to be a favorable indication of the disposition of these people, I have no hesitation in strongly recommending their wish to the favorable consideration of the Hon. the Defence Minister.

There are two roads which, for defensive reasons, ought to be commenced, if possible, this season. One of these will be direct to Taupo through the Rotorua District, and must be eventually the great trunk road.

The other is greatly needed to connect this town with the out-settlements of Otumoetai and Te Wairoa.

I would, therefore, suggest that the sum of five hundred pounds may be set apart for the above

The Under Secretary Native Department, Wellington.

I have, &c., H. T. Clarke,

No. 114.

Copy of a Letter from His Honor J. D. Ormond to the Hon. D. M'LEAN.

SIR,-Napier, 11th November, 1869. The main line of road referred to by Mr. Clarke, viz., the road from Tauranga to Taupo via Rotorua is, in my opinion, a work of great importance. I have in former letters addressed to the Hon. the Defence Minister also referred to the political desirability of employing the Ngaiterangi upon roadworks, having heard through Poihipi of their readiness to be so employed.

I am of opinion that a competent officer should be sent to inspect and report upon the three different

lines that are spoken of from the Bay of Plenty to Taupo. These lines are 1. Tauranga to Taupo.

2. Maketu to Taupo.
3. Matata to Taupo.

I have made considerable enquiry respecting these lines of road, and I incline to think that the choice lies between the Tauranga and Maketu roads; and if the difficulties are anything near equal, then I should say that the road to Tauranga should be preferred as connecting Taupo with a good harbor on the East Coast. The amount proposed by Mr. Clarke, viz., £500, appears to me quite inadequate to effect anything like what is required. I should strongly recommend that during the present summer one of the lines to the Bay of Plenty should be pushed on. The road from either Maketu or Tauranga would pass through the Arawa country, and it is unnecessary to point out the advantage of having the communication to the interior through a friendly district.

In respect to the roads named by Mr. Clarke to connect Tauranga with the out-settlements of Te Wairoa and Otumoetai, I am unable to give any opinion, but would suggest that the road vote should as far as possible be applied to opening main trunk lines of road through the country.

I have, &c.,

The Hon. the Defence Minister, Auckland.

J. D. ORMOND.

No. 115.

Copy of a Letter from the Hon. D. M'LEAN to His Honor J. D. ORMOND.

Auckland, 18th November, 1869. I have the honor to acknowledge the receipt of your letter of the 15th instant, enclosing a copy

of your letter to the Colonial Secretary of the same date.

I concur in the proposal of paying a lump sum to the natives for all descriptions of road-work. The only question is, whether, of the three lines of road from the Bay of Plenty to Taupo, that by way of Rangitaiki is the best to adopt as a main permanent line. I do not consider it is. At the same time, if it can be rendered passable for drays for the sum named, and is essential for transport service, you can use your own discretion in employing Poihipi's tribe in carrying out the work.

I object to Mr. Bold's proposal of giving the work at per chain or cubic yard when employing native labour, as it would lead to greater expense than is necessary in measuring and checking, and would

not be easily understood by the natives.

SIR.-

I will furnish you with several reports I have called for, which will give you some idea of the respective merits of the three lines of road leading from the Bay of Plenty to Taupo.

His Honor J. D. Ormond, Napier.

I have, &c.,
Donald M'Lean.

No. 116.

Copy of a Letter from Lieutenant Way to the Hon. D. M'LEAN.

SIR. Auckland, 5th October, 1869. I have the honour to inform you, for your information, the distances of the different roads, running from the East and West Coasts to Lake Taupo. The road leading from Maketu to Taupo

is the shortest distance (about eighty miles). I have been to Rotorua Lake in command of packhorses, and, after leaving Maketu, there is no feed of any kind except dry grass; this road is very easy for packing, &c. I have gone in one day from Maketu to Rotorua with pack-horses; it would take three

days to get to Lake Taupo.

From Napier to Taupo (about 110 miles). I have ridden it in three days, but in driving cattle or packing it would take quite four days to Lake Taupo; there are two or three good feeding places upon this road, but the track is very hilly, and more bush upon it than the Maketu road. From Wanganui to Taupo, about 146 miles, and by the river, about 176 miles. From Rangitikei River, distance about 150 miles. The distances have been given to me by Mr. Sinclair, General Government Surveyor. There is another road from Tauranga through Europe, but I have never travelled it. The road that I would prefer in travelling would be the Maketu road, except that it is inferior as regards feed to the Napier road.

The Hon. the Defence Minister, Auckland.

I have, &c., HERBERT F. WAY, Lieut. A.M.

## No. 117.

Copy of a Memorandam from the Hon. D. M'LEAN to Mr. HEALE.

Auckland, 23rd October, 1869. Mr. HEALE is requested to furnish a report on the different lines of road leading from the Bay of Plenty to Taupo; the advantages and disadvantages of each line; the number of rivers to be crossed; the facilities for obtaining metal and timber; the quantity of bush to be cut through; the extent of water communication where it exists; and such other information as may be important before deciding on the permanent main line of road to the interior.

DONALD M'LEAN.

## No. 118.

Copy of a Report from Mr. HEALE to the Hon. D. M'LEAN.

Auckland, 28th October, 1869.

REPORT ON THE AVAILABLE ROAD LINES BETWEEN THE BAY OF PLENTY AND TAUPO. The practicable lines may be limited to three:

1st. From Matata (Richmond) by the valley of the Rangitaiki River.

2nd. From Maketu by Rotorua.

1st. By Rotokakahi and Ohaki.
2nd. By Rotokakahi and Orakei Korako.
3rd. By Parikaranga and Te Niho o te Kiore.

3rd. From Tauranga by do. do. do. do.

The two last roads would join at Rotorua about 25 miles from Tauranga and Maketu respectively, and they would then be the same for two-thirds of their whole length.

The first line has the advantage of passing through a level, dry country, with easy slopes, and requiring very few bridges or cuttings; but its disadvantages are so great as, in my opinion, to put it out of competition with the others.

1st. It starts from a small and indifferent harbor.
2nd. It traverses exceedingly barren lands, where the dry pumice is often very soft; and

3rd. It is flanked all along by the Urewera Mountains, and will therefore be subject to danger as

long as the Urewera tribes are hostile.

The second line from Maketu has been so far made to the south end of Rotorua as to be an excellent road for horsemen, but it would require practically to be re-made before it would be available for wheeled vehicles; and, as Maketu can hardly be called a harbor, the road from Tauranga would also require to be made, and the Matapihi Ferry is so extreme an inconvenience that, to render such a road really available, it would have to be carried round by Hairini, by which route the distance from Taurangato Maketu would be almost as great as from Tauranga to Rotorua, and all along this line of nearly 50 miles (from Tauranga to Rotorua) there is no natural feed for horses, except a little round Maketu.

From Rotorua to Lake Taupo three roads are now in use-

Ist. One proceeding to Rotokakahi, thence to the east of the Paeroa Range, passing on to the homestead of the late Captain St. George, near Ohaki. By this route it would be easy to avoid crossing the Waikato, but it is circuitous, and presents no counterbalancing advantage.

2nd. From Rotokakahi, by the Rotoreka, crossing the Waikato by Orakei Korako. This line is pretty good, except near the Waikato, where the hills are lofty and steep. Still I do not think it would be found difficult to select a pretty fair, though circuitous, road; it would be out of the question to cross the Waikato on this line except by ferry, and the current is so rapid, and the eddies so strong, as to make it very undesirable, even for that.

3rd. By Parikaranga, crossing the Waikato at or near Te Niho o te Kiore. This I consider by far the best line:—lst, since it runs through the best grass country in the district; 2nd, as the least broken; and 3rd, because it crosses the Waikato in a straight reach where a punt would work perfectly well; and lastly, whenever political circumstances admit of the re-opening the Waikato and Taupo Road, this road will join it, and cross the Waikato as that formerly did by a bridge, for which there are remarkable facilities a short distance below Te Niho o te Kiore.

The third line direct from Tauranga to the west side of Rotorua, in my opinion (founded on considerable enquiry on the spot), is beyond comparison the best. I have not, however, been completely through the forest. The only serious objection to it, apart from the political questions which may be involved, is the length of the cutting it would require through the forest (fifteen or sixteen miles), but it must be borne in mind that on pumice land forest does not present any of the greater difficulties which make the ordinary clay lands of this country so very objectionable for road lines. A great portion of the Maketu road runs through the forest, and it was not very much more difficult nor costly to make it than on the open, and it is even less liable to get out of order, since the pumice land is perfectly dry, and it is firmer in the forest owing to the greater admixture of soil, and is not liable to be cut up by winds, which is a most material source of injury on open pumice lands.

On any of these lines the only considerable river to be crossed is the Waikato, the other streams having hard sandy beds, and being generally shallow may very well be forded; but patches of forest, containing totara and rimu, are to be found at moderate distances all along the line by Parikaranga, so that no difficulty can be found in the construction of bridges and culverts where necessary. The question of metalling requires to be considered at length. In this climate, a topping of broken stone or good gravel is indispensably necessary on clay lands to enable a road to carry traffic in all seasons, but on the very permeable pumice land, where not too loose and open, as in the Rangitaiki valley, this is not the case, unless the traffic is very heavy indeed. I would quote as an instance the road from Te Papa to the Gate Pa, on which for the past six years there has been a traffic which may be called heavy, but it is hardly cut up at all, and is in fine order at all seasons.

Since the roads I recommend lie in country of this nature, I take for granted that a simple formation will be sufficient for almost all the plane surface; parts no doubt will be found where the lightness of the pumice may be such as to require some finer material for the surface. Swamp is almost unknown in the district, but the small sandy valley crossings, culvert approaches, and the like, will no doubt require to be metalled. There is hardly any good metal suitable for a town road to be found in the whole district, but I have no doubt the rather soft volcanic rocks, of which the hills are generally composed, would be found quite sufficiently durable for a country road, and their use would not be expensive. most laborious part of the work would undoubtedly be the cuttings, since the road would often require to be carried in benchings round hills too steep to be ascended in a direct line, but in dry soils of this class such works are not expensive.

I intentionally pass by all political questions as beyond my province, but I may notice as an additional advantage of the Parikaranga line, that it passes near the principal centres of Native population in the district—Puhirua, Ohinemutu, Te Tatua, and Oruanui—and wherever circumstances admit branch roads from it to Patetere and Waikato would naturally be carried, and would form an excellent and symmetrical system. I have, &c., Theo. Heale.

### No. 119.

Copy of a Letter from Mr. Civil Commissioner Clarke to Mr. Cooper.

Auckland, 26th October, 1869.

In obedience to a verbal request made by the Hon. the Defence Minister, I do myself the honor to furnish the following report on the different lines of road from the Bay of Plenty side to Taupo.

In giving my opinion as to the best line to be adopted, I have considered the political aspect of the question as well as the natural features of the country. I have kept in view the great advantage whenever practicable (even though it involve additional cost) of taking roads through the centres of native population. Not only would it tend to remove that discontent natural to an impoverished people by giving the natives a ready access to the sea coast for the purposes of trade, and opening up the country to European enterprise; but it would also lessen the probability of a serious disturbance with the natives from the fact of their accessibility from different points. And, while the native proprietors of land are not only willing but anxious to have roads taken through their country, I respectfully submit that every opportunity should be embraced of forwarding this project.

There are four principal lines of road which occur to me, all of which are marked on the accompanying plan-

- 1. From Te Awa o te atua, commonly called Te Matata, following up the Rangitaiki River by water to Kuianui (Port Alfred), thence inland by way of Te Karamuramu, and so on to Taupo.
- 2. From Te Awa o te atua up the Tarawera River, through the Tarawera Lake, Rotomahana Lake. and by the eastern side of the Kairoa Range to Taupo.
- 3. From Maketu to Rotoiti and Rotorua by the western side of Paeroa Range (or diverging from Ohinemutu to either No. 2 or 4) crossing the Waikato River at Orakeikorako to Taupo.
- 4. From Tauranga through the forest to Rotorua crossing the Waikato at Te Niho o te kiore, through Te Tatua to Taupo.

The above are the main lines which occur to me, but there are points where one line could be run into another, perhaps with advantage as indicated on the plan hereunto attached.

1. With respect to the first line as proposed, I would remak that there is a bad bar at the mouth of the river Te Awa o te atua; a steamer drawing only five feet of water may be detained for days without being able to cross. Then, when the river has been entered there are two miles of shallows only passable by boats. The steamer Clyde, only drawing three and a half feet, could not pass these into the deeper water above with the advantage of a slight freshet. Passing these, the river deepens to an average of eight feet as far as Kokohinau, from which place the river is obstructed by snags to within a mile of Fort Alfred. The navigation extends beyond this point for two or three miles, but the high precipitous hills do not present a break through which a practicable road could be formed. From Fort Alfred the road enters a gap in the hills, taking advantage of every valley and leading range to a stream called Otamawahine, when the road becomes perfectly level to Fort Galatea. This road passes through a desert country of pumice formation right to Taupo, with one or two rapid streams, but not a vestige of timber; then it

SIR.

is flanked for nearly the whole distance by the Urewera Mountains, rendering it unsafe in the event of hostilities with that tribe.

2. The second line is from the same starting point as the last, following up the Tarawera branch, the same shallows have to be passed. After crossing these, the river divides into several branches, for the most part deep but narrow and tortuous, until the Umuhika is reached, where it becomes a broad deep stream as far as Te Ahiinanga; here the road leads up for about six miles on the level banks of the river, when it crosses at a place rough with boulders and the current rapid. After crossing this the road follows along hills and leading ridges to Te Tapahoro. From this point, by canoe to Te Ariki and Rotomahana, thence along the eastern side of the Paeroa Range to Waiotapu and Taupo.

I have only mentioned this line because I am aware that it has already been suggested. Not only is the frequent change from water to land transport objectionable, but it sometimes happens that a canoe cannot venture on the Tarawera Lake for days together. The only native village it passes through is Te Tapahoro, and that is nearly descreed. I consider both these lines impracticable, and shall not revert to them again.

3. The third line is from the Maketu. This also is a bar river, but not so open to objection as Te Awa o te atua; the force of the sea is greatly broken by the Okurei point. The road runs from Maketu to Te Rotoiti and Rotorua, crossing the Rotoiti at Te Taheke, where there is but little current; the distance across about 284 yards. There is a point a little lower down (half a mile) where a bridge could be conveniently thrown across, the distance between the banks being about sixty feet. The road has been partially made, and could without much difficulty be completed, at comparatively little cost, as far as Te Whakarewarewa, near Ohinemutu. From this point the road could diverge either to the eastern side of Paeora Range, already described, or to the road described in No. 4. From Ohinemutu, skirting the Rotokakahi Lake to Ratoreka, crossing the Waikato at Orakeikorako, and so on to Oruanui. From Batoreka to Orakeikorako the line is cut up with deep narrow swamps and one considerable hill; but the chief objection is the crossing at Orakeikorako; the banks of the river are steep, the river broad and rapid, some skill being required even in swimming horses across. Between Orakeikorako and Oruanui there is some rather rough country to pass; the road skirts along a forest nearly the whole distance, which in case of hostilities would form splendid cover for ambuscades. But this could be all avoided by taking the east side of the Paeroa range following the east side of the Waikato to Tapuaeharuru, or at least the point opposite.

4. The fourth line is direct from Tauranga through Oropi and the dividing forest between Tauranga and Rotorua, following along the west bank of the Lake to Ohinemutu; from thence to the Waikato River, crossing a little above Te-Niho-o-te-kiore, at which point there are natural facilities for the construction of a bridge; then along the Tatua to Tapuaeharuru. This line, as I have stated in a former communication on this subject, must be the great trunk line to Taupo, possessing, as it does, the advantage of starting from the only good port on the East Coast.

If Tauranga is made the starting-point for all these roads, this line will be about twenty miles shorter than the others, and presents no great engineering difficulties, so I am informed by both natives and Europeans who have passed over it. I think that this has already been made the subject of correspondence between the natives and the Provincial Government.

It appears to me that the one question involved is a political one, as to whether it would be advisable to carry this road through at the present juncture, inasmuch as a good deal of the forest land is owned by the Ngatirangiwewehi (Kereopa's) hapu of rebels. Mita Hikairo, of the Native Lands Court, is one of the principal claimants, and could afford valuable information, and suggest, perhaps, the best course to pursue to obtain a settlement with the natives of his tribe.

For temporary purposes, even if the funds cannot be legitimately provided out of the grant made by the House of Representatives, I would strongly recommend the finishing of the Maketu and Rotoiti road sufficiently to allow of a dray passing through. It could be completed at a cost of from four to five hundred pounds.

Since writing the above, I have seen a letter (with sketch attached) from Poihipi Tukairangi, a tracing of which I have taken the liberty of procuring. You will see that he has suggested the road through the forest to Tauranga.

I have, &c.,

The Under Secretary Native Department, Wellington.

Hy. T. CLARKE, Civil Commissioner.

### No. 120.

Copy of a Letter from the Hon. D. M'Lean to Mr. Civil Commissioner Clarke.

Sir,—

Auckland, 19th November, 1869.

I have the honor to acknowledge the receipt of your report on the different lines of road from

the Bay of Plenty to Taupo, and to thank you for the valuable information which it contains.

I have, &c.,

H. T. Clarke, Esq., Civil Commissioner, Auckland.

SIR,-

Donald M'Lean.

## No. 121.

Copy of a Letter from the Hon. D. M'LEAN to Lieut.-Colonel St. John.

Auckland, 17th November, 1869.

I have the honor to request that you will be so good as to proceed at once to Whakatane for

## CONSTRUCTION OF ROADS IN THE NORTH ISLAND. 57 A.—No. 17.

the purpose of examining the country between that place and Ohope, with a view of reporting on the best line of country on which to employ the people of the Ngatipukeko tribe in making a road between those places—a distance assumed to be about six miles.

It is the desire of the Government to have formed a passable track for horsemen rather than a completely formed dray-road. This, it is thought, may be done by breaking down occasional banks, and improving the present surface, rather than by any great amount of cutting and filling or bridge-making. It is desirable that you should first inspect and report on the line, setting forth in your report what work will be requisite, and accompanying it with an estimate of cost. Major Mair, it is expected, will be able to give you valuable assistance in finding the best line of way, and in your transactions with the natives. Pending the answer to your report on the whole line, it will be convenient if you at once, on having determined the direction of the road, give out to the natives by contract the work on the first mile of it from either end, bearing in mind that the whole sum to be spent on the road will not exceed four hundred pounds.

It is not desirable that the work should be done by daily pay, nor yet by contract, at per foot or per yard. It would be better to divide the line into portions lying between natural features, such as rivers, &c., and determine upon a round sum for the completion of each piece so arranged.

It is the desire of the Government to employ the Ngatiawa and Ngatipukeko people on this work, and at the most economical rates. The natives should be given to understand generally that the roads to be made are quite as much for their own advantage as for that of the Europeans. In this case, I am, however, aware that the road must traverse much confiscated ground.

The work should be left as much as possible to the management of the chiefs, as if they were doing it of their own accord, and for their own benefit. You will, of course, have to be satisfied that it is done according to your agreement with them before it is ultimately paid for.

The continuance of the work must depend on the economy which can be practised in its execution.

I have, &c.,

Lieut.-Colonel St. John, Auckland.

Ohope:-

DONALD M'LEAN.

No. 122.

Copy of a Letter from Lieut. Colonel St. John to the Hon. D. M'LEAN.

Sir,— Whakatane, 12th December, 1869.

I have the honor to report as follows on the line of road I have selected from Whakatane to

- 1. At present the track runs along a steep goat track on the face of the rocks forming the western side of Kotu Point, then proceeds along a ridge, a narrow saddle track, and runs steeply up to the culminating point of the range, where it drops down to Ohope in a series of steep descents. The ground about here being very broken, the gullies deep, and all the spurs ending abruptly in almost precipitous faces. It was therefore necessary at this part to endeavour, by winding in and out of gullies and round shoulders, to gain a gradient which would give a general gradual upward slope.
- 2. Starting from Whakatane, I have had cut the line along the side of a small stream, which falls into the flat behind the remains of Simpkins' house. The soil is here all rocky, but the stone splits easily, and breaks up with a plane fracture on exposure to air. A part of it will have to be blasted, as also a shoulder of rock, eight feet thick, which bars the entrance. This gully is twelve chains in length. This summit reached, the line turns to the S.W., avoiding the big hill, and by a plateau and ridges almost level, runs along the left bank of the Wairere Stream. This has to be crossed where it joins a swamp, and a long siding leads down to it and upward again to another plateau. The swamp can be partly drained, and will be crossed by a culvert. At the 181st chain the watershed between Whakatane and Ohope is reached. From this the dip into the latter plain is very rapid the sides of the hills sloping steeply down into a circular hollow, where springs feed the little Ohope Stream. By taking the road by sidings along the flanks and shoulders of the hills, I drop down gradually into the bush lining the bank of the stream, and emerge at the cliff at Ohope.

The native idea with respect to the amount of money for the work is as yet fanciful; in fact they do not know what can be done in that line. I have estimated the value of their day's work at what they get as wages when working here for Europeans, 2s 6d per day. When the soil is rocky, as in the case of the first part of the river, I reckon that as the rock is of a character which breaks up easily, each man can do one cubic yard per diem; when the soil is loose I reckon four cubic yards per diem per man. I have explained my views to them, and they have agreed to start to work.

They are very anxious to obtain a small advance, and I beg to recommend it be granted to them, as they are in a great state of destitution. If possible it would be advantageous to pay them partly in flour, as here they have to pay for it £1 per cwt.

To complete the means of communication between Tauranga and Opotiki, I beg to suggest the establishment of a wire and punt at the Ohiwa. At this place the Arawa, who are receiving Government pay, absolutely refuse to put on the ferry anything but a small canoe, which can only take two men besides the paddler, and in any rough weather only one. Whenever it blows, this ferry is actually dangerous. It has been reported several times to the Civil Commissioner.

I append my estimate of the work to be done, and the price I propose should be given.

I have, &c.,

The Hor. the Defence Minister, Auckland.

J. H. St. John.

Es

### CORRESPONDENCE RELATIVE TO THE

STIMATE OF WORK AN	D EXPENSE	ON THE	ROAD	BETWEEN	WHAKAT	ANE AN	o C	Эноре.	
From Flag 1 to 29—	_								
963 cubic yards	of rock, inc	luding d	rain			£120	7	6	
From Flag 29 to 59-		Ü							
1,901 cubic yard	ls of earth					59	8	0	
160 chains ditch			•••	•••		39	5	0	
Clearing fern and lev	m elling~120~cl	$_{ m hains}$				15	0	0	
Bridge and culvert	•••	•••			•••	10	0	0	
From Flag 59 to 92-									
2,548 cubic yard	ls of earth					79	12	6	
Ditching 58 cha	ins					13	5	O	
Clearing bush 1 chair	n on side of	road							
12 chains, at £3	3 10s. per acı	re				5	0	()	
Clearing roots and bu	ash on road-								
12 chains, at £8	per acre					1	0	0	
23 chains of fer	n clearing	• • •				2	18	0	
	•								
						$\pounds 345$	16	0	

## No. 123.

Copy of a Letter from Lieut.-Colonel St. John to Hon. D. M'LEAN.

Auckland, 7th March, 1870.

I have the honor to forward the following report on the road between Whakatane and Ohope, SIR,now complete:

Starting from the foot of the range of hills, which extends to Kohi Point, the road follows the windings of a small stream, which, owing to the rapidity of the descent, does not swell even in heavy rains. The siding along this was almost entirely through a shaly rock, with hard underground, which disintegrates rapidly on exposure. A shoulder of this rock had to be blasted and cut through.

From fleg 0 to flag 21, a distance of fifteen (15) chains, the siding is through this rock along an almost precipitous face of cliff, and twice the stream is crossed by culverts. For about  $1\frac{1}{2}$  chain the gradient is 1 in 5, the remaining part being easy. This was the hardest part of the road.

At flag 21 the road turns to the south, taking advantage of a plateau lying S.W. of Kopu Hill. Here occur a good many cuttings and sidlings, until the 98th chain from flag 21, where a long sidling leads with a gradual descent down to the Wairaka Stream, here a deep swamp.

At this spot an embankment and bridge have been formed, the latter eighteen feet in length and ten in width, supported on piles, twenty feet long, raised six feet above water. The natural drainage of the swamp has also been aided by dredging it clear of vegetable matter which hindered the current.

The stream crossed, another siding carries the road up the opposite slope, and eighty-seven more chains of similar sidling bring it to a height overlooking the Ohope side of Kohi Point. From this, on account of the steepness of the descent, the road has to wind about it zigzag, with several deep cuttings and sidlings for sixty-seven more chains, passing through two small belts of bush, and emerges on the beach at Ohope. The road is of a breadth of seven feet, with drains on each side, and, where any turns exist, its breadth is increased to ten, and in some places twelve, feet.

The estimated cubic contents were 4,846 cubic yards, but I am satisfied that this estimate is far under

The first portion of it through the rocky portion cannot be expected to remain in good order until metalled, as the rock decomposes under the influence of the atmosphere. The remaining part is through soft stuff, and, being well exposed to the wind and properly drained, will, I believe, continue sound.

Occasional supervision and repair of any defects caused by the weather, which could be done by the detachment of Armed Constabulary at Whakatane, would keep it in good working order. The total cost was as under :-

Road work	• •	••	£350 12		
		T barra	£362	0	0

The Hon. the Defence Minister, Auckland.

J. H. St. John.

## No. 124.

Copy of a Memorandum from the Hon. D. M'Lean to Mr. Civil Commissianer Clarke.

Tauranga, 12th February, 1870.

It being important that a main line of road from here to Taupo should be at once commenced, I have to request that you will employ the Ngaiterangi on this service.

Having satisfied yourself as to the best permanent line of road, it should be at once marked off, and advantage taken of the remaining summer months to get as much of the work completed as possible.

The course you should adopt in carrying on road works with the natives is to pay such a sum for the work performed as may be deemed reasonable, and in no instance should day labour be employed, but so much be given for the completion of the road from a certain given point along the line as far as the contract with a certain tribe extends.

The Militia, Volunteers, and Constabulary must be employed near their several posts on road work also, and their pay charged to the road vote of £30,000. More detailed instructions will be sent from Auckland. DONALD M'LEAN.

#### CONSTRUCTION OF ROADS IN THE NORTH ISLAND. 59 A .- No. 17.

## No. 125.

Copy of a Letter from Lieut.-Colonel Harington to Mr. Civil Commissioner Clarke. General Government Offices,

Auckland, 22nd March, 1870. SIR,-

I am directed by the Hon. the Defeuce Minister to acknowledge the receipt of your letter of the \*17th instant, relative to the construction of the road across the Kopurererua swamp to the lands on the west side of the Judea ford, and beg to inform you that the Inspector of Surveys has been desired to give the necessary instructions for the preparation of plans and general engineering directions.

The officer commanding the district has been instructed to give all necessary assistance in providing

men from the forces under his command for the completion of this work, and has been desired to place

himself in communication with you.

Civil Commissioner, Tauranga.

H. T. Clarke, Esq.,

the work.

I have, &c.,

PHILIP HARINGTON, Lieut.-Colonel.

## No. 126.

Copy of a Letter from Lieut.-Colonel Harington to Lieut.-Colonel Lyon. General Government Offices

SIR,-Auckland, 22nd March, 1870. I am directed by the Hon. the Defence Minister to inform you that the Inspector of Surveys has been requested to give instructions to the district surveyor of Tauranga to proceed with the construction of the road across the Kopurererua swamp, and you will take an early opportunity of communicating with Mr. Clarke, Civil Commissioner, relative to the employment of the men under your command, who can be spared for the completion of this work. The Inspector of Surveys has been instructed to give directions to the district surveyor to lay out the road and superintend the execution of

I have, &c., Philip Harington, Lieut.-Colonel. Lieut.-Colonel Lyon, Commanding Bay of Plenty District, Tauranga.

### No. 127.

Copy of a Letter from Mr. HEALE to the Hon. D. M'LEAN.

SIR,-Inspector of Surveys Office, 21st March, 1870. In obedience to your verbal instructions, I proceeded, on the 13th instant, to Tauranga, to inspect the road now being made towards Rotorua and Taupo, as well as to determine on some alterations required on several rectilinear roads previously laid out near the Gate Pa.

I find that the Rotorua Road has been commenced on imperfect surveys, so that the direction taken in leaving Tauranga has been adopted rather on a balance of loose opinions, than upon a comparison in detail of the works required on the two lines between which the choice lay. I have, however, no reason to think that the selection made is a bad one; the road will now pass close to the head of the navigation, nearly five miles inland from Te Papa, which is a very considerable advantage, but, looking to the vast future importance of this road, both for defence purposes and for the development of the great interior of the island, I would strongly deprecate the incurring any risk of error in laying it out. An expenditure of £3 or £4 per mile in exhaustive exploration, may easily effect a saving of many times the amount, by the

avoidance of expensive works, besides causing a great and permanent difference in the utility of the road.

Mr. Clarke has arranged for Mr. Gundry to make a survey of the line through the forest, which will make the future work safe against error, but I would suggest that since all detail surveys ought to form part of one whole, it would be better if this were put under the general supervision of this department, which has directed all the surveys in the district.

The construction of the road is necessarily executed by the military; with that I am not called upon to interfere, but I may suggest that, as several bridges will be required, some of them over swampy places, it would be well if the necessary means for their proper construction were supplied without delay; a small portable ram for driving piles is immediately required.

It has been found necssary to make a small deviation from the survey line of road as it passes through the lands of Mr. J. Chadwick, in order to avoid a very deep cutting, and a long swamp crossing. The new road is in every way advantageous to Mr. Chadwick, and he takes no objection to the change, the

old line being given up to him in exchange.

Another short piece of road, of the most pressing necessity, has been carefully designed by Mr. Turner, the Survey Officer at Tauranga, by Mr. Clarke's directions. This piece, scarcely a quarter of a mile in length, will connect the township with all the lands lying to the west beyond the narrow but singularly impassible Kopurererua Swamp and Rivulet, comprising a large portion of the land allotted to military settlers, and all the Kati Kati purchase; in fact, nine-tenths of all the land belonging to the

At present many settlers are located on this land, at Otumoetai and elsewhere, and many now would be, but for the intolerable risk involved by the circumstance that, in case of alarm of attack, of which so many have occurred, it is impossible, for six hours out of every twelve, to get to Te Papa without swimming, the long Judea Ford being at about half tide, and so making retreat by it impracticable for women and children.

The proprietor, however, makes no difficulty about this being done. His land is cut up by several roads in places so impracticable that they can never be of any service to the public, and on a reasonable exchange in the interest of the public, he would receive much more land than would be required from

him, and would have a considerable balance to pay.

About a year ago I made some suggestions for this very road to be revised, but some legal difficulties were raised at Wellington. I will, at an early date, lay before you the alterations which seem to be required, but in the meanwhile there is no obstacle to the progress of the road to Judea, a work the want of which not only retards the settlement of an extensive district, but may at any time be productive of a deplorable disaster.

I presume Mr. Clarke will have laid before you the rough estimate made by Mr. Gundry of the cost of the road to Rotorua; a detailed one is also in preparation of that to Judea, of which the amount cannot

be very considerable.

I have, &c., THEO. HEALE, Inspector of Surveys.

The Hon. the Defence Minister, Auckland.

### No. 128.

Copy of a letter from Lieut.-Colonel HARINGTON to Mr. HEALE.

General Government Offices,

SIR,-

Auckland, 22nd March, 1870. I am directed by the Hon. Defence Minister to acknowledge the receipt of your letter, No. 117, of the 21st instant, relative to the roads now in course of construction in the Tauranga district, and beg leave to inform you that he wishes you to undertake the general supervision of them, and to give such instructions to the surveyor of the district as will ensure the speedy and efficient completion of the roads in question.

I am further directed to request that you will be good enough to send in an estimate of the probable expense of a ram and such iron work as is required for the construction of the bridges across the swamps.

You will be good enough to give the necessary directions to the District Surveyor to make arrangements for the completion of the road across the Kopurererua swamp, and thus connect the lands on the west side of the Judea Ford with the township of Tauranga.

The Officer Commanding the District has been instructed to place himself in communication with Mr. Clarke, Civil Commissioner, so as to render all available assistance with the men under his command for the completion of this road without delay, as it is necessary for the defence of the district-

I have, &c.

PHILIP HARINGTON.

T. Heale, Esq., Inspector of Surveys, Auckland.

Lieut.-Colonel.

## No. 129.

Copy of a Letter from Mr. HEALE to the Hon. D. M'LEAN.

SIR.

Wellington, 27th June, 1870.

In March last I was instructed to take charge of the road then being constructed from Tauranga towards Taupo. I immediately proceeded to Tauranga and, in company with Mr. A. C. Turner, who has long conducted the Government surveys there, I examined the proposed line throughout.

A large amount of work had been already performed on the end of the road nearest the town, with which I did not feel called upon to interfere further than to improve upon some of the minor details of the work, especially in respect of drainage; but I became very anxious to push the survey on through the forest to where the road must debouch on the Rotorua Lake, in the vicinity of Puhirua, before the actual road-making advanced any further, lest any unforeseen difficulty should be discovered which might require an alteration of the line.

Some small difficulties which arose among the natives employed on the survey and escort duties and with others through whose lands the road would pass, prevented me, in the absence of Mr. Clarke, the Civil Commissioner, from completing the survey and getting out a plan and section of the whole. I, however, deliberately went over every part of the line and satisfied myself that, without departing very materially from it, a road may be made from Tauranga to Ohinemutu, which will be several miles shorter than the present one from Maketu to the same place, which will for a great part of the way be nearly level, on which the steeper portions will be but short, and with nowhere a gradient exceeding one in eleven; and the construction of which will not cost more than £250 per mile, including all the work necessary to made it passable for wheeled vehicles.

This being so, I had no hesitation in recommending the work on the line to be continued.

To secure the selection of the absolutely best line between the terminal points through an untracked country a great portion of which is covered with forest, would require wide spread and exhaustive surveys, which are quite impracticable under existing circumstances. In any case other roads will be constructed by the settlers as this fine district becomes opened, and as the settlement of the country advances. It is most probable that some of them may ultimately be opened more suitable for the trunk line than the one now proposed; but this road, which can be opened rapidly and at a moderate cost, is the first and essential step to make such an advance possible.

It will not be necessary to do more than clear the forest a breadth of about a chain on an average; to form the road to a breadth of fourteen feet; to provide efficient drainage where required, and to bridge

## CONSTRUCTION OF ROADS IN THE NORTH ISLAND. 61 A.-No. 17.

the streams. The permeable nature of the pumice subsoil renders roads over it capable of bearing a considerable traffic without any artificial surface (metal), as is abundantly proved by the road at Tauranga and that by Maketu.

This road is not being proceeded with, partly, I presume, because it would be necessary to resume a small section which has been sold.

It would be delusive to offer any detailed estimate of the work without a complete plan and section, but the following is a sketch of the nature of the work required:—

			Miles.	Miles.	
From	Tauranga to Waioroi, nearly completed			$\boldsymbol{5}$	
,,	Waioroi to Oropi, open fern ridges—				
• • • • • • • • • • • • • • • • • • • •	Forming, draining, and say 6 culverts		7		
,,	Oropi to near Puhirua, all forest, clearing throughout and	)			
,,	forming—	ĺ			
	Say 4 bridges, 30 to 30 feet each	}	15		
	1, 40 feet in one span	İ			
	1 ,, 60 ,, ,,	j			
	Side cutting, in all about four miles.	•		30	
"	Edge of forest to Ohinemutu, open fern country		8		
,,	2 bridges, 2 bays each.				
	. 0				
	Total			25 M;	1,

These distances are for the most part only estimated, but the trigonometrical survey proves that they cannot exceed that stated, since the direct distance is only thirty miles, and I am satisfied that seven thousand five hundred pounds will be sufficient to complete it.

I understand that it is contemplated that the clearing and the earthwork should be done by the native owners of the land—by contract for small sections. This plan will economise the cost, but will probably extend the time required for the work. The bridges will require skilled labour, and must be contracted for by open tenders.

The importance of this road can hardly be overestimated. Not only will it reduce the distance from the most available harbour to Taupo by about twenty-five miles, and that by a road much less steep than the present circuitous one, but, unlike the Maketu road, it will open up an exceedingly fine agricultural district, many of the native owners of which are not unwilling to sell, and which, therefore, there is no reason to doubt will soon pass into the hands of settlers. Besides, by taking advantage of the present temper of the natives to lay open a part of the country hitherto almost unknown, and which for the past eight years has been closed against the colonists by reason of the disaffection of its inhabitants, it will render impossible for the future the disastrous alarms which a comparatively small party of insurgents such as Te Kooti's could inflict simultaneously in many distant places, when on entering this untracked district it was impossible to ascertain his position, to surmise where he might appear, or to take steps to cut him off.

Another small piece of road at Tauranga is now in course of completion by the Armed Constabulary across the Kopurererua swamp and stream. By this singularly impassable obstruction, close to the Town Belt, one-half of the settlers have been completely cut off by a broad arm of the sea for nine hours out of every twelve, a circumstance which has greatly added to the panics which have so often occurred, and has largely added to the military expenditure. The bridge has been contracted for for the sum of £144, and the whole will be completed by the end of August.

The road formerly partially made by the Arawa tribe from Maketu to Ohinemutu is not under my charge, but I have had to pass over it several times recently in my inspection of the direct road from Tauranga. Several portions left unfinished in 1868 are now being made good, and it will soon be practicable for drays. Being in the heart of the Arawa country, this road will always be safe and useful, but it can never be a very good road, by reason of the very broken nature of the country through which it runs. It has never been laid out on engineering principles, but it is an excellent example of what may be done "by eye."

I have, &c.,

THEO. HEALE,

The Hon. the Defence Minister, Wellington.

Inspector of Surveys.

## No. 130.

Copy of a letter from Mr. Civil Commissioner Clarke to Mr. Cooper.

Civil Commissioner's Office, Tauranga, 9th June, 1870.

SIR.

I have the honor to enclose for the information of the Hon. the Defence Minister a report written at my request by Captain Gilbert Mair upon the best line of road from Rotorua to Taupo, and also to draw your attention to my general report on the same subject, forwarded some time since.

Captain Mair has been over every part of the road he recommends, as well as every other line that has yet been suggested, and therefore speaks from his own observation.

I have thought it my duty to lose no time in drawing your attention to this matter, as the line of telegraph is about being erected from Taupo to Rotorua. There is no reason why the line should not run parallel with the road.

The road can be constructed at comparatively little expense, and by bringing the line of telegraph the same way it will be secure from harm, and I have therefore no hesitation in recommending the lines of road and telegraph as suggested by Captain Mair.

I have, &c., H. T. CLARKE,

The Under-Secretary Defence Department, Wellington.

## Enclosure in No. 130.

Copy of a Letter from Captain MAIR to Mr. CLARKE.

SIR. Tauranga, 8th June, 1870. I have the honor to furnish you with the following report as to the best line of road to Taupo from Rotorua; and as the telegraph is now being erected between this place and Taupo, it would be advisable that a careful survey be made, so that the very best line of road may be determined upon.

Having, during the last four years, become thoroughly acquainted with the country between this place and Taupo, and having frequently travelled over the various tracks leading there, I am of the opinion that the very best line from Rotorua to Taupo is the one branching off from the Ohinemutu road at Puarenga, passing the Wakarewarewa Hot Springs, winding round at the back of Kaitereria to the Pakaraka Bush, following the Taupo track through the Waipao Valley, turn off to the left at Te Waikorua to Tutuhu Bush, thence round the foot of Maungaongaonga Hill, passing between Tutaeinanga and Mangaouri Lakes to Otutekaiwhara; from thence down a narrow defile emerging upon the Waiotapu Valley, passing Te Waiau and Koangataheke at the foot of the Paeroa range, turning off to the left, going round the east side of the Kairuru Hill; cross the Waiotapu River just above the junction of the Mangakawa Stream; follow along the proper right bank of the Waikato River; cross the Torepatutahi Stream, and on to Pari-anga-kau-anga (the late Captain St. George's station); cross the Waiakerewa, Pueto, and Parariki Streams; leave Rotokawa Lake on the left, and follow along the Iwituaroa Plain round the western base of Tauwhara Mountain, striking the Napier road at the exit of the Waikato River from Taupo Lake, opposite Tapuaeharuru. The advantages of this line are—

1st. Saving a bridge over the Waikato River at Orakeikorako, or Te Niho o te kiore, besides being

more direct.

2nd. Two-thirds of the whole line is over level plains, where scarcely any labour would be required

in making a very fair cart road.

Although this route crosses a number of streams, they are mostly small, and would not require bridges. The only stream of importance is the Waiotapu; here a bridge, thirty feet wide, would be Between it and Taupo, the Torepatutahi, Waiakerewa, and Pueto would also require small required. bridges.

There is plenty of totara at the Paeroa, Te Waiukoangataheke, and Te Aputahou Bushes.

these places are close to the road.

The country about Kaiteriria is rather rough, and about half a mile at Otutekaiwhara; but with these exceptions, the line is nearly all plain. From Pariangakauanga to Taupo Lake the road is quite level.

It would be a great mistake crossing the Waikato River at all, because the principal traffic will always be on this side, and again, if it is crossed at either Orakeikorako or Te Niĥo-o-te-kiore, it will necessitate another bridge at Tapuaeharuru.

A glance at Captain Heale's map of the Taupo Trigonometrical Survey will show the advantages of this line, and I am sorry I have not time to furnish a sketch map of it to accompany this hurried report. I have, &c.,

The Civil Commissioner, Tauranga.

GILBERT MAIR.

### No. 131.

Copy of a Letter from Mr. Civil Commissioner Clarke to Mr. Cooper.

Civil Commissioner's Office,

SIR. I have the honor to acquaint you that I left Tauranga for the Lake Districts on the 9th inst.

Auckland, 27th June, 1870.

The principal objects I had in view in making the journey were-

To inspect the road now in course of construction between Maketu and Rotoiti.

2nd. To arrange about the Telegraph.

2rd. To come to some understanding with the Pukerua natives regarding the road through the Mangarewa Forest to Tauranga, the great trunk line to Tauranga from Taupo.

I desired Captain Turner to accompany me, so that I might have the assistance of his professional experience, and in order, also, that he might be thoroughly acquainted with any arrangements I might make with the natives.

At Te Wai-whakareto I came upon Te Pokiha's working party. The work in progress, considering the appliances within the reach of the natives, was most creditable, and will compare favourably with

any work of the same kind previously accomplished.

Two miles beyond Te Pokiha's party we came upon a party under Te Wataauhe (Te Pokiha's brother).

The portion of the work allotted to him was very creditably done, and nearly completed.

The next party was under the charge of Hapeta; their work also was nearly completed. The next party, under Wiremu Matene, Te Huaki, Te Matangi, and Pita, was a large one. have finished the work allotted to them, but not with that care which the other parties have shown. I found it necessary to send them back, to go over several portions of their work again, to improve the gradients, and widen and round off the road, so as to allow the water to escape without damaging the work done.

#### CONSTRUCTION OF ROADS IN THE NORTH ISLAND. A.—No. 17.

The last party of workmen were Ngatirangiwewehi, under one of their chiefs (Ereatara). Most of these men surrendered a few months ago, and when laying out the line of road eight years ago opposed the survey through the Kaharoa Forest.

A cart or dray can now go the whole distance from Maketu to Te Taheke (Rotoiti), a distance of twenty-two miles, with great ease. Ten miles of the road are made over as rough and broken a country as any in this part of New Zealand.

The one great drawback to making a really substantial work of it is the great want of stone. In its whole extent there is not a stone the size of a goose egg. This will necessitate a certain annual outlay

to keep the road in repair—say £100 per annum.

There have been about 200 natives employed on this road for two months, including women and boys, and the average amount received by each individual will be about 60s. The actual value of the work, estimating the cost by the cubic contents of the excavations at 6d. per yard, would be about £1,200. The sum they actually get is £600.

On the 11th I proceeded to Ohinemutu, where I arranged a meeting with the Puhirua natives for Monday, the 13th. The Ohinemutu natives, who have always thought themselves more or less threatened

to be attacked by their neighbours, now believe that we are on the eve of a general peace.

They have lately been visited by a messenger from Matutaera, making overtures for a friendly meeting. This has been responded to, and a deputation of young chiefs—Te Warihi, Taukata, and Herewini Amohau—have gone over to Waikato. They had not returned when I left. Wiremu Te Wheoro states that they reached Tokangamutu the day he came away.

Te Atua-herangi and a number of the "Parauta" (Ngatiraukawa) have come over from Patetere, and have taken up their abode at Ohinemutu. In a previous report I mentioned the circumstance of their harings and the return and I gave taken up their abode at Ohinemutu. In a previous report I mentioned the circumstance of

their having asked to be allowed to return, and I gave them a sort of "pass" in English and Maori to

shield them from molestation by any of our expeditionary forces.

On the morning of the 13th I left for Te Awahou (Puhirua), where I found the Ngatirangiwewehi assembled. Many of them had just given in their submission. One of these, in the course of his speech, said, "I thought you were a small thing in my hand, and that I could crush you, but I have found out that I was mistaken. I have had enough of it (kua iro ahau), and we now submit."

The people of this hapu were many of them at Te Ranga; two-thirds of them, including Kaingararu,

fell there, and it has been the hope of avenging their deaths that has kept them out so long.

Their discomfiture at Tapapa, and the subsequent death of their great man (Hakaraia), has compelled them to submit, but not until two-thirds of those who went into rebellion have been slain.

After the usual complimentary speeches, I introduced the principal question which I had come to discuss with them, viz., the subject of the direct road from Tauranga through the Mangorewa Forest.

Te Retimana said that he was one of the principal owners of the forest land, and was quite willing that the road should be made, but that it must be bought right out by the Government. This, I said, was something quite new, and a demand I had never heard of before; that the owners of the land on either side of the road would be the people who would derive most benefit from it; that the road was not intended exclusively for Europeans, but for both races, and much more to the same effect. He admitted that what I said was correct, but that they had carefully considered the subject, and had decided to get payment for the road.

I told Retimana that it could not be done, and that they were foolish to hesitate about the matter, inasmuch as if they delayed the opening of this road the Government might divert the line, an event

which they (the natives) would surely regret.

Retimana said, "I cannot give my consent now; let me consider the subject, and when I have made up my mind I will let you know."

From what I could see and hear, I knew this would not be the termination of the conference, and therefore did not press the matter further, but left them to introduce the subject again. They grew impatient at my apparent indifference, and demanded what I intended to pay for the making of the road. I told them that I could not proceed further in the matter, as the first thing to be decided upon was whether they would allow the road to be made without payment for the right of taking it over their land. They, however, urged the matter in such a manner that I could see the first demand was practically abandoned. I told them that they should get from £100 to £130 per mile, according to the nature of the work required, for a road at least sixteen feet wide through the forest. I would here observe that

I estimated the work at the lowest rate possible, for I knew that a much higher demand would be made.

This, as I anticipated, was a matter of warm debate. They said that it was worth at least £200 per mile (and cheap at that), and that we must give more. I would not yield, and we came to a standstill again. I was taunted with being a "tangata pakeha rawa," and they begged time to consider.

I next introduced the subject of the survey of the road from the Rotorua side, and expressed a desire that it should be done as quickly as possible. I consider this the "thin end of the wedge," and, if carried, the rest would follow as a matter of course. I left them to discuss the subject.

When I returned to the "whare runanga" they had made up their minds to go on with the survey, and after another hour's haggling settled the terms upon which the work should be done.

When this was completed, I reverted to the cost of making the road, and told them that they should, subject to the approval of the Government, get £150 per mile, taking one mile with the other. I told them at the same time that it was such a great concession on my part that I did not wish them to begin the work until I had communicated with the Government-

They received my intimation with great satisfaction, and requested me to acquaint Mita Hikairo, Wi Maihi, and other absentees, who were interested in the lands, of what had passed.

Our conference did not break up till late at night.

I have requested Captain Turner to push the survey through the forest from the Rotorua side a quickly as possible, and Mr. Gundry to push on his work from where he left off.

I have also authorised Captain Turner to take on an assistant, Mr. Sydney Hague, at 10s. per diem, so as to have the work done without any delay, as I consider every moment is of importance.

Captain Turner left Tauranga for Rotorua on the 21st inst.

I retraced my steps towards Maketu on the morning of the 14th.

I returned to Tauranga on the 16th inst., just in time to communicate the result of my tour semi-officially to the Hon, the Native Minister

I have, &c.,

Hy. T. CLAKE,

The Under Secretary Native Department, Wellington.

Civil Commissioner.

## No. 132.

Copy of a Report from Lieut.-Colonel St. John to the Hon. D. M'Lean.

Sir,-

In accordance with your instructions to report upon the physical features of the country lying at the back of the Bay of Plenty, and the best means of communication from the coast line to Taupo, I have the honor to submit the following.

The report I will divide into two heads, namely-

1. The nature and resources of the interior country in the Bay of Plenty, as far as I have seen it.

2. The different lines of road leading from the Bay of Plenty to Taupo.

#### OPOTIKI.

1. From Opotiki to Te Kaha the mountains run down to the water's edge, leaving on their flanks a few valleys cultivated by the Natives near the coast. The interior of the country over which roam the remains of the rebel Whakatohea, is to the Friendlies almost a terra incognita.

Allured by the frequent appearance of quartz in the Torere stream, I once took up it a prospecting party, and found, according to the diggers who were with me, every indication of gold but the gold itself. Mr. Gwynneth, C.E., and Mr. Way subsequently went further than me, and hurriedly prospected a good lot of country. They brought back stone containing pyrites and copper. Each party found the country fearfully rough and broken; the path, as usual, leading up the bed of a mountain torrent abounding in waterfalls.

The two Opotiki rivers, the Waioeka and the Otara, each flow through narrow gorges, affording nowhere room for cultivation, except in small patches, until the enclosing ranges open out, forming the Opotiki Valley and the Waiotahi Swamp. Wilson's land, on the western bank of the Waioeka, is a fine fertile plateau.

Whilst at Opotiki I endeavoured to introduce flax-dressing, in order to give employment to the settlers' families; but, after several meetings and many rides in search of a supply of flax, I was forced to abandon my views. The swamps about are all raupo; the only flax to be found, and that in small quantities, being on Native land about Whakatane, which the owners were disinclined to lease.

## WAIMANA.

The head of the Ohiwa is separated by a low chain of hills from a rich valley, taking its name from the river Waimana, which, issuing into it at Nukutahuahua, waters the upper portion, and again entering a narrow gorge joins the Whakatane at Puketi. Upwards from Nukutahuahua the ravine through which it flows opens out into glades and flats of rich soil, which will eventually form desirable sites for small farms. From the summit of the Te Ponga Hill, my furthest point, I could descry a fair sized valley, leading, as my guide informed me, to Maungapowhatu. Beyond the confiscated boundary on the Waimana, lies a flat of a few thousand acres, which, together with some land similarly situated on the Whakatane, was leased from Rakuraku, of the Urewera, by Messrs. Gwynneth, Simpson, and Pitcairn. The latter was murdered on Rakuraku kainga.

### WHAKATANE.

Up to Ruatoki the Whakatane flows through a fertile valley, which on the western side sinks into the Teko swamp. Beyond Ruatoki it is nothing but a large mountain torrent. After leaving it at Tuanui, we had to take to hills, a series of ups and downs leading by small confined valleys to the foot of the Wharau. On surmounting this we found ourselves, after a deep descent (the ascent occupied five hours), on the Omaru Teangi flat; and this, small in itself, was magnified in extent by the contrast it afforded with the chaos of mountains seen from the peak.

The Whakatane here in winter must be a fearful torrent; its strength being evinced by the deep gorge it has cut for itself, and by the accumulation of huge logs at a great height. This plain ceases at the Hukanui Hill (where Lieutenant White was killed), on the other side of which lies Ruatahuna; the first stronghold met in it being the Tahora Pa. It used to be currently reported that somewhere up the Urewera country there existed a large plain. I cannot credit this; as Ruatahuna, formerly described to me as a fine flat, is merely a small open valley, bounded by high bushy hills, and closed at each extremity by lofty wooded ranges. All these small valleys appear fertile from the height of the fern and tutu they grow, and from the quality and quantity of the potatoes we found in the Native cultivations.

I have ascended all these rivers, and can only describe the upper country through which they flow as utterly impracticable. The only possible roads lie up the beds of the streams; often these have to be left to avoid deep pools or rapids, and steep hills ascended merely to go down again; from these summits, far and wide, nothing can be seen but a vast jumble of mountains tossed into all manner of fantastic shapes. There is hardly a mile of these tracks where spots cannot be found in which fifty men could

#### CONSTRUCTION OF ROADS IN THE NORTH ISLAND. 65 A.-No. 17.

with ease stop one thousand. The sides of the hills are, with few exceptions, clothed with thick bush, but rarely carry timber which would repay the cost of floating it down in freshes.

Up the Waioeka and Otara is occasionally to be found a clump of fine manuka, but the best timber grows generally on the hills away from the river,

### MINERAL RESOURCES.

If not for its mineral resources, the country of the rebel Whakatohea and Urewera is worthless.

It is, however, my firm opinion that these mountains contain within their bosom mines which some

will add to the wealth of New Zealand.

I have already stated that quartz in small quantities is to be found in the Torere stream, and indeed in all the rivers about Opotiki. Whilst in command, I formed several prospecting parties, and though most of them were futile, yet the nature of the soil was such as to lead me to believe that further research would not be thrown away. In more than one spot we discovered thin veins of quartz permeating the slatey rock; in others, on sinking, we found a boulder formation much resembling the "dirt" of the Victorian alluvial fields; in others, we came upon a stratum of thick greasy yellow clay, adapted for potters' work, and a thinner layer of pipeclay. Everywhere washing invariably gave a residue of black sand.

But, one spot I thoroughly believe, will yet prove auriferous. Just before leaving Opotiki I was struck with the number of the quartz veins running through the rocks at Kohi Point (Whakatane Heads), and took some of my men to explore them. Whilst there a Native informed me that if I wanted to find "kiripaka" he could take me to a spot where quantities of it existed.

### OHIWA.

Into the western end of the Ohiwa Harbour there falls a small stream which we struck some two miles from its mouth, and which I named at once "Awa Kiripaka." The bed was composed of huge boulders of quartz of all colours, from the milky-white to the brown, and I ascertained the existence of two reefs running through the hill into another stream. We could only knock off a few pieces, which, though good-looking stone, had nothing in them; and since my departure, no further attempt has been made. Lately, however, a leading Whakatane chief has informed that he believes gold-bearing quartz exists on his land, close to Puketi, the junction of the Waimana and Whakatane. From his description I gather that it must be in a stream running towards the Ohiwa, possibly connected with the one I explored. He wishes me particularly to see it, and offers me an escort. He says the land is his, and that he is willing to throw it open at once, but I have ascertained that the whole of the block still belongs to the Government.

Up the Waioeka, in a stream running from Pukenui Oraho, I have found indications of coal. In many places the rock over which the springs run is coloured to a deep red by an incrustation of a ferruginous matter, and heavy ironstone is common.

Copper ore will also, I believe, be discovered, as I have seen several specimens, and one piece I picked up near the Ohiwa had visible signs of it.

### WAIOEKA AND WHAKATANE.

In our last march through the Urewera country I heard that some of my men had come across good specimens, but I had other things to think of. I have, however, at Tauranga, been shown a piece of gold-bearing quartz, said to have been picked up in the Ruatahuna. From the slatey character of some rocks I hurriedly examined, I think it is probable that the specimen came from its represented position.

I regret that, in my last march in the unknown Urewera country, I had not leisure to attend to the botanical and other features of the country. One peculiarity struck me. From the highest peak we ascended, the Wharau, we could see the different ranges, broken in themselves certainly, but still keeping each as it were, a distinct character, and all trending towards Whale Island, like the spokes of a wheel to the felloe. Everywhere where the country opens out are traces of a former subsidence and subsequent elevation. In some places the terraces are clearly marked out—in others, the rounded outlines of the bases of the hills attest the influence of water, and that so distinctly that there can be no doubt that at a geologically recent period all the valleys of the Bay of Plenty were estuaries which have been filled up by elevation and by the detritus brought down by the rivers from the interior. The Tauroa plain, for instance, is evidently the bed of an ancient lake; but the absence of shells in the pumice sand shows that the showers overlaying it, to the depth of some thirty feet, fell on it after its emergence from the waters.

The scenery of the Urewera is grand and wild, and a tourist or a geologist would have been

delighted with the excursion I took under circumstances not favourable to a search after the picturesque. Should my conjecture about the existence of gold at Whakatane prove correct, the Government must benefit largely. The land in the neighborhood is all Government property, and townships have been laid out at Ohiwa and Whakatane, and remain yet unapportioned.

Ohiwa is bound to become the harbour in such a case. I have been over the bar with fourteen feet of water on it.

The Whakatane River is dangerous, on account of the rocks at the entrance, the narrowness of the channel, and the swiftness of the current. Were the rocks blasted away, it is believed a sandbank would soon accumulate.

### TE TEKO TAWAROA AND KAINGAROA FLATS.

From the Whakatane Valley the hills sweep round to the westward, bounding the Teko swamp, and turn again to the southward, at the spot where, in former ages, the inland waters which covered the

Tawaroa plain burst forth through a rocky defile into the estuary, now partly consolidated, which lay between Matata on the west, and Kohi point on the east. An immense swamp extends from the seacoast to Kokohinau, where is found a small expanse of land, about four miles square, of apparently fertile quality. The base of Putauaki is formed of a series of pumice sand hummocks, bounding this tract of fern land, and from these upwards barrenness prevails. For twenty-five miles the path leads through these desolate dunes, destitute of timber and vegetation, though intersected by four brawling mountain streams. From these the traveller emerges on the Tawaroa plain, and a fifteen miles' ride brings him to the Kaingaroa flats. The soil is a soft pumice, clothed with a dwarf kind of toetoe, affording no sustenance to animals. Its roots are so little imbeded in the soil that sheep pull it up at every bite, and horses will hardly touch it even when half-starved. From Fort Alfred to Taupo no other vegetation exists save, at rare intervals, toetoe bushes on some flat formed by detritus in a bend of the river.

The chain of mountains bounding the Urewera country on the right bank of the Rangitaiki is pierced by two gorges which afford access from this side—one at Horomanga, and the other at Tawaroa; a pathway also exists from Fort Alfred to Opouriao on the Whakatane. This was the trail taken by Te Kooti. The road from Arowhata Hou by Heruiwi passes over the ranges—of that by Tarawera I have

no knowledge.

Once on the Kaingaroa plains, which lie some 200 feet above the level of Tawaroa, the only water to be found for a long distance is on the Rangitaiki River. Its banks are mostly steep, though of no height, and are occasionally clothed with toetoe and harakeke. At one place, Arawata Tawhito, the river neight, and are occasionally clothed with toetoe and harakeke. At one place, Arawata Tawhito, the river foams between two rocks, so close that the space between them is an easy jump. The Kaingaroa plains are as sterile as Tawaroa, but exhibit more traces of volcanic action. Wood and water are very scarce, and are rarely found together. At Te Onepu there exists a good sized pond close by a bush, and at Opepe a small stream trickles out of the rock. Here there is also a limited amount of grass.

The only spot I considered fit for the permanent camp for which I was ordered to reconnoitre was on the eastern side of the Waikato, near Tapuaeharuru, as timber in abundance could be rafted to it from a wood some three miles up on the opposite share.

a wood some three miles up on the opposite shore.

Of the country lying between Taupo and the Hot Lakes I know nothing, but Mr. Heale has given me information which will appear in my report on the roads.

### MATATA AND MAKETU.

Between Matata and Maketu, and at the back, lies a large expanse of fern land, mostly taken up

The mountain country at the back of "Canaan," near Maketu, and southward from Tauranga, is but indifferently supplied with water, and, like the rest of the hill districts, is very broken and difficult. In 1867 Major Mair took a body of Arawa from Maketu to Oropi by the mountains, and the party suffered much from thirst. Near Tauranga, however, this want is not so much felt. Several streams run down into the harbour from Otane Wainuku, which forms a watershed; and from the humidity of the bush, and the clayer substratum, I have no doubt wells could be sunk with advantage.

### TAURANGA.

During the Tauranga expedition of 1867, several specks of gold were found by washing in the Wairoa, about Kaima, and it is possible that further research will prove that the range running from

the Aroha, and dividing the Thames from Tauranga, is auriferous.

A discovery made near Katikati some time ago is likely to influence the fate of Tauranga. Last year, in July, a party of gentlemen walked from Ohinemuri to Tauranga. They were jealously watched all the way, but saw quite enough to satisfy them of the mineral capabilities of the country. On the way to Waihi, four miles from Katikati, they discovered auriferous quartz, and knocked off with a tomahawk a few bits, which have been proved to be impregnated with gold.

### WAIHI.

Waihi is only some twenty-five miles from Te Papa by the inland waters; the only difficulty in the navigation being a narrow channel between two spits of land, impassable for boats at low water. Should this place be opened out as a goldfield by the Government, Tauranga will be the harbour, and as I hope to be able to prove that the best road from Auckland to Taupo runs at present through Tauranga, I see no reason for doubting that this fine harbour will, in a short time, become the site of a flourishing town. I shall, later, have to speak of the Pirirakau, the natives living at the back of Tauranga, who now object to any prospecting on their land; but I am confident that, were Ohinemuri opened, the small section of rebels still holding out in the bush around Te Papa and gladly follow suit with the Thames Natives, and that the settlement of a mining population on the Upper Thames would ensure permanent peace in the district of Tauranga.

The desideratum is that the Government should open out this country, and not allow it to fall into

the hands of speculators, who would naturally prefer their own interest to the public good.

### RECAPITULATION.

As a general recapitulation, I may say that, as in the Bay of Islands, the valleys near the coast being of different ages, have arrived at different degrees of maturity: some have passed through the grades from estuaries to mud-flats, then to raupo swamps, and lastly to sound arable land. Some are still undergoing the process of formation; while the Ohiwa and the inland sea of Tauranga remain to show what was formerly the general character. The formed valleys are all fertile.

#### CONSTRUCTION OF ROADS IN THE NORTH ISLAND. A.-No. 17.

The mountains which formerly rose out of the bed of the sea form a wild chaos, pierced here and there by deep gorges, the outlets of the waters which once filled the hollows in the interior. volcanic region is approached the soil changes: it no longer bears high fern or bush: a thick deposit of pumice-sand, the result of centuries of eruptions from the craters around, overlies the fertile ground, and forbids all hope of cultivation. The open country from Matata to Taupo is worthless.

## PART II.

Three direct lines of communication exist between the Bay of Plenty and Taupo. They are-1st. From Matata, via the posts established by the field force, Arawhata Hou and Opepe, to Tapuaeharuru.

2nd. From Maketu by Kaiteriria, or by the Horohoro.

3rd. From Tauranga to Puhirua, by Otane Wainuku, thence by Ohinemutu and the eastern base of the Horohoro, crossing the Waikato at Te Niho-o-te-kiore, and reaching Tapuaeharuru through Oruanui.

1st. The bar of the Awa-o-te-Atua is dangerous; at low water it has not two feet of water, and not more than seven at high tide. A further obstruction exists some two miles up-stream, where vessels drawing over two feet are arrested by a shifting bank of pumice sand. Once this shoal of only a few hundred yards in length overcome, the Rangitaiki becomes a fine stream, with a good body of water as far as Kokohinau. Soon after reaching this kainga, the rapids commence.

All traffic by this line must go by water as far as Kokohinau, as the two roads, or rather bridle-tracks, leading from Matata run through immense swamps. The best of the two has five miles of beach and ten of swamp, with a ford, not always practicable, at the junction of the Orini and Rangitaiki.

This latter river must also be crossed at Kokohinau.

From this place to the hummocks at the base of Putauaki no difficulty occurs, and beyond these up to Fort Galatea the road is all but made. There are two small streams to be bridged, but the timber for the bridges is ready, and near to its intended position. There are twenty-nine cuttings and sidings on this twenty-five mile piece of road, executed by the Armed Constabulary.

From Fort Galatea to Tapuaeharuru the distance is fifty-two miles, on which little work would be

required, as the country is all flat save at the rise from the Tawaroa to the Kaingaroa plain. The soil I have already described is a soft rotten pumice, into which wheels sink deep. Traffic would, however,

I always considered this the worst line which could be adopted for the following reasons:-

1st. Its flank is exposed the whole way to the Urewera, who could, coming by Opouriao and Fort Alfred, fire upon boats; or, emerging from the gorges of Horomanga or Tawaroa, cut off travellers, and retreat with impunity into their fastnesses. To watch this road effectually a strong force is absolutely

2nd. All along it there is a great dearth of wood and water, the few water-holes being at more than a bullock-dray's journey apart. The worst part lies between Fort Galatea and Taupo. I once rode over twenty-five miles in that direction without finding water. At the ford at Arawhata Hou, one of the natural camping-grounds, there is hardly enough tea-tree scrub to boil a billy. Wells cannot be sunk except to a great depth, as all moisture percolates through the pumice.

3rd. There is no feed for cattle or horses along the whole line. Whatever means of transport are

used, whether bullocks or horses, their forage must be carried.

4th. The fact of its having as its only harbour a river which is frequently unapproachable, and of its being a necessity that the first twenty miles of carriage should be by this bad river, is enough to

### SECOND LINE.

From Maketu to the Taheke the road has been partly made; it is a good bridle-track, available for bullock-drays for twelve miles beyond Maketu. After crossing the Taheke, the road winds round Rotoiti and Rotorua to Ohinemutu. The track now adopted is by Kaiteriria; but Mr. Heale has informed me of the existence of an almost natural road leading past the Horohoro Mountain by Te Niho-o-te-kiore and Oruanui to Tapuaeharuru. This, he tells me, will require hardly any labor, and passes through a country which can produce feed for horses and cattle. The road by Kateriria and Orakeikorako is bad and rugged. After leaving Maketu, from the first creek (the furthest point which waggons can now reach) to the Ngaere, a distance of sixteen miles, the road must be made through the bush. The great objection to this line is the want of a harbour at its starting point. The Maketu river has a bad bar, and even the "Sturt" has only once been inside. A swift current and a heavy surf are impediments. The advantage is that it runs the whole way through a friendly country.

### THIRD LINE.

This runs past Pye's Pa block-house, and by an old Native track, in a direct line to Puhirua, on the The two difficulties attendant on its formation are the hostility of the Pirirakau and Rotorua Lake. the absence of water in the Otane-wainuku Bush.

I think that, when the Upper Thames is opened, the former consideration will not give much trouble; and the latter can be obviated by sinking wells.

The Pirirakau are a small tribe, living at Maenene, Oropi, Akeake, Taumata, and Kaimai, on the edge of the bush.

Although supposed to be hostile, they do not seem to have moved since 1867, and they are in the habit of coming into Tauranga as often as the friendly Ngaiterangi. I was speaking, about a month ago, to one of their chiefs, who assured me I need not have the slightest hesitation in visiting their villages. I am of opinion that the only case in which they would take up arms would be in the event of a large body of hostile Natives arriving among them from Patetere; or, as was recently threatened, from Canaan, under the leadership of Hakaraia.

Oropi contains the most disaffected, being the residence of a notorious character who murdered a settler in 1866. All their villages come within the confiscated boundary, and their population is so small that they could easily be kept in check by a post, due care being taken to let them know that no aggression

From the edge of the bush to Puhirua the distance is 22 miles; the track is one but rarely used by the Natives, on account of the absence of water. This, I have remarked, can be overcome by sinking wells. It is described as rough travelling, but, from the character of the country rising from Te Papa, the ravines in it extending in parallel lines along the road, and not across it, I do not anticipate many engineering difficulties.

From Puhirua to Ohinemutu the road is easy, and then we fall into the track above mentioned

leading by the Horohoro.

The advantages of this road are as follow:-

1st. It takes its departure from the best harbor in the Bay of Plenty, on the shores of which is

situated a settlement, with abundance of good land.

2nd. It can throw out two branches into the Patetere Plateau—one by Kaimai, a few miles to the right of its entry into the bush; the other by the foot of the Ngongotaha Mountain, near Ohinemutu, the track taken by the Hauhaus after their defeat by Colonel M'Donnell in, 1867.

3rd. Up to Pye's Pa block-house the road is already available for drays.

4th. It is watered throughout, with the exception of the Otane-wainuku Bush, in which wells can be sunk.

5th. I believe the inhabitants of Tauranga, alive to the importance of this road, would assist towards its completion.

6th. It would establish a rapid communication between Tauranga and Ohinemutu, and enable

supports to move quickly in case of necessity.

7th. It affords a short and easy means of access to the Hot Lakes, and will, before long, be the cause of the establishment of a sanatorium on their shores, and attract many visitors who would not take the more circuitous route.

8th. If no objection is raised to the cutting, a small force will be sufficient to protect the travellers by it.

The distances of each line are as under-

#### FIRST LINE.

Matata to Kokohinau (by water) Kokohinau to Arawhata Hou Arawhata Hou to Tapuaeharuru				•••	20 miles. 41 " 52 "
				1	 13
•	SECON	D LINE.			
Maketu to Ohinemutu	•••			:	35 "
Ohinemutu to Niho-o-te-k	iore			5	26 "
Niho-o-te-kiore to Tapuae	•••			23 "	
				-	
				8	34
	THIR	D LINE.			
Tauranga to Puhirua	•••		• • •		30 "
Puhirua to Ohinemutu				•••	8 "
Ohinemutu to Tapuaehar	aru	•••	•••	4	19 "
				-	<del></del> 37
				C	, ,

These distances are, of course, measured on the map, which gives none of the devious windings of the road.

It is without the slightest hesitation that I recommend the adoption of the third line.

But a short time will elapse before the Ohinemuri and Upper Thames country will be thrown open to the Pakeha; once this is done, there will be nothing to prevent prospecting parties from exploring Tauranga, the back country of which has already given good indications.

With a gold field to the north-west—with a probability of mineral resources close to it—with its splendid harbor—with its fine land, and with an easy communication by Taupo with the Kaimanawa— Tauranga must eventually prosper, and, by its prosperity, add to the general improvement of the country. And not the least cause of its prosperity will have been the road leading from it to the interior. No amount of road-making will benefit Maketu, either as a commercial town or as a strategical point. Tauranga, on the contrary, is the key to the interior, and to the Upper Thames. In days past I advocated the formation of a road from it by Matamata to Maungatautari; this, however, was not feasible. Now, I believe that, what with the ejection of the leading rebel from the King's territory, what with the presence of our forces in Taupo, what with a touch of the same feeling which seems to have animated the West Coast Natives, the poor remnants of the hostile tribes at the back of Tauranga will welcome an opportunity offered them to come in and cease from mischief; especially, as before remarked, if the Upper Thames Natives consent to open up their country.

I have no doubt that, in the course of years, the Patetere Plateau will be the line of communication between Auckland and Taupo. At present the best road is via Tauranga. I believe that there will be found to be but little difference in estimates for making this or the one by Maketu.

### DEFENCE.

If my surmises are correct, I should say that, on the completion of the road, two posts, each of twenty-five men, one at the entrance of the bush, the other at Puhirua, would be amply sufficient.

As traffic increases, and hostility diminishes, even these will be abandoned. The temper of the Natives can be easily gauged while making the road. Among them there is a Chief, named Pene Taka, who has never been concerned in any atrocities; he has always fought us fairly. I have heard that he is anxious to come in. Should he do so, he would be of great assistance in keeping his tribe quiet.

On the second line no posts would be needed. A few mounted police, to check the appropriating

tendencies of any light-fingered gentry, would suffice.

In each of these cases I suppose that a post exists at Taupo, somewhere about Tapuaeharuru.

The first line I would not undertake to keep safely open under 500 men, distributed from Matata to Taupo. My last letters from Tauranga speak of Te Kooti as having once more thrown himself into the Urewera country. If so, the waylaying of parties travelling to Taupo via Matata would just suit the tastes of both leader and followers.

J. H. H. St. John, Lieut.-Colonel.

Auckland, 8th October, 1869.

Copy of a Letter from Mr. Field to the Hon. W. Gisborne.

Wanganui, July 16, 1870.

Wanganui, July 16, 1870. Sir,— Having had occasion to come to town to supply the returns required by the Government for the

information of the General Assembly, I take the opportunity of sending you a further report as to the

progress of the Mangawhero-Taupo road.

I am happy to be able to inform you that the leading line is now cut through to a point within three miles of the nearest portion of the plains, and that on Saturday last I went as far as the hill top overlooking them, for the purpose of seeing what the ground was like. I find the lower end of the plains appears to be very wet, intersected in all directions by shallow water-channels, filled with flax and rushes, winding about among the grass. The wooded portions also are so level as probably to be also very wet. This, coupled with the great curve which the river Wangaehu makes to the westward between the main and lower plains, and the information which I have received from Komene (a native who is the principal owner of the land we are now crossing, and who was sent up by Mr. Booth, under the impression that he might be useful as a guide), to the effect that in the course of this curve it washes under the base of a very high cliff, to avoid which, if we descend at once on to the plains, we should have either to ascend the hill again or to cross the Wangaehu River twice, makes me think that Haimona Hiroti was right when, as mentioned in my last report, he recommended that we should keep on the ridge till we could go down at once on to the main plain at Rangiwhaea,

The weather, which has been very unusually bad even in Wanganui, was such inland as to almost stop our progress. During more than eight weeks we had to dry our clothes every evening, and my son became at last so ill from the constant wettings, that I was obliged to discharge him in the middle of June. Even my own health has suffered considerably. I did not feel it much while I was at the work, but during

the last few days since I came home I have been quite confined to the house.

The accompanying map, which is approximately accurate, will explain the position of the road and the nature of the adjacent country better than any written description. I find the total distance from Wanganui town to Matahitira is only from forty-six to forty-seven miles, so that if I find it necessary to continue on the ridge till we can descend at once to Rangiwhaea, my original estimate of fifty miles as to the distance to the plains will not be exceeded.

The ease with which the road, even in its present state of a mere survey line, can be found and traversed may be judged of by the fact, that the man who brought me Mr. Buller's letter summoning me to town, travelled all the latter part of the way by moonlight and torchlight, arriving at the camp, where I was waiting for him, at three o'clock in the morning; and that he and I, starting from this point, which is within five miles of the plains (my own tent is within three miles of them), at 8.30 a.m., reached the lowest ford of the Mangawhero at 5.40 p.m. the same evening, and the town of Wanganui the following afternoon. In fact, when the road is completed, it will be easy for a fair pedestrian to walk to Taupo

Lake in three days, or for a good rider to accomplish the distance in two days.

I found there was rather more difficulty in laying off the latter portion of the line than I had anticipated. The flats by the river side, which, when viewed from the hill tops at some little distance, appeared almost perfectly level, I found on reaching them to be so far undulating, and so intersected by small streams and shallow watercourses, as to necessitate many more slight curves and short bits of side cutting than I was prepared for. The ridge again, which, in my report to the Hon. the Premier last December, I mentioned as apparently the best to take the line along, proved to have so steep and narrow a termination as to be quite impracticable; and I was therefore obliged to carry the line nearly two miles farther up the Mangawhero Valley to the next ridge, which has an easy From a distance again, this last ridge, owing to its inequalities being partially concealed by the vegetation, appears crested merely by a series of gentle undulations; but these, on reaching them, prove to be a succession of low but abrupt peaks, requiring short side cuttings to pass them. Even the general crest of the ridge, too, is very rough, and covered by very dense fern and scrub, through which we have had great difficulty in making our way. Most of the remainder of this ridge, and apparently the whole of the dividing ridge between the Mangawhero and Wangaehu Valleys, is, however, covered with comparatively open bush, which will enable us to get on much faster with the rest of the line. In fact, I consider our difficulties, as regards the selection and laying off of the road, as now ended, except in so far as a recurrence of bad weather may hinder our progress; and even this I hope we shall be spared, as the rain seems over and frosty weather set in for the present.

I hope the Government will be able to dispense with my presence in town until the line is cut through. No doubt it was necessary that the information should be given which I have fetched down, or detained in town from time to supply; and also that the business connected with the Sub-paymastership should be conducted in the regular form. There is no question, however, that the time, (nearly seven weeks in all), which has been consumed in this way, has been a very great hindrance to the work, and has added greatly to its total apparent cost. I mention this because I learn from Mr. Buller, that you and other members of the Government are under an impression that my original estimate of the cost of cutting and levelling the track has in some way been exceeded. This, however, is not the case. Owing to the employment of natives, it is true that a part of the work cost nearly £220, which, if it had been done by Europeans, would have been completed for about £150. This £220, however, is every farthing of expenditure which was included in my estimate; and all outlay beyond it is for entirely extraneous matters. I have endeavoured to make this clear in the returns, but mention it here to prevent any further misunderstanding in the matter.

The Hon. the Colonial Secretary, Wellington. I have, &c.,

H. F. FIELD,

Engineer in charge of the Mangawhero Taupo Road.

## No. 134.

Copy of a Letter from Mr. Civil Commissioner Parris to the Hon. D. M'LEAN.

Sir,—

New Plymouth, 24th June, 1870.

I have the honor to report for the information of the Government the result of my journey through the Native district, as far as Waingongoro, inspecting the roadwork before paying the balance due on the contract, and other matters necessary to be attended to.

I left New Plymouth on the 6th inst., and stopped one night with the party working between Stony River and Warea, where I found the work progressing satisfactorily, having overcome some slight opposition from Te Motu, who became rather sulky after the unpleasantness which took place in the town, reported in my letter of the 26th ult.; and could he have got sufficient support I have no doubt he would have tried to stop the road-work, as he threatened to do.

On the 8th inst. the Opunake Flax Company gave an entertainment to from two to three hundred Natives of the district, amongst whom were about twenty of the Pariaka Natives, who showed a friendly disposition by attending the meeting to commemorate the erection of the first flax-mills for the district.

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Whilst at Opunake I marked out the road across the Kumupiko Reserve to the Cape Egmont mill site, and explained to the Natives that they were to get five town sections, which they agreed to, although with some reluctance; but as the town allotments have never been surveyed, but only sketched on the town plan, I was not able to show them the boundaries.

On the morning of the 10th inst. Mr. T. Kelly, M.H.R., joined me at Matakaha, on his way to Patea and Wellington, and we proceeded together along the new road as far as between Inaha and Waingongoro, where he had to turn off to cross the latter river, nothing having been done to open the road on the south side when I was at the river examining the work on the north side; but I heard before I left the district that a party had been seen cutting the line, from which it was supposed that the work had been ordered to be done, otherwise I had been requested by Manaia and Hone Pihama to inform the Government of their willingness to undertake the opening of the road on the south side of the Waingongoro River.

It affords me very great pleasure to be able to report how very satisfactorily the Ngaruahine natives, under Manaia and Reihana Wharehuia, have done their part of the work; in fact, when the contract was estimated for, it was never expected that so much work would be done for the sum allotted them—£391 10s.—for a line of road twelve miles long, with numerous culverts over swamps and small streams, and cuttings for the fords at the rivers, besides bullock labour carting timber for the culverts. The working party was composed of thirty-six able-bodied men, and, being contract work, they worked early and late; and their whole time so engaged is over ninety days, which, at two shillings and sixpence a day, would be £405 for ninety days, whereas the estimate for the contract which I prevailed upon them to undertake was only £391 10s. In addition to their own labour, their women were all in attendance upon them, carrying food to their encampments, and cooking for them, and assisting to put up sheds for stopping in at night to be near their work, having been told by me that it was necessary the contract should be finished before the end of this month. After I had inspected their work, I told them I was much pleased with it, and would pay them the balance due to them—£241 10s., upon which they complained of the very inadequate sum allowed for the contract as compared with the work done, and asked for the contract to be increased to £500. I told them I had no power to make an advance upon the original contract, but as they had behaved so very honorably in the fulfilment of their agreement, I would bring the matter under the notice of the Government.

I have therefore the honor to recommend that they be paid the sum of £58 10s, in addition to the sum of £391 10s, already paid for the contract between Waingongoro and Rawa, and in support of my recommendation I beg to refer you to Mr. Kelly for his opinion as to the amount of work done, as that centleman rode over the road with me and spoke in the highest terms of the work.

gentleman rode over the road with me and spoke in the highest terms of the work.

With regard to the other contracts undertaken by the Natives under Hone Pihama, Ngahina, and Wm. King Matakatea, I have already reported upon them by letter, dated 16th April, 1870, No. 92, when I brought under your notice the state of a side cutting at the Oeo ford, where there has been a land slip, which has now carried away the full width of the road, and rendered it impossible for carts to pass.

During my late journey through the district, a Mr. Treweek, with his wife and family and two carts, went through from New Plymouth to Patea; but was very much inconvenienced by having to cross the Oeo River at the old ford further down, where there are two precipitous hills on either side. I must

## CONSTRUCTION OF ROADS IN THE NORTH ISLAND. 71 A.-No. 17.

therefore bring under your notice the necessity of something being done at the ford at the new line of road by making a fresh cutting, for which I hope you will send me the necessary authority for say £25 to be expended there.

Mr. P. Smith, in his report on the road, dated February 28, 1870, in reference to that part between Umuroa and Te Namu, stated:—"There will also be required an additional sum for the purpose of making a causeway across a swamp in the vicinity of Te Umuroa, but until the road is cleared and the side

drains cut, it is impossible to indicate the sum required to make it good."

The road has been cleared under the first contract, and it is now evident what is necessary to be done to make it available for carts, which is much needed for the traffic created by the new industries connected with the flax works. The part referred to is low, swampy land, with no natural drainage; consequently, it will be necessary to cut side drains, some three feet deep, to carry the water into the nearest streams, which it is estimated cannot be done for less than £50, which sum I beg to apply for authority to expend.

authority to expend.

The Ngamahanga are working at the road between Hangatahua (Stony River) and Waiweranui (close to Warea), and will, I hope, have the road available for carts by the time the bridge is up, which

will be a great boon, as the Hangatahua is the worst river on the coastline.

Tamihana Ruakere is using his influence to get the road carried on through the Warea District, but it is useless to commence any new contracts until the weather is better, more particularly as that part is very swampy, and being now full of water from the very heavy rains we have been getting, it is impossible to trace with any advantage the best line for drainage.

I have, &c.,

The Hon. the Defence Minister, Wellington.

Ř. Parris, Civil Commissioner.

Note.—Letters Nos. 133 and 134 were not received until after the correspondence relative to the Mangawhero-Taupo road and the Taranaki roads was in print.