

R E P O R T

D.—No. 1 c.

••

THE TELEGRAPHIC ENGINEER.

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

AUCKLAND :

1864.

REPORT

OF

THE TELEGRAPHIC ENGINEER.

General Government Electric Telegraph Department,
Christchurch, Nov. 15, 1864.

SIR,—

I have the honor to furnish you with a report on the progress of the works entrusted to my care, and at the same time to offer certain suggestions which may guide the Government in arriving at any decisions that may be necessary to lay before the General Assembly at its approaching Session.

I have recently returned from a general inspection of the works now being prosecuted in the southern portion of the Middle Island, and I will first sketch out the actual state of these works, and offer any remarks that may present themselves to my mind in so doing.

Bluff and Invercargill Provincial Telegraph.—Commencing at the Bluff, it will be remembered that the Southland Provincial Government has already erected a single line of wire, which has now been in successful working for some months.

By a previous arrangement, I believe it was agreed that the General Government should be empowered to place two wires for its own purposes on the posts now standing and used by the Southland Government.

I think it will be seen that the working of two different departments, namely, General and Provincial Government, would not only necessitate useless expense, but cause mutual injury, by establishing and maintaining an unnecessary competition. I have therefore deemed it expedient to enter into an arrangement for the purchase of that necessary portion of the main trunk line from His Honor the Superintendent of Southland, and His Honor has kindly consented to transfer this portion of the line to your Government, at its original cost of material and erection.

The total cost of this nineteen miles of line will be Eight hundred and twelve pounds fifteen shillings and sixpence, being at the rate of Forty-two pounds fifteen shillings and six pence nearly per mile—a very reasonable cost. Attached are the various items of the work. (Appendix A.)

£812 15s. 6d.

£42 15s. 6d.

Should this line be taken over, I shall use the wire now erected, and simply have to make the addition of a second wire, necessary for carrying out the uniformity of the remaining portion of the trunk line.

Invercargill and Mataura.—Proceeding to Invercargill, the point where our own works actually commence, I am happy to report that the whole of the posts are erected between that town and the Mataura River.

This portion of the work, I may add, is very creditably and satisfactorily performed, and I have therefore passed the work in due course, and furnished the Contractor, Mr. James McKenzie, of Dunedin, with his certificates for the usual payments amounting to eight hundred and ninety-nine pounds five shillings; a balance being retained till completion of contract, amounting to two hundred and ninety-nine pounds fifteen shillings.

£899 5s.

£299 15s.

Mataura and Molyneux.—Between the Rivers Mataura and Molyneux, the Contractor is busily engaged erecting the posts, and is working from both these Rivers towards a centre.

As far as I could judge from the portion of work already done, that work is advancing very satisfactorily, and may be expected to be completed about the beginning of December ensuing.

The Contracts are let for delivering the wire, insulators and arms, along this portion of the line; and I see no reason why that section of the line should not be completed by the end of December, if the works be steadily prosecuted in due course.

We now come to that section of the work lying between the Molyneux River and the City of Dunedin. The posts on this portion of the line are all erected under a contract entered into with Mr. James McKenzie, by the Otago Provincial Government, prior to the resolution of the General Government to take the work into its own hands. I regret to say that a few of these posts will have to be removed to more convenient positions, and that a few extra posts will have to be erected, owing to irregularities in the roads.

In this, however, no blame can be attached to the Contractor, as he has set up the posts at points marked out by the Assistant Surveyors, and the whole question may be reduced to one of misunderstanding of instructions, or error of judgment in carrying out the same. Under any circumstances the error is certainly excusable.

These errors, being of comparatively rare occurrence, will be easily rectified by the Foreman of the works, and at a trifling delay and expense.

The material is being delivered along this section of the line, and a gang of about twenty-two men is engaged under Mr. Green, Foreman of the works, fixing the roofs, arms, and insulators, and stretching the wires in a southerly direction from the City of Dunedin, namely, towards Invercargill and the Bluff.

I doubt not but this gang will accomplish an average of two and a half miles of line per diem for all full working days.

Dunedin to Waitaki.—The next section of the work that presents itself is that situated between the City of Dunedin and the River Waitaki.

The posts on this section have also been erected under contracts entered into with the Otago Provincial Government; and this section, I am sorry to say, has caused me the greatest share of trouble, delay, and extra expense.

For the first nine miles out of Dunedin, I was compelled to order the displacement and transfer of nearly the whole of the poles; for they had been erected in the midst of bush which I must have cleared away at a great outlay, and were, moreover, so mixed up with the poles of the private line of telegraph to Port Chalmers as to render the working of either line a matter of utter impossibility.

But here, again, I must exonerate the contractor from any blame, as he was working under precisely the same conditions as alluded to above.

Under any circumstances, this was a most difficult—perhaps the most difficult—portion of the line to construct; and I am happy to report that, after the alterations noticed above, the line now presents a very satisfactory appearance.

On this section, a gang of twenty-two men is actively employed under Mr. Smith, Foreman of the works, working in a northerly direction, and about twenty-five miles of the double line is actually completed in a very creditable workmanlike manner.

I expect, by the end of the present month, Mr. Smith will have pushed his gang on as far as Oamaru, for his men are at present encamped at Waikouaiti. This gang, I doubt not, will complete an average of two and a half miles of double line on full working days. The wire, insulators, roofs and arms, for this section, are delivered at convenient points along the line, and contracts are let for further detailed distribution, as the works advance and materials are required.

Waitaki and Timaru.—We now come to that section of the line lying between the Waitaki and Timaru.

The posts for this portion of the line, were laid in the first instance in groups of ten posts, at equal distances along the line; but contracts have subsequently been let, for laying them at points recently marked out by the Telegraphic Surveyor.

These posts will be erected as the works progress, by men engaged under Mr. Smith.

The progress of this portion of the works, as well as those which will afterwards occupy our attention, will much depend on the course which will be ultimately adopted by your Government.

Timaru to Christchurch.—The section of line lying between Timaru and Christchurch next comes in order. The posts for this portion of the line are now for the most part laid along the line of route, and will be erected as soon as Mr. Smith's gang arrives at this portion of the work which will entirely depend on the number of men employed, and sanctioned by the Government.

The remaining sections lying between Christchurch and Nelson, have not received such immediate attention as the preceding Southern sections already reported upon. Suffice it to say, that the whole of the contracts have been let for the supply and delivery of the poles, and that the united gangs of Messrs. Smith and Green will be prepared to continue with this Northern portion of the trunk line, as soon as the Southern portions cease to occupy their time and attention.

This then will show you the actual state of the works, and will guide you in forming an opinion as to the future progress of the same, I will therefore, no further trespass on your time in this regard.

Having disposed of this portion of my report, and before advancing further, I must now offer a few remarks, on the subject of a letter you did me the honor to place in my hands, and which you had received from the Honorable the Colonial Treasurer. I cannot help but think, that under existing circumstances, the stoppage, or even relaxing of activity, in the prosecution of the works connected with this department, would be both highly impolitic and imprudent.

It would be impolitic inasmuch as heavy engagements have been entered into with Contractors, for works which are now in course of execution; large amounts of stores are in hand for which considerable sums of money have already been paid, and which if allowed to be idle, will become for the time totally unproductive.

The poles now erected, and lying on the ground ready for erection, will be deteriorating and decreasing in value, while a probable source of revenue will be closed to the Colonial Chest. It would be imprudent now at the eleventh hour, so to speak, so far to disappoint the general public, and more especially such an influential body as the commercial part of the community.

Telegraphic communication has long been the favourite theme of the Merchant's conversation, the subject of his speculations.

Promises have been held out that were speedily to be realized; and consequently, advantages have been calculated upon, which if now denied, will I fear, be productive of withering effects on commerce generally, and despondency amongst those classes, for whom everything should be done

to create and maintain a healthy and buoyant state of commercial enterprise. The invaluable aid, such a powerful agent as the Electric Telegraph will render the General Government of the colony, is of itself an overwhelming argument in favour of vigorously prosecuting the works.

I feel convinced that few words are necessary from me on this subject, and that the Government will be as fully alive to the advantages, here to be derived, or to be denied, to the colony as I am myself: I have therefore only to hope that the works will be allowed to continue, at least at the same rate as at present, and with as much greater expedition as circumstances will admit.

Having hazarded these few remarks as a means of preparing the way, I can now with confidence pass on to offer a few suggestions, as to the future working and requirements of the line.

The Working of the Line.—In entering upon the subject of the working of the line, I consider it advisable to propose four courses, the details of which will be found, in Appendix BC and DE.

The adoption of any one of these courses, must however depend on the object the Government will chiefly have in view, in opening up Telegraphic communication.

These two objects will be, first, general utility to the community at large in its widest form, and regardless of profit in the shape of revenue; and secondly the establishment of a reproductive system, which will satisfy the barest necessities of the Government, and the highest order of commerce, such as the Merchant and Banker; keeping in view the most vigorous economy.

The first object will be attained by the adoption of attached scheme (Appendix B).

Should this be considered too comprehensive, I will attach a more modified form (Appendix C)

Either of these schemes would I conceive secure the first object of general utility.

The second object would be secured in its full vigour by the scheme I have drawn out and attached. (Appendix D).

Should this however be considered not sufficiently comprehensive, I compile and attach a safe and more amplified scheme. (Appendix E).

Either of these latter schemes would meet the strict requirements of the colony, and satisfy the claims of economy.

The estimated receipts of stations will be found apart, (Appendix F), and so arranged as easily to be applied to the various schemes above proposed for consideration. These estimates I may remark are on a very low scale, and may be considered to be well within the mark.

Before closing this report, I would urge the importance, of taking as far as possible and justifiable, the whole of the lines of Telegraph in the colony into the hands of the General Government, and working them under one management. I feel quite certain that by this means the public would be better served, and useless expenditure would be avoided.

I have, &c.,

ALFRED SHEATH,
Telegraphic Engineer.

The Hon. the Postmaster-General.

Appendix A.

TOTAL COST of the BLUFF LINE, including Erection, Material, and Expenses.

	£	s.	d.
Amount of Contract	316	16	6
Cost of Posts	372	4	0
Cost of Insulators	27	18	6
Cost of Wire	64	4	0
Travelling Expenses	15	0	0
Labour	2	0	0
Cartage	3	0	0
Freight on Wire and Insulators—4 tons at 50s.	10	0	0
Insurance on same at 35s. per cent.	1	12	6
	£812	15	6

ALFRED SHEATH.

Appendix B.

ESTIMATE of the Expenditure required for the establishment of sixteen stations in localities where Telegraphic communication is considered generally useful.

This list contains Stations that may scarcely in all cases be considered remunerative, but will be of utility to the public, and might justify a supplementary vote.

Under the charges of the Head Office are included the Salaries of Chief Officers and Assistants connected with the general administration of the Department; such as construction, maintenance, and general management.

TELEGRAPHIC ENGINEER.

7 D.—No. 1 c.

			£	s.	d.	£	s.	d.
Brought forward	...	...	...	...	...	8300	0	0
Nelson Station:—								
Chief Telegraphist	...	...	150	0	0			
Junior „	...	...	75	0	0			
Messengers	...	...	100	0	0			
						325	0	0
						8625	0	0
Balance applicable to Contingencies	...	...	...	...	...	625	0	0
Total estimated Revenue (Appendix F, No. 1						£9,250	0	0

ALFRED SHEATH.

Appendix C.

THIS LIST is nearly the same as the foregoing one (Appendix B). It simply omits Stations and excludes Towns that are not absolutely remunerative, but at the same time admits Stations for Towns that will make a limited return, and are proposed as having a fair claim to the advantages conferred by Telegraphic Communication.

The number of Linemen is here reduced to a minimum for the efficient maintenance and proper repair of the Line.

						£	s.	d.
Head Office	...	...	...	...	...	2325	0	0
Nine Linemen	...	...	...	...	...	1575	0	0
Fitting 14 Stations	...	...	...	...	...	700	0	0
Bluff Station	..	...	...	...	...	400	0	0
Invercargill Station	...	..	...	...	...	400	0	0
Molyneux „	...	...	...	...	...	250	0	0
Tokomairiro „	...	...	...	...	...	100	0	0
Dunedin „	...	...	...	...	...	400	0	0
Waikumaiti „	...	...	...	...	...	100	0	0
Oamaru „	...	...	...	...	...	100	0	0
Timaru „	...	...	...	...	...	100	0	0
Christchurch „	...	...	...	...	...	400	0	0
Kaiapoi „	...	...	...	...	...	75	0	0
Blenheim „	...	...	...	...	...	100	0	0
Picton „	...	...	...	...	...	175	0	0
Havelock „	...	...	...	...	...	250	0	0
Nelson „	...	...	...	...	...	325	0	0
						7775	0	0
Balance applicable to Contingencies	...	...	...	...	...	1225	0	0
Estimated Revenue (Appendix F. No. 2.)	...				...	£9000	0	0

ALFRED SHEATH.

Appendix D.

THIS LIST of Stations is reduced to the minimum number, and simply supplies the most stringent exigencies of the Middle Island.

For reasons of economy Linemen are dispensed with; and as all repairs will have to be done by the Foreman of the Line, Works, or the Mechanician, great delays in cases of accident must necessarily ensue.

						£	s.	d.	£	s.	d.
Head Office	...	...	...	...	...				2325	0	0
Fitting 6 Stations	...	...	...	...	...				300	0	0
Bluff Station:—											
Telegraphist	...	...	...	...	...	200	0	0			
Messengers	...	...	...	...	...	100	0	0			
									300	0	0
Invercargill Station:—											
Telegraphist	...	...	...	...	...	200	0	0			
Messengers	...	...	...	...	...	100	0	0			
									300	0	0
Dunedin Station:—											
Telegraphist	...	...	...	...	...	200	0	0			
Messengers	...	..	...	...	...	100	0	0			
									300	0	0
Carried forward	...	...	...	...	...				£3525	0	0

REPORT OF THE

			£	s.	d.	£	s.	d.
Brought forward	...	...				3525	0	0
Christchurch Station:—								
Telegraphist	...	...	200	0	0			
Messengers	...	...	100	0	0			
						300	0	0
Picton Station:—								
Assistant Telegraphist	...	...	100	0	0			
Messengers	...	...	75	0	0			
						175	0	0
Nelson Station:—								
Assistant Telegraphist	...	...	100	0	0			
Messengers	...	...	100	0	0			
						200	0	0
						4200	0	0
Balance applicable to Contingencies and Profit Account,						1050	0	0
Estimated Revenue (Appendix F. No. 3)	...		£5,250	0	0			

ALFRED SHEATH.

Appendix E.

THIS LIST of Stations is so compiled as to include Towns of second importance in the Middle Island, which fairly have a claim to, and which should certainly be furnished with, Telegraphic Communication, if such can possibly be done without injury to the interests of the Colony.

			£	s.	d.	£	s.	d.
Head Office	...	...				2325	0	0
Fitting 8 Stations	...	...				400	0	0
Bluff Station	...	...				300	0	0
Invercargill Station	...	...				300	0	0
Dunedin	...	...				300	0	0
Oamaru Station:—								
Addition to Postmaster's Salary	...	...	25	0	0			
Messengers	...	...	75	0	0			
						100	0	0
Timaru Station:—								
Addition to Postmaster's Salary	...	...	25	0	0			
Messengers	...	...	75	0	0			
						100	0	0
Christchurch Station	...	...				300	0	0
Picton	...	...				175	0	0
Nelson	...	...				200	0	0
Balance applicable to Contingencies and Profit account	...					1750	0	0
Estimated Revenue (Appendix F. No. 4)	...		£6,250	0	0			

ALFRED SHEATH.

Appendix F, No. 1.

ESTIMATED Receipts for One Year at the various Stations enumerated below, supposing the Chief Stations, marked with an asterisk (*) to be kept open from 8 a.m. till 10 p.m., and the remaining Stations to be kept open from 9 a.m. till 5 p.m.

The number of Linemen proposed in connection with this Estimate (Appendix B and D), will enable the Line to be kept in constant working order and avoid losses from stoppages.

*Bluff	...	...	...	...	1500	0	0
*Invercargill	...	...	...	...	1000	0	0
Molyneux	...	...	...	...	300	0	0
Tokomairiro	...	...	...	...	200	0	0
*Dunedin	...	...	...	...	1500	0	0
Waikouaiti	...	...	...	...	250	0	0
Oamaru	...	...	...	...	500	0	0
Timaru	...	...	...	...	500	0	0
Rakaia	...	...	...	...	150	0	0
*Christchurch	...	...	...	...	1000	0	0
Kaiapoi	...	...	...	...	300	0	0
Saltwater Creek	...	...	...	...	100	0	0
Blenheim	...	...	...	...	200	0	0
*Picton	...	...	...	...	600	0	0
Havelock	...	...	...	...	400	0	0
*Nelson	...	...	...	...	750	0	0
Total estimated Revenue	...	...	...	...	£9,250	0	0

ALFRED SHEATH.

Appendix F, No. 2.

Bluff ...	...	...	...	...	...	1500	0	0
Invercargill	...	...	...	...	...	1000	0	0
Molyneux	...	...	...	...	...	300	0	0
Tokomairiro	...	...	...	...	...	200	0	0
Dunedin ...	...	...	...	...	...	1500	0	0
Waikouaiti	...	...	...	...	...	250	0	0
Oamaru	...	...	...	...	...	500	0	0
Timaru ...	...	...	...	...	...	500	0	0
Christchurch	...	...	...	...	...	1000	0	0
Kaipoi ...	...	...	...	...	...	300	0	0
Blenheim	...	...	...	...	...	200	0	0
Picton ...	...	...	...	...	...	600	0	0
Havelock	...	...	...	...	...	400	0	0
Nelson ...	...	...	...	...	...	750	0	0

Total estimated Revenue £9,000 0 0

ALFRED SHEATH.

Appendix F, No. 3.

ESTIMATED receipts for One Year at the Stations mentioned below, supposing the hours of business to be fixed between 9 a.m. and 5 p.m.

One Clerk alone is allotted to each Station. Work will consequently be considerably delayed, and so cause a diminution in profits, as the full benefit of Telegraphic communication will not be afforded, namely utmost speed.

No Linemen being engaged, great delays will be experienced in repairing the Line, and profits will consequently be stopped in the meanwhile.

As the number of Stations is greatly diminished, the feeders to the Line generally and to the Stations enumerated are proportionately reduced; every new Station opened on a Line augments the receipts of existing Stations in proportion to its importance and relations.

Bluff ..	...	...	...	...	...	1000	0	6
Invercargill	...	...	...	...	...	1000	0	0
Dunedin	...	...	...	...	...	1000	0	0
Christchurch	...	...	...	...	...	1000	0	0
Picton ...	...	...	...	...	...	500	0	0
Nelson ...	...	...	...	...	...	750	0	0

Total estimated Revenue £5,250 0 0

ALFRED SHEATH.

Appendix F, No. 4.

						£	s.	d.
Bluff ...	...	...	...	...	...	1000	0	0
Invercargill	...	...	...	...	...	1000	0	0
Dunedin ...	...	...	...	...	...	1000	0	0
Oamaru ...	...	...	...	...	...	500	0	0
Timaru ...	...	...	...	...	...	500	0	0
Christchurch	...	...	...	...	...	1000	0	0
Picton ...	...	...	...	...	...	500	0	5
Nelson ...	...	...	...	...	...	750	0	0

Total estimated Revenue £6,250 0 0

ALFRED SHEATH.

