

1856-7.

VICTORIA.

ELECTRIC TELEGRAPH.

REPORT

OF THE

GENERAL SUPERINTENDENT OF THE ELECTRIC TELEGRAPH, UPON THE
ADVANCEMENT AND PRESENT CONDITION OF THE DEPARTMENT
FOR THE HALF YEAR ENDED 30TH JUNE, 1857.

PRESENTED TO BOTH HOUSES OF PARLIAMENT BY HIS EXCELLENCY'S COMMAND.

By Authority:

JOHN FERRES, GOVERNMENT PRINTER, MELBOURNE.

REPORT.

Department of Electric Telegraph, Superintendent's Office,
Melbourne, 29th July, 1857.

Since concluding my Report of the 31st December, 1856, much progress has been made in carrying out the works connected with the construction of the inter-colonial lines, nearly one half of the Victorian section of the New South Wales division being now in such a forward state as to warrant the belief that communication will be opened to the southern bank of the Murray, at Belvoir, within the present year, the winter having thus far proved not unfavorable to the operations of the contractor.

On the western, or Victorian section of the South Australian division, the work has been somewhat retarded by the heavy rains on the plains between Fiery Creek and Hexham, but during the last few weeks active operations have been resumed, and as nearly one half of the posts are in position, in readiness for the insulators and wire, it is thought that this line will be completed to the western boundary of the colony, by the latter part of January, 1858.

It is intended that the Victorian and South Australian lines shall join at a point on the boundary between the two colonies, near the township of Nelson, at the mouth of the Glenelg river, about twenty-three miles S.E. of Mount Gambier, and fifty-four miles from Portland, this place of junction having been approved of by Mr. Todd, the Superintendent of Electric Telegraph for South Australia, and myself, as presenting a more favorable route for the terminal sections of the lines in either colony, our decision upon the matter having been arrived at after a personal examination of the country, in the month of May last, a report of which meeting I have already had the honor to transmit to you.

In arranging the route of the line from Ballaarat, westward, care has been observed by the surveyor to mark out the position in such a manner as hereafter to afford, if required, a favorable route for a line of road. I anticipate good results from this course especially in traversing the open plains between Raglan, (Fiery Creek diggings,) and Hexham, on the west bank of the Hopkins river, a distance of nearly eighty miles. In passing through this section of country the line will form a safe guide to travellers in proceeding from the western gold fields to Warrnambool and other ports on the southern coast, and also of service to strangers visiting the interior of the district through which the line is carried. Offices will be established at Portland, Belfast, Warrnambool, Hexham, Streatham, and at or near Raglan. The contract for this work was taken by Messrs. Campbell and Thompson, at the rate of £65. 10s. per mile, and so far as it has proceeded, it has been satisfactorily performed; the entire length of the line has not yet been accurately determined, the survey being at present only approaching completion, but it is considered that the total distance between Ballaarat and the point of junction at the boundary of the colonies will not exceed 320 miles.

The north-eastern, or Victorian section of the New South Wales division of the main inter-colonial line has already crossed the Goulburn river, at Tallarook, near Seymour, and the work is being pushed forward with vigor. The thickly wooded country beyond Kilmore, through which it was necessary to carry the line, presented such an obstacle that much labor was incurred, and progress, for a time, rather retarded, in removing the heavy timber; but this has been overcome, and as there are comparatively few additional sections of the line so thickly wooded, it is thought that no hindrance will be met with, affecting the future progress of the work. Offices will be opened at Kilmore, Tallarook, Longwood, Benalla, Wangaratta, Beechworth, and Belvoir. At the latter place the line will connect with the New South Wales division, its terminal station being Albury.

The contractor, Mr. E. L. Crowell, is to receive £59 15s. per mile for this line, and the total length will be 226 miles; the difference in the cost of the two lines may be partially attributable to the abundance and contiguity of suitable timber on the north-eastern route, and the consequent lessening of expense of transport, usually a considerable item in carrying out public works in the interior.

The timber employed for posts has been carefully selected, and having been cut during the winter months, will be the more likely to prove durable. Sound stringy-bark, box-wood, and red gum saplings, of proper size, have been generally used; the base of each post being thoroughly charred over the portion embedded in the earth. Decay has thus been, as far as possible, guarded against; it is, however, intended that when the posts become affected by rot, at or near the base, to sever the decayed portion, remove the remainder from its position, and re-erect the post at a lesser depth, probably reducing the height of the post to eighteen feet; in this way some economy will be effected, and the expense of replacing partially defective posts, by new timber, avoided, until the latter course may become strictly necessary. As it is not improbable that some injury may be sustained by the posts, in heavily timbered districts, during the prevalence of bush fires, my attention has been directed to a new application, said to be very effectual for the preservation of timber against fire. The preparation, as described by F. A. Abel, Esq., Chemist to the War Department, in Paper xviii, Vol v., Professional Papers of the Corps of Royal Engineers (new series), consists simply of soaking or painting the wood with a solution of silicate of soda, the effect of which is described as rendering a nearly perfect protection, even under most severe tests; and from my own observation, I believe that the use of the substance here would be attended with beneficial results, not only as a preservative for telegraph posts, but in its general application to fences and wooden structures exposed to danger from the ravages of bush fires, during the summer months. The coating, once applied, is not readily removed, the action of the weather having very little effect upon it; indeed the application of water, it is stated, did not appear to affect the qualities of the substance, and by combining a strong lime wash with the silicate, in alternate coatings, the wood was rendered quite impervious to the effects of a continuous stream of water, and the preservative qualities of the coating materially improved. I therefore purpose, so soon as I shall have been enabled to procure a quantity of the silicate of soda, to apply the solution to such of the posts as may not appear to be otherwise sufficiently protected against the danger alluded to.

The progress made in the adjoining colony of New South Wales, during the past six months, in advancing that division of the inter-colonial line, has not been so satisfactory as could have been desired; but I have recently learned that active measures are about to be adopted for the prosecution of the work, in order that the advantages of inter-colonial telegraphic communication may be availed of, with the least possible delay, after the completion of the Victorian division to Belvoir.

In South Australia, I am informed by Mr. Todd, the superintendent, that the division of the line undertaken in that colony is in a very forward state, one section of

upwards of 100 miles having been already prepared for the wire and insulators; so that there is every probability that this line will be completed contemporaneously with the Victorian division. This gratifying fact may be duly appreciated when considered in connection with the existing European and Australian postal arrangements as affecting the sister colony, and the additional facilities which will be afforded in effecting mail departures, &c., through the agency of the telegraph.

In Tasmania the contracts have been carried through with success, and the line (120 miles) between Launceston and Hobart Town is now in operation. Launceston and Georgetown will be connected during the present year, and possibly a considerable portion of the line to connect with the submarine inter-colonial division at Cape Grim advanced towards completion. I briefly alluded to the latter proposition in my previous report, and as the correspondence, as well as my special report upon the subject, has been already laid before Parliament by command of His Excellency, I consider it merely necessary to advert to the fact that arrangements have been made to proceed with an accurate survey of the route decided upon for the submarine cable between Cape Otway and King's Island, and from the latter point to Cape Grim, so soon as the weather shall have become sufficiently settled to admit of this work being proceeded with safely and effectively. The *Victoria*, steamer, will be availed of for the purpose, and the services and experience of the Government Marine Surveyor, Captain Ross, R.N., who is to be detached for the purpose, will, undoubtedly, prove valuable in effecting the necessary preliminary arrangements for laying the cable in a secure and efficient manner. The size of the proposed single wire cable will be about three-fourths of an inch in diameter, and its weight rather less than two tons to a mile. Every precaution will be adopted to procure the most approved form of cable, and as so many really valuable and economical improvements have lately been made in the manufacture of submarine cables, I entertain the hope of obtaining the most suitable article for the purpose that has ever been produced; but of course little can be said in this respect until the survey alluded to shall have been completed, and replies received to the call for tenders which it will be necessary to make after having obtained all possible information relative to the nature and extent of the services to be performed.

The overland line from Geelong or Queenscliff to Cape Otway, there to connect with the submarine section, has not yet been commenced, as I considered it inadvisable to recommend the construction of this line until some progress had been made in the more important branch to cross Bass's Straits—the former would not occupy more than three or four months in course of erection, and may readily be provided between the time of ordering the cable and the arrival of the vessel conveying it.

When the lines referred to shall have been completed and placed in connection with those now in operation, which it is expected will be accomplished by the summer of 1858, there will then be direct telegraphic communication between Melbourne, Adelaide, and Sydney, and between the two latter cities and Hobart Town, *via* Melbourne, embracing of course all places of importance on each of the routes, and combining a total of about 2000 miles of electric telegraph, having upwards of fifty offices in active operation; this will for the present complete the chain of inter-colonial communication, but it cannot be imagined that any lengthened period will be permitted to elapse ere great extensions will be carried out, nor that the spirit of public enterprise will flag, until the crowning object shall have been obtained, in accomplishing communication by electric telegraph with Great Britain *via* India, and that this object will ultimately be attained can scarcely be doubted by any one who has observed the rapid strides lately being made towards its advancement in other parts of the world.

The business of the lines during the past six months exhibits a very marked improvement on my last report, partially attributable to opening communication with the gold fields, and to the natural increase as the various offices become regularly established and publicly known.

The following is the statistical and financial Return for the half year:—

STATEMENT shewing the general business of the TELEGRAPH DEPARTMENT in VICTORIA, during the HALF YEAR ending the THIRTIETH JUNE, 1857.

Year.	Month.	Number of Private Messages.	Number of Messages on Public Service.	Value of Messages. on Public Service.	Total Cash Receipts.	Total Number of Messages transmitted.
1857.	January	2,773	440	162 5 4	574 0 11	3,213
	February ...	3,030	512	170 12 7	647 5 3	3,542
	March.....	4,289	630	264 11 6	844 10 9	4,919
	April	3,989	510	247 12 9	812 13 5	4,499
	May.....	4,574	471	237 8 3	873 18 6	5,045
	June	4,654	608	269 13 1	909 12 7	5,262
		23,309	3,171	£1,352 3 6	£4,662 1 5	26,480

GENERAL ABSTRACT.

The GROSS EXPENDITURE for SALARIES and EXPENSES incidental to the working and maintenance of the lines during the period included in the foregoing Return amounts to £4825 10s. 4d.

DEBTOR and CREDITOR STATEMENT.

<i>Dr.</i>				<i>Cr.</i>			
	£	s.	d.		£	s.	d.
Total Expenditure for working and maintenance from the 31st December, 1856, to the 30th June, 1857.	4,825	10	4	Balance 31st December, 1856	665	12	1
Balance				Revenue for the transmission of private despatches	4,662	1	5
	1,854	6	8	Value of the despatches on Public Service	1,352	3	6
	£6,679	17	0		£6,679	17	0

Adding, as above, the balance £665 12s. 1d. in favor on the 31st December, 1856, and the total expenditure on account of the lines and stations now in use, being in round numbers under £40,000, we have interest on the outlay (after defraying current expenses) at the rate of 9 per cent. for the present year, or $1\frac{1}{2}$ per cent. on the same sum during the past three years.

Until the chain of communication, before alluded to, shall have been completed and in full operation however, it is manifest that positive statements as to the financial probabilities of the department would be premature, but judging by the present success and the extended uses to which the electric telegraph is daily being applied, we may indulge the hope that with prudent economy and the evidence of a desire to meet the wants of the public, the revenue may continue to improve proportionately as the magnitude and importance of the works, and necessarily their current expenses become increased.

With reference to the establishment at the Flagstaff Hill, Melbourne, to which your attention was directed in my last Report, as being the only unproductive branch of this service, I have now to add that the expenditure occasioned thereby is still chargeable to this department, although no direct pecuniary benefit is derivable therefrom—the uses to which the office is at present applied being merely to exhibit flag signals when vessels are notified as having arrived in the Bay, and to be available on Sundays in the event of marine casualty at the Heads, or to announce the arrival of an European mail steamer on that day. The former of these services is I consider sufficiently performed by means of

the marine intelligence board at the Hall of Commerce, and the latter is quite practicable from the central office. Under these circumstances, I would beg to suggest that Government may be pleased to take the subject into consideration with the view of removing the present unnecessary expense entailed upon the department in supporting the establishment referred to.

Having been long aware of the inconvenient position of the business conducted at the office in William-street, and having obtained the sanction of Government to its being removed to a more central locality, a lease was procured of four convenient rooms in the building known as the Hall of Commerce in Collins-street, into which, after the proper fittings had been completed, the instruments, &c., were conveyed, and a central office established on the 1st of March last. Much benefit has been derived in various ways from this step, but more particularly in the increase of the business of the department, as may be observed by a reference to the financial statement and a comparison between the business of January and February with that of the four subsequent months. The present position of the office being in a measure temporary, and suggestions having been offered on the part of the Exchange Company as to the desirability of again removing the office, and of accepting certain accommodations offered in their building, I deem it necessary to state that the only space available there, is not of a character that I could strongly recommend, and even apart from this consideration, I think the advisability of removing the office from Collins-street at this period open to question and doubt; the present site being almost unobjectionable as to centrality, and the practice of frequent removals not being generally conducive to the increase of telegraphic business. The fact of a permanent building for the Post Office being about to be commenced has presented itself to me as a fitting opportunity for definitely deciding upon the position of the Chief Electric Telegraph Office, and I have been led to the conclusion that the most perfect arrangement would be that the latter should be included in the same building, both on the ground of advantage to the postal department and also as a great public convenience. Should it therefore not be too late to make alterations or additions to the plans already prepared for the new building, I would beg to suggest that the subject may be brought under the consideration of Government.

In conclusion, I feel much gratification in being able to state that the business of the lines has suffered comparatively few interruptions, and no instances have occurred where evidences of malicious injury to the works has appeared, but, on the contrary, a disposition has been manifested by the inhabitants of the districts to protect the lines passing through their respective localities.

I have in this Report omitted making allusion to the Astronomical Observatory attached to the office at Williamstown, the work of reducing the observations of the past six months not having been sufficiently forward to admit of the report of the Superintendent being completed in time for immediate transmission, but I purpose forwarding that document so soon as the requisite information shall have been obtained, which I believe will not occupy more than a fortnight.

I have the honor to be,

Sir,

Your obedient Servant,

SAMUEL W. MCGOWAN.

To the Honorable

The Commissioner of Trade and Customs.