

1876.  
WESTERN AUSTRALIA.

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REPORTS

UPON THE

EUCLA TELEGRAPH LINE,

BY

THE POSTMASTER GENERAL

AND

THE SUPERINTENDENT OF TELEGRAPHS.

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1876.

# EUCLA TELEGRAPH LINE.

## REPORT BY THE POSTMASTER GENERAL.

### WESTERN AUSTRALIA.

Postal and Telegraph Department,  
General Post Office, Perth, 13th July, 1876.

Sir,

In accordance with instructions, I have the honor to furnish you, for the information of His Excellency the Governor, with the following Report on the progress of the Eucla Telegraph Work and the disbursements on account of this service.

In consequence of the absence of the Superintendent of Telegraphs on the Line, on a tour of inspection, I am unable to inform you accurately how far the work has been extended to the present time; but from official reports already received I may state that the line has been completed as far as Bremer Bay, the first station erected (distance from Albany 120 miles), and communication established with Albany. The wiring has been completed more than two-thirds of the distance between Bremer and Esperance (distance from Albany 286 miles) and the remaining portion I have no doubt is nearly completed, and communication will be established, probably, in a few days.

From private sources I am informed that two months ago the line was cleared and surveyed, and poles erected 90 miles beyond Esperance; since then no intelligence has been received from the party on the line.

### COST OF CONSTRUCTION.

When the construction of the line was proposed by the Government to the Legislative Council the estimated cost was £32,000, but when contracts were made upon tenders accepted the aggregate amount exceeded £1652 10s. of the estimated cost.

The respective contracts are as follows:—

1. For Telegraph Poles ... ..	£	s	d
2. For Five Telegraph Stations... ..	8282	10	0
3. For Shipping Poles and Stations to landing places along the Coast ... ..	600	0	0
4. For Carting and Erecting Poles and Stations ... ..	5050	0	0
5. For Telegraph Plant ... ..	10320	0	0
6. For Shipping plant from Fremantle and erecting same ... ..	10400	0	0
	4000	0	0
Making a total of... ..	£33652	10	0

It must be borne in mind that there are other items of expenditure, such as surveying, clearing the line, superintendence, &c., which have not been provided for.

The payments which have been made on account of the line, including contractors, up to the 1st instant, are as follows:—

For Poles ... ..	£	s	d
For Stations ... ..	1892	14	9
For Shipping Poles, &c. ... ..	600	0	0
For Carting and Erecting Poles, &c. ... ..	2931	4	6
For Shipping and Erecting Plant ... ..	3460	8	6
For Telegraph Plant, &c. ... ..	827	10	0
For Instruments, &c., from Crown Agents ... ..	10400	0	0
For Salaries of Survey Party and Miscellaneous Expenses ... ..	1419	2	11
	3303	19	6
Making a total of... ..	£24835	0	2

The balances remaining to be paid on account of the respective Contracts, &c., are as under:—

For Poles ... ..	1389	15	3
For Shipping Poles, &c. ... ..	2118	15	6
For Carting and Erecting Poles ... ..	6859	11	6
For Shipping and Erecting Plant ... ..	3172	10	0
For Salaries of Survey Party, and other incidental expenses, including stockades for the Stations, for the erection of which no provision has been made, about ... ..	3000	0	0
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	£16540	12	3

#### COMPLETION OF THE LINE.

By the conditions of the respective contracts it is provided that the several sections of the work on the line shall be completed by the end of November next, and if the contractors shall fail to do so within such time, they shall pay a penalty of £5 for every week-day from such time appointed for its completion.

From the progress that has already been made, I am apprehensive that the work will not be completed, and communication open, between Albany and Eucla before the 1st of April, 1877; and even then I may state that the work will be but partially completed, inasmuch as it has been authorised by the Government, on the recommendation of the Superintendent of Telegraphs, that if it did not invalidate any of the conditions embodied in the contract, and without any additional cost to the public, that the contractor should be allowed to commence, after crossing Phillips' River (distance from Albany 180 miles), to carry on the extension of the line with eleven poles instead of twenty-two to the mile, with a view to accelerate communication, leaving the intermediate eleven to be erected when returning from Eucla. By this arrangement I hardly expect the whole of the work will be fully completed before the end of 1877.

#### MAINTENANCE OF THE LINE.

The cost of the maintenance of the line I have estimated at £4378, but the whole of this sum will not necessarily be expended next year, as it is quite probable that there will be no through communication by the first of January next.

In framing my estimates for this service I have had due regard to economy, and I may add that the salaries proposed by me for the Station masters and Linemen, &c., are considerably lower than those proposed to be given by the South Australian Government to the officers on their portion of the line.

In the above estimated sum I have not provided for transport, inasmuch as I have not the remotest idea as to the amount that would be required; and, also, whether the Government would supply rations to the officers on the line, or whether it would be done by contract, I have no means of ascertaining.

I have, &c.,

A. HELMICH,

Postmaster-General.

The Hon. the Acting Colonial Secretary, Perth.

# REPORT BY THE SUPERINTENDENT OF TELEGRAPHS.

## WESTERN AUSTRALIA.

SIR,

Perth, August 19, 1876.

I have the honor to submit the following Report upon Albany and Eucla Telegraph Construction, for the information of His Excellency the Governor, after my fourth visit to the works.

The objects of this visit were to set in order Esperance Bay station, and open communication; to consult with the officer directing the line, and decide on the sites of stations beyond Esperance Bay; to learn the practicability, or otherwise, of landing station materials on the coast east of Israelite Bay, where the bays or protected bights terminate; to acquire some personal knowledge of the country that might assist in the direction of linemen; to inspect some of the wiring contractor's work; and to see to other matters of detail.

Hitherto, the vessel carrying materials from Fremantle and Bunbury made the voyage to and from the works in six (6) weeks, and it was expected on this occasion that seven (7) weeks would be the outside duration of the voyage, giving ample time and opportunity at three (3) landing places; but unforeseen circumstances have been the means of lengthening the time to three (3) months, and of affording much larger insight of the work, and the country it passes over, than I expected, for the visit has extended to the fifth section of the work, within one hundred and fifty (150) miles of Eucla Harbor; to the sites of all stations except Eucla; and a journey over the construction of four hundred and thirty (430) miles.

After a most unfavorable voyage of nine (9) days, the vessel anchored at Esperance Bay on June 4th, and upon landing, I found that the wiring contractor was behind with his work, and the wire about forty (40) miles back, instead of being at the station awaiting connection, as expected. The cause assigned for the delay was, the loss of horse forage, and other supplies, from a small vessel from Albany, which, being caught in a gale, cast cargo overboard for the vessel's safety, and this loss brought the contractor to a stand for a time, causing him to fall back on Bremer Bay for supplies. After arranging for the despatch of a letter informing the contractor that I should return to Esperance Bay in about ten (10) days' time, and fixing the Telegraph apparatus at the station, I left for Israelite Bay, and arrived there on June 6th.

The anchorage in the west side, or corner, of Israelite Bay is in good holding ground, well protected by a reef a quarter (¼) of a mile in length; but the bay is shallow, and a vessel drawing nine (9) or ten (10) feet of water could hardly remain there in safety in all weathers.

Here, I found the constructing contractor's party waiting for poles, and, rains having set in, anxious to push forward to Culver Cliffs, and the vessel's raft was made ready without delay for landing the poles required. On meeting Mr. Price, I communicated to him His Excellency's willingness to give effect to the wishes of the settlers, and to place a station at Israelite Bay, provided such an alteration did not interfere materially with the plan of the work. Unfortunately, Mr. Price had not been able to visit Culver, and without an inspection it could not be rejected as an unsuitable site. He had been as far as "Wattle Camp," which he found not so good as Israelite Bay country for grass, wood, and water, whilst the two (2) places are only thirty miles apart; and the matter of site seemed thus to rest upon the question whether a station could be maintained at Culver.

The station materials being on board the vessel, it became necessary to fix their place of landing with as little delay as possible; and, accordingly, I arranged with the master of the vessel to retain the materials on board, and proceed to Culver.

On June 14th, the poles being landed, I left with Mr. Price, and found, as soon as the vessel was abreast of Culver Point, a difficulty in landing there. Though the weather was fine and favorable, the beach being open and steep, exposed to a long, high, and incessant swell,

breaking in heavy surf upon it, it was a question whether telegraph poles could be landed, not to mention station materials. We effected a landing in the ship's boat, after being upset in the surf, and found the place, in addition to the matter of landing, utterly unsuitable for a station site. Perfectly destitute of grass, or any description of feed whatever, there is on the one hand the Bluff, being the first of the cliff range, rising about three hundred (300) feet high and dipping into the sea, forming Point Culver; on the other hand, the drift sand hills, one hundred (100) feet high, extending along the coast as far as the eye can reach; in the rear, a high terrace clad from base to summit with marlock, and forming a background about half-a-mile from the sandy beach, fronting which there are a few sapphire flats and more sand, presenting, in fine, one of the most inhospitable sites for a telegraph station that could possibly be imagined.

Having reports that at Point Dover, fifty (50) miles further east, there were brooks, or gaps, in the range, and a low beach, I determined to proceed there, in the hope that it might afford the fourth station a better site, and perhaps make an important marine signal station, at all events give a better division of the sections, having an eye to Israelite Bay for the third station; but here again we met disappointment. From Culver Point the vessel stood close in and sailed along the cliffs, favored with fine and fair weather, and rounded Point Dover without finding any change whatever in the character of the range, Point Dover being merely the largest of a long series of small head-lands, scarcely distinguishable in sailing along, and the range one of remarkable uniformity, with bold water washing against its base all along.

At Point Dover, however, we saw what appeared to be the termination of the range, or rather where it recedes inland, leaving a low sandy beach, at about twenty-five (25) miles distance from us, and that being only eighty (80) miles from Point Culver, whilst the length of this section, *i.e.*, from Culver to Eyre's "Sand Patch" being set down at one hundred and forty-six (146) miles, we were uncertain whether the beach in the distance was really the east end of the range, or only a long gap in it. On arriving abreast of this part, landing was effected without much difficulty, and after a few hours travelling, we discovered that our place of landing was within a few miles of the "Sand Patch," and consequently, that the length of the section, measuring from Point Culver, is only one hundred and ten (110) miles, not one hundred and forty-six (146).

How this error originated, I cannot explain; but the discovery enabled me to dispose of the positions of stations, without further search or time. Taking the contemplated site of Eyre station about ten (10) miles nearer the end of the range, the section between that station and Israelite Bay would not exceed one hundred and sixty (160) miles, or eighteen (18) miles less than Bremer Bay-*Esperance Bay* section, and, accordingly, Israelite Bay was selected in lieu of Point Culver; and the actual length of the section as against the computed length will, of course, effect the total cost of construction by a reduction of about one thousand five hundred pounds (£1500.)

In returning, the vessel anchored off Point Culver with the object of landing poles, and succeeded in landing one hundred and seventeen (117) after waiting, ready at all times to slip the cable and put off to sea, no less than six (6) days for opportunities.

The remainder of the poles were taken on and landed at "Wattle Camp," where the contractor was ready to receive them, having poled up to there during our absence from Israelite Bay, and bringing up the work within thirty (30) miles of Culver.

At Israelite Bay the station materials were landed, and carted to the site, and the erection commenced before the vessel had finished ballasting. This station will have abundance of firewood and water convenient to the site, soil capable of growing vegetables, and patches of grass feed. As at Bremer Bay and *Esperance Bay*, the station overlooks the bay.

On July 9th, Mr. Price left me with the intention of pushing forward his camp to Culver, and after bringing up the work to that point, to commence on the cliffs, directing the line

straight over, if practicable; and at that date the contractor had only about two (2) weeks work up to the cliffs, and doubtless his party are now some twenty (20) miles on the cliffs.

On July 12th, I left Israelite Bay, having on board some of the surveyors discharged from the party, and after passing Point Malcolm in the afternoon of the same day, the contractor's cutter "Tribune" was seen at anchor under Bellingher Islands, about a mile from the mainland, in S. Lat. 30 deg. 54 min. E. Long. 123 deg. 32 min., with wire for Point Malcolm, and the master went into the anchorage to give some instructions to the crew. There was fair weather for the voyage to Esperance Bay, but the distance being too much to get over by sun-down, and many dangerous reefs and islands to be cleared, the captain determined, being inside the islands, to remain there till morning. Unfortunately, the wind hauled round during the night; in the morning freshened; and the vessel could not under canvas get her head off the land. A rope was laid out to the cutter and brought to the windlass with the intention of heaving the vessel further out, but the line parted; the anchor was dropped once more, and notwithstanding the captain's anxiety to proceed on the voyage, it was considered prudent to ride out the weather where the vessel lay. At that time there was no anxiety whatever for her safety, the cutter having found good anchorage and ridden out a heavy south-west gale some few days before; nevertheless it was evident that the vessel was in proximity to a dangerous, rocky shore; that surf was breaking high over many boulders cropping up off the land, that the bottom was, doubtless, rough and treacherous, whilst the barometer indicated stormy weather. Before five (5) o'clock in the afternoon the wind rose to a gale, when the anchors began to drag, and the vessel was driving slowly on to the rocks. This was first indicated by striking aft on the keel upon a ledge of rock, when in about fourteen (14) feet of water, and as she kept on striking heavily, there is no doubt had she struck on the bilge instead of the keel, lives would have been lost. Fortunately, the vessel held together, though lifted by every roll of the sea and dashed on the rocks, until morning, when she had driven fairly on shore, and settled down in about four (4) feet of water, a complete wreck; and here I may be allowed to express my regret for this unfortunate occurrence, and sympathy with the anxious and efforts of the master to avert it. For twelve (12) months this vessel had carried on the service remarkably well, in face of many dangers, discovered and avoided over an almost unknown coast.

After arrangements had been made for camping on the island, the cutter was ordered off to Point Malcolm to discharge wire and other materials, and return to take the passengers and crew off the island and on to Esperance Bay, where horses could be procured for an overland journey to Perth; but on the second day after the cutter's departure for Point Malcolm, the weather being unsettled, and the vessel's progress uncertain, I determined to proceed to Esperance Bay overland, a journey of about one hundred (100) miles, and after reaching the mainland in the ship's boat, and walking forty (40) miles on foot to Thomas River, I found horses at Mr. Taylor's station, and two (2) days after arrived at Esperance Bay. Fortunately, I met Mr. Andrew Dempster there, about to proceed to Perth, and he readily undertook to supply horses and assist the party.

The cutter having arrived, I procured and shipped such supplies of flour, meat, tea, and sugar, for the survey party as kept them from risk of being starved out before the arrival of another vessel from Fremantle; and after travelling over the line two hundred and ninety (290) miles, arrived at Albany on 9th inst.

The progress of the contracts is satisfactory, and more especially the contract on which the work depends, i.e., the pioneer party, erecting poles. That party must now be at work some twenty (20) or thirty (30) miles on the Cliff section; but reckoning they are not beyond Point Culver—thirty (30) miles from where I saw the work,—the length of line poled is five hundred (500) miles from Albany, with three (3) stations erected, leaving about two hundred and fifty (250) miles and two (2) stations, including Eucla, to erect. Much of this successful progress may, perhaps, be attributed to a favorable season, for if, as it is said, there are long

periods in these latitudes without rain, the work is singularly favored, there being abundance as far as Eyre station. But, from the indications seen, I believe the coast country has regular rainfalls, whatever may be the experience inland. From Israelite Bay eastward, the nights and mornings, when without rain, were extremely cold, with the barometer about 33 deg. and ice half-an-inch thick in the water-holes. The difficulties anticipated at one time from want of fresh water have not arisen, and where no springs or swamps are found, water is obtained a few feet under the base of the bare sand hummocks. As an instance, from Israelite Bay to Point Culver, about sixty-five (65) miles, it was believed from all previous information that water could only be found at Wattle Camp, whereas water is opened every four or five miles over that section.

From the extreme roughness of the country, the line between Gardner River and Phillips River, in the second section, has been heavy and difficult work, and, in my opinion, much more so than will be experienced in the far section.

The lightning wires and staples should be sent by the first vessel, that they may be fixed to the poles when being earthed, as the contractor is finishing work as he proceeds, and will continue to do so on to Eucla. Portions of the second and third sections in flat country where the line is without intermediate poles will require but little time to finish, the poles being on or near the line where wanted, for as the chief work in this construction is in the haulage of materials from landing places on the coast and distributing them on the line, and as the major part of this work is the making of cart tracks or roads through scrub and thickets, after-work becomes comparatively light and insignificant.

When I left the ground, it was expected that the poles would be up to Eucla in eight (8) months' time; but this calculation may be affected by a delay in delivering materials to keep the work going. Already one (1) month is lost by the wreck of the contractor's vessel; and another will be despatched, I hope, without delay.

As already reported, the wiring contractor had not brought up his work to Esperance Bay when I left; but I believe, if heavy rains have not interfered with his progress over some swampy country near Esperance Bay, that he is at the station now; and I am in daily expectation of a telegram from that station, having at Albany, Bremer Bay, and Esperance Bay done everything in my power both with operators and apparatus to ensure communication, once the wire is connected. The hours fixed for the first signals are from 10 to 11 a.m., and from 1 to 3 p.m., after which correct Perth time shall be given to Esperance Bay. This section being unfinished no tests could be taken at stations, but I have seen the joints generally, which appear to be well made. It would, however, be more satisfactory, and probably be the saving of some trouble and expense hereafter, were an assistant stationed over this work, and keep up communication with the nearest station, affording the means of testing from time to time as the work progressed.

With reference to the construction itself, the poles are well earthed and lined, and the curves and rough places well poled. In some instances the wire is exposed to sea atmosphere, by no means conducive to the life of galvanized iron, and being a coast line, this was unavoidable under the contracts; but in rough places, in the second section especially, I think it would have been better, in consideration of the future maintenance, had the line been more sinuous. For the sake of protracting perfectly straight courses ten, fifteen, or twenty (10, 15, or 20) miles, it travels up and down high and rough hills, along the sides of steep hills, through thickets, and over rugged parts almost inaccessible, where deviations would, I believe, have carried it over more favorable country, and, in many instances, nearer to water and grass. Several of the river crossings will be even even more troublesome, such as at Fitzgerald River, Dempster's Inlet, and Point Ann Inlet, where horses cannot be taken over, not from the depth or flow of water, but from their mud bottoms, which are sheer bog holes. Fitzgerald River, as an instance, can only be forded over the sand bar at the river's mouth, about a mile and a half below the line, or at a crossing used

by the contractor up the river two and a half (2½) miles from the line, a better crossing though farther off, a road being cut through the marlock thickets; but to travel five (5) miles round in order to get eighty (80) yards forward would prove inconvenient and troublesome in many respects in patrolling the line in cases of emergency, or after sun-down. There are loose stones in abundance at hand, and I would recommend that the contractor's waggons be employed, when returning, to cart and lay sufficient materials to form crossing places alongside the line over the rivers and inlets.

The stacks of spare poles placed every ten (10) miles for future service in cases of accident, should be buried for safety and not left on the scrub. A trench should be dug near a pole, its number taken, and the poles laid in, and covered over with about six (6) inches of earth, and I would recommend that this service be also done by the contractor while on the works.

I find also that it is necessary in the sections beyond Bruner Bay to supply three (3) small huts, stationed for jinemen's use in travelling, and in which tools, stores, and rations may be safe from bush fires, rain, natives, or dogs; and as there are no materials on the ground, the huts should be framed and sent down. I would recommend galvanised sheet iron on a wood frame, as the best and most suitable materials. The huts should be in dimensions 8x5 feet and six feet high.

The telegraph pole nearest the hut, when in its place, should be a test or "speaking" pole with the up and down stations, and for this purpose a double insulator would be required, in order to form the necessary connections. About three (3) dozen of these insulators would be sufficient for the whole line, and I recommend that they be ordered by the next English mail, the cost being about twelve pounds (£12).

For Eyre station, and for permanent use over the Cliff section, seven (7) iron malt tanks should be sent down and properly distributed for the storage of water. Some plain furniture should also be sent for station quarters.

With regard to the coast natives, they are not likely to prove mischievous or troublesome as far as Eyre section; but while travelling over the country it appeared to me desirable that jinemen be stationed forthwith at Israelite Bay and Esperance Bay, to patrol the line periodically, were it for no other purpose than to give indication that it is looked after and protected. In Eyre section, the natives, completely wild, haunt by themselves, and run to the thickets as for life, at the approach of a white man, and many attempts to lay hands on them, or to coax them, have failed to draw any from their haunts, to associate with white men. I have seen the smoke of as many as thirty (30) of their fires, under the terrace land, within twenty (20) miles of Point Culver, the country where their fires were seen by Flinders seventy (70) years ago; still, their uniform timidity and shyness being ascertained fact, it is likely they are now small in numbers and harmless. With the Fraser Range native it is different; he is bold and daring; and if, as some people suppose, the coast be frequented in certain seasons by his class, there may be some trouble for a time. But the Fraser Range country is about one hundred and fifty (150) miles inland, and I know not whether these natives really visit the coast, nor have I seen anything to favor the supposition that they do so.

I trust that the result of this visit, and in particular the alteration made with the middle station, may meet the approval of His Excellency.

I have, &c.,  
J. C. FLEMING,  
Superintendent of Telegraphs.

The Postmaster General, &c., &c.

## EXTRACTED FROM THE MINUTES.

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TUESDAY, 15TH AUGUST, 1876.

**EUCLA LINE OF TELEGRAPH.**—Mr. Steers, in accordance with notice, asked The Honorable The Acting Colonial Secretary, if any report has been made to the Government by the Postmaster-General on the Eucla line of Telegraph; and if so, that it be laid on the Table.

The Honorable A. O'Grady Lefroy replied as follows:—A report has been received from the Postmaster-General on the Eucla line of Telegraph, and will be laid on the Table with other papers, on the return of the Superintendent of Telegraphs, who has been down inspecting the construction, and is shortly expected in Perth.

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MONDAY, 28TH AUGUST.

**EUCLA LINE OF TELEGRAPH.**—The Honorable A. O'Grady Lefroy laid on the Table a copy of the Report made to the Government by the Postmaster-General, on the Eucla Line of Telegraph, asked for by Mr. Steers on the 15th instant, accompanied with a Report of Mr. J. C. Fleming, Superintendent of Telegraphs.