

65. *Lightning Rod.* - A length of wire, ten or twelve yards long, is to be securely stapled on to every ~~second~~ pole, as a lightning rod, projecting three inches above the top of the insulator, on the opposite side to the line wire, the other end being buried in a coil at the foot of the pole, four feet in the ground. Care to be taken that the rod does not touch the insulator. The upper part of it above the pole is to be bent outwards, so as to leave at least three inches clear from the insulator.

66. *Instructions to apply to Overseers of Contract Work.* - The preceding instructions are to apply to all Overseers of Works in charge of contract work, with the exception of ~~that~~ part which relates to the actual construction of the line, which is to be taken by them as a guide as to the manner in which the contractor should execute his work.

67. *Overseer to be furnished with Specification and Agreement.* - The Overseer of Works will be furnished with a copy of the specification and contract agreement for the work under his charge; from which he will learn the rate and time of payment.

68. *Certificates to be forwarded.* - The overseer is to make a certificate of the value of the work done, estimated at the contract price, at the beginning of each month, and forward it with the monthly report; and, upon the contractor becoming entitled to a payment, he is to make a special certificate of the measurement and value of the work done.

69. *Overseer responsible for carrying out the works.* - The Overseer of Works will be held responsible for the proper carrying out of the work, in accordance with the spirit and intention of the specification, and in terms of the contract. He is to be careful to check at the commencement any departure from the specification which may lessen the stability or insulation of the line.

70. *Officers to abstain from interference with contractor's men. -*

The Overseer and his subordinate officers must carefully abstain from any interference between the contractors and their men, and must not mix themselves, up with any disputes should they arise.

71. *The Overseer of Works*, and the Sub-Overseers, are to do everything in their power to co-operate with and to assist the contractor in his work. They are to treat all the contractors employes with courtesy, and are to make in writing all complaints as to the mode of carrying on the works, or the materials employed. All instructions given to the contractor, or his employes, are to be in writing.

CHARLES TODD, Superintendent of Telegraphs

Electric Telegraph Department, Office of Superintendent,

Adelaide, September 30, 1870.

*Addendum --- Directions for Loading Colt's or Whitney's
Revolving Pistols.*

Fire a cap on each nipple to clear them. Hold the Pistol at half-cock, muzzle up, in the left hand. Tear the covering off the cartridge, by pulling the piece of tape attached to it. Place the cartridge without breaking the paper containing the powder, in the chamber. Turn the chamber with the cartridge in under the ramrod, or lever, and force the bullet below the mouth of the chamber. Place another cartidge in the next chamber, withdraw

the lever from the chamber, and proceed as before until the whole are charged. Place a cap on each nipple, pressing them well home. Take care on each cocking, between the discharges, to hold the muzzle down, or the revolver may be fouled by the exploded caps.

With Whitney's Revolver, observe that the cypher ("0") on the cylinder rod-fly-pin is turned *from* the cypher *on the body* when loading. If the pin is reversed, the loading lever becomes disconnected, and, if used so, is rendered unserviceable. The chambers should be discharged, the revolver cleaned, and reloaded once a week.

Progress Month by Month

1870

<u>June</u> 13	\$240,000 authorised by SA Parliament to build line.
<u>July</u> 8	Explorer John Ross and party left Adelaide.
July 15 - 20	Contract for southern section let to Edward M. Bagot.
July 15 - 20	Contract for northern section let to Joseph Darwent and William Dalwood.
July	Recruitment began for men for centre parties.
<u>August</u> 14	Ross left The Peake for exploration north.
August 17	Ship Omeo left Adelaide with construction party for Darwin.
August 20	Three of five centre parties left Adelaide.
<u>September</u> 5	Remaining two centre parties left Adelaide.
September 9	Omeo arrived at Darwin.
September 15	First pole planted at Darwin.
<u>October</u> 5	Work began on Bagot's section.
October 19	Ross returned to The Peake.
October 28	Depot camp established at The Peake.
<u>November</u> 10	Todd arrived at The Peake to confer with Ross and organise centre parties.
November 16	Ross left The Peake for further exploration north.
<u>December</u> 9	Northern parties reached Adelaide River.
December	Northern Wet began.

1871

<u>January</u>	Work on Knuckey's section began.
January 10	Knuckey discovered Charlotte Waters.
January 26	Alice Well depot (on Finkle) established.
January 23	Northern party reached Katherine.
<u>February</u>	Work began on Gilbert McMinn's section.
February 24	Northern party crossed Katherine on rafts.

<u>March</u>	Work began on Mills' section.
March 11	Mills discovered Alice Springs.
March 14	William McMinn complained that progress in north was unsatisfactory.
<u>April</u>	Work began on Woods' section.
April	Northern party reached King River and then returned to the Katherine.
<u>May 3</u>	McMinn cancelled Darwent and Dalwood contract.
May 19	Ross reached Roper River.
<u>June 1</u>	Work began on Harvey's section.
June 3	McMinn and northern party sailed from Darwin for Adelaide.
<u>July 5</u>	Northern party arrived back in Adelaide. Todd then at Strangways.
July 13	Patterson appointed to command new northern party.
July 27	Patterson's party sailed from Adelaide.
<u>August 24</u>	Patterson's party arrived at Darwin.
<u>September</u>	Knuckey's section completed.
<u>October</u>	Northern party reached King River.
October 26	Cable ships arrived at Darwin.
October 30	Patterson left Darwin to establish base on Roper.
<u>November 1</u>	Harvey's section completed.
November 7	Cable brought ashore at Darwin.
November 15	Gilbert McMinn's section completed.
November	Northern wet began.
<u>December</u>	Bagot's section completed.
December	Mills' section completed.
December	Woods' section completed.

December 26 Patterson bought sheep from Milner.

December 31 Patterson reached Roper.

1872

January 4 Todd sailed from Adelaide to the north.

January 27 Todd arrived at Roper.

April Work on northern section resumed.

June 13 Todd began overland journey south.

June 24 Pony express started by Lewis brothers.

June 24 Cable broke.

August 9 Poling completed.

August 22 Patterson made final join near Frew's Ponds
(Todd at Central Mount Stuart).

October 21 Cable restored (Todd at Beltana)

October 30 Todd back in Adelaide

November 15 Banquet.

HISTORICAL RELICS ON THE LINE TODAY

Although the overland telegraph has been re-routed to follow more closely to the railway in the south and the road in the north, it is never very far away from the original line.

Interesting relics of the original line can still be found. Some are close to the road; others, although not far away in mileage, are quite remote in terms of gibbers, sandhills and thick scrub country.

The following are extracts from the report of an APO journalist who travelled the length of the old line on a field research project in May :-

THE REPEATERS

We visited the old repeater sites along the route. The present condition varied from complete disappearance of all buildings and building material to a comfortable station homestead.

Beltana The old Beltana repeater is part of an abandoned township which is now being restored by the local postmaster, Mr. Ivan Hull.

Mr. Hull has the ambitious project of re-creating the township with complete authenticity and using it as a base for supervised camping parties of senior school students.

To date, he has worked only on the railway station and the police station. He said that, had he realised earlier that this was the telegraph centenary year, he would have given a higher priority to the repeater. Some restoration work on a stone wall adjacent to the repeater building is being undertaken by Rover Scouts.

The building itself is in good condition outside. Inside, there has been some vandalism, and there is an accumulation of dirt and junk left by aborigines who camped there from time to time.

Strangways This is a rather picturesque ruin which gives a good idea of the layout of a repeater in an isolated area. The roofs of the buildings have disappeared, but most of the walls are still standing. The large stone water store adjacent to the main buildings can be readily identified.

There has also been some sand drift, particularly on the stone wall near the cattle-yard.

Headstones in the cemetery are in good condition. There are two, both dating back to the 1890s. One was an operator aged 41, and the other an operator's wife who died in childbirth aged 32.

We found one original wooden pole still standing about a quarter of a mile from the station. There are probably others nearby.

The site has been marked for preservation as a historic ruin under the South Australian Aboriginal and Historic Relics Preservation Act.

Notices forbid the removal of any article from the site. One wonders how this can be policed.

Fortunately, the station is a mile or so from the road and, although accessible by conventional vehicles, is not readily seen by the irresponsible tourist. Apart from the scratching of a few initials, there has not been much vandalism.

The Peake This to me was the most interesting and certainly the most picturesque of all the old sites.

It is a complex of eight or nine buildings (almost a village) extending over quite a large area. As with Strangways, most of the roofs have disappeared but the walls are still standing to about three-quarters of their original height.

Situated at the base of a range of low hills and with water nearby, The Peake ruins have a unique atmosphere. This is possibly because of their great historical importance for, as well as being a repeater site, The Peake was Todd's headquarters in organising work and supplies for the centre parties. This was where Ross reported back after his explorations, and where Todd kept detailed day-to-day diaries covering all aspects of the organisation. The Peake was also a supply depot for the centre parties.

Like Strangways, The Peake has been marked for preservation under the South Australian Aboriginal and Historic Relics Preservation Act. Similar notices forbid the removal of any items.

The Peake is in a more fortunate position for preservation than Strangways. It is nine or ten miles from the road and is in four-wheel-drive country. The turn-off from the road would not be found without prior knowledge.

I know of two tourist operators who go there. Both are reliable men, who take only small parties which are carefully supervised.

I do not recall seeing any evidence of vandalism.

Charlotte Waters Nothing at all remains of the old repeater, all the stone having been removed and used as building material at a nearby station.

Alice Springs This is the best known of all the old repeaters because of the praiseworthy efforts of the Northern Territory Reserves Board in restoring it as a tourist attraction.

The restoration, which is geared to 1900 because of better available reference that 1872, is not yet complete, and some rooms which have been restored (living quarters mainly) are not open to the public because of insufficient staff to supervise large numbers of tourists.

Barrow Creek The Barrow Creek station is the only one still owned by the Post Office. It is still in use today as the line depot and residence of the lines supervisor.

It is also a hospitable stopping-place for any Post Office people who happen to pass by.

The Roper River The Roper, where so much of the drama of the OT line occurred, is in magnificent rugged country which has reverted completely to its untamed natural state. The only people living there are a Northern Territory police officer and his wife and two children.

By courtesy of the police officer we travelled by launch downstream from the Roper Bar and found two places of interest.

One was the wreck of the Young Australian (wrecked in 1872 on a journey downstream). Only two protruding pieces of iron now reveal the presence of the ship which carried Todd and other notables of the OT story.

The second was a flat area on a high bank of the river, which was designated by the police officer's tracker as the site of a camp "a long time ago". Grass was shoulder high, but the spot had obviously been cleared at some time or other.

Distances and geographical features indicated that it could well have been the site of the OT line camp.

Pine Creek An interesting feature here was that some of the original cypress pine poles are still standing.

THE LIGHTER SIDE

Getting the Men to Work

When the place where you have to start work is anything up to 1,300 miles from your home base, and your only means of transport is the horse and the bullock wagon, you expect a problem or two on the way.

From overseer C. Giles, who had the job of taking the first parties out of Adelaide, there was a simple solution to problem No. 1 - that of getting the men past the pubs in the settled areas.

"My plan for running the gauntlet of so many townships was a simple one," he said.

"I had several staunch teetotallers among the horse drivers. These I placed in the lead with their teams, with orders to push on without stopping on any account whatsoever.

"On reaching Gawler, several of the men, on behalf of the rest, asked me if I objected to their taking a glass. 'Certainly not,' I replied, 'Get what you want, but you will not be waited for, and anyone who does not answer his name when the roll is called tonight will be struck off.'

"This plan had the desired effect. All who wished to get a glass had just time enough to do so and no more, and I had no further trouble on this account."

Euchre Players

Sweating out the 1871-72 wet (70 inches in three months) on Providence Knoll (0 miles west of the Roper), one group of men passed the time playing euchre.

With soggy cards?

Not at all.

They were tin cards resourcefully made on the spot out of bully beef tins.

Letters to His Wife

It is inevitable that, when large groups of men live together in close proximity, certain minor frictions develop; even more so when they are bogged down in a northern Wet and can't get on with the job they are there to do.

Even Charles Todd, who was usually easy to get on with, could be disgruntled at times. He complained that Patterson did not mix enough with the men because he spent too much time writing to his wife.

And where does this complaint appear?

In a long letter written to his own wife, Alice.

Todd's Cup of Tea

Charles Todd was a man who liked a good cup of tea.

So it was praise indeed when he said of his cook, "He was a splendid fellow, that cook of mine, never put out with trifles such as water of the consistency of cream, with which he still managed to brew most glorious tea."

And he went on, "His few and far between Sunday duff, out of which every third man was rewarded with a single plum, was, like his yarns over the camp fire, not easily forgotten.

"And special mention should be made of his rich and rare plum pudding of 16 ingredients - plums, currants, marmalade jams and I know not what - made as a final treat when we got into what he called crystallised society."

Todd's Wardrobe

Todd was a methodical man. He kept detailed diaries covering each day's business and records of his dealings with party leaders.

And, as other things came to his mind, he often jotted them down at the back of the diary.

One such reminder (October 1871) is headed List of Things for Journey.

The list is :- 4 trousers, 3 waistcoats, 4 Crimean shirts, 8 pairs drawers, 12 pair socks, 3 doz collars, 9 pocket handkerchiefs, 3 pyjamas, 5 jerseys, 1 belt, 3 alpaca coats, 3 scarves, 1 clothes brush, 1 green scarf, 2 pairs boots, 1 pair slippers, 10 towels, 3 puggarees.

A far cry surely from the open-neck shirt, shorts and wide-brimmed hat which are standard bush attire today.

TODD'S RETURN TO ADELAIDE

Charles Todd arrived back in Adelaide, after his long overland journey, on October 30 1872. He and his party had travelled by train from Burra.

The following report of his arrival appeared in the South Australian Register, November 4:-

"The Postmaster-General and Superintendent of Telegraphs returned from his formidable trip across the continent on October 30, and personally he seems none the worse for his ordeal.

"The arrangements made for keeping the time of his arrival in Adelaide dark were only partially successful, for a considerable crowd had at half past one collected at the railway station to bid him welcome.

"He was received by the Chief Secretary, members of the Reception Committee, the principal officers of the departments under his charge and a number of other private friends, and warmly congratulated upon his return after the successful accomplishment of his mission.

"His first visit was paid to the new Post Office, which, at his leaving, was in an unfinished state, the whole of the fittings having since been supplied.

"Some of the apartments were decorated with flowers in honour of his return, the most elegantly dressed of all being the operating room. Over the Port Darwin instrument in particular was suspended a handsome floral arch.

Upon entering this room, he was received by the assembled operators with a hearty cheer.

He afterwards spent half an hour in examining the offices in company with Mr. Cunningham and Mr. Hurst, and expressed himself delighted with the arrangements."

The Register also devoted a long editorial to Todd's return:-

"Days before the arrival of Mr. Todd in Adelaide, attention had been called to the fact that provision should be made for suitably recognising the labours of himself and colleagues.

"The first enthusiasm excited by the news of the completion of the Central Telegraph line had, since the 22nd August, had time to sober down, but not on that account did the people of South Australia feel disposed to neglect to pay the honour that was most due to Mr. Todd who from first to last had been the moving spirit in the gigantic undertaking now so happily completed.

"Merely to give a sketch of the part he has so efficiently played would be to repeat the history of the greatest Australian enterprises.

"We have recently shown how for years he has cherished the project of a trans-continental telegraph recommending it in his official reports, and seizing the opportunity afforded by the earlier proposals of Captain Osborne to press upon the Government the inestimable benefits likely to accrue to the colony from its accomplishment.

"If at first dazzled by the prospect of having his ardent wish actually realised, he made too light of the difficulties that surrounded the work, and presented an estimate of the cost that left out of account many of the contingencies inevitably connected with an attempt to carry a line of wire over nearly 2,000 miles of unknown country, no one can say that in the practical part of the business he has shown signs of flinching.

"The discovery that he had miscalculated the magnitude of the task before him, instead of bringing doubt and despondency in its wake, nerved him to increased effort.

"Even the blunders of Ministers who from time to time have overruled his judgment and hampered his arrangements have been powerless to quench his ardour or shake his confidence in the ultimate success of the scheme.

"When matters became so complicated in the Northern Territory that the ultimate failure of the undertaking seemed imminent, he stepped into the breach, risking his reputation, and even his life, in an endeavour to save the credit of the colony and demonstrate the practicability of a work for which he was mainly answerable.

"We all know how signally he has succeeded, how he has directed operations on the line to a speedy and satisfactory issue, and how he has crowned his labours by a triumphant journey across the continent.

"Such enterprise, such public spirit, such zeal, such perseverance, such intrepidity as he has evinced deserve marked acknowledgment.

"It is not alone in connection with the Overland Telegraph that Mr. Todd is deserving of commendation, for his conduct during the many years in which he has held high official position in South Australia has been of a character to win golden opinions from all sorts of people.

"Had he been merely an industrious officer he would have found work enough and to spare in the two departments under his control, and in all probability the Port Darwin line would never have been entered upon; but beyond that he is a man of advanced views, devotedly attached to his profession as an electrician, and eager to promote the cause of science.

"He is a man whom the colony might well delight to honour, and it has been generally felt that no more appropriate occasion for honouring him could be chosen than that afforded by his return from an enterprise of such pith and moment as that which he has just completed."

EXTRACTS FROM REPORT OF CHARLES TODD 1884

- (a) Telegraph Prior to 1870
- (b) The Port Darwin Line

TELEGRAPH, PRIOR TO 1870

The Government having decided to establish telegraphic communication between Adelaide, the Port, and Semaphore, the Secretary of State for the Colonies was requested to appoint a Superintendent of Telegraphs and operators in England.

It was also intimated that the Superintendent should be competent to act as Government Astronomer; and, in compliance with this request, I was appointed as Superintendent of Telegraphs and Observer by Lord John Russell, in February, 1855, the appointment having been previously offered to me by Sir (then Mr.) G.B. Airy, C.B., Astronomer Royal.

The instructions were that I should bring out a staff of operators; but this I thought unnecessary, as I could select and train operators after my arrival in the colony. I therefore recommended taking out one assistant only, and nominated Mr. E.C. Cracknell (now Superintendent of Telegraph in New South Wales), who was appointed accordingly.

I arrived with the necessary telegraph plant for the work in November, 1855, and in the month following the first Government telegraph line in the colony - Adelaide to Port Adelaide - was commenced.

On February 18th, 1856, the line was opened for business, and was extended to Lefevre's Peninsula early in the succeeding month, the total cost, including erection of stations at the Port and Semaphore, being £3,024.

The first office at the Port was simply a small wooden structure of one room, a brick building of two rooms was erected at the Semaphore, and at Adelaide an office was rented at Neale's auction mart, until 1857, when the office was removed to Green's Exchange, where it remained until the new General Post Office was opened on May 6th, 1872.

At Port Adelaide the office was subsequently removed to a building adjoining the Marine Board offices; but a new office with residence for the stationmaster was built in 1867, and opened in February of the following year.

According to specifications and instructions sent to England, and which I had to follow, the line was carried underground from the Port to the Semaphore, and from the Adelaide railway station to the central office in King-William-street.

The underground cables consisted of six gutta percha double-coated copper wires, with an outer serving of tarred yarn, laid at a depth of two feet, in Henley's split pines, a six wire submarine cable (a remnant of the first Mediterranean cable) being laid under the river at the Port. These underground wires, for which there was no necessity, added very greatly to the cost, and were very soon an endless source of trouble, as indeed were all the underground wires laid in England about this time, owing to the insulation becoming defective, and they were ultimately abandoned. Along the Port railway, the wires were overhead on square poles of Western Australian jarrah, and Singapore cedar; and it may be of interest to state that these poles are only now (1884) being taken up, having been replaced by much longer poles.

The instruments selected were the Henley magnetic double needles, which were ultimately superseded by the Morse system, as the telegraph was extended to the other colonies.

The rates fixed between Adelaide and the Port were, for the first twenty words, exclusive of names and addresses, 6d., and 3d. for every additional ten words; and to the Semaphore, first twenty words 1s., and 6d. for every additional ten words.

Intermediate stations were opened at Bowden and Alberton, and at the Railway stations at Adelaide and the Port.

It may be amusing to mention that the first day's receipts were 5s. 3d.; the second, 2s. 6d.; the third, 1s. 9d.; and the fourth, 1s. 3d.; totals certainly not calculated to inspire much confidence in the financial success of the infant scheme.

It should, however, be stated that rival line, erected by Mr. James Macgeorge, had been opened between Adelaide and the Port immediately prior to the completion of the Government telegraph, and this secured for a time a large amount of public patronage. We ultimately purchased this line from Messrs. Elder, Stirling. & Co. for £80, and pulled it down.

The business, however, steadily increased, and by the end of the year we had transmitted 14,738 messages yielding a revenue of £366 6s. 7d.

A line of two wires to Gawler, including a branch to the Labor Prison, twenty-eight and a half miles, and costing £1,576 - or a little over £55 per mile, was opened on April 14th, 1857; and that year there were 35,792 messages, yielding £1,183 13s. 10d.; the receipts on the Port line being £883 17s. 2d.

In July, 1856, having submitted a scheme for an intercolonial line of telegraph, I was directed to proceed to Melbourne to negotiate with the Government there for the establishment of telegraphic communication between Adelaide and Melbourne.

These negotiations proved successful, and I returned to Adelaide overland, in order to select on my way the route for the South Australian section of the line, and on my arrival I furnished a report giving an estimate of the cost.

This estimate (£20,500) being approved by the Government, the necessary provision was made on the Estimates for 1857. The actual cost of the line was £19,403 9s.

The line was commenced in April, 1857, and opened through to Melbourne on the 21st July, 1858, by His Excellency the Governor, Sir R.G. MacDonnell, C.B.

The route selected was via Goolwa, and thence to Pelican Point, at the entrance to the Coorong, a submarine cable being laid across the Goolwa Channel and Lake Alexandrina. This cable gave much trouble, and was ultimately abandoned, the wire being taken by way of Strathalbyn and Wellington, after a second wire had been erected by that route in March, 1861.

At this time (1858) the telegraph had made only a beginning in New South Wales, a short line to the South Head being opened in January; and the Government of that colony, after consulting me, appointed Mr. E.C. Cracknell, Superintendent of Telegraphs.

Melbourne and Sydney were connected by telegraph on October 29th, 1858, and Brisbane not until November, 1861.

The telegraph was introduced into Tasmania in 1859, and in the month of August that year a cable was laid across Bass Strait in four sections, viz.:-

From Parker River to Victoria Cove, King's Island	49 miles
From Sea Elephant Bay, King's Island, to Three Hummock Island.	50 "
Three Hummock Island to West Bay, Circular Head	25 "
Circular Head to Low Head, near the mouth of the Tamar	72 "
	196 miles

with intermediate connecting land lines across King's Island, Three Hummock Island, and Circular Head. This cable had a very short life of a few weeks only; and it was not until a second cable was laid from Cape Schank to Low Head, in May, 1869, that Tasmania was permanently connected with the telegraph system on the mainland.

The telegraph was introduced into the several colonies as under:-

- Victoria - March, 1854, line to Sandhurst and Williamstown.
- South Australia - February, 1856, and a few weeks earlier by
Mr. MacGeorge's line to Port Adelaide.
- New South Wales - January, 1858, line to South Head.
- Queensland - April 10, 1861.
- Tasmania - August, 1859.
- New Zealand - July, 1865.
- Western Australia - June, 1869, a private line from Perth to
Fremantle taken over by the Government in
April, 1871.

At first we had but one intercolonial wire, and on the arrival of every English mail, there was an exciting amount of rivalry between the different newspapers in Melbourne and Sydney, great efforts being made to secure first possession of the line, and chapters in the Bible were sometimes put in to occupy the wires to the exclusion of other customers. For several years, even after a second wire had been provided to Melbourne and a direct inland line had been established with Sydney (indeed, up to the time of the mail steamer calling at Glenelg, in February, 1874), the Argus and Sydney Morning Herald used to send their local agent or reporter by the branch mail steamer to Albany, so that his reports might be ready to hand in immediately the mail arrived off Glenelg.

In those days messages of 8,000 and 10,000 words were common. The Argus ultimately increased their reports to over 20,000 words; and on one occasion the full report published in Bell's Life in London of the fight between Sayers and Heenan was transmitted to Melbourne and Sydney.

In 1859 the pressure on our single wire was so great that a second wire became a matter of immediate necessity. This was completed by the end of 1861, the duplicate wire taking the route via Wellington; and about the same time a second wire was also put up between Melbourne and Sydney.

In my annual report for 1861 I advised the construction of a line of telegraph between South Australia and New South Wales direct, via Wentworth; but, for want of concerted action on the part of the two Governments, the work was not sanctioned; nor was it until May 1st, 1867, that through communication between Adelaide and Sydney was established by the erection of a direct line; but communication between Adelaide and Wentworth had been effected since August, 1866.

In the meantime the telegraph in South Australia had been extended to Kapunda, Clare, Koorunga, the new mining centres at Kadina, Wallaroo, and Moonta, Port Augusta, and other places.

The subjoined schedule gives the names and dates of opening of the various lines in succession, and expenditure charged to capital account, from 1856 to 1869, both inclusive:-

ar	Name of Line	Length in Miles	Date of Completion	Cost £ s d	Remarks	£ s d
56	Adelaide, Port, and Semaphore	39½	Feb. 18		The cost of the Adelaide, Port, and Semaphore portion was	3,024 0 0
57	Gawler, and line to Stockade		April 14	6,282 5 11	The line to Gawler, &c., cost	1,576 0 0
58	Intercolonial line to Victoria ...	300	July 21	19,403 9 0	The balance being cost of instruments, stores, freight, and passage money of officers from England	1,682 5 11
59	North line - Gawler to Clare and Koorunga	97½	-	5,226 5 3		£6,282 5 11
60	Second line to Victoria via Mount Barker, Strathalbyn, and Wellington. with branch to Woolside	121	March	12,155 19 3	Opened to Clare and Koorunga in January, 1860	
61	Telegraph to Glenelg	6½	September	226 15 9	311 miles of wire; new line as far as McGrath's Flat.	
62	Telegraph Mount Gambier to Penola	36½	August	1,800 2 10		
62	Telegraph Auburn to Kadina	60	September	3,997 3 10		
62	Telegraph Mount Gambier to McDonnell Bay	20	March	996 13 9		
63	Telegraph Willunga to Normanville	22	September	1,280 9 0		
63	Telegraph Woodside to Gumeracha	10	June	491 14 1		
63	Telegraph Penola to Naracoorte ..	27½	July	1,577 9 4		
63	Telegraph Kadina to Wallaroo	7	March	416 13 7		

Year	Name of Line	in Miles	Date of Completion	Cost £ s d	Remarks
1863	Instruments, &c., for branch offices ..	-	-	158 7 4	
1864	Telegraph Auburn to Riverton	-	March	155 1 6	Wire only.
"	Telegraph Mount Barker to Hahndorf	-	April	83 15 0	Wire only.
"	Special wire to Stockade	-	-	201 0 5	Wire only.
1865	Telegraph to Victor Harbor	4½	August	448 12 3	
"	Telegraph to Milang	13	March	519 8 2	
"	Telegraph to Moonta	11	December	743 18 9	
"	Telegraph Clare to Port Augusta	120	August	8,549 8 7	
"	Telegraph to New South Wales	151	-	10,683 2 8	

THE PORT DARWIN LINE

We now come to the overland telegraph to Port Darwin, concerning which it is proposed to give here a succinct account from its first commencement up to the present time.

In March, 1870, a letter, dated June 22nd, addressed to the Governor, was received from Admiral Sherard Osborne, R.N., Managing Director of the Telegraph Construction and Maintenance Company, Limited, enclosing a prospectus of the British-Australian Telegraph Company, and stating that his company had received orders from the latter to manufacture a cable and construct a land line to connect Singapore and Burketown, the then proposed terminus of the Queensland telegraph system; but as a portion of such land line from Port Darwin, where the cable was to be landed, would pass through the Northern Territory, Commander Noel Osborne, R.N., as agent for the company, was to be sent out to seek the sanction of the South Australian Government for the execution of these works. In reply, the company were informed that, whilst every facility would be afforded to Commander Osborne, the Government would much prefer the construction of a telegraph line from Port Darwin to Port Augusta, then our most northern station, and that, with this view, they were prepared to submit to the Legislature a measure to authorise the entering into an agreement with the company for a direct line across the continent to Port Darwin, to be erected either by the company under a Government guarantee, or constructed and worked by the Government.

Commander Osborne arrived in April. Mr. H.B.T. Strangways, then Attorney-General, had always taken a deep interest in the projected overland telegraph, and in Stuart's exploration, as promoting its successful consummation, and after consulting with him and hearing Commander Osborne's views, as the representative of the Cable Company, in a full report on the subject I wrote:-

"A careful consideration of the whole question induces me to recommend that the Government should undertake to introduce a measure, immediately after the new Parliament meets, for providing, by means of a loan, for the construction at once of a line of telegraph from Port Augusta to Port Darwin, Commander Osborne guaranteeing, on the part of his company, to terminate the cable there. This I understand, Commander Osborne would be quite willing to do, or at least to recommend to the British - Australian Company, with whom he would communicate, to save time, by the Indo - European telegraph next mail.

"To remove all cause for jealousy, as well as to provide an alternative line, Queensland should be invited to connect with us at some convenient point, and this, in my opinion, would be far better than having a central

station at Cooper's Creek with radiating lines to each capital, as has been suggested, but which I have shown to involve a useless expenditure of money." (P.P 24, 1870).

It was finally determined that the Government should undertake the construction of the line to Port Darwin, to be completed by the 1st of January, 1872, and the company agreed to lay and complete, by the same date, a cable from Singapore to Batavia, and from Banjoewangie to Port Darwin, the two sections to be connected by an intermediate land line through Java, to be constructed by the Government of Netherlands India.

A Bill was accordingly introduced and passed, authorising a preliminary loan of £120,000 for the land line.

The Government further undertook to provide a site for the Cable Company's office and quarters for staff at Palmerston, and agreed to erect the buildings at the expense of the company.

In planning the work, I proposed that one section from Port Augusta, for about 400 miles northwards, and another from Port Darwin to the Roper, should be erected by contract, and that the intermediate section - the longest and most difficult - should be undertaken by the Department. On this middle section I proposed to employ six working parties, four in the interior, north of the Neales, and two from the Roper southwards. But, as it subsequently appeared that persons would be willing to tender for longer portions of the line, or for the whole, tenders were invited, and Mr. John Rounsevell's tender was accepted; but the negotiations fell through; and it was then decided to divide the line into three sections, viz.:-

1st. From Port Augusta, 500 miles northwards, to about latitude 27°

2nd. From latitude 27° to $19^{\circ} 30'$.

3rd. From latitude $19^{\circ} 30'$ to Port Darwin.

The first and third sections to be carried out by contract, and the central and most difficult portion by the Government.

Tenders were accordingly advertised, and the following accepted:-

First Section - Mr. E.M. Bagot, from Port Augusta, 500 miles north, at £41 per mile.

Third Section - Messrs. Darwent & Dalwood :-

Port Darwin to Southport, 39 miles, at £39 per mile.

Subsection A, 250 miles from Southport, at £60 per mile.

Subsection B, 2nd 250 miles, at £89 per mile.

Subsection D, 100 miles to north end of middle section at £92 per mile.

The Government, in each case, provided wire and insulators, and about 1,500 iron poles were supplied to Mr. Bagot, which were used north of Strangway's Springs.

The route I selected was that traversed by Mr. John McDouall Stuart, in his successful explorations through the interior to the north coast, the terminus, of course, to be at Port Darwin. As the only information we possessed of the country was that supplied by Mr. Stuart, I felt it to be necessary to fit out and dispatch an exploring expedition in advance of the construction parties under the command of Mr. John Ross, with Mr. Harvey as surveyor and second in command. The other members of the party were Mr. Alfred Giles, Mr. T. Crispe, and W. Hearn. Mr. Alfred Giles subsequently rendered valuable service in connection with the construction of the line. Mr. Ross left Adelaide in July, with instructions from me to proceed as far as the centre of the continent, following generally Stuart's tracks, and then return to meet the construction parties, or myself, with full information as to the nature of the country, timber, water, &c., and advise as to the best course the line should take.

The following is a copy of my letter of instructions to Mr. Ross for his guidance:-

"O.T. 17/70

"Adelaide, July 7th, 1870

"Sir - I have the honor to inform you that the Government have appointed you as leader of an expedition to be fitted out for making an exploration of the country to the north of Mount Margaret, at a salary of £450 a year, to commence from the 4th inst.

"I have therefore to direct you to proceed to Beltana by the northern mail, leaving Adelaide on Friday next. At Beltana, you will select ten (10) good saddle horses and twelve (12) packhorses, and procure the necessary rations (excepting meat, to be obtained at Mount Margaret) for a party consisting of yourself as leader, a surveyor as second in command, and three men. The selection of the three men will be left to yourself, their pay not to exceed 21s. per week.

"The surveyor, to be selected by the Government, will join you at Beltana. The necessary horse equipment, together with arms and ammunition, as per annexed statement, were shipped for Port Augusta on Saturday last, and arrive at Beltana in about ten days.

"The object of this exploration is to determine the best route for the line of electric telegraph, with which view you will direct your special attention to the following:-

"1st. Timber suitable for poles 20 ft. long, 10 in. in diameter at the butt, and 5in. or 6in. at the top - or sawn poles. Twenty or more will be required to the mile.

"2nd. Permanent or other waters.

"3rd. The facilities afforded by the general character of the country for carriage of the necessary materials - also the nature of the ground for sinking holes to the depth of 4ft. for the poles.

"Care must be taken to select a route not liable to inundations, where the line would be subject to injury, or be difficult to inspect. Favorable places for crossing creeks or watercourses should also be noted, as well as suitable sites for stations and depots, at distances of about 150 miles to 200 miles.

"The surveyor accompanying you as second in command will lay down on a map the route followed in course of the exploration indicating the localities of suitable timber and permanent waters.

"A detailed report is also to be furnished to me on the return of the expedition.

"As it is probable that the advanced construction parties will arrive at Mount Margaret by the end of September or the middle of October, you are not to extend the exploration further than will permit of your returning to Mount Margaret by the latter date, so as to avoid delay in deciding on the route to be followed by the telegraph.

"Bearing in mind that the general direction of the line must be such as to cut Stuart's tracks north of the Centre, making towards Newcastle Waters, or the Roper at the 134th degree of east longitude, it is undesirable

for you to go to the east of the 136th meridian, unless the nature of the country should compel you to do so.

"Before leaving Beltana you are to furnish me with a copy of the brands of the horses purchased, and a list of all the stores, arms, and rations in your charge at starting.

"In carrying out the duties entrusted to you, you will use all the dispatch compatible with the attainment of the objects of the expedition and the safety of the party under your charge.

"Your services will probably be retained for further explorations in the interior in connection with the construction of the line subject to termination on one month's notice.

"I have, &c.

"CHARLES TODD, Postmaster-General and Superintendent of Telegraphs.

"Mr. John Ross."

Mr. Bagot commenced his work about the end of September. Mr. W.H. Abbott, was appointed overseer of the first section of 250 miles, commencing from Port Augusta; and the late Mr. B.H. Babbage had charge of the northern section of the contract. Owing to the difficulties arising from the absence of timber suitable for poles over more than 300 miles, this section was not completed till the end of March, 1872; but by allowing the contractor to put in at first only ten (10) poles to the mile (i.e. every alternate pole), on the northern end of the contract, the whole of the wire was suspended and joined on to the middle section by the beginning of January.

Messrs. Darwent & Dalwood's contract broke down, principally owing to want of transport power, after about 225 miles of poles and 156 miles of wire had been erected, and the overseer of works, Mr. W. McMinn, having determined the contract, returned to Adelaide in the Gulnare (arriving on July 5th) to report the great disaster. A fresh expedition was at once organised under the command of Mr. R.C. Patterson, the Assistant Engineer-in-Chief, who left Melbourne for Port Darwin in the s.s. Omeo, in August, 1871, followed by a fleet of vessels (the Himalaya, Golden Fleece, Laju, and Antipodes), conveying horses and bullocks. In all, 170 horses and 500 bullocks were sent.

In my letter to the Hon. the Chief Secretary of July 8th, reporting Mr. McMinn's return and the breakdown of Darwent & Dalwood's contract, recommending what should be done, I pointed out that the Roper should be the future base of operations, and advised that three or four sailing vessels, with men and stock, should be dispatched without delay from some port on the east coast to the Roper, being preceded by a steamer, which should in the first instance go to Port Darwin to land some horses required to complete the line between Port Darwin and some point south of the Katherine, and then proceed with materials to meet the sailing vessels off the mouth of the Roper. The steamer was to be of light draught, to go up the river, which at my instance had been surveyed, and soundings taken, which showed that it was navigable. Had this been done, much waste of time and expenditure and loss of valuable stock would have been avoided. Unfortunately, I was overruled, and the whole of Mr. Patterson's expedition was sent to Port Darwin, and to this may be attributed nearly all his disasters.

In the meantime rapid progress was being made with the central section which had been divided into five subsections, viz.:-

Section A, from about lat. 27° , the north end of Bagot's contract, to lat. $25^{\circ} 30'$.

Section B, from lat. $25^{\circ} 30'$ to $24^{\circ} 0'$.

Section C, from lat. $24^{\circ} 0'$ to $22^{\circ} 30'$.

Section D, from lat. $22^{\circ} 30'$ to $21^{\circ} 0'$.

Section E, from lat. $21^{\circ} 0'$ to $19^{\circ} 30'$.

The fitting-out of the working parties for the interior was a matter of grave concern, as upon it, and the selection of good officers and men, their success mainly or entirely depended. It was necessary, above all things, that they should have efficient transport power - thoroughly good staunch horses and bullocks. In this last important particular I was greatly assisted by the late Commissioner of Police, Mr. G. Hamilton, who at my instance personally selected nearly all the horses. In the selection of good officers, the Surveyor-General afforded valuable aid in recommending Messrs. Harvey, R.R. Knuckey, Gilbert R. McMinn, and W.W. Mills, all of whom, as well as Mr. A.T. Woods, whom I subsequently made chief officer on the central section, rendered good service, and carried out the difficult work entrusted to them with a zeal and intelligence worthy of all praise.

The five parties were made up as follows:-

Section A. - Overseer, Mr. R.R. Knuckey; sub-overseer, Mr. Christopher Giles, jun.; cadet, Mr. J.H. Aldridge; and sixteen men.

Section B. - Overseer, Mr. G.R. McMinn; sub-overseer, Mr. C. Musgrave; cadet, Mr. T. Bee; and sixteen men.

Section C. - Overseer, Mr. J. Beckwith; sub-overseer, Mr. W.W. Mills; assistant, Mr. A.G. Burt; and seventeen men.

Section D. - Overseer, Mr. A.T. Woods; sub-overseer, Mr. S. Jarvis; cadet, Mr. C.M. Bagot; and nineteen men.

Section E. - Overseer, Mr. W. Harvey; sub-overseer, Mr. J.L.M. Roberts; cadet, Mr. A.Y. Forster; and nineteen men.

Mr. Beckwith became so ill that I sent him back to Adelaide on my arrival at the Peake, and placed Mr. Mills in charge. Mr. Harvey, as will be presently explained, was, in the first instance, attached as surveyor to the exploring party under Mr. John Ross.

The parties were supplied with fifteen horse wagons, seventeen bullock drays and one bullock wagon, and five express wagons; in all about 165 horses and 210 bullocks.

A small party, under Mr. Harley Bacon, was fitted out to take charge of a receiving and forwarding depot on the Finke, and this party took 2,000 sheep.

Three parties (A, B, D), in charge of Mr. Christopher Giles, jun., left Adelaide on the 29th of August, and the remaining two parties on the 5th September.

The cartage of rations and telegraph materials, wire, insulators, &c., for this middle section was let by contract to Mr. E. M. Bagot at the following rates:-

				£	s.
From Port Augusta to the Peake		24	0	per ton.	
" " " " Section A		26	0	"	
" " " " B		48	0	"	
" " " " C		75	10	"	
" " " " D		102	10	"	
" " " " E		130	10	"	

It will give some idea of the difficulties to be overcome and the distance to be travelled over when I state that Mr. Harvey's party did not reach the scene of their operations (section E) till the 24th of May in the following year, the first pole on that section not being planted till June 1st.

I personally proceeded as far as the Peake Station, lat. $28^{\circ} 4'$, leaving Adelaide at the beginning of October, 1870, in order to complete the organisation of the central parties, and fix the route for the first 500 miles. And on my way I met Mr. Ross on his return from his first trip at the Strangways Springs, on October 22nd. From the Peake, on November 18th, I sent Mr. Ross out a second time to explore the country north of Central Mount Stuart, into section E; and after this had been accomplished, he returned and met the construction parties at the junction of the Hugh and Finke rivers, where he was again fitted out, in accordance with my instructions, by Mr. Woods, to go north and effect communication with the Northern Territory party. In this last trip, Mr. Ross, with Mr. Alfred Giles as second in command, crossed the continent to Port Darwin, where he arrived in August, 1871, and returned by sea to Adelaide, per Omeo, on October 5th following. With regard to the central portion of the line, it may be added that section A was completed by the end of September, 1871; section B, commenced in February, 1871, was completed in every respect by the 15th of November following; section C, commenced March 22nd, and finished December 29th, 1871; section D was also finished by December, and the wire was suspended through to the north end of section E as early as November 1st, only every alternate pole being planted over the last thirty-four miles of that section, as, in consequence of the breakdown in the Northern Territory, I had sent Mr. Harvey instructions to go on with erection of the line north of section E, and he actually constructed 82 miles 16 chains 41 links of line additional, or 190 miles 12 chains in all, thus greatly facilitating the completion of the work. Mr. R.R. Knuckey, having completed his section (A), proceeded with a party of volunteers northwards, to assist in the prosecution of the work north of Mr. Harvey, and ultimately met me at the Roper river, after an arduous and perilous journey through flooded country.

It will be seen, therefore, that the middle or most difficult and inaccessible portion of the work undertaken by the Government parties, extending from latitude $26^{\circ} 52'$ to $19^{\circ} 30'$ (a distance of 626 miles), was completed by the end of 1871.

On Mr. Bagot's contract the wire was up by the beginning of January, so that, but for the collapse of Messrs. Darwent & Dalwood's expedition, we should have been able to communicate with Port Darwin in January, 1872; and as the cable was laid, communication would then have been established with England.

It was hoped that the large force and transport power placed at the disposal of Mr. Patterson would have been ample to enable him to join, by wire, on to Mr. Harvey's work - not by the end of 1871, that was impossible, perhaps, but certainly by March or April, 1872. In the meantime an estafette, it was thought, could bridge the contracting gap between the two ends of the wire, at each of which I had placed a field operator to keep up the communication; but, unfortunately, further disasters occurred to prevent this. Mr. Patterson's expedition arrived at Port Darwin during the dry and hot months immediately preceding the setting-in of the north-west monsoon. The country was bare of feed, and long stages had to be performed without water. Before wells could be sunk, and all materials carted up from Southport, a wet season of remarkable intensity was upon them, and all work was stopped; 20.968 inches of rain fell in December, and 18.261 inches in January, up to the 24th. Very severe losses of stock were sustained (30 to 40 per cent. of the bullocks), and Mr. Patterson, after dispatching the Bengal with stores and material to the Roper, where he subsequently met her, having proceeded overland, had to send Mr. Little from the Roper, in a boat to Normanton, and thence to the nearest telegraph station (Gilbert River) in Queensland, to telegraph for further help.

It was then decided - all anxiety respecting the work on this side being at an end - that I should proceed to Mr. Patterson's assistance. I accordingly left for the Roper, in the s.s. Omeo, on the 3rd January, with eighty horses, and was followed by the s.s. Tararua, with seventy-seven horses, of which seven were landed at Port Darwin, sixty-six at the Roper, and four died on the voyage.

I arrived safely at the mouth of the Roper on the 27th of January, where I was met by Messrs. Patterson and Little and Captain Sweet, who were encamped on Maria Island.

As it was expected that such large steamers as the Omeo and Tararua would be able to navigate the Roper, a small paddle-steamer, the Young Australian, was purchased, and was dispatched from Port Adelaide, under the command of

Captain Lowrie, in December, with orders to proceed via the western coast to meet me at the mouth of the Roper.

On my arrival, however, nothing had been heard of the Young Australian, and, after ascertaining that there was sufficient water on the bar at high tide, I decided to take the Omeo up the river as far as possible, so as to land the horses safely. The captain (Mr. Calder), who throughout had shown the greatest interest in the work, very naturally declined to take so great a risk, which was not contemplated in the charter party, and was not covered by his policy of insurance, unless I would sign a bond making the Government responsible for the value of the vessel. This I did, and the evening of our arrival found the steamer fifteen miles up this comparatively unknown river. The horses were landed a few days later at a place called Three Island Reach, about fifty miles above the mouth; and on the arrival of the Young Australian, on February 3rd, I transhipped a quantity of cargo, and proceeded in her to the Roper depot, or landing, about ninety miles from the mouth, taking careful soundings on my way. We passed the barque Bengal, anchored a mile or so above the Omeo, where she had been since the middle of December.

After landing the cargo I returned to the Omeo, and made a fresh start with her up the river, the Young Australian leading the way, with the Bengal in tow. We had, however, to drop the Bengal, and the Young Australian towed the Omeo up to the depot, which was reached without any disaster.

The Omeo's horses were subsequently brought up by the Young Australian in two trips, and I then proceeded to the mouth of the river to meet the Tararua.

The Tararus, unfortunately, arrived during my absence up the river, and the captain having missed the actual entrance to the river, went on to Port Darwin, and did not reach Maria Island, where I was waiting for her in the Young Australian, till the 3rd of March. A fine freshet enabled me to take her up to the depot and land the horses and cargo without accident, although the presence of several rocky bars rendered the service somewhat dangerous. A protracted wet season kept us at the depot for some weeks, and as it was feared that the working parties near the Daly Waters - of whom nothing had been heard for some months - would be out of provisions,

a supply was sent to them on about fifty pack-horses, in charge of Mr. Arthur Giles, and Mr. Patterson followed almost immediately to look after the work. Ultimately, as soon as the country became passable, all the teams were got away with full loads, and I then proceeded in the Young Australian to Port Darwin, having previously sent Mr. Little round in the Bengal.

Completing all arrangements at Port Darwin, I returned to the Roper, and leaving there on the 13th of June, travelled overland to Adelaide, thoroughly inspecting the work and putting all the stations in good working order on my way. Some time was spent with each working party, and on my arrival at Daly Waters I was able to send a telegram to the Agent-General, London, advising him of the satisfactory progress making with the work, and of the establishment of a horse express to convey messages between the ends of the wires. A few messages were received from London which were duly forwarded by horse express to the north end of the wire from Adelaide, but some messages brought from Adelaide could not be sent, as the cable broke down between Port Darwin and Java the day after I reached Daly Waters, and the communication was not restored until some weeks after the completion of the overland line.

At Attack Creek I met the end of the wire from the south, and was able to communicate with Adelaide, and from that time could give almost daily reports of the progress being made.

The two ends of the wire met and were joined on August 22nd, and from my camp, near Central Mount Stuart, I received and acknowledged messages of congratulation from His Excellency the Governor, the Government, from the foreign consula, and from numerous friends in all parts of the colonies. Our great national work was so far un fait accompli - the north and south shores of Australia were electrically connected, and our distant settlement at Port Darwin was brought within speaking distance of the seat of Government.

On the final completion of the Northern Territory section, the working parties, under the command of Mr. Patterson, and Mr. Harvey's party, the latter having, as before explained, erected about eighty-two miles of line north of section E, or 190 miles 12 chains, thus greatly facilitating the work, went to the Roper, where they embarked in the Omeo, for Port Adelaide, in October.

The work throughout was of a most substantial character, but the white ants, especially on the section north of Tennant's Creek, were numerous, and very destructive, and in view of this I thought it advisable to have the line from about twenty miles north of Daly Waters to Tennant's Creek reposed with iron poles while we had teams in the country. I therefore telegraphed, when at Tennant's Creek, to the Hon. the Chief Secretary, Sir Henry Ayers, K.C.M.G., recommending that orders should be sent to England for 6,000 iron poles (Oppenheimer's patent), 19ft. long, and that the teams employed on the Northern Territory section should be left at the Roper depot, so that the poles might be carted and distributed during the following year, 1873. The wooden poles already planted were good, and would no doubt last for some years, but where the white ants were so numerous no timber, except the cypress pine, could be expected to stand as long as in the southern portions of the colony, and the course I proposed, therefore, was the most economical, and would only anticipate by a few years the work of repoling. Sir Henry Ayers immediately concurred in my views, and orders were forwarded to the Agent-General accordingly.

To carry out this work the following stock and plant were left by Mr. Patterson at the Roper landing, viz.:-

174 horses	17 bullock wagons
325 bullocks	13 bullock drays
16 horse wagons	32 saddles, harness, &c.
14 spring drays	

Besides these, forty-one horses and six bullocks were sent down to the landing from Daly Waters; but four teams of horses and six bullocks had to be sent to the Katherine with building materials.

In addition to the construction of the line, we had, at the time of my journey, built substantial stone stations of eight or nine rooms, including office, roofed with galvanized iron, at the Peake, Charlotte Waters, Alice Springs, and Barrow Creek; temporary huts of three rooms at Tennant's Creek, Powell's Creek, and Yam Creek; a substantial log hut of six rooms, with galvanized iron roof, at Daly Waters; a similar building was in course of erection at the Katherine; and at Palmerston (Port Darwin) we had erected a large stone building, consisting of a central building and two wings, for

the accommodation of the cable staff as well as our own. The central building comprised three offices, one being for the cable. The South Australian quarters, forming one wing, consisted of five large rooms, besides detached kitchen and bathroom. The cable staff occupied the other wing, containing ten rooms for the resident superintendent and five assistants. One of the rooms was used as a billiard-room, the company generously providing their officers with a good billiard-table, besides a well-stocked library. There were also two large underground tanks, each capable of holding 12,000 gallons on water; stores, workshops, stables, &c. The cost of the buildings at Port Darwin was £6,670 6s 10d., of which the Cable Company paid £3,547 0s 8d.

All this work was accomplished in less than two years.

To complete this historical sketch I may add that, having ridden overland and carefully inspected the whole of the work, and placed every station in thorough working order, I arrived in Adelaide on October 30th, 1872. The cable was repaired and communication with England was established on October the 21st, and on the 15th of November banquets were held in Adelaide, Sydney, and London to celebrate the event.