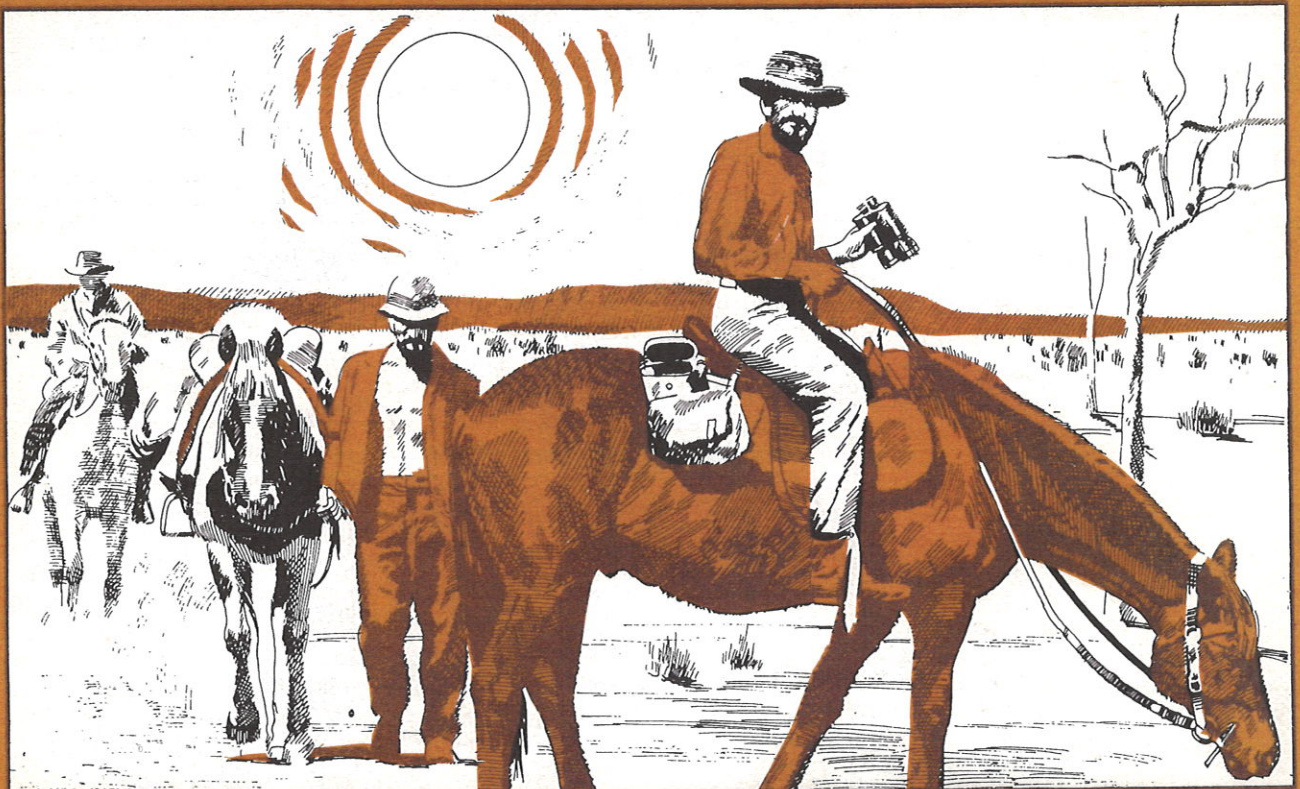
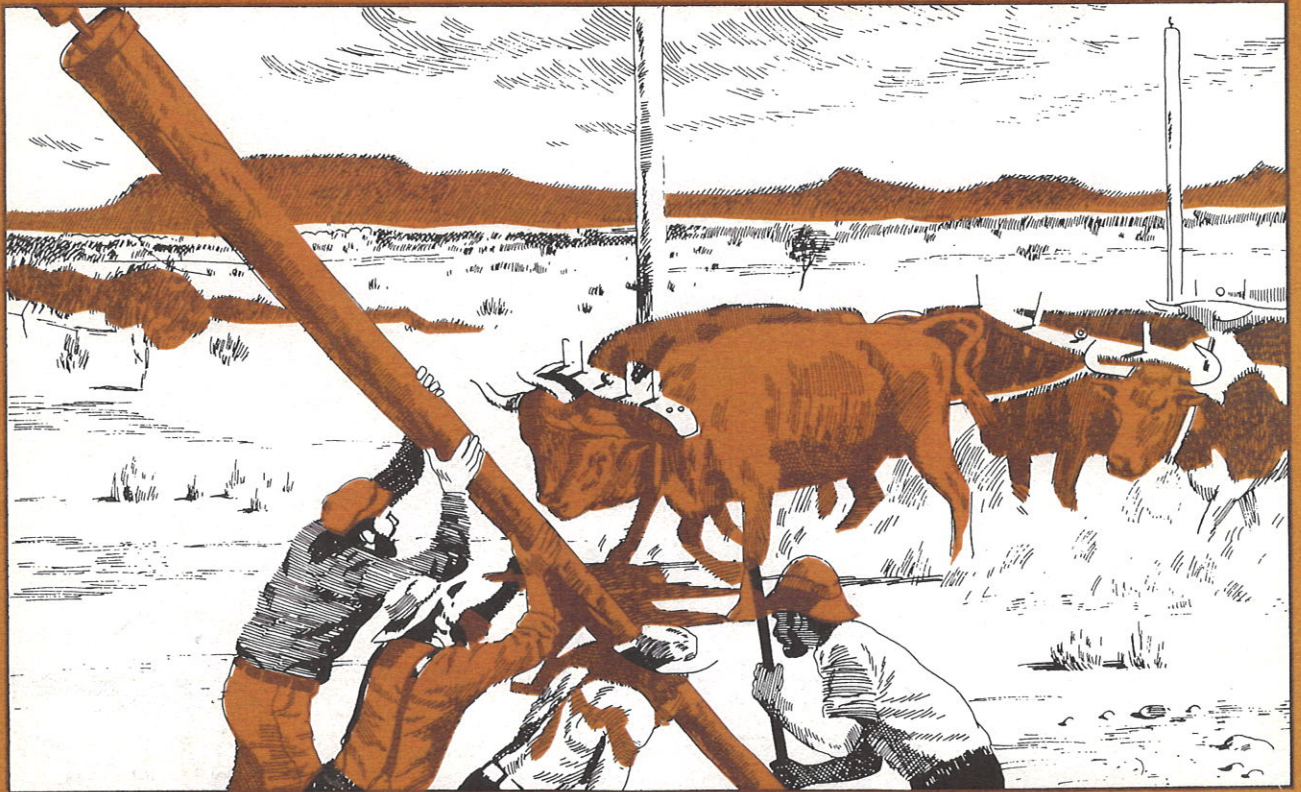


The Overland Telegraph Line



The Overland Telegraph Line

Peter Taylor recounts the story of the construction of the telegraph line across 3000 kilometres of the desolate heart of the continent, which linked Australia with the world.



Charles Todd, Superintendent of Tel. Adelaide, with his wife Alice

There are two very surprising things about the Overland Telegraph Line, built from Adelaide to Darwin between 1870 and 1872. The first is that it was built at all, for it passed through some of the most inhospitable country in the world. And the second is that this almost incredible achievement has been largely forgotten, even though the line was in operation for many years. Indeed, the first news of the bombing of Darwin in 1942 was sent in Morse down this line.

The Overland Telegraph Line was built for a reason that now seems almost trivial until we think of its implications. In the 1860s it still took at least three months for a letter to reach England. Whilst this was certainly annoying in personal correspondence, it had an even greater effect in two other areas: trade and news.

Because most of Australia's trade was

with Britain, this slow communication posed a feeling of remote isolation although long accepted as inevitable. It had serious economic consequences. When the grazier sent his wool to England he did so knowing that it would take nearly a year before he received the proceeds, or even knew what they were. Australian mines could be producing ore without knowing that in Britain had slumped and that there was little hope of selling it. The Victorians did not move as quickly as we do now, moved quickly enough for delicate matters to be potentially dangerous.

If the economic effects were bad enough, a few, the delay in news was fatal to the body. The monthly mail ship brought a few copies of English newspapers and



monial planting of the first pole of the
Telegraph Line, 15 September 1870

arrived the Australian newspapers
ed their 'monthly mail' editions
ising all the latest news from
Even though it was out of date,
then long forgotten in Britain, it
e latest news in Australia and
read in a country that thought all
ortant events occurred elsewhere.

developing system of the telegraph
eeded communication to some
As the international system spread
Europe and India it became pos-
telegraph news from London to

There it joined the mail ship,
ad left England weeks earlier, for
l stage to Australia. As the network
alia was extended to link Brisbane,
Melbourne and Adelaide, news
loaded from the ship at its first

Australian landfall at Albany, Western
Australia, and sent by a fast vessel to Adel-
aide, where reporters waited to telegraph
their reports to papers in other States. Even
with all this effort and considerable ex-
pense the latest overseas news in the *South
Australian Advertiser* of 15 February 1870
was already a month old. But it had at least
arrived faster than it took someone to
carry it, and that was the technological
benefit that the telegraph provided.

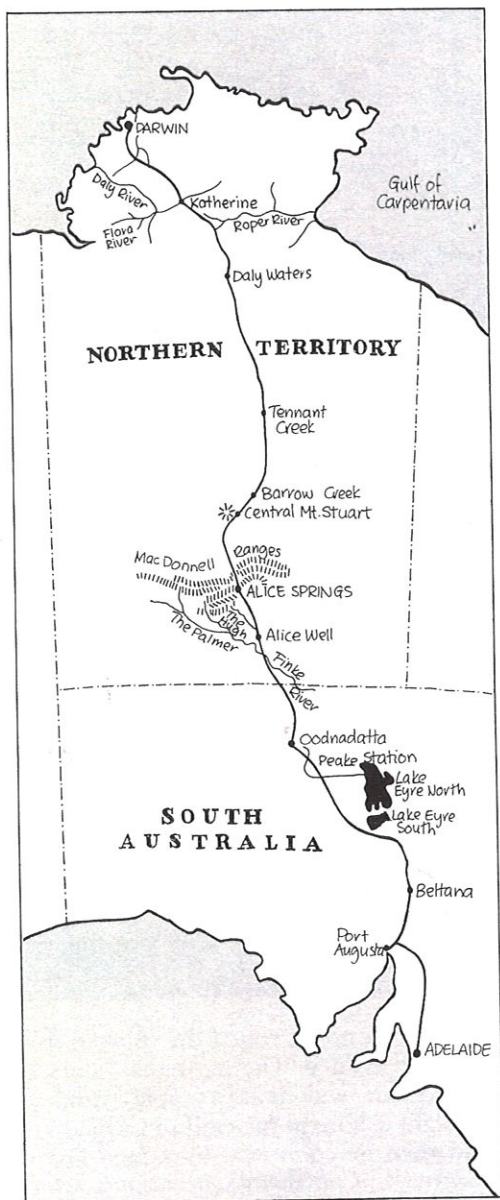
As the international telegraph system
edged through India into Asia, the possi-
bility of connecting the Australian system
to it was a very exciting one for it would
put Australia into direct communication
with London for the first time. The trouble
was that although the international system
was indeed coming closer to Australia, it
was coming closer to the wrong part. It
was not practical to lay an underwater
cable from Jakarta, which was likely to be

the nearest point, round the coast to Bris-
bane or Sydney. The most that could be
hoped for was that a cable could be
brought ashore in the Gulf of Carpentaria
and then be connected by a land line to
Cardwell in northern Queensland, which
was then the nearest point on the Aus-
tralian system. It would be difficult but not
impossible.

It was so logical that few questioned
it. Except for a man in Adelaide
called Charles Todd. Born in London
in 1826, he had left school at fifteen and
worked as a calculator at the Royal Obser-
vatory in Greenwich. At twenty-two he
moved to the observatory at Cambridge
University, where he came into contact
with the new-fangled telegraph. He also
met his future wife, then aged only twelve.

Six years later he left Cambridge to

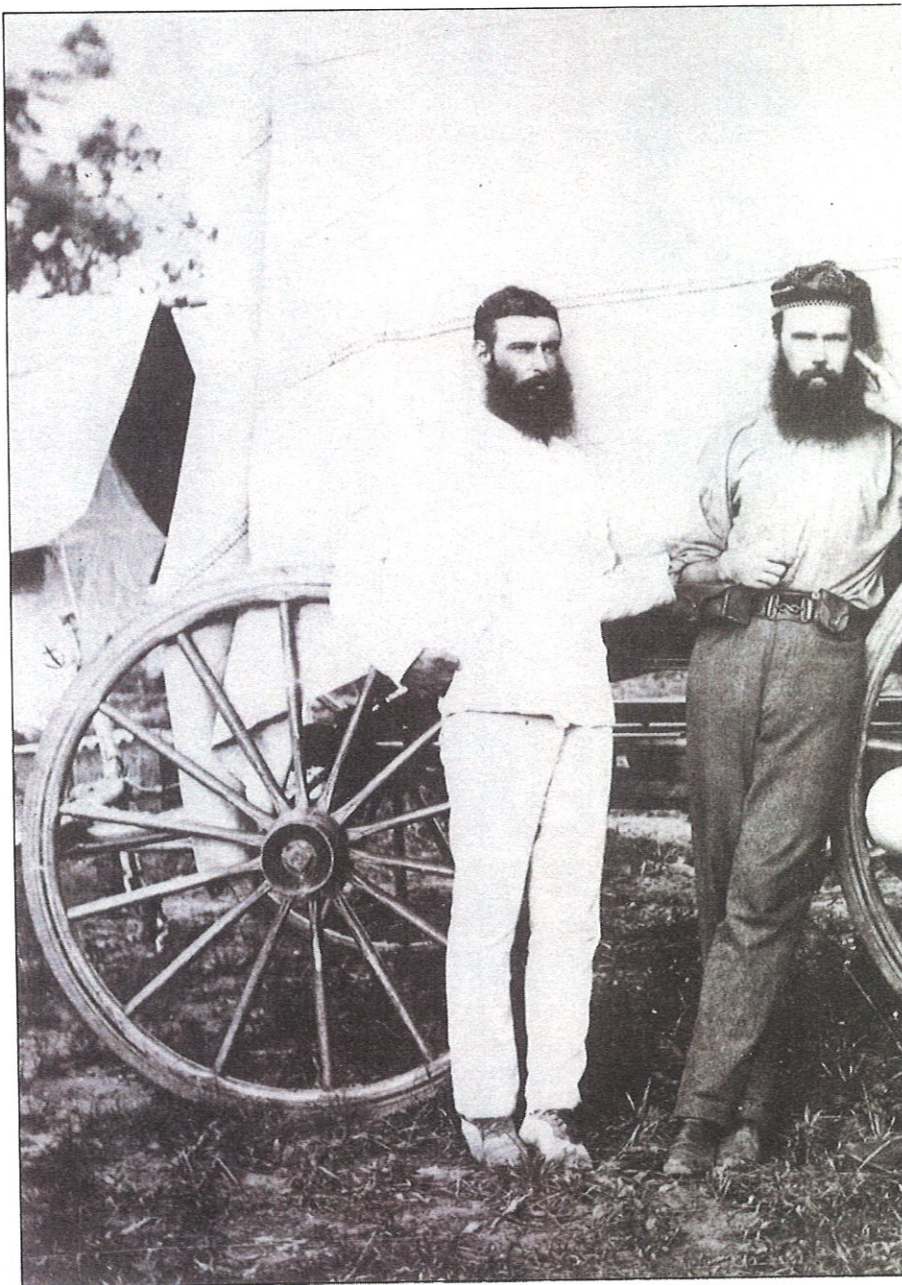
The Overland Telegraph Line



Map of The Overland Telegraph Line, 1872

return to Greenwich and there he was offered the position of Government Astronomer and Superintendent of Telegraphs in Adelaide at a salary of £400 a year. At twenty-eight, Todd knew he was unlikely to see a better offer, but he said he could not give an answer until he had seen a 'certain young lady at Cambridge'. Alice Bell, now in her late teens, consented to be his wife.

At their wedding he said, in reply to the traditional toast, that he hoped 'he would



be instrumental in bringing England and Australia into telegraphic communication', but it was no more than a dream by a man who had not yet built a single line. The Todds arrived in Adelaide in November 1855 and two months later he had built a line, although it ran only the 16 kilometres to Port Adelaide. But it was a start and soon he was building a much longer line to the Victorian border, where it would join up with a similar line being built from Melbourne.

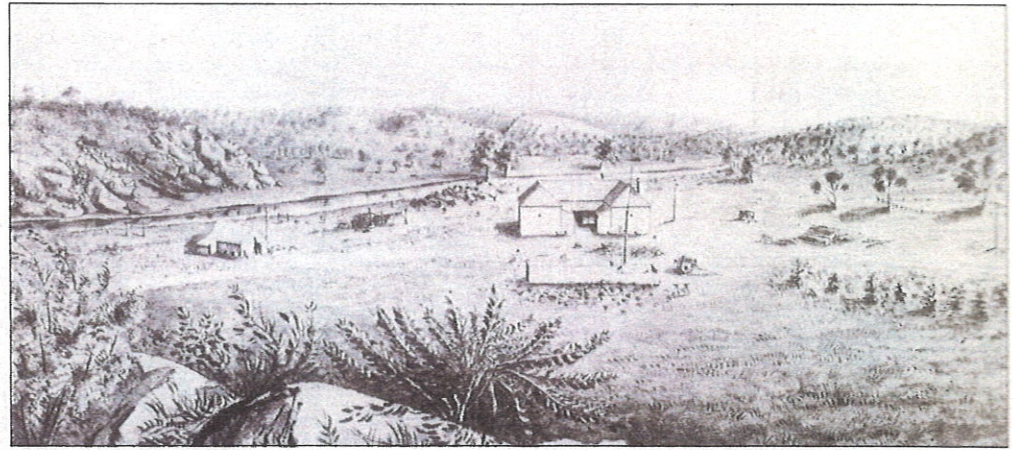
But as the international system crept towards Jakarta it seemed that his dream was as far away as ever, for Queensland was the obvious joining place and the work would be done by the government there.

When Stuart returned to Adelaide in 1862 after successfully crossing the continent for the first

At the Roper River, 1872, Charles Todd right, and Robert Patterson, in char, completing the difficult Central Sect

time he had proved that man could in the harsh interior. His encouraged Todd to believe that it possible to build a line right across continent and when the South government was given all the known as the Northern Territory result of Stuart's expedition, could see the value of the telegraph developing their distant northern

But it seemed that it would el for in January 1870 the government received a letter from Captain O the British-Australian Telegraph company saying that the company intended to bring an underwater cable ashore Darwin and that from there they to build an overland line at their



to join up with the Queensland system at Burketown. The letter was simply a request for permission to build part of the line across South Australian territory, and Osborne said that his brother Noel would shortly arrive in Adelaide to discuss it.

When he did so, Todd fell on him with enthusiasm. He talked of the possibility of the line crossing the centre of the continent to Adelaide and his enthusiasm for the scheme was so infectious that the government said it would build the line at its own expense and require nothing from the company. It was a busy time, but six weeks after Noel Osborne's arrival the company had agreed on the condition that the government undertook to have the line open for traffic by 1 January 1872. It was less than eighteen months away, but the government agreed. Queensland was furious, and rightly so.

After the excitement had died away,

Todd realised what a massive job he had taken on. The line would be 3000 kilometres long and would have to pass through country about which they knew nothing other than what Stuart had told them nearly eight years earlier, and which was unoccupied by white people for more than 2000 kilometres. And although Stuart had survived with a small and fast moving expedition, they would have to take scores of men and animals into the heart of the continent, where there were no tracks and little water, and where they would have to transport every last item of food and equipment.

Todd's first need was to know more about the country and he selected a station manager called John Ross to take a small party on a quick journey of exploration to find the water courses, and thus a possible route, and to locate suitable timber for the poles. He was to follow Stuart's track as

Top: erecting a pole at one of the camp sites. An engraving from the 'Illustrated Sydney News'

Above: the Alice Springs Telegraph Station as it looked in 1872 shortly after construction

closely as possible and was to be back at the northern edge of white settlement by the middle of October. By then Todd planned to have moved men and materials there and they would need to know what Ross had discovered before deciding on the route ahead.

As Ross took his party into the wilderness in early July, Todd started planning at a furious pace. He decided to divide the route into three sections so that work could proceed on each at the same time. Of these three, he assumed that the Central Section, which ran through the very heart of Australia, would be the most difficult and he decided to build that section with

The Overland Telegraph Line

government working parties under the control of surveyors from the Lands Department. The Southern Section, which was likely to be the easiest, would be built by a contractor, Edward Meade Bagot, whilst the Northern Section, which would work south from Port Darwin, would be built by a contractor called Darwent and Dalwood. The terms of these contracts were severe and all work had to be carried out to the satisfaction of the government overseer who would work with them. The work had to be finished by 1 January 1872.

Soon the whole of Adelaide was involved in equipping the parties. Animals had to be selected, stores bought, wagons built and harness made. Even such a simple item as the pin that would nail the insulators to the top of the poles had to be made and one timber yard was soon turning them out at the rate of 3000 a week. The excitement was almost overpowering and when Darwent and Dalwood advertised for eighty men for their Port Darwin expedition more than 400 applied. When the thousands of spectators turned out on Saturday 20 August to watch the party leave for the North on the thousand-tonne steamer *Omeo* it was only four weeks after the contract had been let.

When they arrived at Port Darwin in early September the settlement there had a population of about forty and the Government Resident's office was a tent with a flag pole through the middle. To them, the news was startling, for they had assumed

that the line would be built to Queensland and now here was this bustling place telling them that instead it would be overland to Adelaide, and that there was no time to lose. Six days after their arrival the Government Resident's daughter declared the first pole 'well and truly

Meanwhile, at the end of August of the working parties of the Centenary had driven their wagons out of the yards into King William Street cheered by the huge crowds that lined the way, they had started their long journey north. By the middle of September of the teams had left and at the end of the month Bagot left with his party on the *Augusta*. They planted their first pole the day after they arrived and by night had poled about a kilometre. I

The ships at the head of the Roper River: incongruous sight deep in the heart of Territory



measured on the map, but at last as in progress at both ends. 3000 miles of emptiness separated them. Meanwhile, Ross was leading his party north after a journey that had taken them well into the MacDonnell Ranges. With provisions, they crossed the Finke at Stuart's crossing place and followed down for about 30 kilometres to join with the Hugh and there found water. It was an important discovery for the party, which was later called Alice Well, which could make an ideal depot camp for the advance parties as they moved up to the outstation at The Peake in the middle of October and about a week later the rest of the working parties arrived after their long journey from Adelaide. Ross himself had left Adelaide in early November and after travelling through the Northern Section, he met Ross on 24 November at Strangways Springs. There they

held a conference about the route ahead. The first part seemed clear enough and the parties could move up to the camp at Alice Well and prepare themselves for the next stage. But the problem was that Ross had failed to find a way through the MacDonnell Ranges, and until he did the more northerly parties would be unable to reach their ground. So in the middle of November Ross took his party north again with instructions to find a way through the Ranges and to return to Alice Well in time to meet the first of the advance parties there. He was then to determine the best route with the overseers of the northern parties before leaving to go north again, this time to the Roper River to meet with William McMinn, the overseer of the Northern Section, who would then need information about his route to the south.

As Todd returned to Adelaide Ross again passed through the Ranges, but again his route was unsuitable for the line. He went north as far as Barrow Creek before turning back to cross the Ranges further west at Brinkley's Bluff. But Stuart had crossed the Ranges here and they already knew it was unsuitable. When they met the advance parties at Alice Well, after a journey of ten weeks, they knew little more than when they had left.

Todd had assumed that by now there would be a choice of several routes, but instead they had none and the parties for the northern sections were completely blocked at Alice Well, even though work was progressing well in the south sections.

With Ross busy making preparations for his long trek to the Roper River, two overseers, G.R. McMinn (brother of the overseer in the Northern Section) and W.W. Mills, set out on another attempt to find the way through the Ranges. Having split up, McMinn found his way through the first line of hills at Temple Bar and camped in bad weather in Simpsons Gap, just to the north. Climbing the hill at the side of the Gap he found he could see for about 50 kilometres to the east and was certain that he had found the way through. Joining up again with Mills, they hurried back to Alice Well.

There it was decided that Mills would go back to quickly explore the country to the north and he left on the same day that Ross left for the Roper River. Mills soon found a way through to open country north of the Gap with little difficulty and on 11 March 1871 he found a dry riverbed 'with numerous waterholes and springs, the principal of which is the Alice Spring, which I had the honour of naming after Mrs Todd'.

As men, animals and stores now started to move through the Ranges, Todd had every reason to

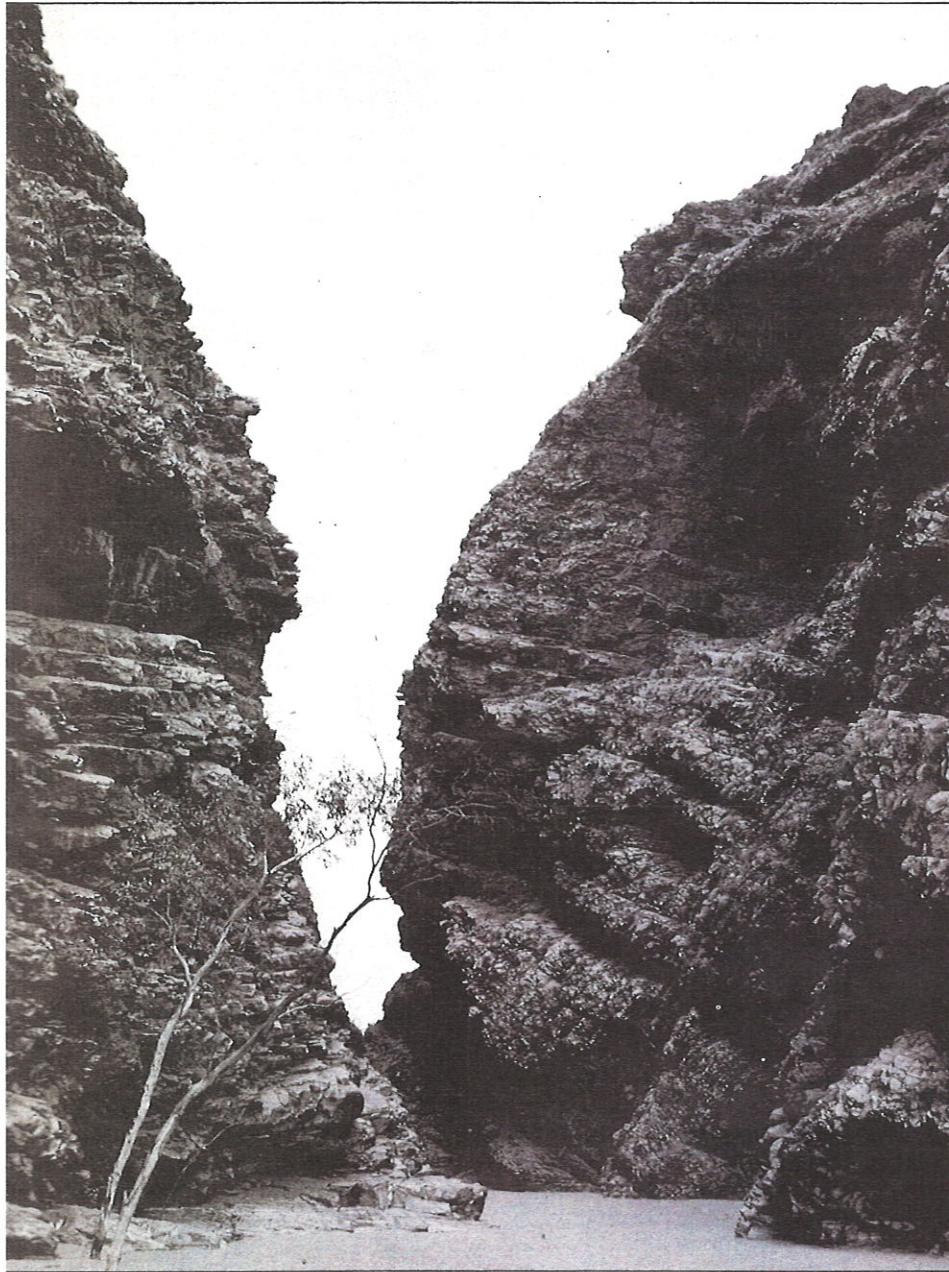
believe that the line could be completed on time. The latest news he had from Port Darwin was that by early November they had built about 145 kilometres of line and by the end of March work on the Southern Section was well advanced. By the end of May the most northerly of the Central Section working parties had reached its ground, eight months after leaving Adelaide, and work was now in progress all along the route. Or so they thought. But they were wrong, for on 8 July 1871 the *Gulnare* suddenly sailed into Port Adelaide and on board were most of Darwent and Dalwood's men from the Northern Section. Overseer McMinn soon explained why: he had cancelled their contract.

At first they had made good progress and by early December they were just south of the Adelaide River, having built 143 kilometres of line in fifty-four days. And then it rained. When they reached the Katherine River at the end of January it was in flood and although they were able to cross it by building rafts, they knew that the flooding between there and Port Darwin would make it impossible to move supplies to them. They worked as far as the King River but when McMinn returned there after an unsuccessful trip to the Roper River to meet John Ross he found the work had been abandoned. The men had refused to go any further and they had withdrawn to the Katherine. When McMinn found them there on 3 May he cancelled the contract as he could see no way that Darwent and Dalwood could complete the job on time. Although the contract allowed for this, it was a hasty move. The work had been held up by the wet and although McMinn now took over the stores and the men on behalf of the government he had little prospect of doing any better.

McMinn had failed to find Ross at the Roper because Ross was still several hundred kilometres further south. After an epic journey using only a prismatic compass, a protractor and a carpenter's pencil Ross had, not surprisingly, made an error of navigation and had reached the Roper much further west than he intended. But in doing so he had found a much better route and as he hurried on to the end of the line with this important information he was surprised to find it deserted. On 6 June he met two police troopers who told them what had happened and that McMinn and the party were leaving for Adelaide that very day.

Their sudden arrival in Adelaide appalled everybody, and none more than Charles Todd. Whatever his legal justification, McMinn's action meant that the chances of finishing the line on time were now very slight and the urgent need now was to reform the party for the Northern





Simpson's Gap which allowed the Line to pass through the MacDonnell Ranges

The Overland Telegraph Line

tion and get them back on the job as n as possible. The man chosen to lead it s a railway engineer called Robert Paton. He was a complex man, a pedantic ublic servant who took himself seriously l who valued his reputation about lost anything else. He was not the type man to appeal to Charles Todd but he l one major advantage: he was avail- e. He was appointed to lead the govern- nt working party on 12 July and was mised a huge bonus of £1500 if he ld complete the line to the northern

boundary of the Central Section by 31 December 1871.

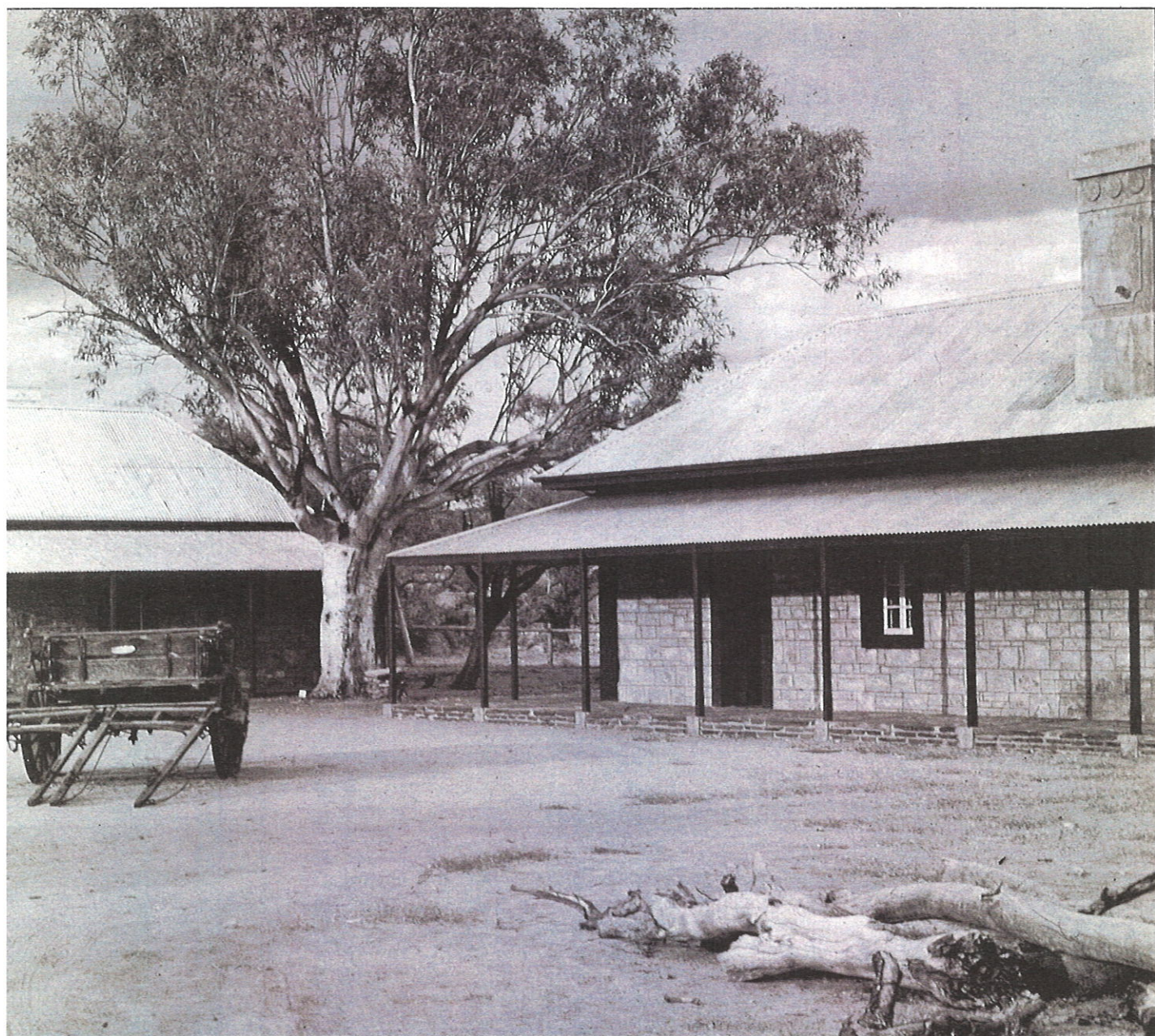
Once again Adelaide was thrown into a flurry of excitement as preparations got under way. A saddler produced, amongst other things, 153 sets of wagon and express harness, 600 pairs of hobbles, 1500 straps and thirteen saddles — all in ten days. Finally on 27 July, less than three weeks after the return of McMin, Patterson left Port Adelaide with a new expedition for Port Darwin. In fact, its destination had been a matter of some argument. Both Todd and Patterson thought they should head for the Roper River, which runs into the Gulf of Carpentaria, as the end of the line was now much closer to the head of the river than it was to



Port Darwin. But they had been over-ruled by Premier Hart, who was concerned that if the small steamer that had also been chartered for the trip failed to arrive, then the expedition could find itself at the mouth of the river with no means of landing the animals and stores.

They arrived in Port Darwin on 24 August and once again the tiny settlement was galvanized into action as the expedition made ready to move south to take up the work. But many of the animals had died on the voyage and Patterson now faced the same situation that Darwent and Dalwood had when they arrived: the need to make as much progress as possible before the Wet once more brought work to a standstill.

Soon there was a long procession of men heading south, but as they reached the Katherine they telegraphed to Patterson that they were finding the going very difficult. In the dry season water was scarce and they were suffering more stock losses



went. But still they pushed on, knowing that Patterson would somehow manage to replace the stock and their equipment, much of which was disintegrated as they went. But a ship that Patterson had sent round to the Roper in the hope of taking supplies up the river had wrecked and he knew that he no longer had the transport to relieve them.

With his hopes in ruins, Patterson knew he must call for help from Adelaide and on 11 October he was able to send a message by telegraph via a ship that would call at Port Darwin, from where it would be sent to Adelaide on the next mail boat. In it he wrote that the expedition was breaking up because of excessive stock losses and the difficulty of passing through the arid country between the Katherine and the Roper rivers. Unless more supplies could be sent quickly, he would have to withdraw to Port Darwin when the Wet started. He thought his misery was complete he

was wrong, for later that day the first of the cable ships arrived to start laying the underwater cable to Indonesia. As the rest of the fleet arrived a few days later their efficiency was in marked contrast to the shambles that Patterson found himself in. At dawn on 7 November several hundred men brought the cable ashore and with the end connected to the instruments in a hut on the beach, the ship *Hibernia* headed out to sea, paying out the cable behind her. It had all been so effortless that it was difficult to realise that this was the cable that would join Australia to England. By 19 November the cable had been brought ashore at Banjoewangi and on that day Port Darwin, one of the most isolated settlements in Australia, was in communication with Europe.

The company had now completed its part of the agreement and would now be able to extract heavy penalties from the South Australian government if the over-

The Telegraph Station at Alice Springs, the place synonymous with the centre of Australia and named after Alice, wife of Charles Todd

land line was not ready in time. But there was little chance of its completion. As Patterson made his way south to join his working parties, not one pole had been erected since McMinn had cancelled the contract. When the first rain fell in early December the men could at last start moving south again. Patterson wrote, 'I have met with defeat of fame but I hope in time to think of it with less pain than it gives me now.'

Patterson had arranged for another ship, the *Bengal*, to carry stores round to the Roper and as his men became bogged in the now flooded country he left with a small party to make his way to the river. He reached it on 31 December 1871, the day before the line should have been finished, and as he huddled in his sodden

The Overland Telegraph Line

camp he knew that the New Year could hardly be worse than the old.

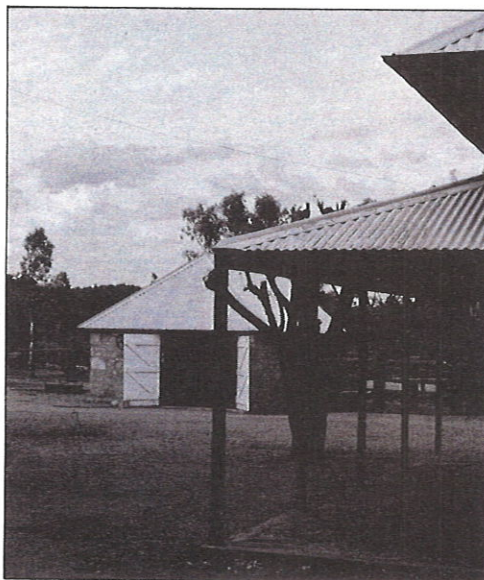
The next day Patterson made a boat out of one of the wagons by taking the wheels off and covering the sides with canvas. It was a dreadful craft for that swollen and fast running river, but Patterson knew that he must go downstream in the hope of meeting the *Bengal*. Their camp was 145 kilometres from the mouth of the river, and they could not be sure that the ship would be able to make anything like that distance upstream. But if they did not find the ship they would surely die, as there was no way they would be able to make their way upstream to get back to the camp. It could only be a one-way trip.

The following day Patterson and four volunteers launched the dreadful craft and headed downstream. They spent a miserable night in pouring rain but late the following day they saw the masts of the *Bengal* through a gap in the trees and after a hair-raising trip of nearly 50 kilometres they knew they were safe.

On board, Patterson learnt that as a result of his message another expedition was on its way from Adelaide, this time heading for the Roper River, and that it was being led by Todd himself. Patterson was furious, for whilst he needed the supplies he certainly didn't need Todd. He knew that there would be little chance of regaining his honour now as it would look as if Todd had rescued him, whereas Patterson was sure he could rescue himself given the supplies and good conditions. He decided he would resign as soon as Todd arrived.

Meanwhile, Patterson went back up to his camp by longboat to supervise the building of a jetty there so that the ships would be able to unload their supplies. He also tried to send some of the *Bengal's* supplies out to the men marooned on the line, but the ground was so flooded that it was impossible to get through and so he went down the river to wait the arrival of Charles Todd.

Todd arrived in the *Omeo* on 27 January and immediately smoothed Patterson's ruffled feelings. He had come to help, he said, not to take command and that as far as he was concerned Patterson was still in charge. But the steamer that was to be used to ferry the stock up the



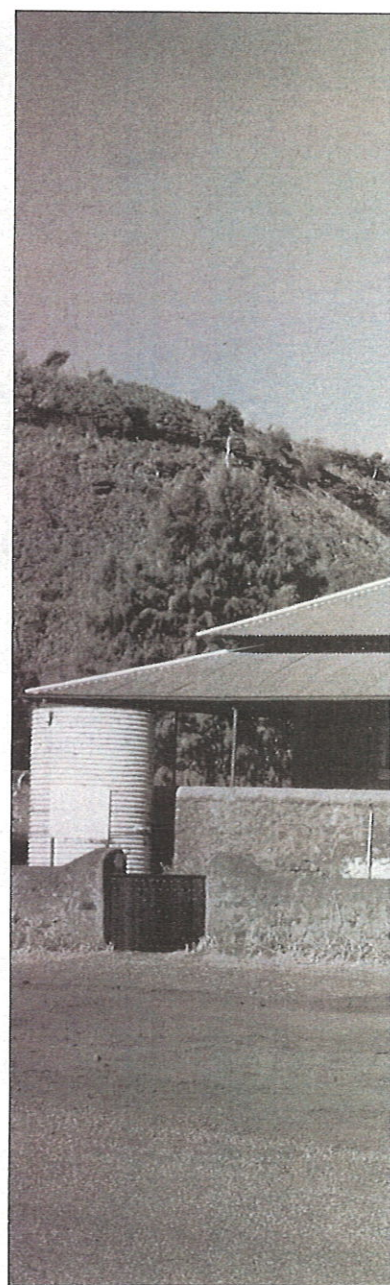
The buildings at the Alice Springs Telegraph Station as they are today

river had not arrived and Todd now found himself in the very situation that had worried Premier Hart. With no means of landing, the stock would surely die and the ship would be forced to leave for Port Darwin. The only alternative was to try to take the *Omeo* herself up the river, but what chance had a thousand-tonne ocean steamer of making 145 kilometres up an unexplored river? Little enough, but it was worth a try.

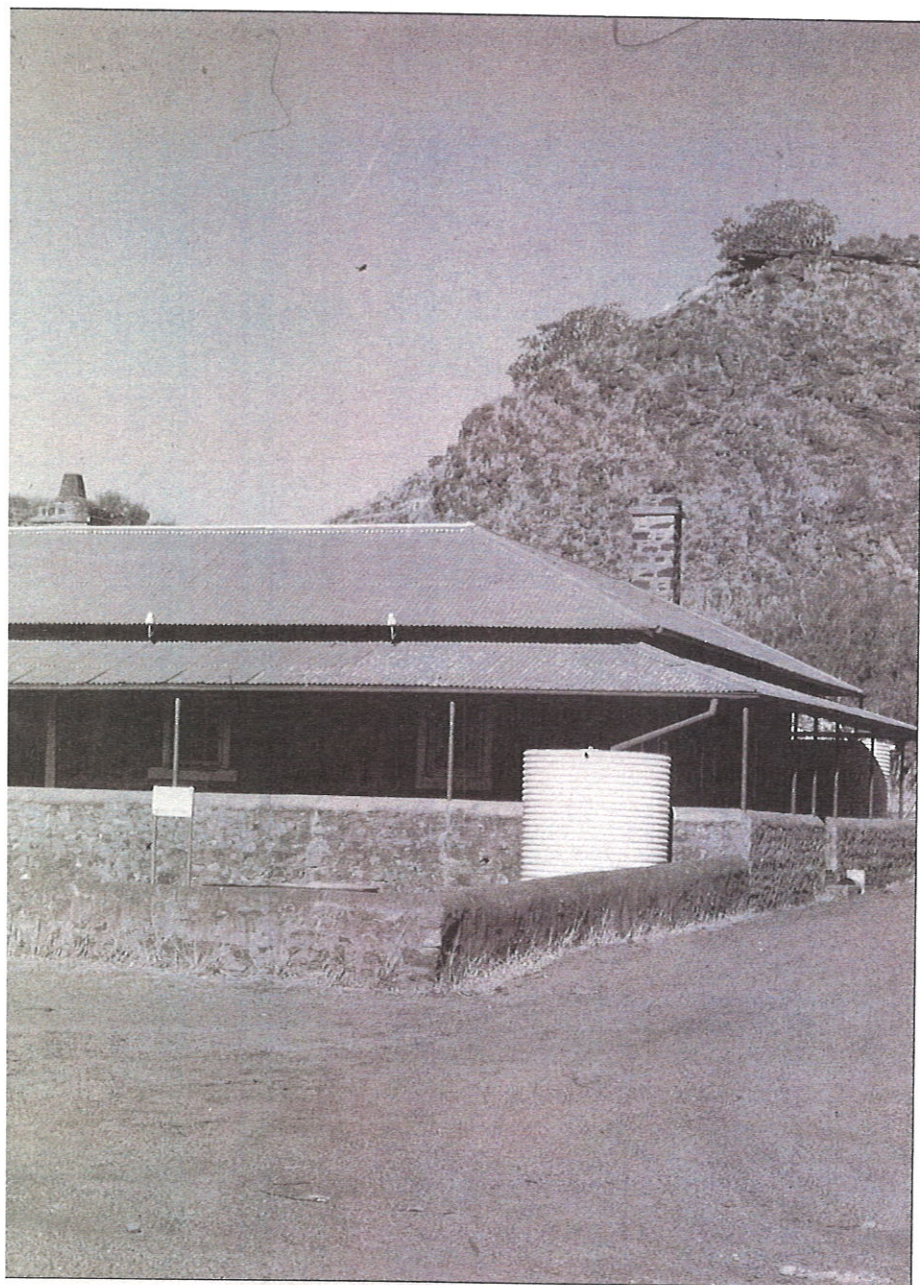
With the light fading, Captain Calder slowly edged the ship over the bar and with men taking soundings on both sides the ship entered the river. Three days later she joined the *Bengal* and from there sent a boat back to the mouth of the river. There they found the small steamer, the *Young Australian*, waiting for them, unaware that the *Omeo* was already well up the river. A few days later all the ships were safely at Patterson's camp and the *Omeo* finally came to rest against the crude jetty. It was an incongruous sight — a thousand-tonne ocean steamer deep in the forest of the Northern Territory and 145 kilometres from the sea.

But although they now had abundant stores, there was still no way they could move them out to the line as it was raining harder than ever. The *Omeo* left the jetty for her return voyage on 13 February and a few weeks later the jetty, which had been 7 metres above her decks, was now 3 metres under water. It was not until 25 March, four days after his twenty-eighth birthday, that Patterson was able to leave the camp with a string of packhorses.

The Wet ended as suddenly as it had started and by early April the jetty was once more high and dry as the



river settled back into its usual course. Patterson found that the men on the line had survived, but only just, and soon to be able to start work again as the waters dried and the floodwaters receded. The breakout from the Roper camp. Todd now went by sea to Port Darwin with the intention of travelling overland to Adelaide so that he could inspect the line on the way. But he found that there were no horses available there and he had to return to the Roper Depot a fortnight later to use those that had been landed. It was a frustrating business, especially as he had to let Patterson take charge of the line to close the gap in the line. The 5th Section had been finished some time ago and the men in the Central Section were edging the line northwards to meet the Northern Section. If they could do this, the gap somehow, the line could be closed and the penalties reduced.



*The Telegraph Station at Barrow Creek,
between Alice Springs and Tennant Creek*

ie of those coincidences that happen in real life, but which seem too good for fiction, the means were at hand. For earlier that year John ad left Adelaide with a string of with the intention of starting a stud Darwin. By May they had reached Creek and the solution was available they would ride a pony express the gap in the line. As Todd made south from the Roper he reached of the line at Daly Waters and there number of international messages to be sent south. As the pony exok them south to Tennant Creek, was the other end of the gap, the ne through from Port Darwin that urtherwater cable had failed and conh Jakarta had been lost. It was inting, but it gave them a chance to e the gap.

went on furiously as Todd, who

had been joined by Patterson, continued south. They reached the end of the southern wire at Attack Creek and using a pocket Morse key, Todd was able to communicate with Adelaide for the first time since leaving there for the Roper. As Todd left to continue south, Patterson turned back to join his men and supervise the final link in the line.

On 22 August 1872 the only gap in the line was a small one at Frew's Ponds where Patterson was camped. They had deliberately broken the line there so that Patterson could perform the joining ceremony when the real gap had been closed further south. But when that important moment came his triumph

nearly turned to farce when they found that the tension on the wire was so strong that they could not bring the ends together. In the end Patterson joined them with a spare length of wire whipped onto each end, but as he did so he received an electric shock from all the batteries that had been installed in the repeater stations between there and Adelaide.

If Patterson thought the glory was his, Adelaide knew it belonged to Charles Todd. Camped that night at the foot of Central Mount Stuart in the very heart of the continent, Todd clipped his instrument onto the line. Suddenly the whole of Adelaide wanted to congratulate him and he received message after message until the night became so cold that he could no longer work the key. And this small, unassuming man, who had left school in Greenwich at fifteen, slept under the frail wire that now connected Adelaide to Darwin and which would soon connect Australia to England. It was done.

In one year and eleven months they had built a telegraph line more than 3000 kilometres long through country that had been crossed only once and which was, for the most part, uninhabited by white people. They had cut and planted more than 36,000 poles and they had transported over 2000 tonnes of material into the centre of Australia. They had cut and cleared tracks 10 metres wide through 800 kilometres of thick forest and scrub. They had worked in the northern Wet and in the arid harshness of the Centre. They had taken a fleet of ships 145 kilometres up the Roper River and they had built nine substantial repeater stations. All in one year and eleven months.

On 20 October 1872 the underwater cable was repaired and two days later the first message was received from London. And what had previously taken three months could now be done in seven hours.

As the men returned to Adelaide, 15 November was given over to celebration. The men formed up in the new Post Office and with a band at the front they swung out into King William Street to march to the Exhibition Grounds as the Town Hall bells rang out and the crowds cheered. There, Charles Todd addressed them in a speech that was frequently interrupted by cheers from the men as he told them that it was the proudest day of his life. And with that bond that unites men who have achieved difficult things together, they knew it was. For it was theirs too.

Now mostly forgotten, they left their names on the map of the Centre and the North. But if you stand in the fading light at the Telegraph Station at Alice Springs and let the silence surround you, you will know something of their achievement. 🐾

the case of a system of milntrone, has been the victim of misapprehension, as the House remarked upon misapprehension in the Ministry will be for him. The third case in which there is an opportunity of seeing what the actual action of the Government has been, is that of the Sheep-drovers. It was forcibly contended on grounds that the omission to appoint a successor to Mr. Marchant was a grave error, and might lead to very unfortunate consequences. The Commissioner of Crown Lands, with a firmness of tone which has been a novelty on the Treasury benches, said the course he had adopted, and the simple proof that he had been influenced by the paltry motives imputed to him by Mr. Cornet. At the same time he tried to show to the satisfaction of the House that he was justified.

[illegible]

took place, and here again the director was strong. Every member who issued the House spoke in terms of a verbal eulogy of the manner in which the director had performed his duties, and issued himself anxious to acknowledge in the same manner the flattering loyalty of South Australia recently evinced by Dr. Schom-Dick. Considering the scientific attainments and extraordinary ordinary attitude for the work in which he is engaged, it cannot be said that he is too liberally treated, but as he is too liberally treated, he can do no more than to say that his services have been so appreciated by the public of South Australia that he could not well, in the interests of the colony, have done otherwise than decline the tempting offer made him by the Victorian Government. It is in that in any scheme for increasing the number of public officers the claims of Dr. Schom-Dick will run no risk of being overlooked. He has commended himself to the public in every respect as being the right man in the right place, and if salary were

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Government to the Bishop of Cambridge has been stopped.

Incubate the *Yersinia* at 25°C until a 1:1000

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"I like a Soldier's life," led up to the song "Blossom in Summer only," sung by Miss N. whose rich voice did full justice to the song. Mr. T. Gepp gave a well-known song, very good style, and the first half of the ramme was closed with a pretty little duet led "The Cousins." A quartette and as opened the next half, and Miss Fox "Evangeline" effectively. Then came a song by Miss Edwards and Mr. T. Gepp, a song by H. Spafford, a mirth-provoking recitation rich Irish brogue by Mr. A. Hawker, and a "The Lover and the Bird," by Miss J. Ford, who does credit to her instructor, "Fervent's" song, "My Friend John," with favour; and the entertainment with the amusing little operetta, "The Rose overgrown." Miss E. Edwards acted the part of a coquettish village maiden, and did it too, showing that she possessed the talent new how to make the most of it. Messrs. pp and H. Spafford were a really effective revival lovers, and the piece at its conclusion I unmistakable marks of appreciation. "Save the Queen," harmoniously sung by the company, concluded a very successful concert, which we trust will only be one of a

YATALA MINING COMPANY.—This property has been formed to work Mineral Claim about one mile south of the Prince Alfred. Oro, we are informed, was discovered on the 2nd and a half years ago by the prospector, Messrs. Leuning, Rogers, Crago, and Co.—who, after testing their find, and feeling of its value, came to Adelaide, and ally arranged with two gentlemen to work the property. Reports from three mining discoverers all that had been stated of the generally favourable prospects. The prospectors determined to work the property themselves, but soon afterwards copper ore in value, and mining consequently led. The Yatala Mine, like others, it till better prices ruled, a little being done at intervals, and resulting aising of a nice pile of ore. Lately the ore was offered and taken up privately, the being few in number and anxious to thorough test of what promises to be a ore affair. The ore is similar in quality raised from the Egmont, which yielded average 48 per cent. of copper, and is many places throughout the section. In four lodes—some persons say six—promoters chose to sink on the one appeared to have the best indications, although there was not so ore on the surface as at other places, proved the wisdom of this policy, early defined walls have been found, steady yield has resulted, the lode as it goes down, and promising to ore by the time 15 fathoms are sunk, ising machinery the mine would, it is pay at once. The property lies in a ad by surrounding hills, and the lodes out the hard "cap" so often covering deposits in the North. A meeting of ore was held at the Company's Office, al-Chambers, Gilbert-place, on Monday, J. A. T. Lako, M.P., presiding. As as of association only provided for the ore three Directors, it was resolved to take amending them, so that the number rs should be five. Messrs. Lako, and Turner were appointed according ices, and Messrs. J. J. Bonham and ore chosen as Provisional Directors. I've was elected Auditor. The Com- to be debited with certain stated y expenses, and to take the ore was resolved to call a special general make the necessary amendments in is of association, and this has been November 1. Some fine samples of ore seen at the Secretary's office. It is in the expressed opinion among the ore the locality of the property that the ore prove a good mine.

in yesterday's *Evening Journal*.]
DELAIDE AND LONDON TELEGRAPH.—to expectation, no telegram was from London on Monday. The first message from Great Britain, however, Adelaide on Tuesday about noon. It ased to a mercantile firm in Molnd dated 8.40 p.m., so that appar 15 hours was occupied in the trans-ut as the difference in time between id this city is 9h. 14m. 13s., the actual upied in transit was say six hours. ated that when telegraphic business arrent the interval will be reduced to hree and four hours. On Monday les & Smith received at 12.10 p.m. a m" from Java, dated from that 1 p.m., so that Old Father Time have been beaten by 50 minutes. In of Monday about £300 worth of ore received at the Telegraph Office mission to England and other distant this cannot be taken as any criterion ogular business which will attach to ment.

SUMMER DRAPEY AND CLOTHING.—ces Materials, New Prints and Mar- west Shapes in Hats and Bonnets, s, Parasols, Feather, Flowers, Trin- ives, Gossamers, Hosiery, Fringes, a Glove Fittings, Stays, a Large own Holland, good value; the Colo- long Tweed Suits, to order; all at the ices, for Cash. Note the address— AN'S, 62, Hindley-street. 204cy

GERMAN SQUADRON GOING ROUND WORLD.

BISHOP OF CAPE TOWN DEAD.
SEWARD, AMERICAN STATESMAN, DEAD.

DISCOUNT 6 PER CENT.

CONSOLS 92½.

MONEY ACTIVE.

WHEAT DECLINED.

COPPER £90 TO £93.

[FROM REUTER TO AUSTRALIAN ASSOCIATED PRESS.]

Bombay, October 21, 16.23.
(astronomical time).

September 29 to October 22, 1872.

GREAT BRITAIN.

The Church of England Congress at Leeds has closed after a highly successful meeting. The Bishop of Salisbury has advocated a comprehensive spirit of indulgence towards Church differences, and demonstrated the impolicy of ecclesiastical litigation.

The Bishop of Salisbury at the distribution of prizes at Manchester expressed the opinion that the Oxford local examinations was the best movement that had ever been instituted in England for the encouragement of popular education. The number of candidates examined was 3,500.

An important Conference of Nonconformists has been held at Birmingham. The resolutions passed were in favour of the disestablishment of the Church of England.

Sir John Wauchope, Stirling Maxwell, Alexander Grant Ramsay of Kildalton, and Principal Tullock, D.D., have been gazetted the Board of Education for Scotland.

Sir Charles Wentworth Dilke in a speech at Glasgow has denounced class legislation. The Czarowitch Stakes were won by Salvanas, Silver second.

The Enfield Cup was taken by Roy.

The Middle Park race resulted in a dead heat between the Kaiser and Surin, and the stakes were divided. Ontargis came third.

Baron Hatherley, the Lord High Chancellor, has resigned his office in the British Cabinet, and Sir Roundell Palmer has been appointed his successor.

Sir Roundell Palmer has been gazetted as Baron Selbourne.

Mr. Justice Willes has committed suicide. The act is attributed to an attack of gout on the brain.

The Hon. George Denman, Q.C., has been appointed to the vacant Judgeship.

Sir William Maynard Gomm has been appointed Lord High Constable of the Tower of London.

Alderman Sir Sydney Headley Waterlow is the newly-elected Mayor of London.

For the Tiverton election the candidates are Massey, in the Liberal interest, and Waldron Conservative.

At Richmond in a Conservative contest Seymour stands.

Fitzgerald contests Horsham in the Conservative interest, Aldridge withdrawing.

Robert Cunliffe has been elected member for the Flint Boroughs.

The reported outbreak of the rinderpest in Lincolnshire has been contradicted.

The foot and mouth disease is rapidly spreading in Yorkshire and Warwickshire.

The *Scotsman* states that the harvest in Scotland has been the most disastrous since 1816.

The bakers' strike has collapsed.

Four thousand Liverpool dockyard labourers have struck work, and a lock-out is threatened.

Five thousand colliers in Staffordshire and a large number in Wales, in order to avert a lock-out, have resolved upon submitting their demands to arbitration.

The great slackening of orders in the iron and coal districts has induced the iron and coal masters at Cardiff to resolve upon meeting the claims of their workmen by entering into a combination to close their works within four weeks.

On the Prince refusing he was conducted by the police to the Swiss frontier.

GERMANY.

An extensive emigration of the inhabitants of Alsace and Lorraine will take place on the expiration of the period given them for making choice of nationality for the future.

A German squadron is fitting out for a voyage round the world.

The emoluments granted by the Prussian Government to the Bishop of Ermeland have been stopped.

SPAIN.

The Cortes has rejected the Republican amendment favouring the abolition of slavery.

[Received October 22, 11h. 15 min. p.m.]

[FROM REUTER'S AUSTRALIAN ASSOCIATED PRESS.]

London, October 21, 2.50 p.m.

SOUTH AUSTRALIAN SIX PER CENTS,

LONG DATES, 116.

WOOL FLUCTUATING.

TALLOW QUIET.

COPPER DEPRESSED, £88 TO £90.

WHEAT DECLINING.

Mr. Graham, a Director of the National Bank of New Zealand, has sailed to establish a branch in the colony. Mr. Burns is to follow with the staff of the institution. Mr. Watson has been appointed Manager in Australia.

Badcock, Secretary of the London Branch, has been reinstated on the resolution of the Queensland Sheep Investment Company.

The termination of the gold withdrawals has depressed the stock markets.

COLONIAL SECURITIES.

Victorian Six per Cents, January and July, 115½; April and October, 112½.

Victorian Five per Cents, January and July, 107.

New South Wales Five per Cents, 1888. 1901; 105.

New Zealand Consolidated Five per Cents, 102.

New Zealand Six per Cents, 112.

Queensland Six per Cents, January and July, 113.

South Australian Six per Cents, short, 110; ditto, long-dated, 116.

Tasmanian Six per Cents, 110½.

BANK QUOTATIONS.

Bank of New South Wales, £38.

Australian Bank, £51.

Union of Australia, £45.

Bank of South Australia, £34½.

London Chartered of Australia, £24½.

English, Scottish, and Australian Chartered, £20.

DIVIDENDS.

Australian Land and Mortgage Finance,

10 per cent.

Oriental Bank, 12 per cent.

North British Australasian Company, 6 per cent.

COMMERCIAL.

In the wool market, after a gradual advance of 2d. to 3d. per lb., there has been a sudden reaction through the introduction of old stock towards the close of the sales. Owing to this the advance was lost, but was partially recovered. About half the quantity was taken by continental buyers, and five thousand bales were withdrawn.

Tallow.—The tallow market is quiet.

Stocks are large. Mutton, £44 to £45; beef, £45.

Petroleum, 18½. Pumping is still suspended.

Sydney oil, £32 to £35; sperm, £86.

The copper market is depressed with few transactions. Present cash quotations for Australian, £88 to £90.

Straits tin is quoted at £141.

Iron is receding.

Corn is declining. Adelaide, 55 shillings (!)

Hemp has advanced. Quotations stand at £20 to £30.

less contribution than is now paid for a four-weekly mail. The Victorian Government contemplate intimating their willingness to acquiesce in the proposed arrangement. The Ministry expect the ready concurrence of the other provinces in the scheme. Victoria will take the responsibility of entering into a contract—Melbourne to be the terminus of the postal route. The Executive propose informing the Imperial authorities and the Governments of the other colonies of this. It has been stated that if any of the other Australian provinces hold back the Victorian Ministry will still advise the Parliament to enter into the arrangement as the best obtainable. Victoria will also be willing to contribute a reasonable proportion of the cost of subsidizing the Californian mail line, but will not incur any liability on account of a Cape route.

Proposals are to be made to the other colonies with a view to subsidizing the British-Australian Telegraph line, and cheapening the cost of English messages.

The steamer Great Britain has cleared out with a large cargo.

The general race entries are good, and the horses now left for the Cup are—Baron, Shannon, Gironde, Early Morn, Novice, Dagworth, Benjirao, Irish King, Boatman, Misty Morn, Emblem, King of the Ring, Barbello, Patriarch, Dolphin, Contessa, Kingfisher, The Ace, Planter, Athelstone, Pyrrhus, Quack, Count, Hamlet, and Valentine.

For the Melbourne Stakes there are 14 entries; Hotham Handicap, 23; Ascendon Stakes, eight; Footscray Plate, five; Maiden Plate, 12; and Queen's Plate, 15.

Loup Garou stands very strong for the Derby at 5 to 4.

Associated Vineyard Company's brandy has been sold at 6s.

Sugars were to-day auctioned at prices equal to late rates.

The flour market is very firm.

Fine wheat has been quoted at 7s. 6d., and 7s. 8d. is now asked.

NEW SOUTH WALES.

Sydney, October 22.

Mrs. Smith, a boarding-house-keeper at Wollongong, cut her throat yesterday.

Connolly has been sentenced to death for murdering his mate at Araluen.

Owen Callaghan, of Goulbourn, has been killed by a bicycle frightening his horse.

The hearing of the Nukulan kidnapping case stands adjourned till to-morrow.

The Fanny Nicholson has towed in two large sperm whales which she caught off the coast.

MAURITIUS.

[Via Melbourne.]

Port Louis news has been received to 16th September.

Fine white sugar was worth \$7 75c., and lower quality \$7 40c. White counters, \$6 60c.

The Nactza et Creole, Windhover, and Guiding Star were loading for Sydney; also the Lily, for Adelaide.

[From yesterday's *Evening Journal*.]

VICTORIA.

Melbourne, October 22.

The Theatre Royal it is advertised, will be opened on November 6.

The congregation of the Scotch Church in Collins-street intend erecting a building to cost £20,000.

A very handsome stained glass window, intended for placing in St. Paul's Church, Adelaide, in memory of the late Lady Edith Fergusson, was shipped to-day.

The Rev. A. M. Henderson delivered an admirable lecture on the new Education Bill last night.

Sailed—Coorong.

Mr. J. H. Parr requests the special attention of Capitalists and parties furnishing at Port Elliot for the summer to his Sale To-morrow of all the Superior Household Furniture and Effects of Mr. Philip C. Grayson, also a number of Valuable Blocks of Land at Goolwa, Port Victor, &c. Sale at Port Elliot Thursday, October 24.

THE O.T. LINE AND THE TRAVELLER

The route of the overland telegraph line has much to interest the traveller, particularly the historically minded traveller, in northern South Australia and the Northern Territory.

In fact, were it not for Charles Todd and his men of the OT line, travel in those parts would not follow the same pattern as it does today.

Travellers by rail to Alice Springs, and by road from Alice Springs to Darwin, are literally following in the footsteps of the intrepid telegraph pioneers of 100 years ago.

What was the OT Line?

The OT line was a single-wire telegraph line 2,000 miles long from Adelaide to Darwin.

It was built to link with a submarine cable from Java so that the Australian colonies could be integrated into the world telegraph service and receive news from overseas as it happened. Before the line was built, all news arrived by ship and was at least three months old when it reached Australia.

Copy of History of the OT Line & an address given by the author to the Royal Australian Society
An overseas cable company agreed to lay the cable to Darwin if the South Australian government would have the line ready for use by the end of 1871.

On June 18 1870, the South Australian government signed a contract agreeing to this date.

The Difficulties

The project was undertaken enthusiastically by Charles Todd (Postmaster-General, Superintendent of Telegraphs, and Government Astronomer of South Australia).

There was no dearth of applicants to join the construction, as the project appealed to the sense of adventure of men of the day.

But the difficulties were many. They were:-

(a) Lack of Knowledge of the Country

John McDouall Stuart had shown in 1862 that it was possible to cross Australia from south to north, but his records were scanty, and much more survey work was needed. This was done by explorer John Ross and a party of surveyors, who set out just three weeks after the contract was signed.

(Note the names familiar today with the Todd River and Todd Street; Central Mount Stuart and the Stuart Highway; Ross River. Stuart was the original name of Alice Springs; but more about Alice later).

*Copy sent to
Drafting Section
in South*

[Signature]
Public Relations Officer
GPO

(b) The Harshness of the Country

Sandhills, gibbers, mountain ranges, deep rocky clefts and other features which make the Centre attractive to the traveller today were major obstacles to the men of the OT line. Add to this the heat and dust and sandstorms, from which the present-day traveller can escape to an air-conditioned hotel. For the men of 1870 there was no such escape.

Further north came tangled mulga and dense scrub. Then there was the problem of the wet season, which turned dry creek beds into raging torrents, sandy tracks into bogs, and filled pole holes with water as they were dug. Animals were drowned. Work parties became isolated. Food went bad in the high humidity.

(c) Supplies and Transport

All materials for work on the line had to be sent from Adelaide. So did the horses and bullocks to transport the men and materials as the work progressed. So did their food.

For the parties working in the south and centre, everything was sent overland. For those in the north, all goods went by ship from Adelaide to Darwin or the Roper River and then overland in a southerly direction.

Meat was sent on the hoof. Thousands of sheep were taken inland over sand and gibbers to a base depot on the Finke to be killed for food.

Poles for the line were cut along the way where practicable, but for treeless country they had to be hauled, sometimes very long distances. In some parts, iron poles were used; they were imported from England.

Altogether 36,000 poles were needed. They were carted an average of nine miles each, and a maximum of 560 miles.

So great were the distances that had to be covered by men, animals and materials that one party which left Adelaide in September 1870 did not reach the place where they were to start work till May 1871.

(d) The Time Limit

To meet the contract, the work had to be completed in 18 months.

How the Line Was Built

So that work could be done simultaneously at various places along the way, Todd divided the project into three sections - south, centre and north.

The southern and northern sections were let to private contractors, and the centre, which it was thought would be the most difficult, was undertaken by government men.

The southern section (let to contractor Walter Meade Bagot) was from Port Augusta (already connected telegraphically with Adelaide) to the Macumba River, near Oodnadatta. This country, although harsh enough, had already been opened up for settlement and did not present great difficulties. It was finished in good time.

(One OT line relic readily seen in this area today is at the ghost town Beltana, where the weather-worn shell of the old telegraph station still stands with a few other contemporary ruins.

There are also ruins of the original telegraph stations at Strangways and The Peake.)

The centre section of the construction, which extended north from Bagot's finishing point to Tennant Creek, was divided by Todd into five parts, each to be worked by a party of 20 men. The respective leaders (from south to north) were Richard Knuckey, Gilbert McMinn, James Beckwith (who became ill and was replaced by William Mills), Alfred Woods and William Harvey.

It was Mills who discovered a clear pool of fresh water, to which he gave the name Alice Springs, called after Todd's wife, Alice. This spot, a couple of miles from the present town of Alice Springs, became the site of one of the telegraph stations on the line. The name was later given to the township Stuart which developed nearby.

This was the origin of today's popular tourist town. Alice Springs now has a local population of 10,000, and this is greatly augmented by the many travellers who come by air, rail and road, particularly during the cooler months of the year.

(The Alice Springs telegraph station is preserved as a museum and national park by the Northern Territory Reserves Board. The old buildings, which are kept in good order, contain many relics of the construction of the line and some interesting old telegraph equipment.

The construction parties did not see Ayers Rock.

It has been said that the name Heavitree Gap was given because Heavitree was Todd's second name. This is not so. Todd does not appear to have a second christian name. If he did, according to his descendants, it was not Heavitree.)

The five construction parties in the centre section had a really tough job, but they got through and finished their part of the line within

the time specified in the contract.

The northern section was where trouble occurred.

The contract there was let to Joseph Darwent and William Dalwood, and work began at Darwin with great enthusiasm. There was a ceremonious planting of the first pole, with the daughter of the Government Resident tamping down the earth and the entire population (50) giving three cheers.

Good progress was made until the Wet set in. It became impossible to work, and the government's supervisor annulled the contract.

The government then took over, but valuable time was lost while a party, under the leadership of Robert Patterson, was sent by sea from Adelaide. By the time Patterson had sorted out the local problems of supply and transport, it was almost time for the next Wet.

Also, time had run out. The cable was brought ashore from Java in November 1871, and, at the end of the year, there were still 394 miles of the northern line to be finished.

Todd travelled by ship from Adelaide and took fresh supplies, including animals, to the northern parties, still marooned in the Wet. His ship sailed up the Roper River and he joined Patterson at a base camp which had been established there.

It was still two or three months before work would be resumed. In the meantime, the cable company was pressing for compensation because the contract had not been met. So, in an attempt to meet commitments, the completed sections of the line were put into operation and a pony express was organised to carry messages over the gap. This was actually how the first messages from overseas were taken through to Adelaide.

However, this did not last long. The cable broke, and, before it was repaired, the overland line was finished. No more was heard about compensation.

The final join in the line was made at Frew's Ponds, a little south of Daly Waters.

(Travellers on the Stuart Highway may see a cairn on the roadside indicating that the final join in the line was made about a mile west of that spot.)

Repeater Stations

As the OT line was built, so too were a dozen telegraph stations along the way.

These lonely stations were the homes of both telegraph operators and linemen, the former to receive and transmit messages up and down the line, and the latter to keep the line in order and attend to any break that occurred.

The stations were, south from Darwin, at Yam Creek, Katherine, Daly Waters, Powell Creek, Tennant Creek, Barrow Creek, Alice Springs, Charlotte Waters, The Peake, Strangways and Beltana.

Some of them today are crumbling ruins. Some have disappeared completely.

Points of Tourist Interest

The main OT line interest is around Alice Springs, with its museum at the old telegraph station. There are, however, several other places of historic interest. Among them are:-

(a) Central Mount Stuart

This is of interest because Charles Todd camped there on the night of August 22 1872, the day when the final join was made 400 miles further north at Frew's Ponds.

After work got under way again in the north at the conclusion of the wet season, Todd did not remain with the construction parties. He travelled overland south to Adelaide, and had reached Central Mount Stuart by August 22. There, on his little portable morse set, he received messages of congratulation from governments, consular representatives and others in many parts of Australia.

(b) Barrow Creek Telegraph Station

This station is preserved as a monument to two men - stationmaster John Stapleton and lineman John Franks - who were killed by natives two years after the line was built.

The station staff were sitting outside their quarters one night when the natives attacked unexpectedly with spears.

The two men who were killed were buried at the stations, where their graves may still be seen.

Variety of Travel

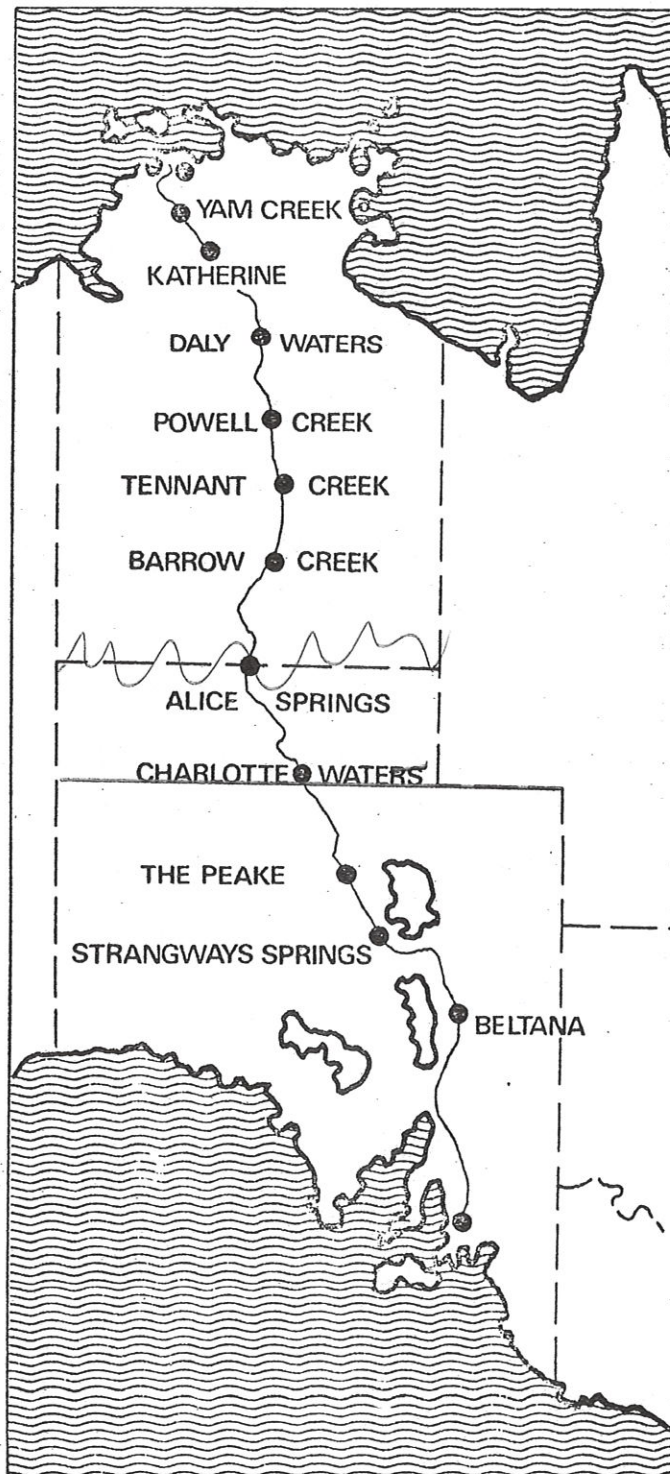
The OT line is so extensive and goes through such varied country, that several types of travel may be suggested.

One could, for example, travel by train to Alice Springs (the Ghan is close to the OT line route), spend a little time at The Alice, and then go by road to Darwin. Alternatively, one could fly to Darwin and travel south over Todd's route.

For something a little more rugged, there could be a four-wheel

drive camping-out party around The Peake and Charlotte Waters and perhaps following on in the footsteps of explorer Ross.

Whatever mode of travel is chosen, every tourist in the Centre will be able to find something somewhere to connect with the OT line. And, in this centenary year, it should not pass unnoticed.



TELEGRAPH STATIONS ON THE O.T. LINE

THE OVERLAND TELEGRAPH LINE

Some Basic Notes

SYNOPSIS

The overland telegraph line was completed when the final join was made at Frew's Ponds on August 22, 1872.

The line (single wire), which linked Darwin and Adelaide (2,000 miles), gave Australia for the first time telegraph connection with overseas countries. It meant that news of the world could be obtained as it happened, not three months later when the mail ship arrived.

The construction of the line, through country that was hazardous and virtually unknown, was one of the truly great epics of Australian pioneering achievement.

The man in charge of the project was Charles Todd (postmaster-general, superintendent of telegraphs, and government astronomer of South Australia).

THE BACKGROUND

her types of electric telegraph existed earlier but Morse revised the dot-dash code.

Following the invention of the so-called electric telegraph by Samuel Morse in the USA in the 1840s, there was rapid development all over the world in this new form of instant communication.

Defence leaders, the business world and the press were quick to see its advantages.

Australia had its first telegraph in 1854 with a line between Melbourne and Williamstown (Victoria). It was soon extended to other centres, notably on the coast and to the goldfields.

Other States followed soon afterwards - South Australia 1856, Tasmania 1857, New South Wales 1858, Queensland 1861 and Western Australia 1869.

Soon there were inter-State links too - Melbourne to Adelaide first in 1858, and Melbourne to Sydney later in the same year.

Bris-Sydney, 1861

By the time the OT project was undertaken, all States except Western Australia were linked telegraphically.

In the meantime, submarine cables were snaking around the world, linking countries and continents.

There were various proposals from overseas to bring a cable to Australia to integrate into the colonial systems.

The Australian States at this time were ambitious and, for the most part, jealous of each other. They were acutely aware of the advantage of having the submarine cable terminating in their territory - and of obtaining the revenue from all ongoing telegraph traffic.

South Australia already had this advantage. Because Adelaide was the first port of call on the inter-State telegraph for ships from overseas, there was always a congregation of news men there to obtain news and telegraph it to their papers in the eastern States. The race to be first on the line led sometimes to pages of the Bible being lodged for transmission so that a reporter could have exclusive use of the line while writing his stories.

The political rivalry between the States to obtain the overseas terminal led to various proposals for building overland lines terminating on the northern or western coasts of Australia. It also led to intense interest in the comings and goings of the explorers.

The keenest rivalry was between Queensland (supported by NSW) and South Australia. There was also a proposal to terminate the cable on the Western Australian coast and to build an east-west line.

South Australia, proposing to build a north-south line to Darwin, had two trump cards. One was that explorer John McDouall Stuart had shown that a route was possible. The other was the stature of Charles Todd in the telegraph world.

THE CONTRACT

In June 1870, the South Australian government signed a contract with the British Australian Telegraph Company. The Company undertook to extend its cable from Java to Darwin if the South Australian government would provide a line down to Adelaide.

The contract stipulated that the line had to be ready for operation by January 1, 1872.

The government immediately voted £120,000 (\$240,000) for the project. Todd was appointed to take charge.

"Then, perhaps for the first time," he said, "I fully realised the vastness of the undertaking I had pledged myself to carry out."

CHARLES TODD

Born on July 7, 1826, Charles Todd entered the service of Greenwich Observatory in 1841. Six years later, he was appointed assistant astronomer at Cambridge Observatory.

He returned to Greenwich in 1854 and was placed in charge of the laboratory for research into electric telegraphy.

In the following year, he accepted an appointment to Adelaide as government astronomer and superintendent of telegraphs. The addition of the postal department to his responsibilities came later, just before the OT project began.

His first job after arrival was to build the telegraph line from Adelaide to Port Adelaide.

Just before leaving England, Todd married Alice Gillam Bell. Alice Springs is called after her.

ORGANISATION OF WORK

Realising that he had a battle against time, Todd divided the construction into three sections - southern, centre and northern.

The southern and northern sections were let to private contractors - Edward Meade Bagot in the south (Port Augusta, which was already connected telegraphically to Adelaide, to the Macumba River, near Oodnadatta); and Joseph Darwent and William Dalwood in the north (Darwin to Tennant Creek).

The centre section, which it was assumed would be the most difficult, was undertaken by government parties.

As little was known of the harsh, arid interior (McDouall Stuart had not done a complete survey), explorer John Ross went in advance of the construction parties to select the best route.

Todd divided the centre section into five parts, which he called A, B, C, D and E.

The five leaders were all capable and experienced bushmen. They were Richard Knuckey (A), Gilbert McMinn (B), James Beckwith (C), Alfred Woods (D) and William Harvey (E). Woods was made leader-in-charge.

Beckwith became ill before reaching his starting-point and had to return to Adelaide. His place as leader was taken by William Mills.

Party A had 800 miles to travel from Adelaide before they started work. Party E had 1,300 miles, a journey which took eight months.

Large numbers of cattle and sheep were sent into the interior (to a depot on the Finke) to be slaughtered for fresh meat.

THE INSTRUCTIONS

The instructions for all parties were detailed, clear and comprehensive. They covered such items as the type of wood to select for poles, the size of poles, job organisation for wiring, building

specifications for repeater stations, sinking of wells, stores accounting, water conservation, discipline, morale, and food rationing details per man per day.

It was largely because so much detail was provided for in the instructions and because the organisation was so thorough that the centre operation was carried out so efficiently. The calibre of the men was another contributing factor.

The five parties working on the centre section totalled 100 men. They had 15 horse wagons, 18 bullock wagons and 5 buggies, using 165 horses and 210 bullocks in the teams, in addition to pack-horses and riding horses. A string of 80 camels was also hired to transport supplies.

The centre section was finished on schedule.

THE CONTRACTORS

Bagot carried out his assignment in the south efficiently and had no difficulty in completing it within the given time.

It was in the north that trouble occurred.

Darwent and Dalwood started off well enough, with 89 miles of line up in 54 days. Then came the wet season. Work continued none the less, and the line had reached the Katherine River, 200 miles south of Darwin, by the end of January 1871.

Conditions deteriorated. Floods cut off supplies. Horses were bogged and drowned. Food went bad. Some men, understandably, refused to work.

So the government overseer stepped in and sacked the contractors. They all then sailed back to Adelaide.

This was May 3, 1871. It was July 5 when they arrived back in Adelaide. There was less than six months to meet the terms of the BAT.

THE DEBACLE IN THE NORTH

In great haste a new expedition, a government one this time, was organised in Adelaide.

The leader was Robert Patterson, a 27-year-old engineer, and second in charge was Walter Rutt, another engineer.

A party of 200 men was quickly recruited and embarked in five ships for the north. They had with them 170 light horses and 500 working bullocks.

They left Adelaide on July 27 and arrived at Darwin on August 24.

Patterson, and Todd too, advocated taking the ships up the Roper River so that supplies could be landed closer to the point reached (the King River) by Darwent and Dalwood.

The government intervened, however, and instructed that the ships should go to Darwin.

This meant that Patterson had to go over the same ground as Darwent and Dalwood, using up valuable dry months to get to the point where he could resume poling.

He met with difficulties right from the start. Many animals had died during the voyage, and the rest were in poor condition and could not survive the journey south in the hot, dry conditions.

By the time he reached the point where work could be resumed, the next wet season had arrived. No progress had been made during the dry season. And time for the contract was running out.

Supplies for the men were running out too. Sickness was rife in the camps.

An urgent message was sent to Adelaide for fresh supplies. Todd went north with them.

At the end of 1871, when the time allowed by the contract expired, there were still 394 miles of line between the King River and Tennant Creek to be completed.

Todd arrived at the Roper River at the end of January with more men and fresh animals and supplies. He had the ship taken up the river as far as Patterson's camp, pledging the government for indemnity when the captain demurred because of the risk.

Still the rain continued, and it was impossible to resume work until April. In the meantime, the BAT was pressing for compensation.

Todd had arranged for men from the centre parties to continue poling further north, and, as the gap between the two ends lessened, a pony express was organised to carry messages from one to the other. That was actually how the first through messages were sent.

But it did not last long. On June 24, the South Australian government had its first piece of luck. The cable broke. No more was heard about compensation.

THE FINAL JOIN

By the time the cable was repaired (October 21), the two ends of the OT line had met.

The final join was made at Frew's Ponds on August 22 by Patterson.

Todd, who made a full inspection down the line after leaving Patterson in the north, was at Central Mount Stuart at the time. During the evening, he received messages of congratulation from all over Australia.

The line had involved the erection of 36,000 poles. Some were cut as required; others had to be hauled many miles.

The final cost was \$479,175, which included the building of repeater stations. They were (in order south from Darwin) at Yam Creek, Katherine, Daly Waters, Powell Creek, Tennant Creek, Barrow Creek, Alice Springs, Charlotte Waters, The Peake, Strangways Springs and Beltana.

Only five men died during the construction of the line - one from thirst, one lost looking for horses, one drowned, and the other two from sickness. This, in view of the mammoth job and the difficult country, is a remarkable record and an indication of the thoroughness and efficiency with which the whole project was carried out.

A POST OFFICE FEATURE

"THE OVERLAND TELEGRAPH"

On the map there is a thin red line running north and south between Adelaide and Darwin. This line is marked "Overland Telegraph" on some maps; on others it is unmarked; presumably it is taken for granted that such a well known feature needs no further explanation. To the initiated it is the "O.T." and, even more familiarly, "the old O.T.". The line on the map is very fine and dwarfed by the size of the deserts through which it runs, but in that insignificant marking lies a tale of endeavour second to none in the history of Australian exploration, endurance and enterprise.

In 1859, the South Australian Government offered £2,000 to the man who first crossed the continent from south to north, and John MacDOUALL STUART decided to make the attempt. He had travelled with Captain Sturt - as his draughtsman - and, in addition to finding the £2,000 a tempting bait, had an urge for exploration.

Not only had he been with Sturt, but he had also been leader on several less ambitious journeys, and so had the experience of an old campaigner behind him. Added to this, he was backed by two Adelaide financiers, Finke and Chambers, so that nothing was lacking in his equipment and he started well found. When, in 1860, he set out on the first of his great journeys he had already been up as far as Neales River, 27° S. lat., but from this point he started out into unknown country. This starting-place was the beginning of desolate country, consisting of gibber plains and other very sparsely covered parts, and must have been an extremely disquieting prelude for him. As he went further north, he found rivers and mountain ranges which now bear eminent names of that time. The Stevenson, Hugh and Finke Rivers, Chambers' Pillar, the James and Waterhouse Ranges, are all of his naming; and the MacDonnell Ranges, so well known today, he named after Sir Richard MacDonnell, the Governor of South Australia at that time. He entered the MacDonnells by Brinkley's Bluff, well west of the Alice Springs of today. Passing through the MacDonnells, he came out on a plain of mulga and spinifex which stretched endlessly ahead. The flat country of the centre is monotonous enough when one is driving along a beaten track, with the knowledge that food, water and rest await one. It required the mental and physical courage of a MacDouall Stuart to face the uncertainty that lay ahead and the privations that accompanied such travel as his. In known or partially known country there is an inkling of the whereabouts of water, but in the desert and near-desert, water is of such rare occurrence that much time must be spent casting about in search of it. And water meant water for beast as well as for man. Horses cannot go any great distance in hot weather without drinking, and if the horses gave out, disaster would overtake man. Such anxiety, for a man who knew his Australia as by this time Stuart did, was an added load, but we hear of him pushing on over what we now know as the Burt Plain, through and over the Strangeways and Reynolds Ranges, over the everlasting low, scrubby desert, surveying as he went, mounting every hill to look for indications of water for his party, till a mountain range appeared which his instruments told him was the centre of Australia. Upon measuring up, he found that the mountain range was rather beyond the true centre. He wrote in his Diary on Sunday, April 2nd, 1860 "I am now camped in the centre of Australia; I have marked a tree and planted the British Flag there. There is a high mountain about two and a half miles to the N.N.E. I wish it had been the centre, but on it tomorrow I will raise a cone of stones and plant the Flag there and call it Central Mount Sturt". This was in honour of his friend and former leader, Captain Sturt. Later "Sturt" was changed to "Stuart", and today this is one of the few spots that bear the explorer's name.

From the top of Central Mount Stuart the land did not look promising with regard to water, but he pushed on, passing through country inhabited by increasingly hostile natives. These natives, the Warramunga Tribe, resented the intrusion of the white man and did not hesitate to show it. Later on, at Barrow Creek, attacks

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From the top of Central Mount Stuart the land did not look promising with regard to water, but he pushed on, passing through country inhabited by increasingly hostile natives. These natives, the Warramunga Tribe, resented the intrusion of the white man and did not hesitate to show it. Later on, at Barrow Creek, attacks by natives proved one of the great trials of the Overland Telegraph. The Warramunga ("the song-makers" is one of the largest tribes of Central Australia, and its members have made themselves felt through all their contact with civilization. At this first meeting, they harried MacDouall Stuart to such an extent that, weakened by insufficient rations and unable to find suitable water, he was forced to retreat. He was under 600 miles from the northern sea, and it must have been a bitter pill. But John MacDouall Stuart wasn't beaten by one failure.

In the next year, 1861, he set off again. This time he knew his way and what to expect, at all events up to a point. His furthest north, Attack Creek, he reached and passed, but not by many miles for the scrub became so dense that it was impossible to force a way through it, so he went back to Adelaide again. It sounds quite simple.....he just "returned to Adelaide"; but that return meant 1,400 miles of desert, low water supply and short rations. And this on top of three trips already along that track.

But men were indeed giants in those days, and MacDouall Stuart would not give in. In less than six months after his return on October 21st, 1861, he started back over the track for the fifth time. This time he kept to the east of the thick scrub, passed beyond Newcastle Waters, crossed and named the Katherine and met the Adelaide River, which he followed for some distance and then left and went N.N.E. On July 24th, 1862, he arrived on the shores of Van Diemen's Gulf at a spot which he named Chambers Bay, after the Miss Chambers of Adelaide, who had made the Flag which he now so proudly planted above the tideline. One can imagine his feelings as he looked over the sea that he had endured so much to reach, but the achievement compensated for the suffering. He and his companions were broken in health, weak and hungry, and the horses scarcely able to travel, but the end was worthy of the endeavour. They had achieved their objective and their sufferings faded in the hour of triumph. In three years he had travelled nearly 2,000 miles six times. This record has placed him in the van of exploration in Australia.

When MacDouall Stuart returned to Adelaide, he brought glowing accounts of the north, for despite the water shortage and privations they had suffered, the party had passed through much country that was well grassed and fertile. The South Australian Government became very interested and in 1865 secured the annexation of the Northern Territory, and the attention thus focussed produced a boom, so that the next few years were very active ones in the north. But the final impetus was to come from outside. As early as 1859, Mr. Gisborne had suggested that Australia and England should be connected by cable, and the British-Australian Telegraph Company contracted to lay the different sections of the great ocean cable as far as Darwin by JANUARY 1ST, 1872. This meant that Australia had to have a telegraph line to Darwin to connect with this cable by January 1st, 1872, also. The Government put all arrangements into the hands of Mr. afterwards Sir Charles Heavetree TODD, Surveyor-General of South Australia. He was an experienced and capable man, and personally supervised everything, down to the most minute detail. The work was divided into three sections; that from Port Augusta for 500 miles north, which was entrusted to private parties; that from 500 miles north of Port Augusta to about Attack Creek - 550 miles; and that from Attack Creek to Darwin - 620 miles - which was done by private contract. The central and most difficult part was done by Government parties, of which there were five. All Adelaide was filled with enthusiasm over the expedition which stirred the imagination of the southerners, and everyone took a personal interest in the large building behind the old Exchange in King William Street that was used as the Survey Depot. The interest was evidenced in a practical way by the thousands of applications that were received for employment in all grades. These had to be weeded out, and with such a wide choice a very good team was selected. Everything was assembled and organised from the Depot under the watchful eye of Mr. Todd. Each of the Government parties was headed by one Inspector, one Sub-Inspector, and one Cadet, and each party had nine horse-teams of five horses each, three express waggons driven hour-in-hand, and half a dozen spare horses.

On August 20th, 1870, the first three parties were ready for the field and moved out along King William Street through large and enthusiastic crowds. 250 miles north of Adelaide, at Port Augusta, they took on three teams of bullocks for each party, and so set out thoroughly well equipped for their race against time. At Strangeways Springs, the leaders of the advance party, ROSS and HARVEY, met them. They were most discouraging - stones, red sand, poor

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scenery, and as it was St. Cecilia's Day, they called it St. Cecilia's Creek. But alas for the grand name! In a country of stark reality it did not last long. Gradually it became "The Cecilia" and then "The Seelyer", which it has remained ever since.

"Stone" country troubled the surveying party greatly. It was exposed, hard-surfaced and, worst of all from their point of view, treeless. They were always on the look-out for trees for their telegraph poles. The advance party cheered them up at this point by reporting that they had seen thousands of poles. These were in the bed of what is now called the Macumba River. By New Year's Day, 1871, they were up to Abminga, and work on Charlotte Waters had begun. They had also met the timber along the Finke. "Forests of tall saplings, straight as an arrow" was the report brought in, and their anxiety in this respect was for the present at rest.

The natives of this part, some of the Arunta Tribes, had been annoying the expedition for some time and at this stage began an intensive campaign of pilfering. Constant vigilance was insufficient to end the trouble, which, however, had its humorous side. One day a party of cutters were selecting poles along the Finke and came across a native granary. The containers of the seeds and so forth consisted of legs of trousers and sleeves of shirts, tied top and bottom. The owners of these novel bags did not think it quite so good a joke as did those whose wardrobes remained whole, but even those who did not suffer at the time had the uneasy feeling that they might be the next victims, and it all helped to add to the difficulty of the task.

The first pole was planted on JANUARY 31st, 1871, a remarkable performance in the face of the existing conditions. They were pushing out into almost unknown country, water was a haunting anxiety, supplies had to come up from the south by slow transport, and daily they increased their distance from their base. They had started work 750 miles from Adelaide, and every one they went forward added one to the journey back. Alone, it is doubtful if horses could have kept up the line of communication, but fortunately the camel had just arrived in Australia, and camel trains in charge of Afghans played an important part in keeping them in touch with civilization. Once introduced, the camel had held its place in the deserts, and still, despite mechanical transport, it has its use in the life of the far outback. It is slow, but its spongy feet have yet to be bettered as a method of negotiating desert sand.

And so the great work went on. Privation, hard work, heat, uncertainty, hostility of the natives, all had to be fought in the erection of the Line, but they persevered and finally, on JANUARY 1ST, 1872, the Overland Telegraph linked up with the British-Australian Telegraph Company at Darwin - and Australia was in touch with the outer world. Through the years, various alterations and improvements have been made, but in the main essentials the Line stands today as it stood then. The route has been slightly changed through the MacDonnells. Originally it followed Stuart's track up the Hugh through the Waterhouse Range and under Brinkley's Bluff, but later was straightened out south of the MacDonnells and came up the Todd, thus making a more direct line. North of the MacDonnells it still follows Stuart's old line of "waters", Barrow Creek, Tennant Creek, Powell Creek, Daly Waters and Katherine, only leaving it at Adelaide River, where Stuart, taking the route northwards along the river, finally reached the sea at Point Stuart on Chambers Bay. The town on the Todd River, which grew up to be the capital of the centre, Todd named Alice Springs after his wife. The Overland Telegraph proved a very expensive affair. The estimated cost of the construction was £120,000 but this was greatly exceeded. By the time all parties had been equipped and maintained throughout, it cost the country £338,059. But Australia was in touch with the outer world. That outside contact was not entirely on the credit side however. The British-Australian Telegraph Company, when laying the cable from Banji-Wangi to Darwin, in 1871, brought eight cows and four bulls from Batavia to the Northern Territory. On these twelve cattle were ticks (*Boophilus Australia*) and the blood parasite responsible for Red-Water. In 1881 the descendants of these came into contact with cattle overlanding south of the Adelaide River, and heavy losses resulted. This was the first record of Red-Water in Australia. Gradually the tick spread into the north-west of Western Australia and along the Queensland coast into northern New South Wales. Fortunately there is a definite tick boundary, regulated by climatic conditions, otherwise the whole of Australia would be infected.

of men who were far from home and constantly turning their thoughts towards the south and those whom they had left behind. A few quaint names have arisen by use rather than by christening. One of these was given to a fine creek 42 miles from the Peake. It had large waterholes and shady gums, unexpectedly peaceful amid the grimmer scenery, and as it was St. Cecilia's Day, they called it St. Cecilia's Creek. But alas for the grand name! In a country of stark reality it did not last long. Gradually it became "The Cecilia" and then "The Seelyer", which it has remained ever since.

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Once established, the Overland Telegraph had to be patrolled and maintained, and here again the camel came into its own. As the Telegraph Stations, which were established on the sites of Stuart's "waters", life was lonely and often dangerous. The natives were hostile, especially in the Warramunga country. The Barrow Creek District was under constant menace from the aborigines, who found ample concealment amongst the lovely broken country of the residuals with its heavily timbered gullies. It was here, in 1874, that a sudden attack on the Telegraph Station caused the death of the Station-

Master and a Linesman. The natives attacked in the cool of the evening while the men were sitting outside, and before they could reach the door and barricade themselves in, the Station-Master, Mr. Stapleton, and a Linesman, John Franks, were speared. The trouble arose out of the human desire of something for nothing, and the natives objected to being asked to work for their rations.

Through the whole history of the contact of the white man with the black, this question has arisen. In some cases the natives are over-paid and thus pauperized, and in others under-paid and exploited. It takes a very wise and experienced man to strike the happy medium, and as there are few such, the natives have little chance of acquiring a working basis of conduct. It is only natural that they should resent the white man's intrusion into their domain, and before they fell before unequal numbers and conditions, they showed their resentment in the only way they knew. The patrol of the Overland Telegraph in those early days was a dangerous affair, and they were greeted with relief as well as welcome at the various stations as they slowly worked their way up the Line. Another annoyance was the habit the natives formed of acquiring the insulators. Their genius for pressure flaking found a fine medium in these china insulators, and much interference resulted. Now, of course, with the race dying out, the victorious white man has his insulators in peace, and the few tamed remnants of a people whose land we have taken, find in the discarded bottles of the North-South Line more material than they can deal with. There are few natives to be seen along the Overland Telegraph these days, and these few are dressed in the rags of civilization, and are for the most part detribalized beggars. The Australian aborigine, as he was a hundred years ago, has passed. We have exterminated the Tasmanians, and it is only a matter of time before the remnant now living on the mainland is obliterated. The conquering white has a lot to answer for. It was soon found that it was not the natives alone who were using the Overland Telegraph for their own ends. Australia is plentifully supplied with termites, and these recognized in the wooden poles of the Line a rare opportunity and made the most of it. If we came out on top with the natives, the termites came out on top with us, and man's only possible reply to them was cold iron. The new iron uprights were brought into the north by way of the Gulf of Carpentaria and the Roper River, and that put a stop to the activities of the termites. From then on, with the exception of the copper wire added in 1900, for nearly seventy years the Overland Telegraph remained the great link between Australia and the outside world, and stood for the romance of adventure and achievement. It was the means of communication, not only between us and the rest of the world, but within the centre of Australia itself. Although isolated, people were now able to get in touch with Adelaide by means of the Overland Telegraph and so many lives have been saved and much mental stress relieved. But in 1941 the romance of the Overland Telegraph was shattered. Radio and the telephone came into the picture. As a defence measure it was decided to put the telephone through, so two copper wires were added. In 1942 the army put another pair of copper wires through, so the old Overland Telegraph became quite suburban in appearance. This series of pairs of copper wires brought about a new complication. When there are more than one pair of wires running parallel with each other, electrical interference occurs. To overcome this, at certain intervals each pair of wires are crossed. This "transposition" (which to the uninitiated looks as though a magpie had been trying to make a nest out of wire amongst the insulators) cuts out what among civilians is known as "Cross Talk". All transpositions are not the same. Different schemes are used according to circumstances, and the

the aborigines, who found ample compensation amongst the heavily timbered gullies. It was here, in 1874, that a sudden attack on the Telegraph Station caused the death of the Station-Master and a Linesman. The natives attacked in the cool of the evening while the men were sitting outside, and before they could reach the door and barricade themselves in, the Station-Master, Mr. Stapleton, and a Linesman, John Franks, were speared. The trouble arose out of the human desire of something for nothing, and the natives objected to being asked to work for their rations.

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The Adelaide-Darwin telephone line has the distinction of being the longest continuous telephone line in the world. Any automatic number in the Metropolitan Area of Adelaide may be dialled by the Telephonist in Darwin. It is anticipated that in the near future the pedal wireless sets may be linked through the Stations on the Overland Telegraph Line with any 'phone number in Australia'.

All this is a matter of fact and history, but when one starts out to follow that Line from Adelaide to Darwin, the thrill of its romance is brought home as no book or lecture can bring it. From Adelaide to Port Augusta the greater is hidden in the less, and ponderous poles support local wires, amongst which the O.T. is lost. From Port Augusta north it is less cluttered, and beyond Oodnadatta settles down to five or seven wires as circumstances dictate. Around Alice Springs it is a repetition of Adelaide conditions on a smaller scale, and then it again settles back into its five, seven or nine lines as the case may be. The sun glints red on the copper of the 'phone wires, but above these lesser fry the one original galvanized wire of the old O.T. runs above the track which in the first case came into being for the purpose of servicing it. Through the years the track has altered slightly, straightening or deviating for local purposes, but the Overland Telegraph carries on to the horizon, through a swathe cut in the bush in some places, the only upright thing in sight in others, heading for the north and Darwin, to connect with the overseas cable. After Birdum is reached, it again becomes lost in the array of wires.... the army has left its mark with these lines of communication. But through it the Overland Telegraph still runs, although its day is done. One has almost a feeling of resentment that wireless should have cut its usefulness out, but the old O.T. has had its day - the years when it held the centre of the stage - and we cannot grudge the wonder of wireless its place in the sun.

With courtesy of the

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