

The Wells of Explorer Charles Hunt:

An assessment of their condition and
historical significance as a groundwater resource



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DEPARTMENT OF ENVIRONMENT AND CONSERVATION

Report No. WG 121
August 1991

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WATER RESOURCES DIRECTORATE
Groundwater and Environment Branch
Environmental Management Section

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John Tonkin Water Centre
629 Newcastle Street
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	<u>Page No</u>
Table of Contents	1
List of Figures and Plates	3
Acknowledgements	5
Preface	6
1.0 Introduction	7
2.0 Method/Sources of Information	8
3.0 Background	9
3.1 An Historical Context	
3.2 Charles Cooke Hunt	
3.3 Hunt's Expeditions	
3.4 Further Exploration in Hunt's Footsteps	
4.0 Hunt's Track	11
4.1 An Overview	
4.2 Hunt's Wells	
Youndegin Well	11
Tammin Well	12
Naraline Well	12
Maranobbing Well	12
Dodolokine Well	13
Metchering Well	13
Totadgin Well	13
Merredin Peak Dam	14
Burrancopping Well	14
Boodahlin Well	14
Moorine Well	15
Keocanie Well	15
Kodjering Well	16
Koorkoordine Soak	16
Weowanie Tank	16
Karolling Dam	17
Quardagin Well	17
Boorabbin Well	17
Granite Hill Well	18
Warngangering Dam	18
Yerdanie Well	18
Gnarlbine Well	18
Horse Rocks Well	18
Slate Well	19
Stony Hill Tanks	19
White Peaks Tank (Saddle Hills)	19
4.3 Additional Wells	20

	<u>Page No</u>
5.0 The Historical Significance of Hunt's Track and Wells	23
5.1 Interpretation of Historical Significance	
5.2 Water Yield	
5.3 Aboriginal Use	
5.4 Historical Events	
6.0 Community Involvement in Maintaining Hunt's Track	25
7.0 Conclusion	27
8.0 Recommendations	28
BIBLIOGRAPHY	29
APPENDICES	30
A1 Alternative Nomenclature for Each Site	
A2 Register of Contact People for the York to Goldfields Heritage Trail	

LIST OF FIGURES

1. Hunt's Track
2. Hunt's Track With Wells Shown
3. Tammin Well
4. Naraline Well
5. Dodolokine Well
6. Totadgin Well
7. Boodahlin Soak
8. Moorine Well, Keocanie Well, and Kodjering Well
9. Koorkoordine Soak
- 10A. Karolling Dam
- 10B. Weowanie Tank, and Karolling Dam
11. Quardagin Well
12. Boorabbin Well, Warngangering Dam, and Yerdanie Well
13. Gnarlbine Well
14. Horse Rocks Well, and Depot Hill
15. Slate Well, Stony Hill Tanks, and White Peaks Tank

LIST OF PLATES

1. Youndegin Well, June 1982
2. Tammin Well, September 1981
- 3A. Naraline Well, September 1981
- 3B. Naraline Well, February 1991
- 4A. Maranobbing Well, September 1981
- 4B. Maranobbing Soak, September 1981
- 5A. Dodolokine Well, September 1981
- 5B. Dodolokine Well, February 1991
6. Metchering Well, June 1982
- 7A. Totadgin Well, September 1981
- 7B. Totadgin Well, February 1991
8. Merredin Peak Dam, September 1981
9. Burrancopping Well, September 1981
10. Boodahlin Soak, September 1980
- 11A. Moorine Well, June 1982
- 11B. Moorine Well, February 1991
12. Keocanie Well, June 1982
13. Kodjering Well, February 1991
- 14A. Koorkoordine Soak, September 1981
- 14B. Koorkoordine Soak, February 1991
15. Weowanie Tank, June 1982
16. Quardagin Well, June 1982
17. Gnarlbine Well, September 1980
18. Slate Well (Looking East), September 1981
19. Stony Hill Tanks, September 1981
20. Saddle Hills (Looking South-West), September 1981
21. Hampton Plains, Terminus of Hunt's Track, Sept. 1981

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This report was prepared by Bridgit Todd who is studying Environmental Science at Murdoch University with assistance from Derek Hopkins and Paul Lavery from Groundwater and Environment Branch of the Water Authority of Western Australia. Claire Young from the Water Authority was largely responsible for the final report presentation and printing.

COMMENTS

Any comments on this report or further information relating to Hunt's wells would be greatly appreciated and can be forwarded to:

Claire Young
Groundwater and Environment Branch
Water Authority of Western Australia
P.O. Box 100, Leederville 6007
(telephone: 420 2902)

PREFACE

During the period 1864 to 1866 explorer Charles Cooke Hunt (1833 – 1868) conducted four journeys into the eastern interior of Western Australia extending as far as the Hampton Plains.

In his search for arable grazing land, Hunt established a track of twenty-six wells, tanks, and soaks providing a seasonably reliable supply of water. The construction of these wells represented the first significant development of a groundwater resource in the eastern part of the state.

Hunt's track was significant not only in terms of water yield but also because of its Aboriginal use, the historic events that occurred on the track, and its role in facilitating the development of the goldfields and agriculture in the interior.

Consequently, it is recognised that the wells developed by Charles Hunt represent an important historic water resource and warrant preservation.

In 1988 the York to Goldfields Heritage Trail was created following Hunt's original track and there is substantial community involvement in the restoration and maintenance of the sites.

This report represents the known historical data for Hunt's track and the 26 wells, soaks and tanks. Information is also provided for a number of wells not included in the track but established or identified by Hunt.

The wells represent a significant historical feature due to their role in :

- : early water supplies,
- : impact on development of the Goldfields,
- : focal point for heritage trails,
- : previous use by nomadic aboriginals.

It is recommended that:

- . all wells, soaks, tanks and dams established by Charles Hunt be rehabilitated and maintained;
- . the wells be appropriately signposted and advertised;
- . the wells be protected from the detrimental effects of stock access;
- . the vesting of the well reserves be reviewed in light of their limited water resource value and relatively greater historical value.

1.0 INTRODUCTION

This report was initiated by the Groundwater and Environment Branch of the Water Authority, to collate the available information on the wells, soaks, tanks, and dams constructed by the explorer Charles Cooke Hunt. These water sources which are collectively referred to as wells were initially built between 1864 and 1866 during three of Hunt's expeditions eastwards from York to Coolgardie. As such, they represent one of the first documented uses of groundwater within the State and were particularly significant in providing a lifeline to the Goldfields region both for prospectors and pastoralists. Many of the sites were previously used by nomadic aboriginal groups and were enlarged by Hunt.

Hunt's wells, and the track that he surveyed and cleared, extend from York to Hampton Plains, a route that was later followed by many other explorers, prospectors and pastoralists, and eventually gave rise to the Old York Road. His track and the location of each of Hunt's wells is shown in Figure 1 and 2.

Prior to this study being undertaken the material available on the wells was widely dispersed with little being documented in a comprehensive published form. While Hunt's diaries and fieldbooks document his journeys in detail little has been written about the wells, particularly after the construction of the Perth to Kalgoorlie pipeline between 1898 and 1902. It was only after the opening of this pipeline to Kalgoorlie that the problem of a safe and reliable water supply to the interior was resolved. The routing of the pipeline was largely determined by Hunt's Track which following the goldrush boom helped open up the eastern regions for agriculture.

In 1988 the Merredin Bicentennial Community Committee developed the York to Goldfields Heritage Trail which incorporated Hunt's wells and followed Hunt's Track. Despite this work, there is still little known about many of the wells themselves. Consequently, it is the wells, rather than Hunt himself, which are the focus of this report. A brief historical overview of Hunt and his journeys is included for completeness.

2.0 METHOD/SOURCES OF INFORMATION

The primary sources of information used in preparing this report were the diaries and fieldbooks of Charles Hunt which are stored in the Battye library, Perth.

Well Registers of the old Water Supply, Sewerage, and Drainage Department provided a record of those water supply wells that had been upgraded by the Mines Department. Shortly after the discovery of the Yilgarn goldfield the Mines Water Supply Department set out on an intensive policy of sinking wells and enlarging rock catchments. The current status of reserves was checked using the Department of Land & Administration's Crown Land Index.

Early cadastral maps from what was the Department of Lands and Surveys provided a record of the location of the wells and their reserve boundaries. Well locations were verified, where possible, through consultation with current leaseholders and past visitors to the sites.

Contact with these past visitors to the sites, and others who had a personal interest in Hunt's work or were members of the Bicentennial Heritage Trail Committee were additional sources of information. A listing of these sources as a point of contact is contained in Appendix A2.

Contact with the shires involved, local historians and historical groups gave an indication of the present condition of many of the wells, as did a series of slides taken at each site between September 1980 and June 1982. Some of these wells have since been renovated and, where possible, were photographed in February 1991.

3.0 BACKGROUND

3.1 An Historical Context

By 1836 a settlement had been established at York but there was little known about the land further to the East. With only limited pastoral land in the vicinity it was hoped that exploration further eastwards would make more land available to the expanding colony for agriculture.

In 1836 the Surveyor General John Septimus Roe became the first European to explore the land of the eastern interior, travelling to within 80 km of what later became Southern Cross. His record of the inhospitable land he travelled through dissuaded any subsequent expeditions until 26 years later, when Henry Maxwell Lefroy, in a more favourable year, travelled east and reported the presence of potential grazing lands. This report encouraged the York Agricultural Society to sponsor another expedition to the area, led by Charles Cooke Hunt.

3.2 Charles Cooke Hunt (1833 - 1868)

Hunt was born in Scotland in 1833, and later joined the Royal Navy acquiring a Master's certificate from Liverpool in 1859. He was encouraged to come to Western Australia by an uncle after an accident on a naval vessel prevented him partaking in further active service, and he arrived in Perth early in 1863. In October of the same year Hunt was appointed junior assistant surveyor to Mr W. Padbury in the country around Nichol Bay.

Early in 1864 Hunt led his first expedition for the York Agricultural Society which was a flying trip into the interior eastwards of York. He led a second expedition that same year followed by two other trips in 1865 and 1866. The details of these expeditions are documented in the following section.

The privations and heavy strain of 3 years of exploratory work seriously affected the health of Hunt. His journals occasionally report that he was too ill to conduct any work or to travel. Following his 1866 expedition he was examined by the Colonial Surgeon Ferguson and was found to be "suffering from dyspepsia, accompanied with strains of nervous symptoms; the result of fatigue and anxiety undergone during his expedition." He was directed to take 4 weeks leave of absence and complete rest.

During 1867 Hunt worked as a road surveyor in the Geraldton district. He became ill in December 1867, entered hospital in January of the next year and died from heart disease on March 1 1868, at the age of 35.

3.3 Hunt's Expeditions

Hunt's 3 major journeys eastwards of York, conducted between 1864 and 1866, secured a safe reliable route to the Yilgarn goldfields and further across the sandplains to Coolgardie. A map showing the passage of these journeys is shown in Figure 1.

His first expedition in March of 1864 was under the patronage of the York Agricultural Society. Hunt departed from York and travelled as far as Duladgin and the Koolyanobbing Ranges before returning.

In his second expedition (July - November 1864) Hunt was assigned to explore the country to the east of York to determine its potential for agriculture and pastoral activity. Governor John Hampton was patron of this expedition which departed from Mr S.S.Parkers farm "Balladong" at York on July 9, 1864.

Hunt succeeded in locating a number of Aboriginal waterholes and a "tract of the finest pastoral and agricultural country about 350 miles to the east of York." This he named Hampton Plains after the Governor. His party, consisting of only 6 others, returned to York on November 4, 1864.

Hunt's third expedition (January – October 1865) left from York on January 25, 1865 with a large party that included 6 pensioner soldiers, 10 probationary prisoners, and the native George Mundail who accompanied Hunt on all of his expeditions.

Hunt was charged with clearing a track some 300 miles to the east and sinking wells at convenient intervals. On June 18, 1865, Hunt reported that he had secured a permanent water supply by the formation of wells, tanks and dams for 300 miles from York to the fertile plains on the northern edge of Lake Lefroy, this became Hunt's Track and is shown in Figure 1. The party returned to Perth on October, 4 1865.

Nine months later Hunt's fourth expedition (July – October 1866) departed from York on July 9, preceded by his provision carts which left 4 days earlier. The party for this journey consisted of 16 others including a depot party of 10 men, 4 of whom were convicts on probation. This journey covered most of Hunt's earlier tracks but the total absence of rain limited the success and extent of his trip. The most easterly point that Hunt reached was some 130km due east of what is now Kalgoorlie.

This final expedition was the best equipped of all of Hunt's, and this time he had a treble duty:

- (i) to complete the track to Slate Well, and to sink as many more dams and build as many more tanks as there was potential for;
- (ii) to survey any blocks suitable for pastoral holdings for the Hampton Plains Estate Ltd. syndicate; and
- (iii) to examine the land further east to see if any more could be taken up between Hampton Plains and the South Australian border, for the York backers of former expeditions.

With the season being so dry Hunt was forced to return to York, arriving on October 25, 1866, with the remainder of his party returning on the following day.

3.4 Further Exploration in Hunt's Footsteps

Like his previous expeditions Hunt's last expedition was restricted by the effects of another unfavourable season and failed to realise the results anticipated. The nature of the country impeded further progress and the enterprise of establishing bountiful pastoral land to the east was abandoned.

In early 1867 J.H.Monger and R.D.Hardey set out for the eastern interior. The rains that Hunt had hoped for finally arrived, with abundant falls in the Hampton Plains district for the first time in some years (Inquirer, 8-5-1867,p.2).

Hardey and Monger reported of the existence of a large river (due to the joining of many of the large salt lakes) and fertile country to the north-east of Hunt's Track. On receiving their report, the York Agricultural Society then voted to undertake further exploration with the assistance of the Colonial Government (Inquirer, 5-6-1867,p.2).

In December 1867 John Forrest was sent with a survey party to take over the work of Hunt in the Northam district.

4.0 HUNT'S TRACK

4.1 An Overview

During his second journey of 1864 for the York Agricultural Society, and subsequent expeditions in 1865 and 1866, Hunt succeeded in clearing a track some 300 miles to the east of York and sinking wells, locating native wells, and excavating native springs at convenient intervals. The track which he cut as far as Lake Lefroy was cleared the greatest part of the distance and was of sufficient width for the passage of his teams and along which a spring cart could be driven with safety. It is this cleared strip that became known as Hunt's Track, opening up the interior to explorers and other travellers and which some 30 years later became the basis for the route to the goldfields. Most importantly, it linked a series of 26 wells, dams, tanks, soaks and other seasonally reliable water holes, securing a safe, reliable route to the Hampton Plains.

4.2 Hunt's Wells

Hunt's wells were generally found at the base of rocky granite outcrops, with the spread of wells eastwards beyond Depot Hill restricted by a change in geological formation from granite to immense beds of slate, pipeclays and quartz.

Pensioner soldiers and probationary convicts provided the workforce for the construction of the wells, with Hunt often exploring further ahead of his team that made up the depot party. While most of the wells built were relatively shallow, their excavation took hundreds of man hours and up to a month at a time, being carefully lined with slabs of granite and timber poles.

Figure 2 shows the location of each of the 26 wells established by Hunt as part of his track. The known details on each well are presented below, in sequence from west to east along the track.

Well No.1 YOUNDEGIN WELL

In March of 1865 Hunt predicted that this well "will be one of the best en route" (Hunt, 6 March 1865). Constructed in the southern side of a gully, Hunt recommended that 100 acres be reserved for the well and marked a tree 100 yards East of the location of the well.

On the 11th of July 1866 Hunt's party were employed putting up a temporary police station for the use of P.C.Haydon, the mounted constable of the neighbourhood (Expedition to the Eastern Interior by C.C.Hunt 1866; Fieldbooks 3 and 4).

When the site was visited in June of 1982 the well appeared to be in good condition with the stones lining the well visible and intact. At this time water was present to almost the top. The well was signposted reading "Youndegin Well..Used by Goldfields Settlers". Renovation of the well had been carried out by the Cunderdin Historical Society.

In February of 1991 the well contained about a foot of water which was murky with algae. The dimensions of the well were approximately; 4 feet in diameter across the top, 3 feet deep, and 2 – 3 feet across at the bottom. The well was signposted on the York – Tammin road and the stones lining it were intact.

There seems to be some discrepancy with regard to the date that Hunt's party visited this site with the plaque on the repaired police station reading:

Erected by the Cunderdin Historical Society to commemorate the first settlement in the district. Originally built in 1865 as a police station it later became the home of Alfred & Mary Ann Eaton the districts earliest pioneers & first farmers.

5th October 1975

The well is shown in Plate 1.

**Well No. 2
TAMMIN WELL**

This small well, 9 feet wide by 6 feet deep, is situated near the western base of a granite rock (Tammin Rock). Hunt recommended a 50 acre reserve and a tree was marked 150 yards north east of the well.

When this site was visited in September of 1981 and June of 1982 the well was surrounded by disperse bush, which was cleared adjacent to the well. The stonework on the well was visible and appeared intact, although weeds were prevalent in and around the well.

The location of Tammin Well is shown in Figure 3 and illustrated in Plate 2. It's location is also signposted on the York - Tammin road.

**Well No.3
NARALINE WELL**

This well is situated 40 chains south from the summit of Quarty Rock, and Hunt recommended that 50 acres be reserved for it. The well's location is shown in Figure 4.

Although the well was located by Hunt it was dug by C. Massingham in 1888 in the middle of a gully bearing in a southerly direction.

This well is on a property owned by Mr & Mrs E.E.Melvin. When the site was visited in February 1991 the well had been filled in to allow a dam to be constructed nearby. Photographs of the well both before and after it was filled in are shown in Plates 3A and 3B.

There is a signpost for Naraline Well on the Goldfields Road, however the well it marks is not Hunt's but one constructed by Perry in the 1920's.

In September of 1981 the well was situated in the middle of a paddock near some trees with other stonework nearby and was full of water.

**Well No. 4
MARANOBING WELL**

Situated in a small gully bearing south between Maranobbing and Jurien Rocks, Hunt recommended that 100 acres be reserved for this well, and a tree marked 3 chains from it. The well was dug out and stoned by Robert Hardey (who had explored this area earlier with Monger) on his sheep station called "Jureen".

Maranobbing Well is located on the property of Mr V.W. Wright.

Both a well and a soak were visible at this location on a farm property when the site was visited in September of 1981. The soak was extensive, contained water and had a rock lining interspersed with weed and other

vegetation. The well's stonework was intact, with the well being fenced and covered with 5 strand wire over the stones and water.

Maranobbing Well and Soak are illustrated in Plates 4A and 4B.

**Well No. 5
DODOLOKINE WELL**

Construction on this well began on February 10, 1865. When Hunt revisited the well on July 16, 1866 it contained 3 feet of water.

The well is situated near the eastern base of Dodolokine Rock with the marked tree originally being about 60 yards east of that site. Hunt recommended a 100 acre reserve for the well.

The location of Dodolokine Well is shown in Figure 5 which is on the property of Mr E.Newman.

In September of 1981 the well was in the middle of a paddock and did contain water. The stonework on the well was not continuous, being interspersed with earth and vegetation and spread out from the well.

When the well was revisited in February of 1991 it was found in the middle of a partly cleared woodland. The well was only shallow and had been taken over by weeds. The well was 4 - 5 feet in diameter and 3 - 4 feet deep. The well is not fenced, and a plaque has been cemented about 1.5 metres from the wells south - west edge. The well is depicted in Plates 5A and 5B.

**Well No. 6
METCHERING WELL**

This well is situated near the western base of Metchering Rock. Hunt's team began opening out the native well they found here on February 13, 1865. They discontinued sinking when the well was 13 feet deep and 12 feet across at the top. As the sides were very hard and compact, Hunt decided it was unnecessary to stone it, and the area was not recommended for a reserve.

When this well was visited in June of 1982 the stones of the well were intact and the well contained water. Surrounding vegetation was overtaking the well and the water was muddied. A photograph taken of the well is shown in Plate 6.

**Well No. 7
TOTADGIN WELL**

When Hunt visited this site in February 1865 he commented on the prevalence of Box Poison.

Work then began on the well on March 7, 1865, with Hunt's team giving up digging after coming upon rock at 8 feet:

"it will make a very good reservoir to be filled by the first rain" (Hunt, 1865).

The well itself is situated near the western base of Totadgin Rock and a York Gum was marked 100 yards to the north-east of the well. Hunt recommended that a 20 acre reserve be created.

The well's location is shown in Figure 6.

When the well was viewed in September of 1980 and September 1981 it was found to be in unusually good condition. The well was situated in a granite rock, and was lined with timber poles at the top followed by stone to a substantial depth.

It is signposted as "Hunt's Soak" on the Merredin - Bruce Rock road at a point about 4 km from Merredin. A number of dirt tracks lead to the well which was an important picnic area for nearby communities. When visited in February 1991 the well was in good condition with a padlocked steel grille over the top. It contained water which was struck at a depth of 3 metres below the surface and was approximately one metre deep.

The well is shown in Plates 7A and 7B.

**Well No. 8
MERREDIN PEAK DAM**

This well was sunk on February 20, 1865 and lined with poles and stones. The well was sunk to 8 feet where Hunts team:

"Came upon a spring which has taken 2 men continually baling the whole day to keep under".

Final dimensions of the well after it was lined were 7 feet deep, 6 in the clear at the bottom, and 8 feet across at the top.

The well was situated on a small gully bearing westerly from the base of the rock, and a 20 acre reserve recommended. The well is illustrated in Plate 8.

**Well No. 9
BURRANCOPPING WELL**

Construction of this stoned and poled well began on February 23, 1865, and at completion was 7 feet deep, and 9.5 feet across the top. The well, is situated about 10 chains from the northern base of Burrancopping Rock, and a tree was marked 10 chains north of the site. Hunt recommended a 40 acre reserve for the well.

When Hunt visited the well in September of 1865 it contained approximately 3 feet of water, although in the July of the next year the well was dry with little or no grass around it.

When the site was visited in September of 1981 the well was surrounded by dense thickets, with some collapse of stone into the centre. The well is shown in Plate 9 and is not known to have experienced any renovation works since this picture was taken.

**Well No. 10
BOODAHLIN WELL**

This well was constructed and stoned on March 13, 1865. At this time Hunt commented that:

"this will be found a very convenient stopping place being situated about halfway between Burrancopping and Keocanie".
(Hunt, 1865)

The dimensions of the well upon completion were 6ft deep, 6 in the clear at the bottom, and 9ft across the top.

On the two occasions that Hunt visited this well, in September 1865 and July 1866, it contained 3.5 ft of water.

The well is situated about 10 chains SW of the base of the rock, and located near Westonia which gave its name to Boddalin. Hunt recommended a 40 acre reserve for the well and marked a tree 12 chain SW from the well near the marked road. Its location is shown in Figure 7.

This site has recently undergone some renovation by the Southern Cross Historical Society. The well is illustrated in Plate 10.

**Well No. 11
MOORINE WELL**

This well is situated on the track from Keocanie and Yarkarakine, and is some 5 chains from the southern base of Moorine Rock. Hunt recommended that a 10 acre reserve be created for the well.

The tree that marked the location of the well was about 10 chains from the well on the south side of the track to Kodjering.

The well is currently in a reserve, numbered 19622, named Moorine Rock and is 20 acres in size. This reserve was originally gazetted on 11-11-1927, and is presently a class C reserve for the purpose of water. Its location is shown in Figure 8.

When the site was visited in September of 1981 and June of 1982 the well appeared as only a shallow depression, that was badly silted with some ash present and evidence of stone collapse. The well has subsequently been renovated by the Southern Cross Historical Society and when visited in February of 1991 was found to be in good condition. It has been restored and a wire covering placed over it. Moorine Well is illustrated in plates 11A and 11B.

**Well No. 12
KEOCANIE WELL**

From March 17-21, 1865 Hunt's party were involved in the collection of stone, timber and rushes for the lining of this well, with a substantial log hut being built near it. Although the supply from this well was only shallow, Hunt described it as being most abundant with a standing supply of upwards of 3ft.

The dimensions of the final well were: 6.5 feet deep, 7 in the clear at the bottom, and 8 feet across the top. The walls of the well were stoned and the well itself was covered with a sloping approach of steps down to it.

The well is situated about 4 chains from the eastern base of Keocanie Rock, and Hunt recommended that a 40 acre reserve be created. Its location is shown in Figure 8.

Though about 4.5 miles north of Hunts direct track there was a dray track from the depot Hunt built here to the wells at Moorine and Yarkarakine.

When viewed in June of 1982 the well appeared as a shallow depression in granite with some evidence of the old stone lining. The well has been located by the Southern Cross Historical Society and is a priority for renovation. Its condition is illustrated in Plate 12.

**Well No.13
KODJERNING WELL**

This well was dug in March 1865 and when Hunt visited it in July of the next year it contained 2ft 9in of water.

The well itself was located 4 chains from the north edge of some flat rocks, and a 10 acre reserve was recommended. Hunt marked a tree 0.25 mile (20 chains) along the track to Koorkoordine. Its location is included in Figure 8.

A reserve for the well still exists, being number 19622, and named Kodjering Well, 6 miles east of Moorine Rocks; it was originally gazetted on the 11-11-1927 and made a class C reserve for the purpose of water supply.

This well has been stoned and fenced by the Southern Cross Historical Society, and a concrete slab with its name and date of restoration placed on it, in addition to wire netting covering the top. It has been dug out to approximately 7 feet in diameter (having previously been under a road) and lined to a depth of 5 feet. The site is signposted both on Great Eastern Highway and the road from Moorine Rock. It is shown in Plate 13.

**Well No. 14
KOORKOORDINE SOAK**

On April 22, 1865 Hunts party were occupied making huts for the reception of stores for the winter. In all 3 huts and a store depot were constructed.

The soak was excavated about 10 chains from the western edge of Lake Koorkoordine and 8 chains from the eastern base of the rock, and Hunt recommended that a 50 acre reserve be created. When he visited the well on July 22, 1866 it contained 2.5 ft of water.

The soak is presently in a 10 acre reserve (number 18250), named Koorkoordine Tank, 4 miles east of Southern Cross. Originally gazetted on the 29-3-1923, it is a class C reserve vested in the Minister for Water Resources for the purpose of Water. Its location is shown in Figure 9.

Following renovation in 1984 the soak has a plaque and steel weldmesh cover to stop vandals filling it with the stones from the top, it has been signposted, and is maintained by the Southern Cross Historical Society.

Prior to this renovation work the soak was in a open area behind the Southern Cross golf course. It was poorly fenced with stone dispersed around it and no evidence of a stone lining, and was full of water and surrounded weeds. Koorkoordine Soak both before and after restoration is illustrated in Plates 14A and 14B.

**Well No. 15
WEOWANIE TANK**

This tank is located on Weowanie Rock near its southern base, in a small gully bearing southerly towards a chain of small salt lakes.

It consists of a hole blasted out of the granite and has a holding capacity of about 3,000 gallons.

Hunt recommended a 20 acre reserve for this tank as there was no permanent water at Duladgin which was 4.5 miles to the south.

The Mines Department Water Supply Wells Register report the well as being shallow, fresh water,

approximately 6ft x 4ft and timbered.

The area is still a reserve, no. 3113, named Weowanie Nature Reserve. Originally gazetted on the 24-1-1896, it is now a class C reserve of 640 acres that is vested for both water and the conservation of flora and fauna. Its location is shown in Figure 10B.

When visited in June of 1982 the tank looked like a natural rock catchment with 2 sides of it lined with stone. When revisited in February of 1991 it contained water to approximately 2 feet. The tank is shown in Plate 15.

**Well No. 16
KAROLLING DAM**

This dam is located in a small gully bearing east from Karolling Rock. When Hunt visited this site he commented on the prevalence of box poison, and the presence of a fine white gum forest to the edge of the dam. Hunt recommended a 150 acre reserve, and also commented on the many fine natural basins on the rock.

The area is still a reserve, no. 13230, named Karolin Rock and Tank. The size of the reserve is now 640 acres, and was originally gazetted on the 12-12-1910. It is presently a Class A reserve vested in the Water Authority of Western Australia for the purpose of Water and Conservation of Flora and Fauna. The location of Karolling Dam is included in Figure 10A and 10B.

**Well No. 17
QUARDAGIN WELL**

This was the site of a native well which when Hunt visited it was only grass located between Karolling and Boorabbin, although water could be obtained from the surface of Quardagin Rock. Hunt recommended a 200 acre reserve for the well. The wells location is shown in Figure 11 and the well is illustrated in Plate 16.

**Well No.18
BOORABBIN WELL**

This well was constructed in June 1865, at which time the water was 4 ft deep. In August that year it was at the same level, and in July of 1866 it was 6 ft in depth.

Hunt's comment at that time on the wells water yield was that:

"This well I think may always be relied upon in the driest seasons and in ordinary seasons: a tolerable supply for travelling purposes".

The well is situated on a small gully bearing south from the north-east side of Boorabbin Rock, and was surrounded by sheoaks. Hunt recommended a 50 acre reserve for this well and marked a tree about 6 chains north of the well. Its location is shown in Figure 12.

From the Water Supply Wells Register, this well was constructed to a depth of 25 ft, with a rest level of water in the shaft of 20 ft and an approximate water supply pr hr of 40. The well yielded fresh water and was circular with an 8 foot diameter and a stone lining.

The location of this well is still in a reserve, that being number 2917. The Boorabbin Reserve was originally gazetted on the 31-5-1895 with an area of 374 acres. That area was subsequently increased to 640 acres. The reserve is currently a class C reserve and is vested in the Minister for Works for the purpose of water supply.

**Well No. 19
GRANITE HILL WELL**

No information is available for this well.

**Well No. 20
WARNGANGERING DAM**

When Hunt visited this site on July 28, 1866 it was nearly dry. The dam is situated between two granite rocks on the east side of the Warngangering outcrop, and has a capacity of many thousands of gallons. Hunt recommended a 100 acre reserve and marked a tree about 18 chains from the well. The Dam's location is shown in Figure 12.

**Well No. 21
YERDANIE WELL**

This well is in a C class reserve, originally gazetted on 19 January 1893 as a public utility. The reserve is numbered 2178, the location of which is shown in Figure 12.

**Well No. 22
GNARLBINE WELL**

This well at Gnarlbine was originally discovered by H.M.Lefroy on his expedition of 1863. When Hunt visited the well on August 16, 1864 he described it as being a valuable native well. It was here that Hunt found the remains of a pack saddle abandoned by Lefroy, and commented that the water might prove to be useful.

The well is situated near the eastern base of Gnarlbine Rock, within sight of Kangaroo Hills. Hunt recommended a 20 acre reserve for the well and marked a tree about 20 chains to the east of it. Its location is shown in Figure 13.

The well is still in Reserve no.2180, originally gazetted on the 19-1-1893. This reserve is presently 640 acres in size, is class C, and vested in the Minister for Works for the purpose of water supply. The well at Gnarlbine is illustrated in Plate 17.

**Well No. 23
HORSE ROCKS WELL**

This well is situated 2.5 miles north, north-west of Depot Hill and about 6 chains from the southern base of Horse Rock. Hunt recommended a 40 acre reserve for the well and marked a tree about half a mile west of the well on the southern side of his track.

This well is in Reserve No. 10137, which was gazetted as a class C reserve on the 23-3-1906 for the purpose of a quarry. Its location is shown in Figure 14.

**Well No. 24
SLATE WELL**

Hunt reported on October 3, 1866 that this well was filled with water to the depth of 18 ft but lowered 18 inches in 4 days.

Slate Well Soak was actually located about 1 mile east of block 48 Hampton Plains. Its depth was about 8 ft and the water supply per hour not known. The supply was of fresh water and the well was lined with stone.

The well is situated on reserve no.2971 and was sunk 15.5 feet through slate. Hunt recommended a 100 acre reserve for this well with the well in the centre. He marked a tree to identify the well about 22 chains to the east of it. This reserve was gazetted on the 1-11-1895 as a class C reserve for the purpose of water.

Hunt's Tank in this location was formed by digging a deep clay hole in the bed of the Moorebar Creek gully with a strong embankment on the lower south side. The dimensions of the tank were 35 feet long, 10 feet wide and 5.5 feet deep.

This tank is located in reserve 6590 which was gazetted on the 10-3-1899 as a class C reserve for the purpose of water. Both of these reserves are leased on an annual basis.

The location of both reserves is shown in Figure 15 and Plate 18 which illustrates the general location of Slate Well, the location being unknown.

**Well No. 25
STONY HILL TANKS**

When Hunt visited these two tanks on August 11, 1866 he found them in "great preservation full and flowing over".

The largest of these tanks has a specific location of:

Latitude 31 04' 00" south (Stony Hill 1.25 miles NNW)

Longitude 121 19' 00" east,

and is situated in a gully near Stony Hill, being 60 feet long, 8 feet deep, and just over 5 feet deep.

Hunt recommended a 100 acre reserve for the tanks and marked a tree about 8 chains south of the largest tank.

The location of the tanks is shown in Figure 15 and the larger of the two is depicted in Plate 19.

**Well No. 26
WHITE PEAKS TANK (SADDLE HILLS)**

This tank has a specific location of latitude 31 02'30" south, and longitude 121 10'00" east, with the Saddle Hill summit to the south west of the tank.

The tank is situated in the bed of a gully bearing south easterly towards Depot Hill and due east from Horse Rocks. It was dug out in red clay with dimensions of 60 feet x 10 feet x 5.5 feet. Hunt recommended a 100 acre reserve for the tank and marked a tree about 12 chains west of the tank.

The location of White Peaks Tank is included in Figure 15 and Plate 20 depicts the area of Saddle Hills.

4.3 Additional Hunt's Wells

In his journeys ahead of his construction team to look for more potential wells Hunt often came upon native wells that he named and recorded locations for, although he chose not to develop them as the water yield was either insufficient or not reliable enough to be included in his track. Some of these wells are briefly mentioned below.

*Hunts Tank at Wollubar.

Located in reserve no. 2954, titled Wollubar Dam, Hampton Plains. Gazetted 1-11-1895
Class C reserve
Area = 40.4686 ha.
Purpose: water
Shire of Boulder
No action without reference to the Mines Dept.

*Tin Hill

Situated in reserve number 12561, this is a gnamma hole 15 miles north east of Southern Cross.
Area = 20.2343 ha.
Applied for 17-12-1909
Gazetted 24-3-1910
Class C reserve
Purpose: water

*Morronebiling Spring

Hunt : "Good feed and water" (7-2-1865).
Reserve recommended by Hunt.

*Mt Monger

Well: Reserve No. 18052
5 acres
Gazetted: 28-7-1922
Cancelled: 24-6-1960

Dam & Catchment: 18053
2562 acres (1036.8046 ha.)
Gazetted: 28-7-1922
Class C reserve
Purpose: water catchment area
Vested in Minister for Water Resources

*Quagalin

3-2-1865:-men engaged opening out the Spring
-made a reserve
4-2-1865:-men engaged sinking a well
-made a hole 10 feet broad by 7 feet deep
-stone carted & poles cut for the well
-well stoned up and covered being 9 feet broad by 6 feet deep with a very fine supply of water.

*Duladgin

24-7-1866:-built a temporary depot
Reserve No. 3112
Depth of shaft: 23 ft, 20 ft
Freshwater
Approx supply of water: 10 pr hr
Completed 1894 (by Mines Dept.)
Timbered lining
Not maintained
Gazetted: 24-1-1896
Class C reserve
Area: 255.0952 ha
Name: Duladgin Nature Reserve
Purpose : Water and Conservation of Flora & Fauna
Vested in the Minister for Water Resources
Historical area: 640
Historical purpose: water

*Buladgebie

6-4-1865:-"Party have sunk a well, 15 ft deep, without success there not being above a bucket or two of water in it at the time of my arrival"

*Wongi Dam (Hunts Old Dam at Wongi)

Reserve No.2955
Gazetted 1-11-1895
Class C reserve
Shire of Coolgardie
Area 40.4686 ha (100 acres)
Purpose water
No action without reference to the Mines Dept.

***Karramindie Soak (14 Mile Rocks Soak)**

Reserve Number 2956
Gazetted 1-11-1895
Class C reserve
Area 40.4686 ha. (100 acres)
Shire of Coolgardie
Purpose water
Refer to Mines Dept. before further action

***Karalee Rock**

No. 3531
Gazetted 18-9-1896
Class C reserve
Shire of Yilgarn
Area 1379.5734 ha. (3409 acres)
Purpose Water
Vested in Minister for Water Resources
Historic vesting in Commissioner for Railways

5.0 THE HISTORICAL SIGNIFICANCE OF HUNT'S TRACK & WELLS

5.1 Interpretation of Historical Significance

The criteria for determining the historical significance of each of the sites have been developed in terms of their importance as examples of groundwater resource utilization in Western Australia. In doing so it is accepted that those wells that continuously supplied more water, or those that were more reliable, especially in dry years will be seen to be more important, as will those that were of crucial importance in either maintaining communities or in allowing passage to the east of York.

Consideration must also be given towards the importance of each well individually versus the importance of the whole track of which each well is an integral part.

The wells were also an essential water supply to the native tribes in the area. Some were native wells that Hunt excavated further and he relied heavily on both local natives to locate water as well as those who were members of his party.

These wells are a significant example of the use and development of a groundwater resource. More generally they are possibly the most significant precursor to further exploration of the interior, the opening up of the goldfields, the establishment of agriculture in the interior, and the development of communication and transport networks.

5.2 Water Yield

In consideration of Water Yield the track as a whole is historically significant as Hunt specifically included those sites that he felt would supply a reliable source of water of sufficient quantity for travellers. Hunt's diaries highlight his impressions of Youndegin, Totadgin, Merredin, Boodalin, Keocanie, Weowanie, Boorabbin, Gnarlbine, and Stony Hill Tank as being dependable water supplies. Weowanie was developed after the well at Duladgin failed to yield a sufficient permanent supply of water, and the well at Boorabbin is documented as always being reliable.

Reliable water supply is in part reflected by the number of events that occurred at those sites. For example Gnarlbine was known by travellers to be a dependable water supply and consequently many explorers and prospectors camped there.

Although changing land uses would have affected the yield of various wells, they still provided an important source of water to pastoralists as recently as World War II. Where spurs from the main Perth to Kalgoorlie pipeline had not been constructed to their properties or where graziers had built few dams, they relied on local wells such as those of Hunt's.

5.3 Aboriginal Use Of The Wells

Many of the wells that Hunt and his party excavated were native wells that he was led to by his guides. Gnarlbine in particular is reported as being an important native well.

The local natives knew of these soaks but were understandably reluctant to divulge their locations as it was on these that their lives depended. The aboriginal guides of Crossland and Riseley referred to Koorkoordine Well as "plenty feller gabby never die", a comment on the soaks ability as a reliable water source. This same area was also culturally important to them with a corroboree ground located about 4 miles north of the soak.

Surveyors and explorers such as Hunt, John & Alexander Forrest and others agreed that had it not been for the

assistance of natives in their expeditions, they would never have reached the remote places in the interior that they did.

5.4 Historical Events

In addition to the historical events that occurred at particular sites, the track itself is of great historical significance as a precursor to many other events including:

- the establishment of the telegraph line to Kalgoorlie, and the first stage of the Transcontinental railway both of which followed its general course;
- the routing of the Perth to Kalgoorlie pipeline;
- the movement of prospectors and, later, pastoralists into the eastern interior; and
- the establishment of the Hampton Plains Estate.

Specific wells that have recorded certain historical events are, most notably, Koorkoordine Soak and Gnarlbin Well.

Koorkoordine Soak was an important stopping place for travellers that helped open up many parts of the state. Alexander Forrest (brother of John Forrest) passed through the area in 1867, and after the discovery of gold at Golden Valley in 1887 prospectors relied heavily upon this soak for water.

In January of 1888, Tom Riseley and Mick Toomey camped at Koorkoordine before moving on about 4 miles south to Wimmera where they found specimens of gold. They later named the location of their find "Southern Cross" after the constellation that had been their guide.

Six years later when gold was discovered at Menzies to the north, the camel pad through the Koolyanobbing Ranges to Menzies passed through the soak.

Hunt's well at Gnarlbin also had an important role in providing water in the early years of the goldfields.

In late 1887 Gilles McPherson recovered here after searching for alluvial gold on Hampton Plains and being unable to find water at Mt Burges. In 1890 George Withers, Henderson and Dick Greaves, as well as Reidy and his party all camped at Gnarlbin well.

Later in 1892, Bayley and Ford camped at Gnarlbin on the last stage of their successful trip to Coolgardie. In 1866 Hunt had come in to the north and north east of Fly Flat where Bayley and Ford discovered their first alluvial gold before the Bonanza was found.

6.0 COMMUNITY INVOLVEMENT IN PRESERVING HUNTS TRACK

(1) Shire of York

Signposts have been erected throughout this municipality marking both Balladong Farm from where Hunt commenced his journeys, and the York to Goldfields Heritage Trail

(2) Shire of Cunderdin

Roadside heritage trail signs prepared by the Bicentennial Heritage Trail Committee have been erected throughout the shire. The Cunderdin Historical Society have placed signs and plaques at Youndegin Well and the old police station originally built by Hunt's party. Members of the society maintain both these sites.

(3) Shire of Tammin

Tammin well is the only one of Hunt's wells in this municipality. The shire clerk reported that the well was in good condition and is a popular tourist spot. The well is generally maintained by either volunteers or the shire, and the shire is not aware of any maintenance conducted on Hunt's actual track itself.

(4) Shire of Kellerberrin

Signposts have been erected throughout the shire to mark the Heritage Trail and the wells of Hunt's Track. The brass plaques that have been prepared to mark each of the wells are with the shire office, with only the plaque for Dodolokine Well having been erected. The three wells of Hunt's within this municipality are on private properties and the owners are aware of each of them.

(5) Shire of Merredin

Most of Hunt's wells in this municipality are signposted. Mr Kevin Cahill, formerly involved with the Merredin Bicentennial Community Committee, and Mr Paul Brown of the Merredin office of CALM, have both been heavily involved with the wells restoration and preservation.

(6) Shire of Westonia

Only 18 or 20 km's of Hunt's Track actually passes between this municipality's boundaries. When contacted, shire officers were not aware of any of Hunt's wells, nor of any shire involvement with the track itself or the 1988 staged re-walking of the York to Goldfields Heritage Trail.

(7) Shire of Yilgarn

Much of the work done on Hunt's Track in this municipality has been by the Southern Cross Historical Society incorporating the Yilgarn. This group has been primarily responsible for the renovation of Hunt's wells at Koorkoordine, Moorine Rock, Kodjering and Weowanie Rock and has plans to restore the wells at Keocanie Rock and Yarkarakine.

(8) Shire of Coolgardie

At the time of contacting, the shire had received signs (from Bicentennial Heritage Trail people) for each of Hunt's wells in their shire, which were in their works depot. Although they have not yet begun works on the sites, their schedule is that in mid January the works foreman, shire clerk, and the co-ordinator of the Coolgardie Centennial Committee (Mr Ollie Swiderski) will visit each of the sites, erect signs, and ascertain the condition of each of the wells.

7.0 CONCLUSIONS

The historical significance of each of Hunt's wells and his track to Lake Lefroy is clearly recognised. So too is the importance of Hunt's work in facilitating the development of the eastern interior, and determining the path of early communications and transport networks. The spacing of reliable wells at convenient intervals along his track provided a safe route for explorers, travellers, prospectors and pastoralists to journey to the Coolgardie goldfields.

While the development of the eastern interior would still have occurred regardless of Hunt's contribution, it is probable that this would have taken a much longer period of time to eventuate.

While in terms of providing a public water supply these wells do not have a current usefulness they do provide an historic record of the first explorers and land users, who undertook their journeys in very adverse and harsh conditions. The wells also symbolise the constructive engineering skills of the day, and the fact that they still exist, in such good condition, more than 100 years later is testimony to that workmanship.

8.0 RECOMMENDATIONS

8.1 That all Wells, Soaks, Tanks, and Dams established by Charles Hunt be rehabilitated and maintained.

These rehabilitation works will need to be prioritised given the renovation work that has already been done on some wells by local historical groups. Repairs to wells on private land would also require the permission of the land owner. As a priority, those wells referred to in Sections 5.2 – 5.4 should be rehabilitated.

The safety element of the wells does also need to be addressed for those wells that are in poor condition. Such wells are subject to stone collapse, and at the repaired soak at Koorkoordine there have been problems with stones from the top layers of the soak being removed by vandals and thrown into the well.

Government departments with an interest and local governments can become more involved in maintaining the wells in good condition, or encourage and support (particularly with regard to the loaning of equipment and provision of expertise) community interest or historical groups in doing so. A list of historical societies and contact people is included in Appendix A2.

8.2 The wells be appropriately signposted, with better definition of the actual well location.

The Bicentennial Committee has already supplied many of the Shires with signposts and brass plaques for the wells, yet few of these have been erected. These signs should be erected to facilitate public access to the sites and encourage public awareness of local history.

Where possible the specific location of the well should be defined in an aesthetically pleasing, unobtrusive manner, such as low pine log fences.

8.3 Wells on Private Property need to be protected from the detrimental effects of stock access.

There is a need for those wells on private property to be fenced, thereby excluding stock from the immediate area and preventing them from falling into the well.

Of the wells that are part of Hunt's Track 10 are on private land. Three of these were recognised by Hunt as being significant with respect to water yield, with a fourth recognised because of its location, and another because of historic purposes.

8.4 Where wells can be protected through vesting this should be encouraged.

Wells that are part of a reserve need to have a review made of the relevance of the body and purpose, with whom, and for what they are vested.

While historically Hunt's wells were an important water supply, they no longer represent a potential public water supply on the scale required by a state water manager. The preservation of these wells for the purpose of historical significance could be better facilitated if these reserves were to be vested in another body, such as the National Trust or the local Shire for the purpose of the protection of state and cultural heritage.

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"Explorations in Western Australia by C.C. Hunt 1864-5,6" (Map No. 74, Dept of Lands and Surveys, Perth).

APPENDICES

A1 ALTERNATIVE NOMENCLATURE FOR EACH SITE

- No. 5 Dodolakine also called Doodlakine
- No. 7 Totadgin also called Yotadgin
- No. 8 Merredin Peak Dam also called Durdgutling, Durdgutting
- No. 9 Burracopping also called Burracoppin
- No.10 Boodahlin also called Boodalin, Bodallin
- No.15 Weowanie Tank also called Weawanie
- No.16 Karolling Dam also called Carolling, Karolin
- No.20 Wargangering Dam also called Wargongering
- No.22 Gnarlbine Well also called Gnarelbine

A2 REGISTER OF CONTACT PEOPLE FOR THE YORK TO GOLDFIELDS HERITAGE TRAIL

1. Shire of Coolgardie
Box 7
Coolgardie WA 6429 (090) 266007 fax.(090) 266266
Ollie Swiderski, Co-ordinator Coolgardie Centenary
Committee - Shire Office
2. Shire of Cunderdin (096) 351005
3. Cunderdin Historical Society
c/- Kit Beard (096) 351113 home
4. Shire of Kellerberrin (090) 454006
5. Kellerberrin Historical Society
c/- Allan Cole (090) 454230
6. Shire of Merredin (090) 411611
7. John Rutherford (Merredin Councillor) (090) 411648
8. Shire of Quarading (096) 451001
9. Shire of Tammin (096) 371101
10. Shire of Westonia (090) 467083
11. Shire of Yilgarn (090) 491001
12. Southern Cross Historical Society (Incorporating the Yilgarn)

Mrs E. Forrester (090) 491225

Mrs L. Blyth (090) 475010
c/- Post Office
Bodallin WA

13. Shire of York (096) 411104

14. Shire of Boulder

15. Eastern Goldfields Historical Society (Inc.)

Mr Keith Quartermaine
P.O.Box 643
Kalgoorlie WA 6430

16. Mr Simon Keane

c/- Arronmore Catholic College
Leederville WA 6007 (09) 4449355

17. Mr Kevin Cahill

Box 180
Merredin 6415 (090) 411652

18. Western Australian Heritage Committee (09) 3224375

See 1:2000 and 1:10000 Enlarged Plans

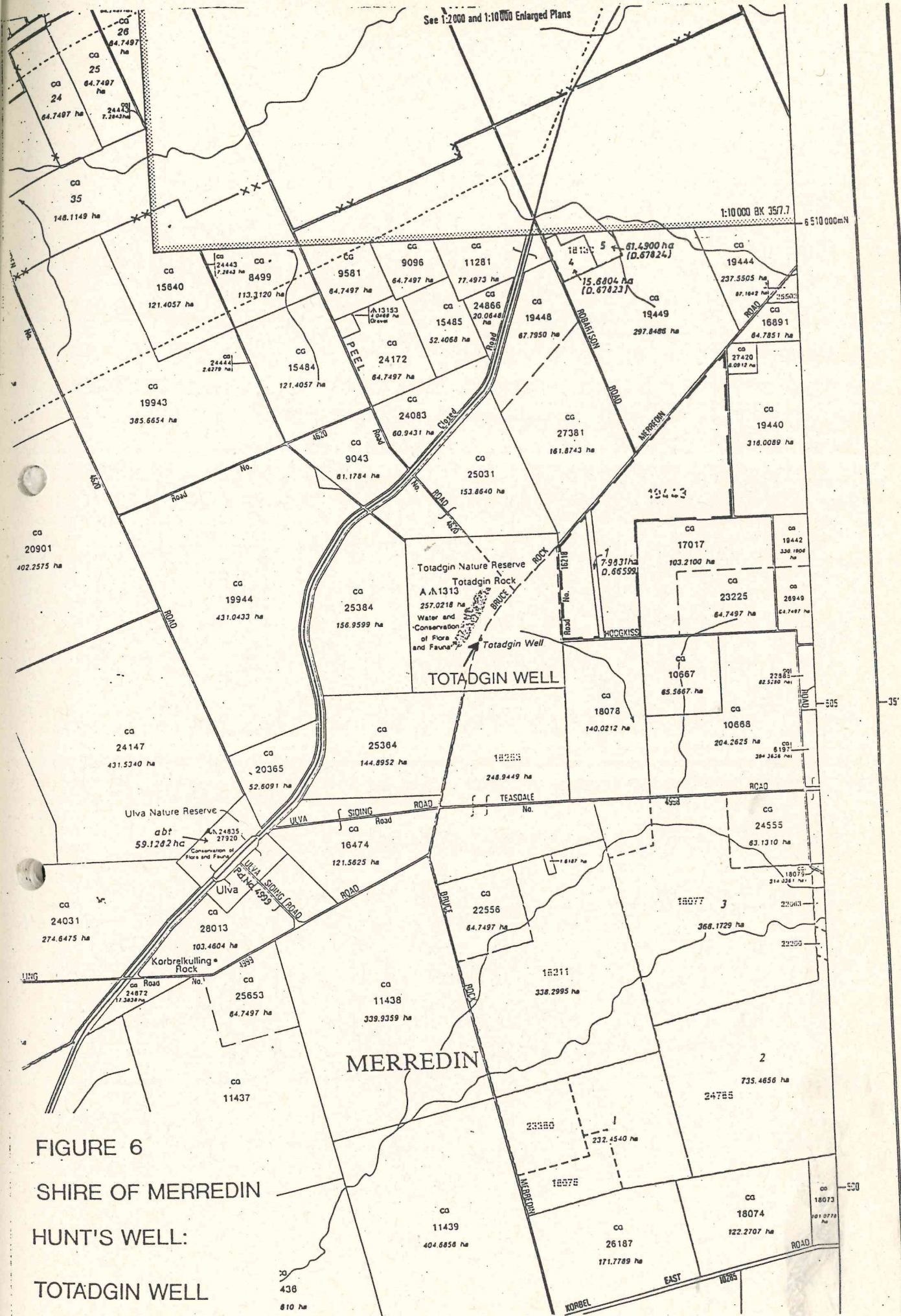


FIGURE 6
 SHIRE OF MERREDIN
 HUNT'S WELL:
 TOTADGIN WELL

35'

505

500

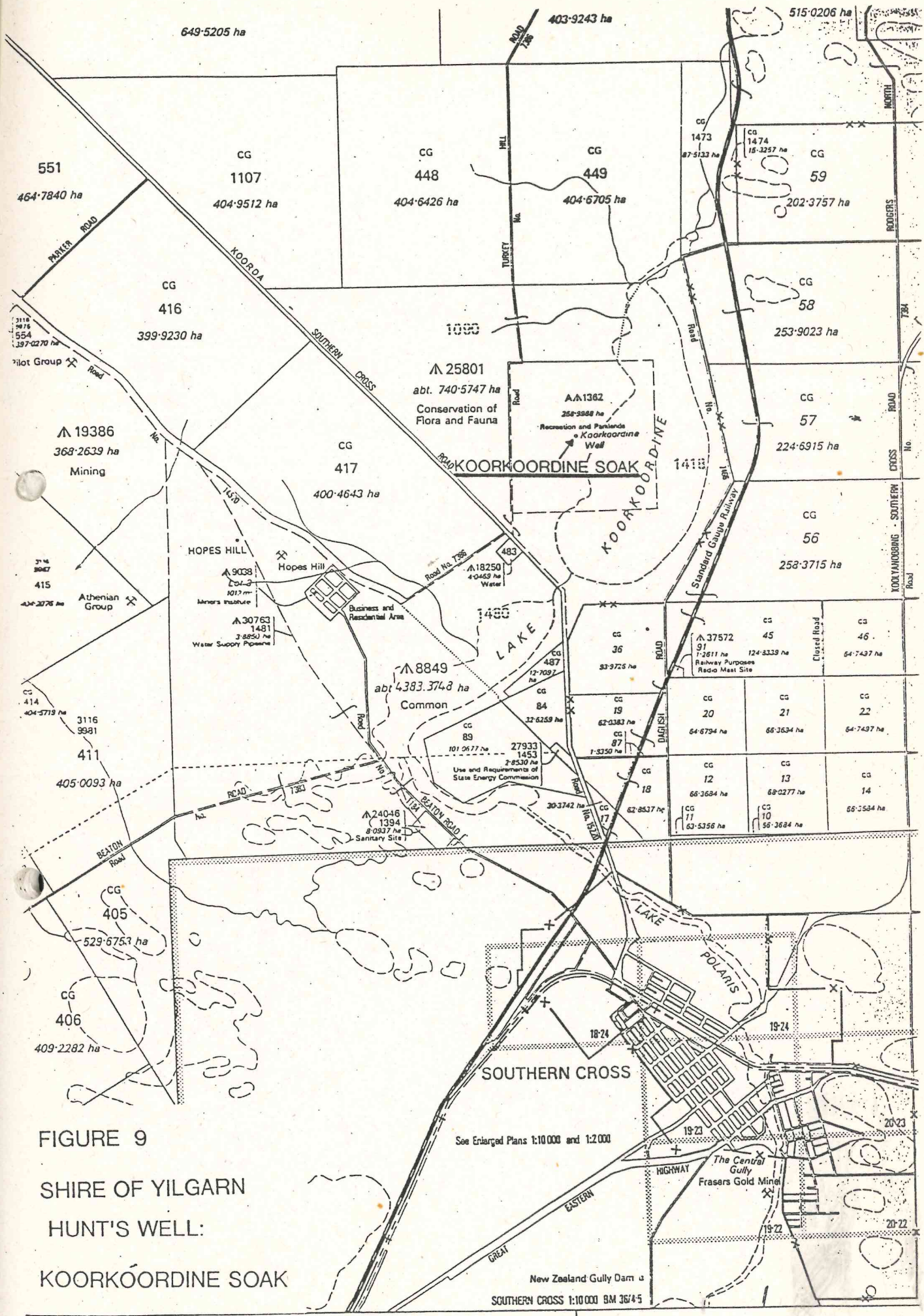


FIGURE 9
 SHIRE OF YILGARN
 HUNT'S WELL:
 KOORKOORDINE SOAK

See Enlarged Plans 1:10 000 and 1:2 000

New Zealand Gully Dam a
 SOUTHERN CROSS 1:10 000 BM 36/45

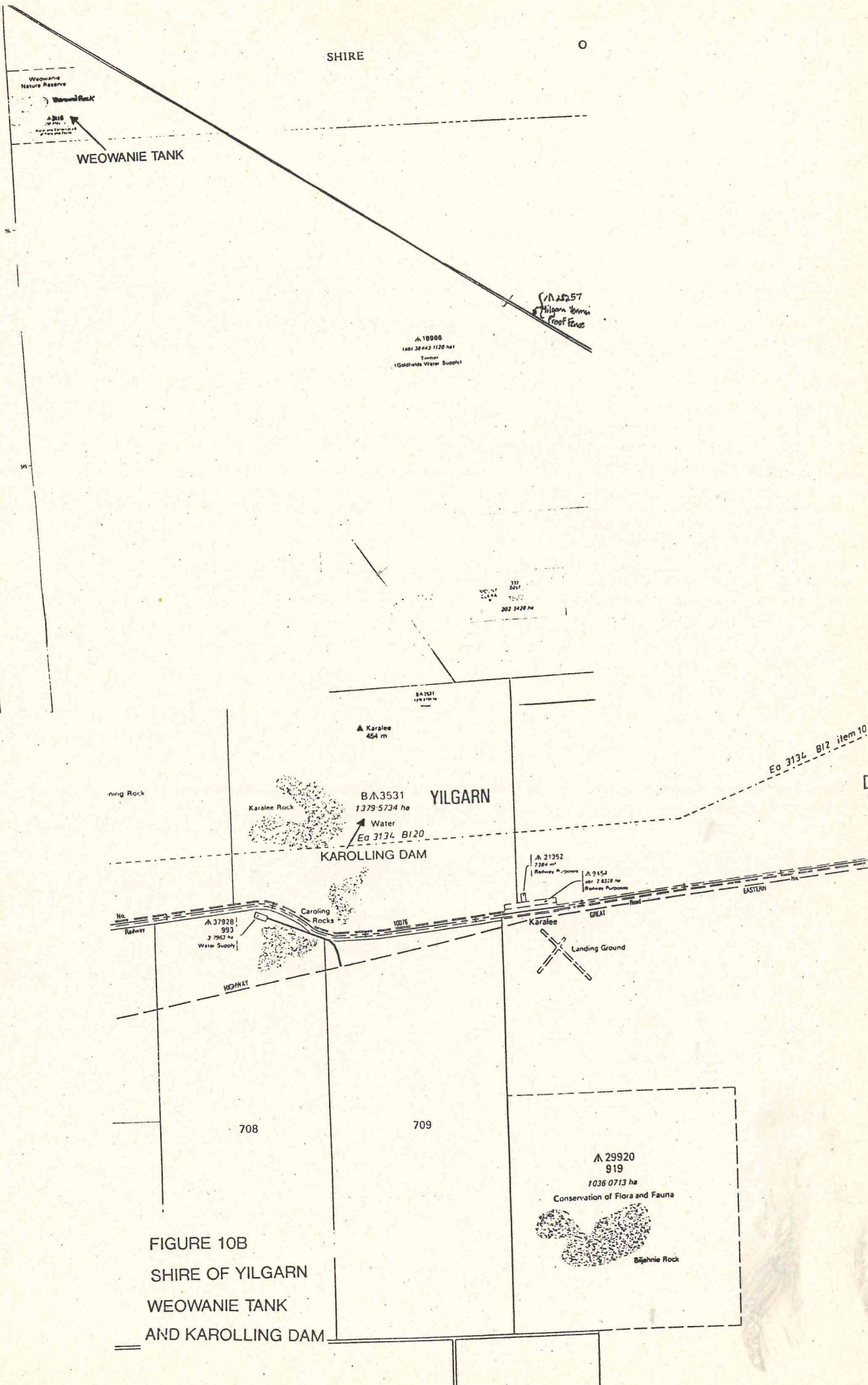


FIGURE 10B
 SHIRE OF YILGARN
 WEOWANIE TANK
 AND KAROLLING DAM

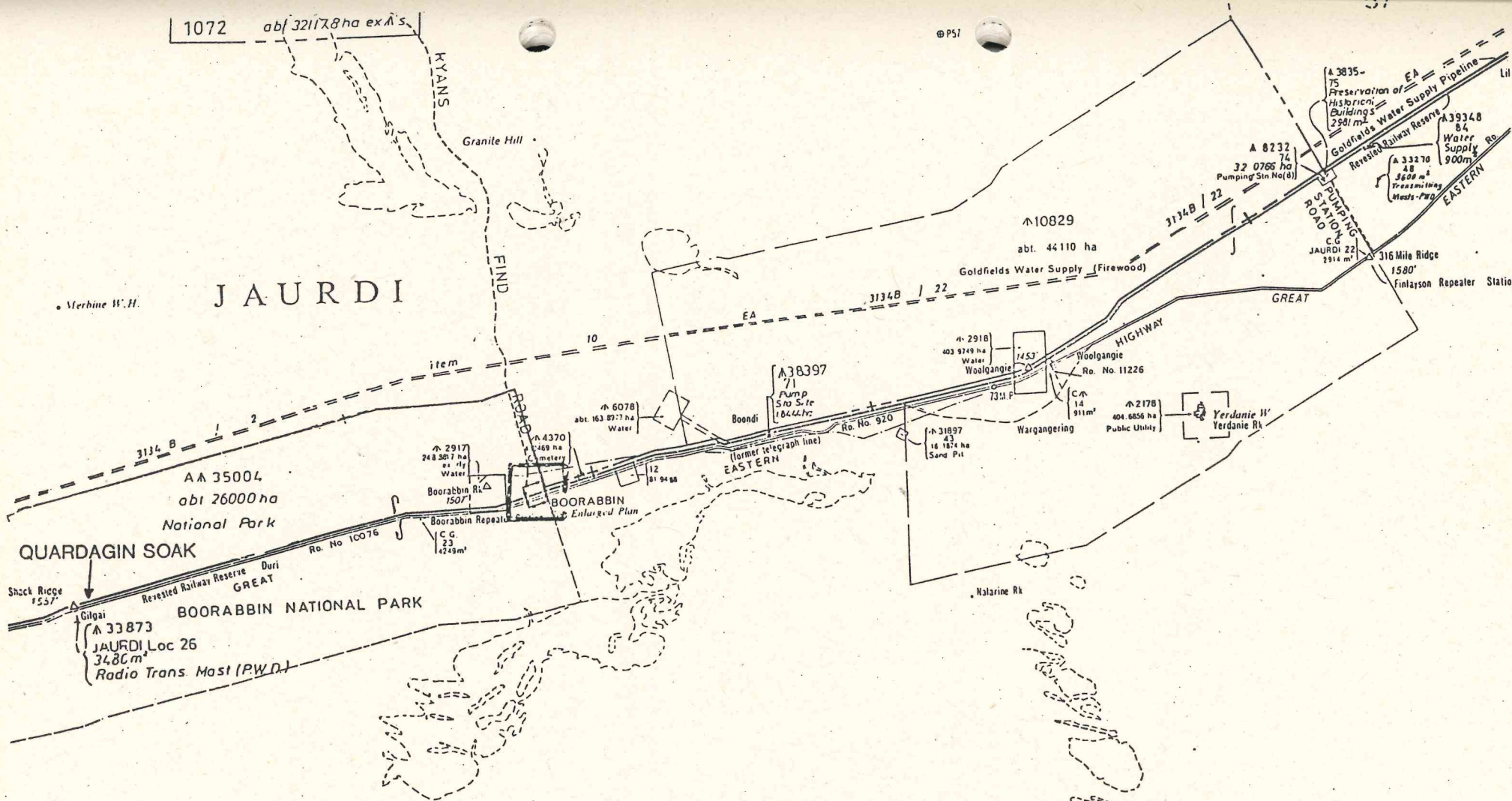
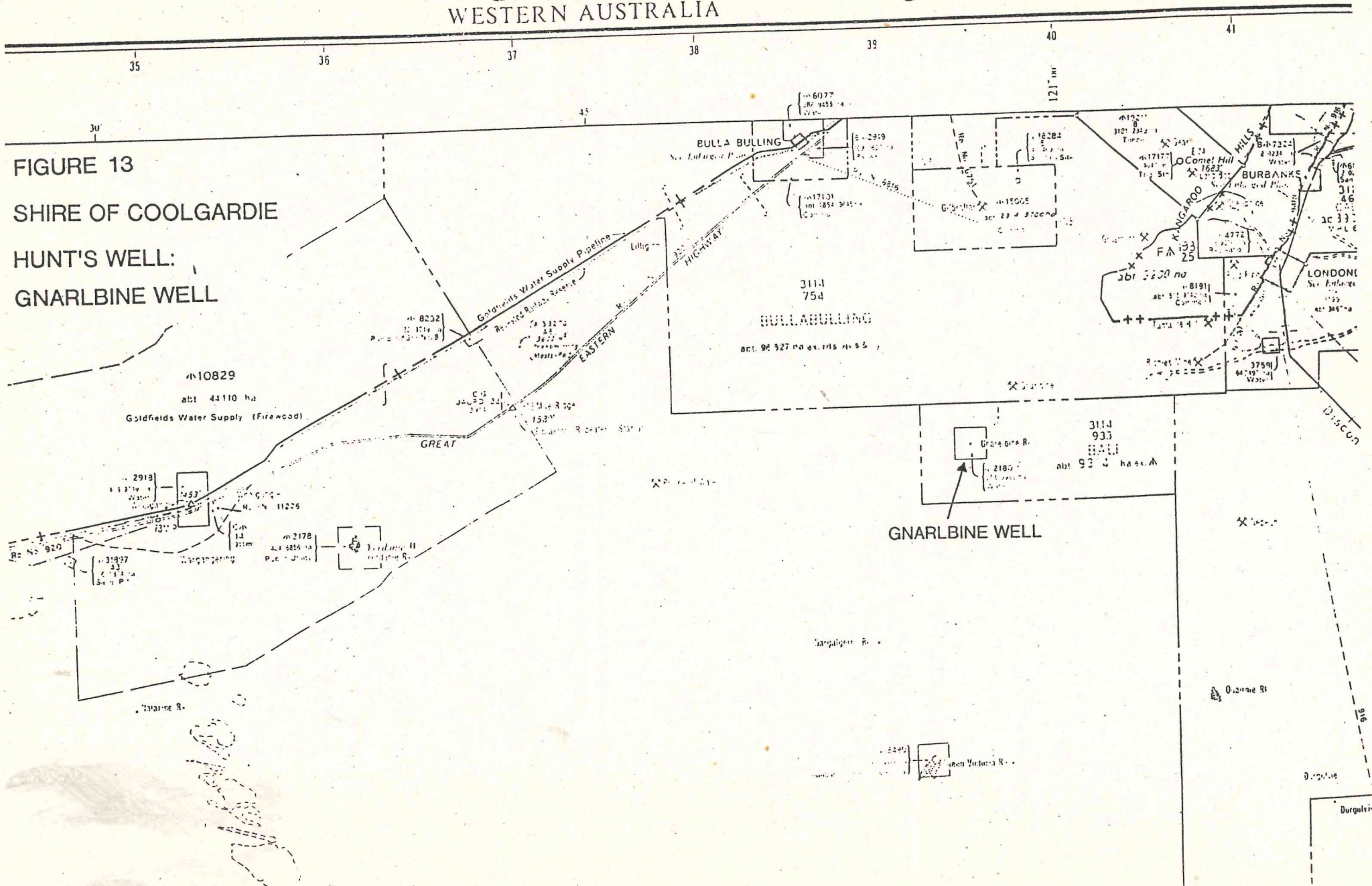


FIGURE 11
 SHIRE OF COOLGARDIE
 HUNTS WELL:
 QUARDAGIN SOAK

BOORABBIN WESTERN AUSTRALIA

FIGURE 13
SHIRE OF COOLGARDIE
HUNT'S WELL:
GNARLBINE WELL



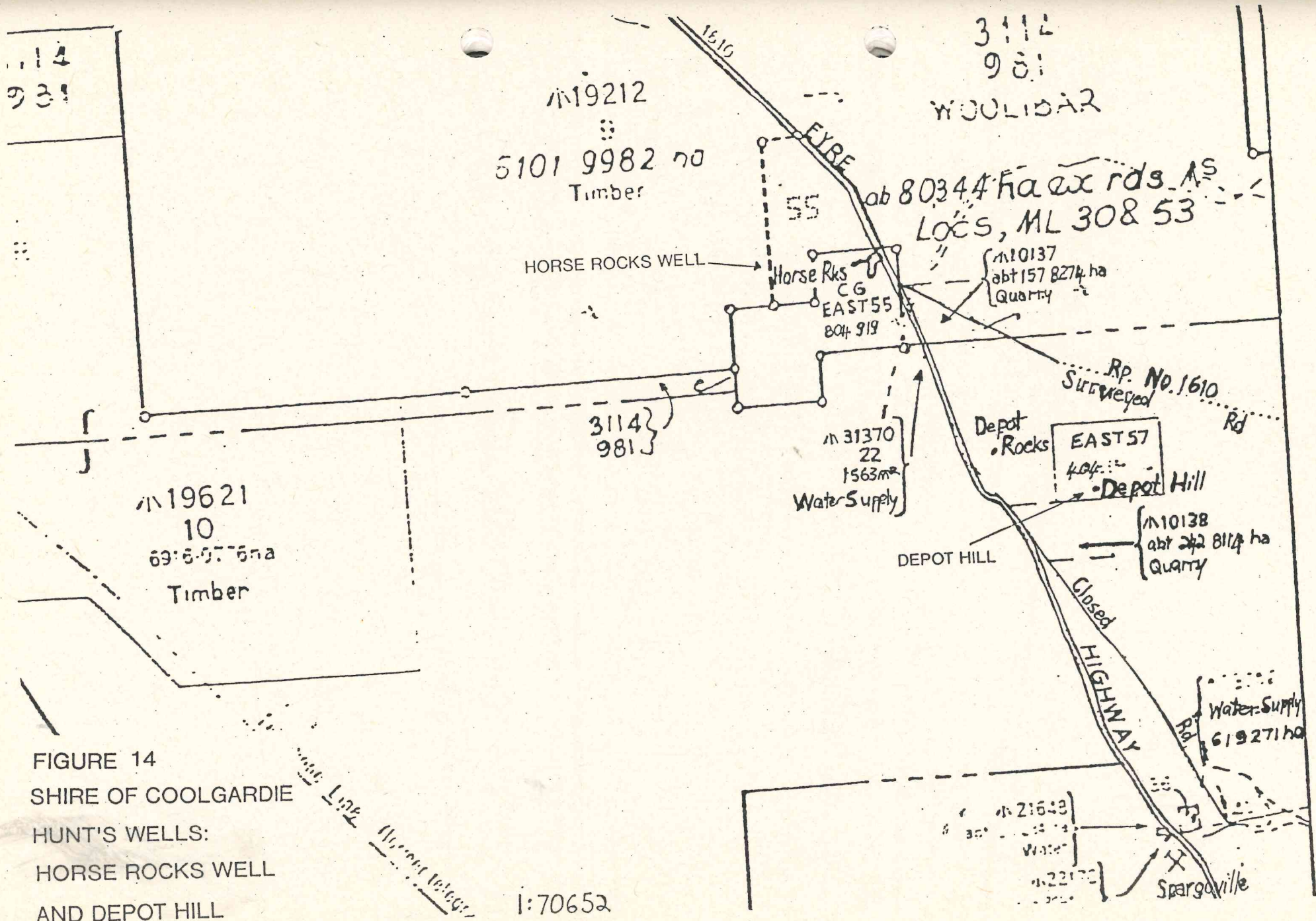


FIGURE 14
 SHIRE OF COOLGARDIE
 HUNT'S WELLS:
 HORSE ROCKS WELL
 AND DEPOT HILL

1:70652

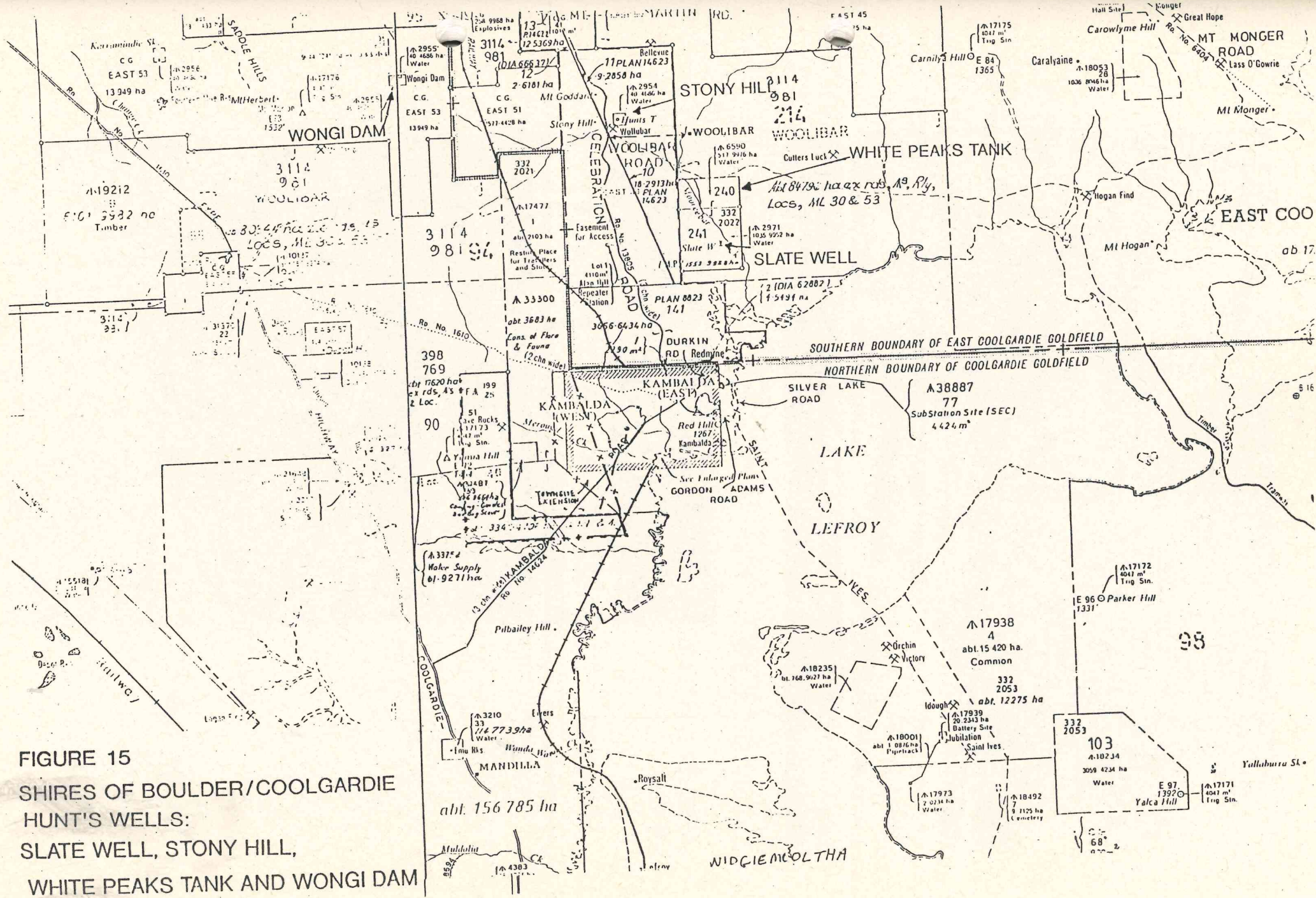


FIGURE 15
 SHIRES OF BOULDER/COOLGARDIE
 HUNT'S WELLS:
 SLATE WELL, STONY HILL,
 WHITE PEAKS TANK AND WONGI DAM



PLATE 1

YOUNDEGIN
WELL

June 1982



PLATE 2

TAMMIN WELL
September 1981

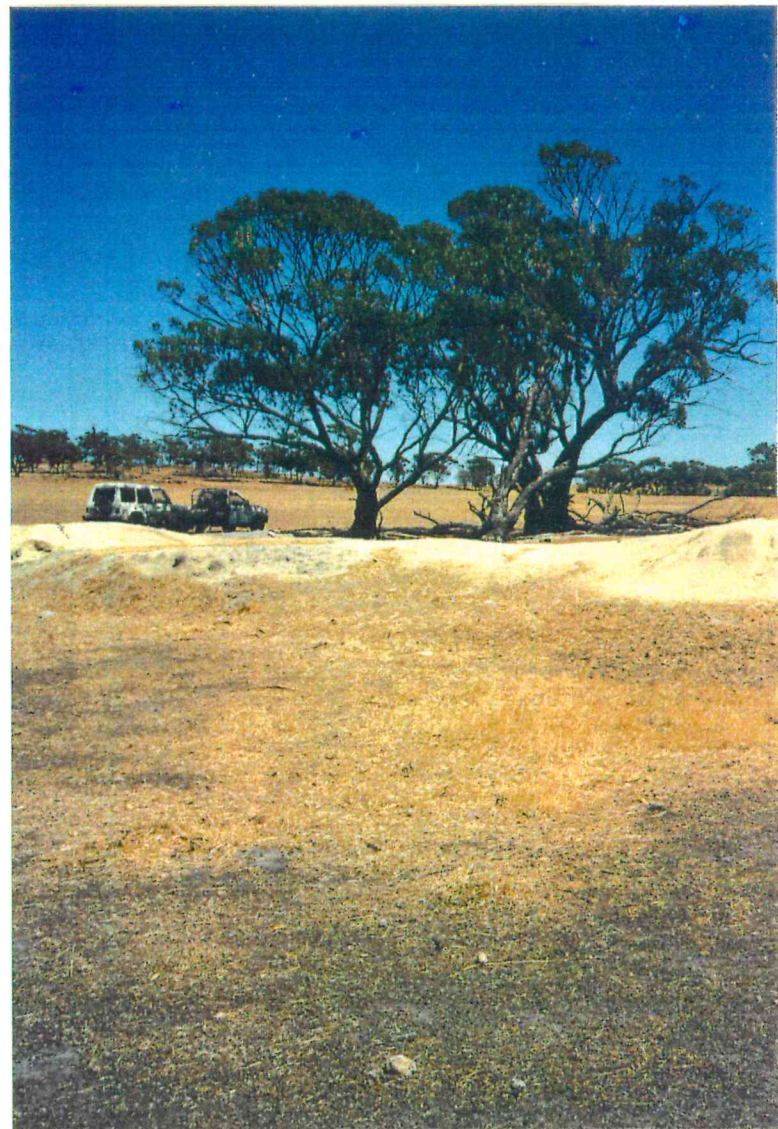
PLATE 3A



NARALINE WELL

September 1981

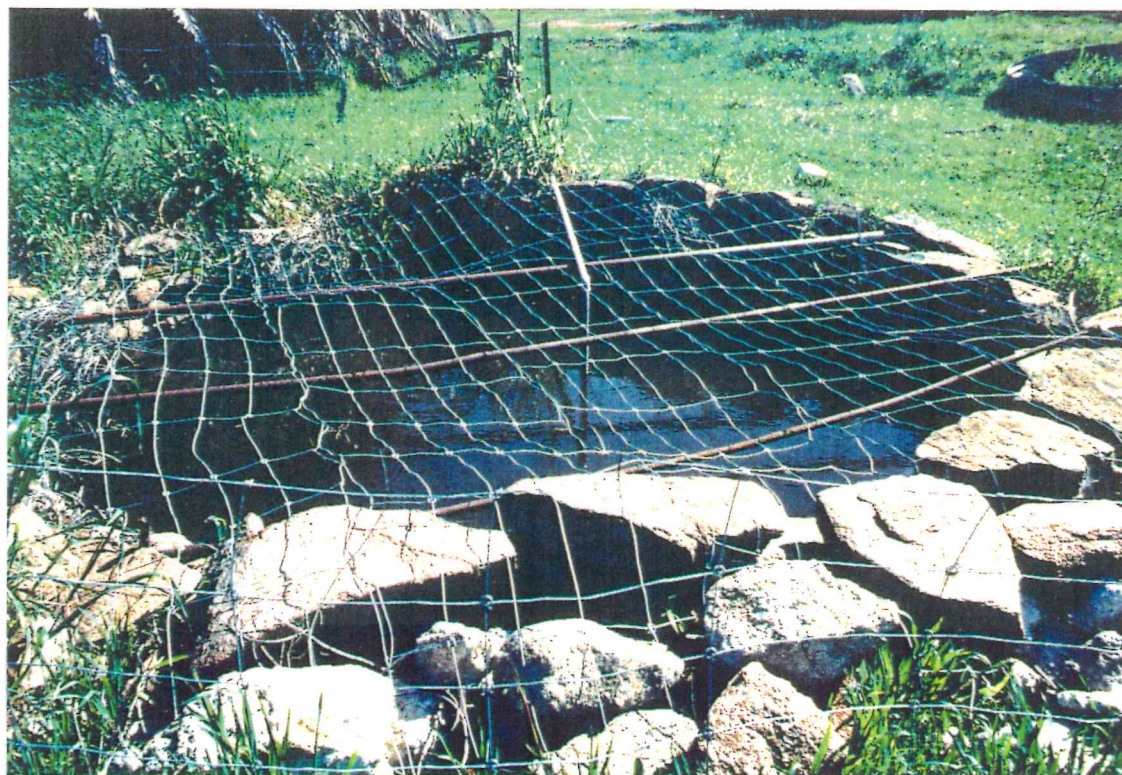
PLATE 3B



NARALINE WELL

February 1991

PLATE 4A MARANOBHING WELL



September 1981

PLATE 4B MARANOBHING SOAK



September 1981



PLATE 5A

DODOLOKINE WELL September 1981



PLATE 5B

DODOLOKINE WELL February 1991

PLATE 6 METCHERING WELL



June 1982

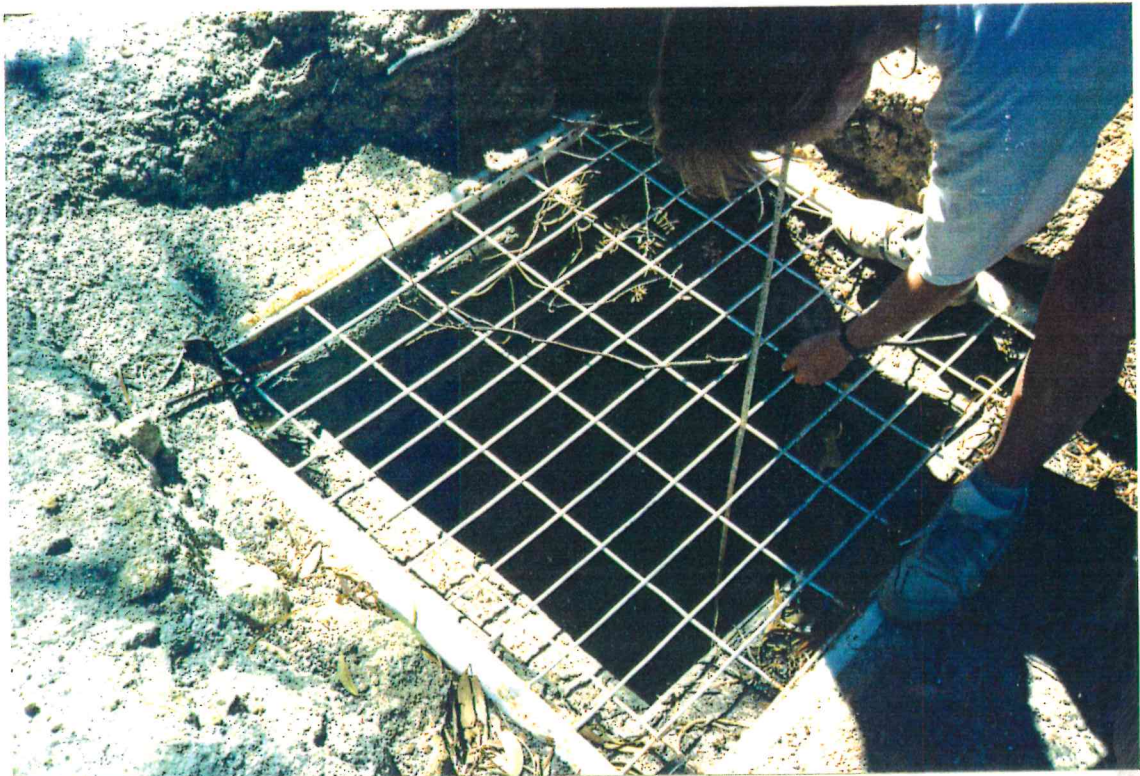
PLATE 7A



TOTADGIN WELL

September 1981

PLATE 7B



TOTADGIN WELL

February 1991



PLATE 8 MERREDIN PEAK DAM

September 1981



PLATE 9

BURRANCOPPING
WELL

September 1981

PLATE 10 BOODAHLIN SOAK



September 1980



PLATE 11A
MOORINE WELL

June 1982



PLATE 11B

MOORINE WELL February 1991

PLATE 12 KEOCANIE WELL



June 1982

PLATE 13 KODJERNING WELL



February 1991

PLATE 14A KOORKKOORDINE SOAK



September 1981

PLATE 14B KOORKKOORDINE SOAK



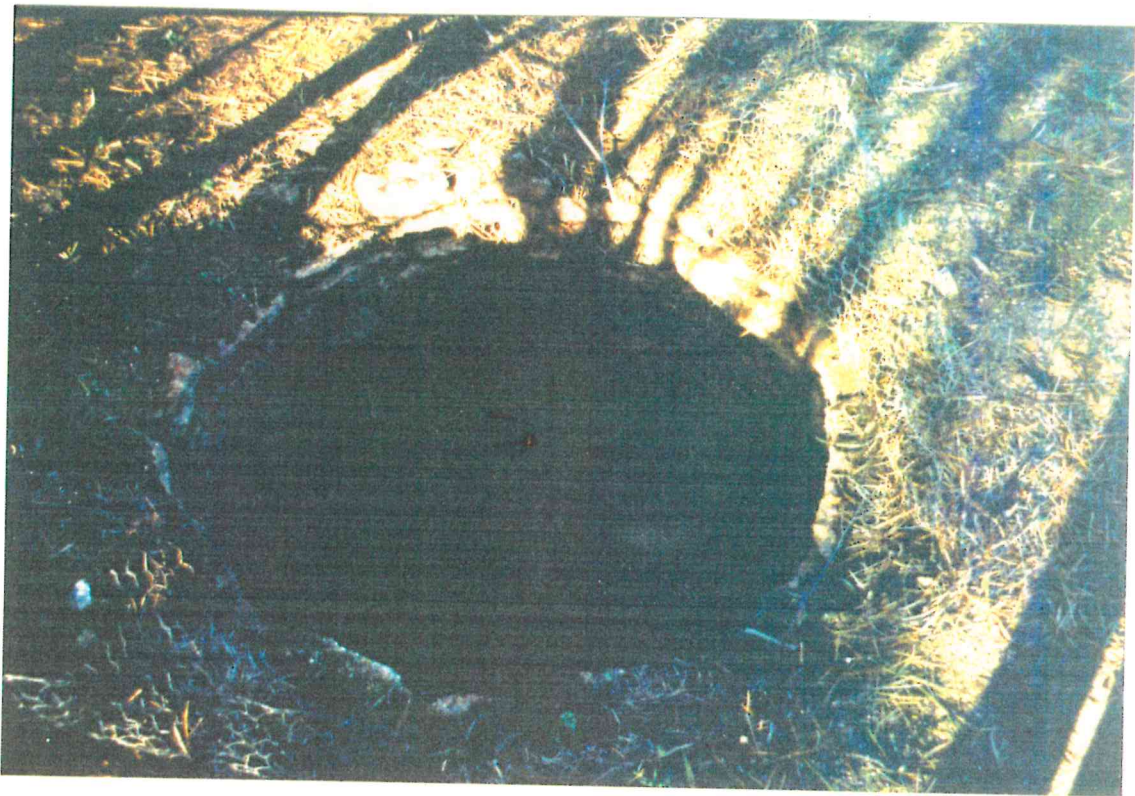
February 1991



PLATE 16
QUARDAGIN WELL

June 1982

PLATE 17 GNARLBINE WELL



September 1980

PLATE 18 SLATE WELL (Looking East)



September 1981

PLATE 19 STONY HILL TANKS



September 1981

PLATE 20 SADDLE HILLS



(Looking South West)

September 1981

PLATE 21 HAMPTON PLAINS



Terminus of Hunt's Track

September 1981