

"CHINAMAN'S WELL" AND STONE QUARRIES HISTORIC SITE  
COORONG NATIONAL PARK

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HERITAGE SIGNIFICANCE

Historically, the site represents the first development of Chinese wells in South Australia to secure a water supply for immigrants travelling to the Victorian gold-fields. No other well of this type is known in Australia.

Physically, the site contains a masonry well, several quarries, ruins of a European eating house, and relics of the overland telegraph.

Environmentally, the elements of the site are scattered and relatively inconspicuous amid swamps and dunes near the Coorong.

The integrity of the site is high. Although some elements are in ruinous condition, there is little recent intrusion. The well and quarries are remarkably intact.

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NOMINATION SOURCE/THREAT/OWNER

This report has been prepared as part of the Branch's reassessment of the context of some early items. The well was placed on the Register in May 1981. An archaeological investigation in 1983 established the significance of the surrounding area, and a management plan has been prepared. The site is vested in the Minister as a National Park and is under no threat, although the well requires conservation of damaged masonry and the impact of visitors must be controlled.

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STATE HERITAGE BRANCH RECOMMENDATION:

.....  .....  
for Manager

It is recommended that this item be included on the Register of State Heritage Items.

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South Australian Heritage Act 1978-82	Register of State Heritage Items ITEM EVALUATION SHEET Historic Site	Ref. No. 6825-10253
	Item "CHINAMAN'S WELL" HISTORIC SITE COORONG NATIONAL PARK	Status NTC, NER, RSHI
Age 1856+	Subject ORIGINAL USE: 0208 Well	Site Type -

History

Physical

Environment

Integrity

**Context** The well was constructed to facilitate overland travel by Chinese miners from Port Adelaide to Victoria, during the short period 1855-57 when South Australia provided a means to evade Victoria's discriminatory legislation.

**Person/Group** Chinese immigrants  
Joseph Darwent  
Charles Todd

**Event** The Chinese rush via South Australia, 1855-57.  
  
Construction of Adelaide-Melbourne telegraph, 1858.

**Natural Elements** Limestone flats, dunes, salt lakes and swamps with stunted acacia vegetation on the eastern shore of the Coorong.

**Man-Made Elements** A masonry well, associated quarries, other wells, eating house foundations and stumps of telegraph poles. Some areas of archaeological significance. The Princes Highway forms the eastern boundary of the site.

**Representation** No other well of this type is known in Australia.

**Continuity** Not applicable.

**Local Character** The site is a focal point for several themes in the early history of the South-East.

**Landmark** Although not physically conspicuous, the site constitutes an important cultural landmark.

**Alterations** Demolition of buildings.

**Condition** Condition of surviving elements is generally good, despite vandalism and decay.

**Compatibility** Not applicable.

E	VG	AG	FP	NA
X				
	X			
	X			
			X	
X				
X				
				X
X				
X				
		X		
		X		
				X

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### Supplementary Information

Adaptation: The site has little potential for any use other than its present one as a National Park.

Interpretation: Publicly owned and close to a major highway, the site will have a high rate of visitation. Its management and interpretation are being planned within the National Parks Service.

### History and Sources

The land route from Melbourne to Adelaide was pioneered by Charles Bonney in 1839, passing along the eastern shore of the Coorong. While sea transport was generally cheaper than land, the movement of stock was one area where overlanding was practical, and after pastoral settlement was well under way in the South-East by 1850, the Coorong Road saw steady use.

However, the most remarkable interval in the use of the Coorong land route arose from Victoria's attempt to exclude Chinese from the gold-fields, by means of legislation specifically designed to discriminate against Chinese arriving in the colony by sea.

Coyly entitled "An Act to make provision for certain Immigrants", the Victorian legislation came into effect on 1 November, 1855. Defining an immigrant as "any male adult native of China", the Act levied an entry fee of ten pounds per head, and more significantly limited the number of "immigrants" who could be landed in Victoria to one per ten tons shipping tonnage, making the passage of Chinese unprofitable for shipping firms.

The obvious loophole in this legislation was Victoria's land borders, and by the early months of 1856 Victoria-bound ships from China were diverting to South Australian ports to off-load passengers. Although folklore puts most emphasis on the Chinese influx through the port of Robe, there were several thousand Chinese landed in Port Adelaide; 1,500 disembarked from five ships in a matter of days in July 1856. There appear to have been three principal routes of entry: through Robe, by sea to Port Adelaide and thence by coastal steamer to Robe, and overland all the way from Port Adelaide.

The third route involved the Coorong Road, which was travelled by at least hundreds and probably thousands of Chinese in 1856-57. The well south of Salt Creek was apparently constructed to serve this traffic. The Chinese influx to mining districts throughout Australia was carefully organised, and some effort was normally put into providing infrastructure in support of immigrants. Archaeological evidence, and particularly the quarry sites, suggest that the well was the work of skilled artisans, accomplished in their distinctive method of quarrying. The well has been

contd.



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### History and Sources

identified by Chinese archaeologists as a form familiar to them from rural China. It seems likely that it was one of a chain which served the Coorong Road, but while there are historical accounts of two others in the district in the past, neither are so readily recognisable as is Chainaman's Well.

The well's presence was first recorded in September 1856 by Charles Todd, when engaged in surveying the route for the intercolonial telegraph. He reported in a letter to the Colonial Secretary that:

"On the 24th, I crossed the Coorong two miles below Bradford's, at a place called the Chinamen's Wells ..."

Thus, the well can confidently be dated to between November 1855 and September 1856 from documentary evidence, and the most likely time of construction is the dry summer months of early 1856, when the Chinese influx to South Australia was beginning:

(It has been suggested that the well dates from c. 1880, on the strength of a report in 1882 on wells sunk by the government in the previous five years, which lists "Chinaman's wells Coorong". However, it is evident from remarks in the report that many of the wells reported on were simply deepened, repaired or cleaned during that period, not initiated. The well's fabric is unquestionably Chinese, not public service issue).

Just as remarkable as the well itself, are the two associated quarry sites on the shore of the salt lakes. The larger quarry has been used to extract limestone blocks from a flat bedded sheet of stone by inscribing and cutting in arcs around centring holes. However, while the quarry is undoubtedly the source of the curved blocks used in the well, the quantity of stone removed is several times greater than the quantity extant in the well.

A second quarry site, in sandstone, contains the hole from which the well's cover plate, a single stone 1.2m in diameter, was taken, and a second circular stone in situ which cracked during quarrying.

Chinese traffic on the Coorong Road probably dwindled in 1857, after Robe harbour became the principal entry point, and ceased entirely by the end of that year. Under pressure from Victoria, the South Australian parliament passed legislation with nearly identical discriminatory provisions, but called it more frankly: "An Act to make provision for levying a charge on Chinese arriving in South Australia".

In 1857 the Intercolonial Telegraph was constructed through the site, consisting of sawn jarrah posts about 150mm square, spaced at intervals of about 50m. The stumps of fifteen telegraph poles have been identified on the site, together with porcelain insulators and other accessories.

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About 200m south-east of the wall are the ruins of a substantial stone building, whose occupation history is not at present clear. The building was probably constructed in 1864 as a wayside eating house conducted by Joseph Darwent, who was later a contractor on the Overland Telegraph line to Port Darwin in 1870-71. Subsequently, the building may have been occupied as a pastoral homestead by Joseph Gall from 1889 to 1907. It was abandoned soon after, and later demolished for road-building materials. Archaeological investigation of this site was undertaken in 1983, and a report is in preparation.

A further element of the site is a stone lined rectangular well of unknown date, 100m north-east of the Chinese well. There are remains of iron troughs and ships' tanks in the vicinity. This well is probably of government origin, and is possibly the one described in the report of 1882.

After a period of nearly continuous activity from 1856 to 1909, the site was deserted from the early twentieth century onward. Construction of a formed road on a new alignment east of the salt lakes has taken traffic away from the immediate vicinity of the well, and activity there in recent decades has been restricted to casual recreational visits.

### Sources

W. Snoek, Archaeological Report of Chinaman's Wells, The Coorong National Park, Department of Environment and Planning, 1984.

R. Luebbers, Recommendations for the Management of the Cultural Heritage of Chinaman's Wells, Coorong National Park, Department of Environment and Planning, 1983.

M.P. Rendell, "The Chinese in South Australia Before 1860", Royal Geographical Society of South Australia Proceedings, Vol. 54, 1953, pp. 23-33.

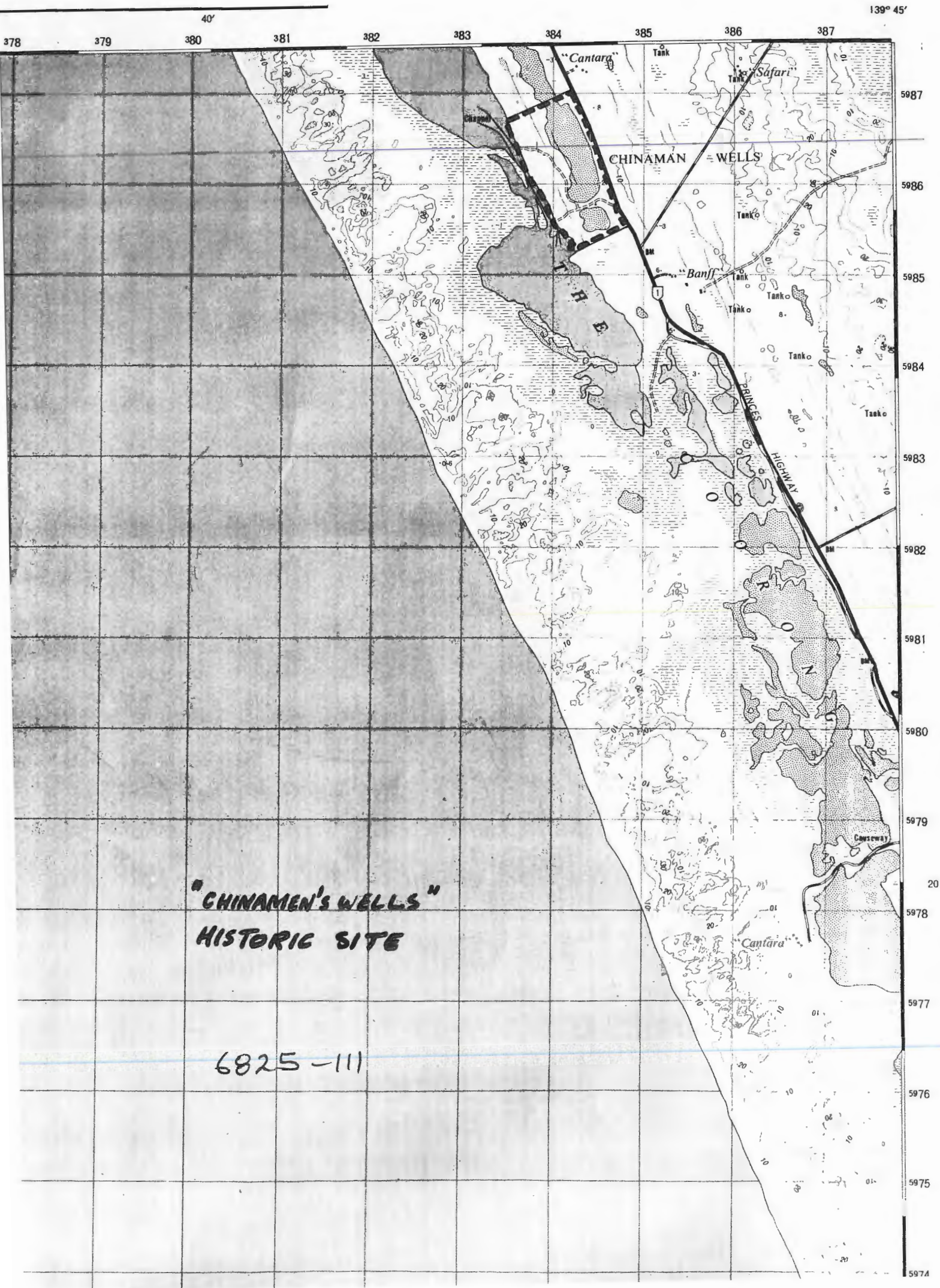
Charles Todd to Colonial Secretary, 17 October 1856, S.A.P.P. Council Paper, 11/1856.

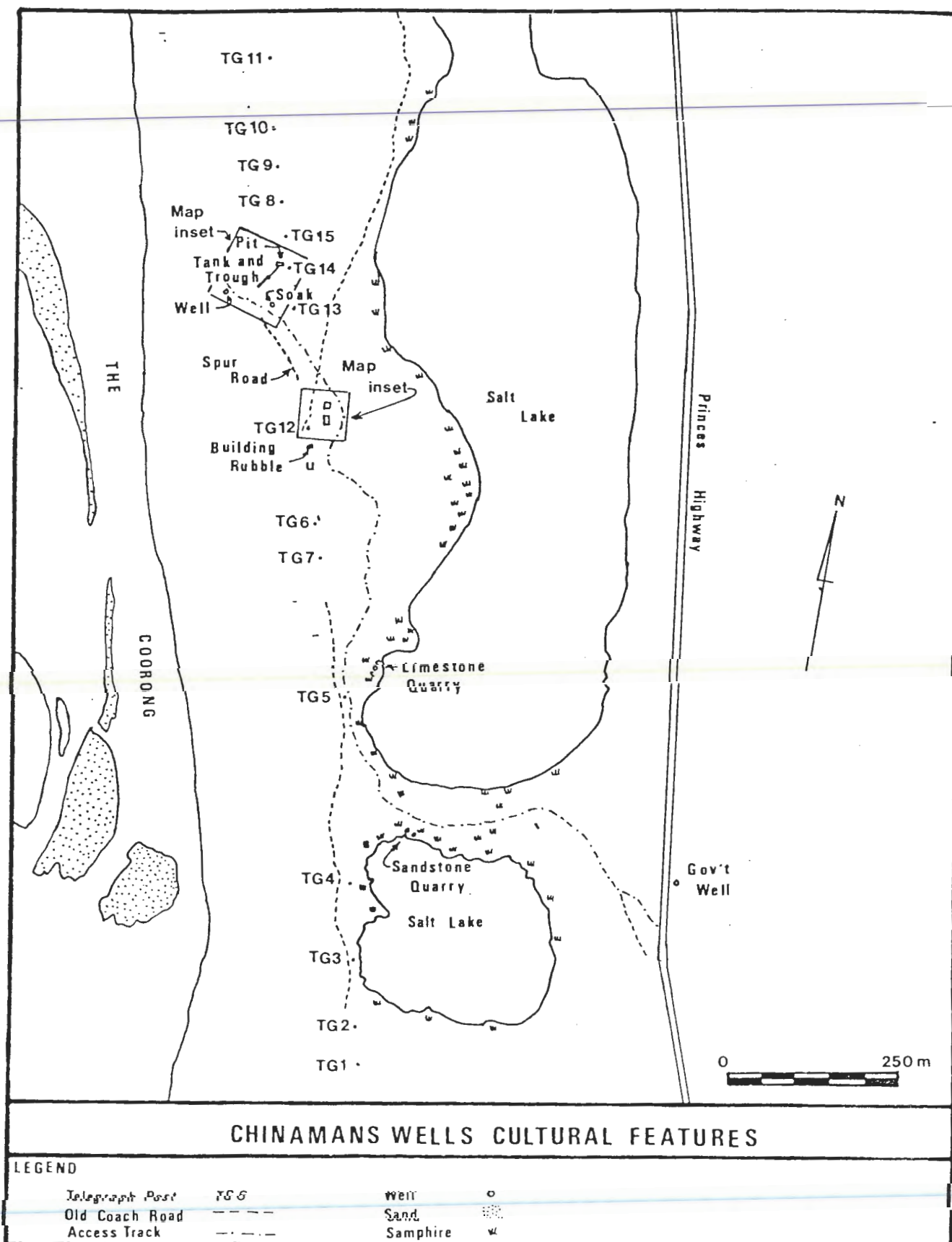
Number of Wells Sunk by Government, S.A.P.P. 138/1882.

18 Vic No. 39 (Victoria).

20 Vic No. 3 (South Australia).

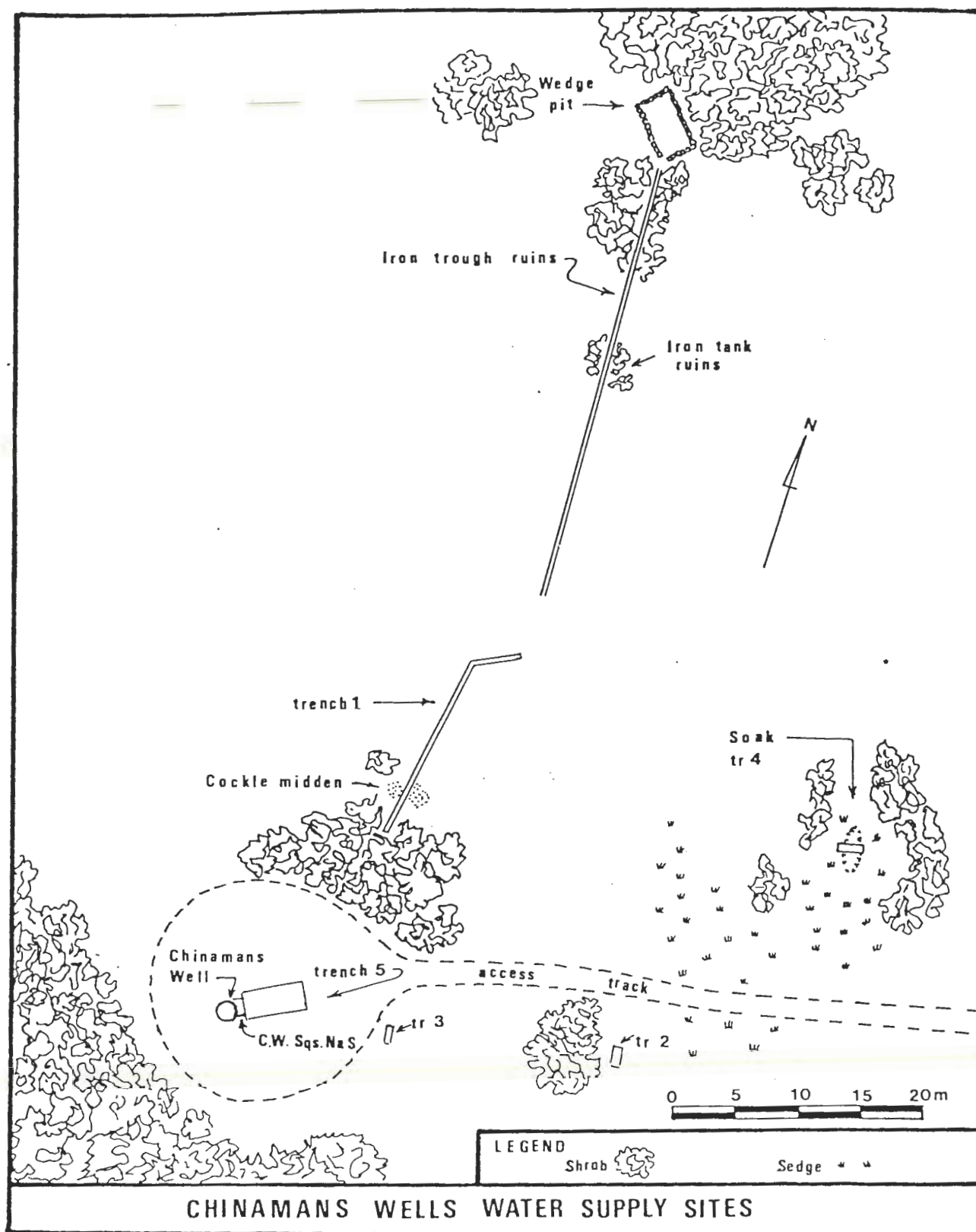






MAP 1

Site plan of Chinamans Wells and relevant cultural features as compiled from the field survey, archaeological excavations, and personal interviews.



MAP 2

Plan of water supply sites at Chinamans Wells compiled from field survey and excavation data.



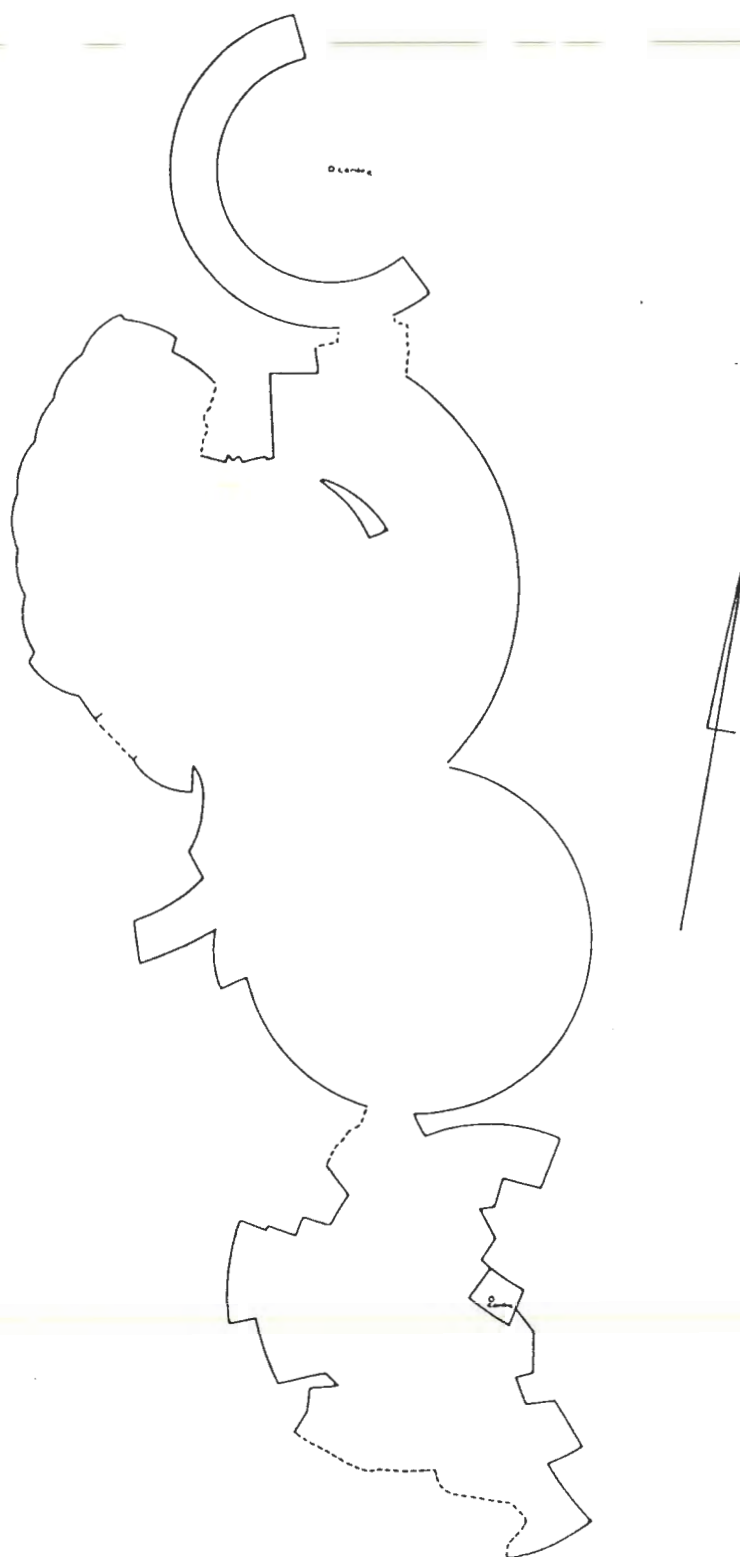


FIGURE 4

Outline of limestone quarry on western shore of salt lake near Chinamans Wells. Water laps quarry to right of illustration and vegetation extends to within 2m on left. Note four main arcate forms from which circular cuts through stone were made. The only two centering holes found are marked and the length of the cuttings is 21.5m.

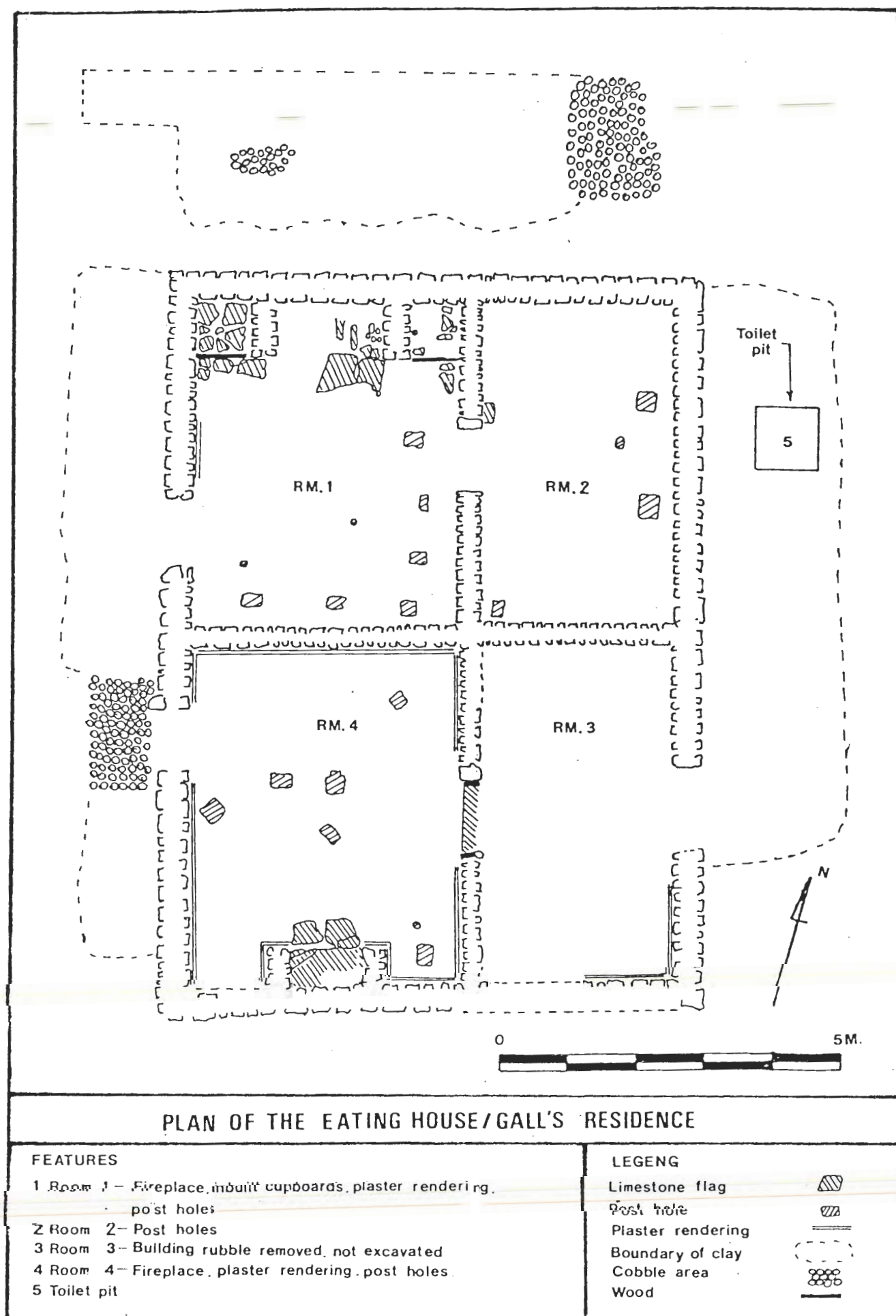
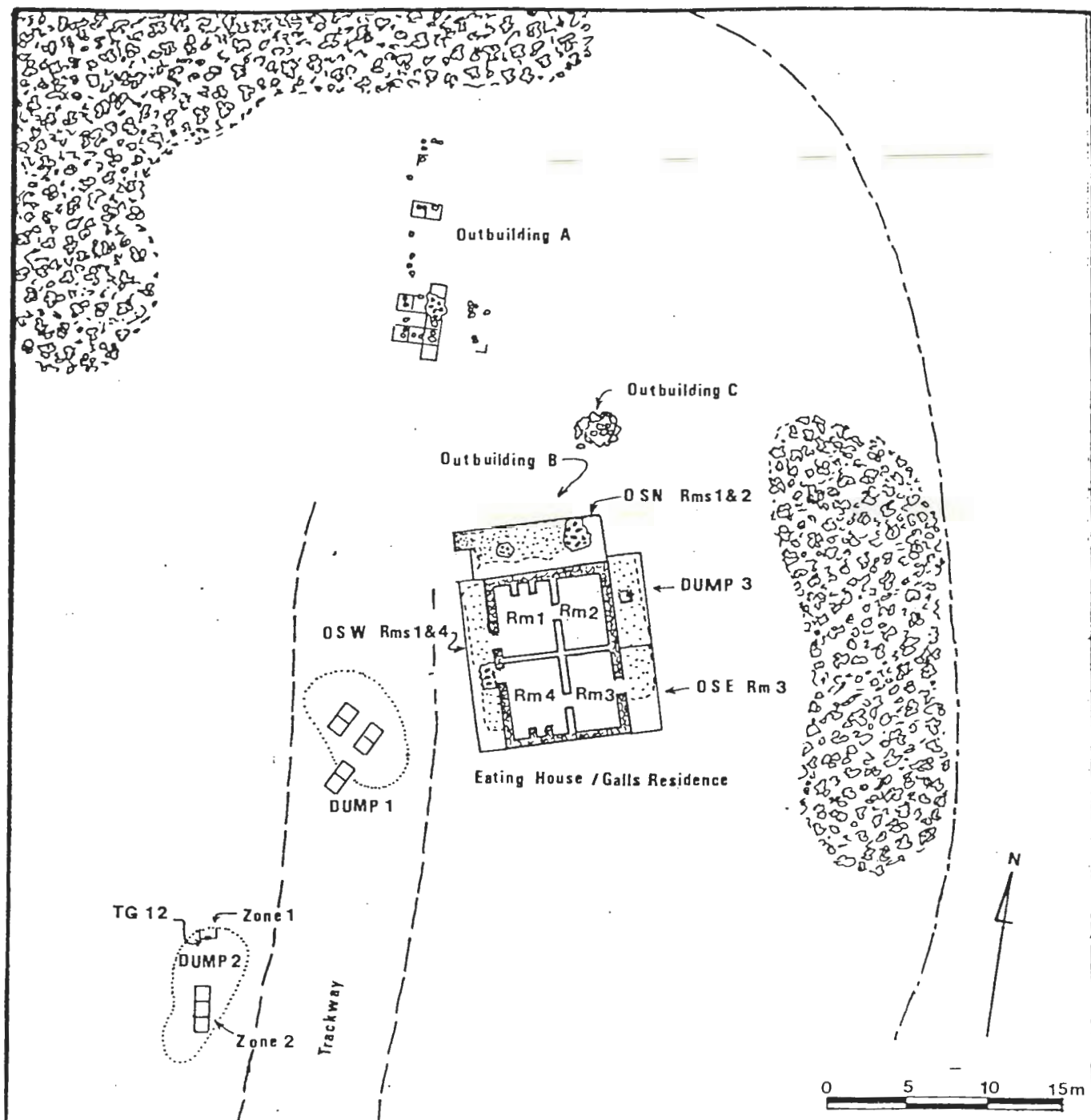


FIGURE 1

The architectural features of the Eating House/Gall's Residence as known from archaeological excavation.



### CHINAMANS WELLS EATINGHOUSE /GALL'S RESIDENTIAL COMPLEX

#### FEATURES:

- 1 Eating House - 11x8m Limestone foundations : 4 rooms
- 2 Outbuilding A - Size unknown: Flagstone, timber construction
- 3 Outbuilding B - Size unknown: limestone, rubble
- 4 Outbuilding C - 2m diam. : Limestone rubble: function unknown
- 5 Dump 1 - Kitchen domestic and construction refuse
- 6 Dump 2 - Kitchen domestic and construction refuse
- 7 Dump 3 - Kitchen and domestic refuse
- 8 TG12 - Telegraph posts and post base
- 9 Trackway - hard cemented sand layer

#### LEGEND

- Limestone
- Cobble paving
- Clay floor
- Acacia scrub
- Excavation unit
- Buried deposit
- Track

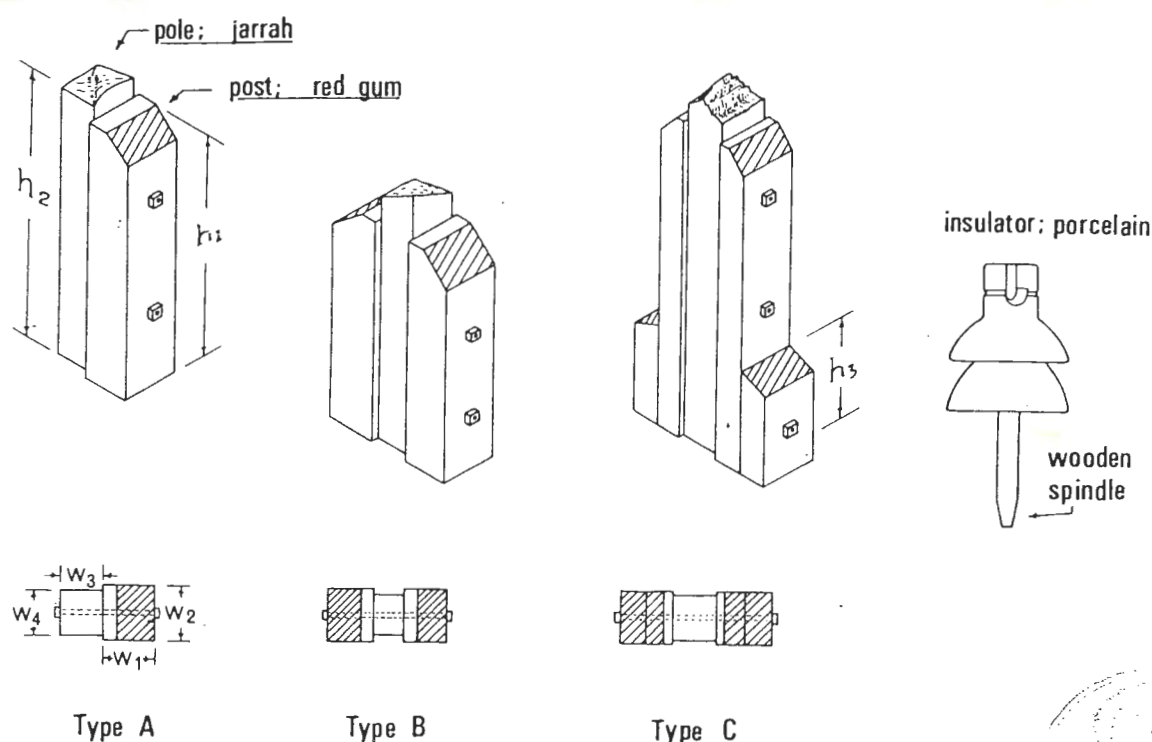


MAP 3

Eating House/Gall's Residence, outbuildings and domestic dumps at Chinamans Wells as known from field survey and archaeological excavations.



# TELEGRAPH POLE, POST, and INSULATOR DESIGN at CHINAMANS WELLS



FIELD NO.	Post $h_1$	Pole $h_2$	Post $h_3$	Post $w_1$	Post $w_2$	Pole $w_3$	Pole $w_4$	Type
TG 1	950	950	-	190	205	155	165	A
TG 2	-	700*	-	-	-	170	180	A?
TG 3	900	910	-	195	205	145	150	A
TG 4	915	975	-	195	190	155	155	A
TG 5	830	850	-	195	190	150	145	A
TG 6	920	955	-	185	180	150	150	A
TG 7	730	740	-	200	195	150	140	A
TG 8	-	300	-	-	-	155	150	A
TG 9	645	645	-	195	180	145	150	A
TG 10	930	300	-	-	200	-	-	A
TG 11	1185	1240	380	100	200	155	175	C
TG 12	-	-	-	100	180	170	-	B
TG 13	790	835	-	190	195	155	155	A
TG 14	-	-	-	190	195	155	155	B
TG 15	550	-	-	100	200	-	-	-

\* = not in situ

Principle dimensions for posts and poles; all measurements in millimeters. A chamfer frequently occurs on bevel edge of post. Arrester wire diameter is 5.0mm, bolt shaft diameter is 18.9mm, and nut head is 32.0mm across. Posts are buried 1.8m deep.

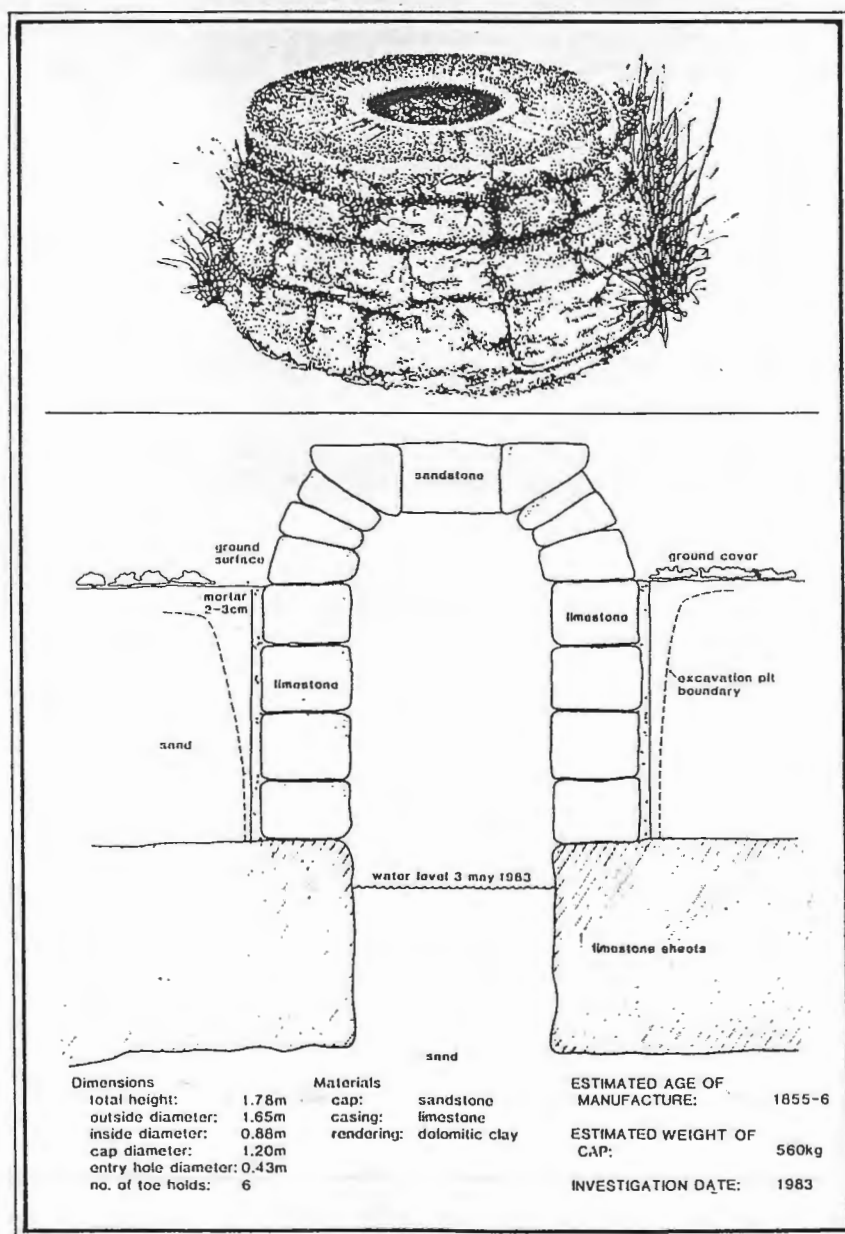
FIGURE 5

Design characteristics and principle dimensions of telegraph pole, post, and insulators at Chinamans Wells. Upper pole elements and cross beams are missing from the site.

*Sharker*  
Pls return.

# THE ARCHAEOLOGY OF CHINAMANS WELLS AND HACKS STATION: THE COORONG, SOUTH AUSTRALIA

**DRAFT**



**Roger Luebbers**  
August 1995

Funded by NEGP, Department of Environment and Natural Resources, South Australia

Draft Copy

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text. Technical

LOCALITY MAP OF THE SOUTH EAST SHOWING PRINCIPLE  
SITES AND ROADS IN 1860.

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# 1 INTRODUCTION

## 1.1 Background

The Coorong National Park and adjacent Game Reserve constitute one of the largest public reserves to be established near Adelaide for the protection of the state's cultural and natural heritage. In 1981, the then South Australian Department of Planning and Environment commissioned a desktop review of the historic sites in the reserves to provide a data base for the development of a Plan of Management by the National Parks and Wildlife Service of South Australia. That background study identified a number of significant 19<sup>th</sup> and early 20<sup>th</sup> century pastoral, mining, fishing, and hunting sites, and recommended a range of strategies to document and protect the area's more significant cultural heritage materials. The results of this landmark study, conducted by Penny Ruddock<sup>1</sup>, was released in 1982.

This report is an outgrowth of that study and is the final publication in a series of archaeological investigations to document key aspects of the prehistoric Aboriginal and early 19<sup>th</sup> century European and Aboriginal record of habitation in the Coorong. It was prepared under contract to provide the National Parks and Wildlife Service of South Australia with advice on the management of culturally significance properties and sites for the Plan of Management of the Coorong National Park. Project funds were provided by the Australian Heritage Commission through the National Estate Grants Program. Project supervision was the responsibility of the Aboriginal Heritage Branch and the Heritage Branch, South Australian Department of Environment and Natural Resources (SADENR), formerly known as the South Australian Department of Environment and Planning.

The first of these investigations<sup>2</sup> sampled a large number of prehistoric Aboriginal sites in the Southern Coorong to determine the character and antiquity of Aboriginal settlement at the coast. Analysis of dietary remains, site technologies, shell fragmentation, site distribution patterns, and the amounts of food refuse discarded at the coast lead to a detailed preliminary reconstruction of prehistoric settlement phases. The investigation was extended into the Northern Coorong in the following year to further examine the geographic variation in the habitation record and to finally test the initial working hypothesis about past land use practices. A comprehensive review of the ethnohistory for the area, and all 19<sup>th</sup>-20<sup>th</sup> century ethnographic artefacts held by the South Australian Museum from the South East,<sup>3</sup> were used to build a model of historic subsistence networks to guide the integration of these data. Incorporating the results from both field surveys and the artefact study, the second report<sup>4</sup> advances a case for substantial increases in resource utilisation in the Coorong over the past 6000 years of occupation, the most dramatic occurring about 2000 years ago. The main conclusions to emerge from the study was that Aboriginal populations just prior to European invasion were large, extraordinary means had been devised to harness and distribute resources through a range of effective food storage systems, and land owning groups had acquired many elements of a sedentary life style. These first two reports concluded that the archaeological remains attesting to this development must rank as an outstanding element in the National Estate which will require sensitive management strategies if future generations of Australians are to have an opportunity to fully appreciate the heritage values of the Coorong.

In 1983, the mid-19<sup>th</sup> century architectural fabric and habitation refuse from the original Salt Creek Inn was investigated by this project. As one of the oldest overland establishments in the Coorong, *the scene of two murders, and the main "village" centre in the district*, the inn exerted a pivotal role in the region's early settlement history and even today as a place name, it is a popular symbolic focus and visitor centre for the Coorong National Park. While scant traces survive of the public house itself, the final report<sup>5</sup> of that investigation brings together an analysis of historical sources and artefacts to comment on the design of the inn and its early history. The Department of Environment and Natural Resources provided the major financial support for this portion of the project.



As a logical extension, this report examines the archaeological evidence at two remote sites which were associated with the first significant period of pastoral settlement and overland travel through the Coorong following a period of colonial settlement beginning in 1836. At the time, few immigrants resided in this isolated coastal tract owing to the scarcity of drinking water in summer, extensive flooding in winter, and the appalling state of the overland tracks. The main towns of Meningie, Goolwa, Robe, and Kingston, and the main tracks that joined them are shown in Figure 1.

The first permanent homestead on the Younghusband Peninsula was erected in 1858 as a dairy by one of Adelaide's founding fathers, John Barton Hack. Built from a blend of local flotsam, reeds, clay, and imported materials, the eight or so buildings at the site reflected the primitive nature of pioneering architecture in such remote settings of the new colony. Located on a swampy section of the main overland track in the southern Coorong between Kingston and Salt Creek, Chinamans Wells offered welcomed relief to many travellers who would otherwise have perished in the harsh coastal environment. Its construction is believed to be the result of a series of related developments surrounding the world-wide quest for riches, which in Australia commenced in late-1851. This led to the immigration of Chinese gold seekers to Victoria through the Coorong in 1855. Although Chinese settlement in the district was temporary, the network of wells reputedly constructed during the brief period must have contributed measurably to both the real and the perceived economic potential of the district. Only hundreds of meters away was a small, four room eating house which was built to cater to the rising number of travellers and potential settlers who were expected to pass through the area. Then, the construction of the overland telegraph line between Adelaide and Melbourne brought the first instantaneous communications between any two colonies in Australia. It passed straight through Chinamans Wells and provided the new colony with a vital commercial link with the outside world.

With the exception of the well itself, these sites fell into disuse in the later half of the 19<sup>th</sup> century and little information about their actual role in the history of the Coorong survives today. The exact construction date of the Chinese well or indeed its Chinese origins have not been verified, nor is the domestic and social context of early pastoral holdings in the Southeast of South Australia been documented in primary sources. The same can be said of the commercial life of the eating house, as it, like Hacks Station, may have been too mundane and possibly too brief a tale to be recorded for posterity. The purpose of the archaeological investigation discussed here therefore was to reclaim the historic identities of these two sites, which, except as place names, leave little impression on our understanding of land use in the Coorong. Once completed, the project will have provided a representative cross-section of the mid-19<sup>th</sup> century heritage of the Coorong National Park in the greatest detail ever undertaken.

The work reported here began with a preliminary investigation to determine the extent of the archaeological remains at each of the two sites. Exploratory excavations at Hacks Station uncovered late 19<sup>th</sup> century artefacts associated with crudely constructed foundation walls of a small building, referred to as "Hacks House". The results of that study, compiled in conjunction with a survey of prehistoric Aboriginal sites at Parnka, were reported at the completion of that stage of the project. Following a similar trial excavation at Chinamans Wells, a full-scale excavation program was instituted on all major cultural features uncovered in the initial field survey at both sites. In addition, two historic archaeologists, Bill Snoek and Marilyn Truscott joined the project to assist in achieving the very large scale objectives that lay ahead. Marilyn supervised an excavation program at Chinamans Wells and Bill compiled an artefact catalogue and analysed the artefact collections retrieved during this investigation. Copies of Snoek's reports<sup>6</sup> are available in the library, SADENR. A draft report<sup>7</sup> of the environmental impacts and management recommendations for Chinamans Wells was submitted by Luebbbers for incorporation in the Plan of Management in 1984.

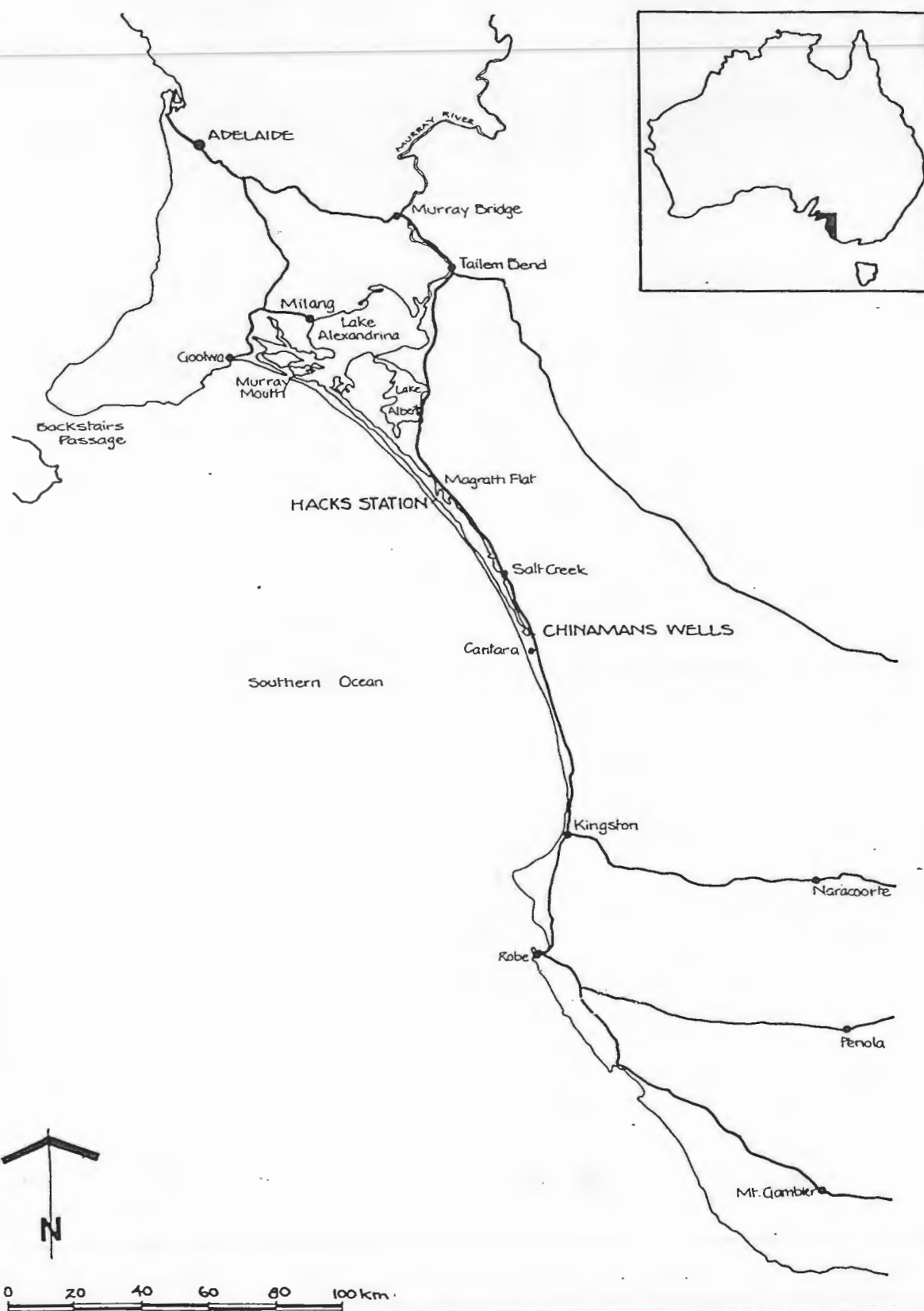


FIGURE 1 Location of places and features in the Coorong known in 1860 and discussed in text.

LOCALITY MAP OF THE SOUTH EAST SHOWING PRINCIPLE SITES AND ROADS IN 1860

## REPORT SUMMARY

This report presents the results of a comprehensive archaeological investigation of two significant historic sites in the Coorong National Park that were associated with the rise of permanent pastoral settlement, overland transportation network, navigation, intercolonial telegraphy, and Chinese immigration to the Victorian goldfields at the end of colonial rule. The project was conducted in 1982-3 and is the culmination of research into the cultural heritage of the Coorong, funded by the National Estate Grants Program and the Heritage Branch of the Department of Environment and Planning of South Australia. These sites were selected for study on the basis of their potential to provide important insights into a cross-section of mid-19<sup>th</sup> century settlement patterns in the Coorong.

The investigation of Chinamans Wells in the southern Coorong identified fabric belonging to five significant cultural aspects of 19<sup>th</sup> century habitation. In chronological order of their development, these are the following:

1. A water hole/soak containing Aboriginal drinking cups made from marine helmet shells, articulated and stray bones of both domestic and native animals, and household refuse in a soil/sand infill matrix is described. Originally an Aboriginal soak, it was converted for casual use sometime during the period ca. 1850-1860. During this period, it became an important watering hole for travelling stock before being declared a part of a public water reserve in 1864. The exact date of its closure in the late nineteen hundred could not be established by this investigation.
2. Featuring one of the earliest stone wells manufactured in South Australia by traditional Chinese masonry processes, this sites contains a solitary well, two limestone quarries and two sandstone quarries. The well is a round, dome-shaped structure which is capped with a heavy sandstone cover-plate through which is cut a small entry hole. The well head stands a mere metre above the ground and was originally encased in a white pipeclay render. Blocks cut from perfect circles were carved in limestone layers on the shore of an adjacent salt lake and laid to form a cylindrical casing and shoulder. The thick sandstone cover-plate was also quarried in a similar manner and trimmed to form a tapered profile before being fitted to the well casing. A cracked cover plate remains unmodified and disused in a second sandstone quarry pit on a lake shore. The distinctive methods of carving curved blocks from limestone is described in detail. The evidence for there being other wells and other designs is discussed and a possible second Chinese well at Chinamans Wells is illustrated.

The report describes the tumultuous historic context in which the well was built. Construction almost certainly took place between November 1855 and April 1856 during the initial migration of Asians through South Australia after the Victorian Parliament passed prejudicial legislation to restrict Chinese nationals from mining the lucrative alluvial gold fields of Victoria in June, 1855. The results of X-Ray defraction analysis of clay and limestone samples, plus the scale of quarrying suggest that other Chinese wells were constructed from stone quarried at the site during the period. These wells therefore were part of a strategy deliberately set out in China to provide a reliable supply of drinking water for a large influx of migrants that were expected to pass through the semi-arid coastal setting of the Coorong. The role of the well may have declined in early 1856 when improvements in the landing facilities at Robe harbour enabled many migrants to by-pass the Coorong on their way to the gold fields.

In all likelihood, Chinamans Wells and its associated quarries are the only fabric of their kind to survive fully intact anywhere in South-eastern Australia today. Owing to this unique status, the site should be considered nationally significant and should be nominated for registration on the National Estate.

3. The first intercolonial telegraph line in Australia, which linked Melbourne and Adelaide beginning in 1857, are also present on the site. The remains belong to the 1861 upgraded installation and include the porcelain insulators, in-ground assemblies consisting of butts



of poles and posts which are fastened together with hand-made hardware, and miscellaneous wire and threaded timber insulator supports. Sub-surface repair and re-installation of base assemblies are evident.

4. A modest four room house was built on the property in 1864 by Joseph Darwent, a prosperous Adelaide merchant. It served as a public eating house for travellers and carriers using the main overland road between Kingston and Meningie for about a decade, while coaches and mail riders continued to change horses there until the early 1880s. The first residents of the house were probably hired as Darwent's agents until his death in 1872, after which time John Gall, a local sheep farmer, purchased the 15 acre property and later positioned his young son Joseph in it as occupier. The house was abandoned shortly after John Galls death in 1907, and finally demolished at the end of World War One after all useful timber had been removed.
  - It was made from local limestone, lime-rich mortar, and pipe-clay, with the interior walls finely plastered and the corner and window/door openings finished with dressed stone. The rectangular floorplan provided for two apartments, separated by a common wall, each with a large heated room and an attached bedroom or storage area, with the kitchen being incorporated into one of the large front rooms. An unusual aspect of its interior layout was the practice of setting furniture or furnishings into the clay floors of the interior rooms as if to permanently fix the use of each room for a particular purpose. A fuller explanation of this function must depend on additional archaeological investigation.
  - The external features of the house are described in detail. Clay paths surrounded front and back sides, the main overland track cut across the front veranda of the house, and various refuse dumps were located some paces away. An early toilet pit was found sealed by a clay pavement at the rear door of the house. Attached to the northern end of the house was a shed or lean-to which was used by a farrier, possibly as a livery stable and/or workshop. A larger outbuilding 30 m to the north was a stables made from timber walls and a cobble and clay floor. The extent of demolition has impaired attempts to further describe the site layout or history of use. Artefact deposits providing indications of the nature of habitation and household activity pertain only to the last three decades of tenancy by Joseph Gall, the son of John Gall of Cantara Station.
  - Darwent's construction of the public house coincides with government initiatives to open up more land for pastoral development and explore possible navigation routes through the Coorong to improve market access for the Colony's most productive farming district in the Southeast. Plausible explanations for the apparent demise of the public accommodation aspects of the house are considered. The report concludes that construction of the eating house is an excellent illustration of the speculative nature of economic development in the Coorong as land prices rose, electric telegraphy and steam power were introduced, and drainage improved the land for sheep farming.
5. A wedge pit constructed in the 1860s for travelling stock is described. A whip, troughs, and fencing completed the installation. The report verifies its construction details, water rates, and repair schedules for various times during the 19<sup>th</sup> century.

Established in 1858 by a prominent Adelaide family, Hacks Station was the first dairy to operate on the Younghusband Peninsula. Built at Parnka from a blend of native materials, shipwreck timber, and prefabricated window and door frames, the farm produced delectable cheeses until dwindling profits forced a shift to sheep raising in 1861, and, failing in this venture, Hack abandoned the farm in 1863. A sketch map compiled by G. Goyder in 1864 is the only depiction of the farm layout discovered by this project. The nature of subsequent habitations is unknown until 1895 when William Ashby built a new house and lived on the farm. The interpretation of the age and function of the fabric investigated has been hampered by a paucity of diagnostic artefacts and architectural design elements. While their identity is therefore preliminary, the following structures are described in the report.

1. A stone foundation, labelled Structure B, with external and internal clay paving, traces of thatching, and with outside dimensions of 5.9 x ?12.0 m. A scatter of household artefacts manufactured between ca 1850-1880 is believed to be discarded household refuse from Hack's occupation and possibly a subsequent residency that lasted another ca. 10 years. The building is most probably one belonging to the Hack occupation of the farm and is believed to be either the main house, or one of the larger farm outbuildings which was also occupied.
2. A stone foundation wall, with external and internal clay paving with an outside dimension of 4.0 x 6.0 m. This building is believed to be associated with Hacks occupation and is most likely to be an outbuilding belonging to the main house, such as a detached kitchen and washhouse. This is Structure C.
3. A stone foundation wall of a small building measuring 3.0 x 3.1 m. A construction style utilising a cement-rich mortar and dressed blocks is consistent with a post-Hack occupation of the late 19<sup>th</sup> century by William Ashby. This is referred to as Structure A.
4. The water hole excavated and reported by Luebbers in 1982 and labelled as Soak HG7, is identified in this report as the main water supply for the Hack Household. It is located at the edge of a large Aboriginal shell midden on the shore of the Coorong lagoon. Use of this water hole probably continued throughout the 19<sup>th</sup> century.

The report concludes that the primitive nature of the Hack settlement is likely to be representative of the character of pastoral activity on the Younghusband Peninsula in the mid-19<sup>th</sup> century. The settlement history of the site illustrates the way European land use practices impacted traditional Aboriginal land use practices throughout the Coorong.

## KEY WORDS

Coorong Historical Archaeology, Chinese immigration, Victorian Goldrush, Coorong History, Aboriginal Settlement, Tangani (Ngarrindjeri) sites.

## 1.2 AIM OF REPORT

This report presents the results of research to determine the historical significance of two mid-19<sup>th</sup> century sites in the Coorong with specific reference to their role in land use in the coastal region of South Australia which is widely renowned for its cultural and natural heritage. The investigation relies on archaeological, archival, anecdotal, and other historical sources to achieve this aim.

## 1.3 HOW THE REPORT IS ORGANISED

The report is divided into four chapters. The first introduces the background and objectives of this report. Chapter Two presents the archival documentation and oral testimony pertaining to Chinamans Wells and Hacks Station and is presented as a historical background to guide the archaeological investigation. This sets the stage for establishing the antiquity and character of the occupation throughout the history of each site. Chapter Three describes the archaeological investigation of Chinamans Wells and concentrates on the wells and the homestead as two separate aspects of historic significance at the one location. A brief description of the remains of the telegraph line also appears in this chapter. The relevance of this site to the transport and telecommunication history in the Coorong concludes this chapter. Finally the archaeology of Hacks Station is discussed in Chapter Four.

## 1.4 ACKNOWLEDGEMENTS

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A host of people provided invaluable specialist support either through physical labour or information of a scientific or historic nature to bring life back to the Coorong with increased accuracy and human spirit. Mary Lou Erskine poured through every relevant 19<sup>th</sup> century newspaper with great speed and care, Norman Tindale gave unique insight to a past era in Aboriginal land use. For their enthusiastic, generous support I thank, Chris van der Borsch and David Lock of Flinders University, Leith McGiliveray of the South Australian Archives, Judy Wilson and John Williams for solid historical advice, Philip Jones from the South Australian Museum, and Joc Schmiechen. Chris von der Borch and David Lock guided samples through mass spectrometry machines and peered down microscopes to analyse samples from the well. A special debt is acknowledged to Henry and Jean Rankine, George Trevor, and Nancy Fagg from the Coorong for authoritative and very useful anecdotal discussions about the Coorong.

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Justin McCarthy commented on a draft of the report submitted in 1984.

## 1.5 ABBREVIATIONS AND SOURCES USED IN REPORT

In alphabetical order, the following abbreviations are used in this report.

### Public Institutions

AA:	Australian Archives, Adelaide.
Mortlock:	Mortlock Public Library, Adelaide.
PRG:	Public Records Group, Mortlock Public Library, Adelaide.
PROSA:	Public Records Office of South Australia, Adelaide.
SAA:	South Australian Archives, Adelaide.
SADENR:	South Australian Department of Environment and Natural Resources. Formerly South Australian Department of Environment and Planning.
SAPP:	South Australian Parliamentary Papers.
LTOSA:	Land Title Office of South Australia.

### Journals

<i>Proc. Roy. Soc. S. A.:</i>	<i>Proceedings of the Royal Society of South Australia.</i>
<i>Trans. Roy. Soc. S. A.:</i>	<i>Transactions of the Royal Society of South Australia.</i>
<i>A. O.</i>	<i>Archaeology in Oceania</i>

### South Australian Newspapers

*Adelaide Observer*  
*Advertiser*  
*Border Watch*  
*Chronicle*  
*Register*

<sup>1</sup> Penny Ruddock, Recommendations of Management for Historic Sites of European Occupation in the Coorong National park and the Coorong Game Reserve, 1982. Unpublished report to the National Parks and Wildlife Service, SADENR, Adelaide.

<sup>2</sup> R. A. Luebbers, The Coorong Report 1981: An Archaeological Survey of the Southern Younghusband Peninsula, 1981. Unpublished report to SADENR, Adelaide.

<sup>3</sup> R. A. Luebbers, Catalogue of Ethnographic Artefacts from Southeast South Australia, 1984. 8 vols., 1,000 pp. SADENR, Adelaide.

<sup>4</sup> R. A. Luebbers, The Coorong Report; An Archaeological Survey of the Northern Coorong, 1982. Unpublished report to SADENR, Adelaide.

<sup>5</sup> W. Snoek, An Archaeological Investigation of Salt Creek Inn, Salt Creek, The Coorong, 1983. Unpublished report to the National Parks and Wildlife Service, SADENR, Adelaide.

<sup>6</sup> W. Snoek, Archaeological Report of Chinamans Wells, The Coorong National Park, 1984. Vols. 1 & 2. Presents results of excavation and analysis of Chinamans Wells artefacts and building fabric. Volume 2 is a register of most artefacts collected for the project and includes photographs and illustrations of selected artefacts discussed in the report. SADENR, Heritage Conservation Branch.

<sup>7</sup> R. A. Luebbers, Recommendations for the Management of the Cultural Heritage of Chinamans Wells, Coorong National Park, 1984. Unpublished report to the Heritage Conservation Branch, SADENR, Adelaide.



## 2 HISTORICAL BACKGROUND

### 2.1 INTRODUCTION

Any archaeological investigation of 19<sup>th</sup> century land use practices in the Coorong would be nothing short of misleading if it did not first recognise the traditional land owners whose heritage was so inexorably linked to the Younghusband Peninsula for so long. The Tangani<sup>1</sup>, the clanspeople of the Coorong at the turn of the 19<sup>th</sup> century, were a dialectal subgroup of the Narrinyeri (Ngarindjeri), a constellation of Aboriginal tribes of the Lower Murray Lakes and Coorong district who shared common social, economic, and legal traditions. While small and densely populated, the Tangani established twenty-seven<sup>2</sup> clan estates, most stretching from the Southern Ocean across the lagoon into the inland swamps along the length of the peninsula from the Murray Mouth to a point immediately south of the Cantara homestead. These were staunchly defended to maintain territorial integrity in the face of any type of invasion, for within it each clan could expect to find all its essential resources, swamps, drinking water, firewood, and crossing places of significance.

The Tangani were expert fisher folk<sup>3</sup> who had developed consummate skills in weaving baskets, ropes, and nets. European fishermen equipped with cotton fishing paraphernalia recognised the superiority of the native fibres in use at the coast and were envious of Aboriginal successes in pursuing their craft in the Coorong estuary. Relying for sustenance on schools of bony bream, yellow eyed mullet, black bream, mulloway, congolli, and the myriad of black swan, teal, and various ducks, not to mention the sweeping surf beach full of cockles and crabs and sandhills teeming with muntry berries, nor to forget the lush reed beds harbouring turtles, yabbies, and eggs, the Tangani considered themselves a saltwater people without equal. Adult women were distinguished from their neighbours by keeping one long finger nail sharp enough to open shellfish with one deft motion, the fishing knife remaining a foreign implement, even in the coastal tool kit. Smoke houses, which were filled with fish when the big catches were hauled in, were at the centre of an ancient energy harnessing strategy that enabled consumption of a primary staple to be stretched out for many months of the year as the seasonal food supply dwindled. In other roles, fish and other processed goods<sup>4</sup> were exchanged for scarce commodities, to cement social relations, or offered as payment for services rendered with neighbouring clan members and more distance communities further inland<sup>5</sup>. As a chief mortuary practice, dead relatives were smoked over fires and the dried remains were eventually placed on raised platforms erected in prominent places before being finally buried in cemeteries in the sandhills overlooking the Coorong lagoon. The establishment of grounds specifically to inter the dead is a trait of most Aboriginal groups residing in the Murray River valley<sup>6</sup> and is linked to the rise of high population levels in fertile habitats. These places filled the sacred and secular world in Aboriginal custom and symbolised the ancient connection the Tangani maintained with their home and territory in the Coorong.

While there are several stories to be told about land use in the Coorong and different cultural perspectives to consider, there can be little doubt from the sheer size of the archaeological record that human settlement has always had a significant impact on it. Spread in clusters over several hundreds of metres of the floodplain of the Coorong lagoon, the main camps were positioned near good drinking water and abundant firewood, and away from buffeting coastal winds. The refuse at an individual campsite typically assume the shape of a mound that might measure hundreds of metres long and contain the remains of hundreds of thousands of cockles, crabs, fish, bird, and the residues of ash and charcoal from the hearth. These are commonly called middens. The contents of the larger middens would fill a modern four bedroom house, the consequence of recurrent occupation for many human generations at a single locality. When it is considered that hundreds of such deposits are present in the sandhills, the magnitude of Aboriginal settlement in the Coorong begins to materialise. The oldest traces

directly attributed to habitation at the sea are 5,500 year old middens which were found<sup>7</sup> near the lagoon in the Southern Coorong, and these are expected to be only the latest chapter in Aboriginal tenure in the region.

The transition to pastoralism in the Coorong commenced gradually<sup>8</sup> with indirect transactions with European colonists who first landed on the Australian continent in distant places. At the turn of the 19<sup>th</sup> century, carriers of contagious diseases were edging westward down the drainage systems emanating in the southeastern continental ranges, devastating defenceless populations in their wake. Survey parties, explorers, and the occasional herd of sheep or cattle which ventured into the lower Murray lakes region, accelerated the process and brought indigenous communities in direct contact with new technologies and more destructive strategies in land use that were instrumental in bringing about their own downfall. Whalers stationed on Kangaroo Island also brought perils when they made occasional forays on to the mainland to abduct Tangani women, and those of their close neighbours. When European settlers began landing in earnest on South Australian soil in the latter half of the 1830s, the ancient traditions of land use in the Coorong were already undergoing tumultuous upheaval as a result of depopulation, infectious diseases, and increased incidences of conflict.

With the foundation of the new colony of South Australia in the closing days of 1836, the colonial government was necessarily pre-occupied with the construction of the infrastructure for the capital city of Adelaide and meeting the basic needs of a burgeoning populace. The first priority was therefore the construction of the town and its port, the development of an effective system of trade and resource distribution, the pursuit of raising crops and produce, and the maintenance of law and order. The general thrust of pastoral settlement was focused on land close to the Adelaide Plains and fertile environments within a day's travel by horseback. Neatly laid out on a grid system along the Torrens River, the capital was separated by 6 miles from its port near Holdfast Bay and gave the outward appearance of being an enclave surrounded by the sea on one side and the Mount Lofty Ranges on the other. The direction of land development was southward along the Fleurieu Peninsula to the port towns of Goolwa and Victor Harbour and northward along St. Vincent Gulf where an abundance of wheat could be sown and valuable mineral deposits were discovered. The main land routes serviced not only the spectrum of travellers who made their way by foot, cart, or saddle, it were also the principle stock runs between the infant pastoral holdings and the Adelaide market. For the first two decades, the development of rural routes was left to the whim of private enterprise and entrepreneurial investment and, accordingly, formal land division by government agents progressed at a much slower rate than many people wished.

The earliest attempt by European colonists to survey the natural resources in the Coorong began with an inspection tour of the South East by Governor Grey in April, 1844. Accompanying this party, Major Burr and his troopers were in charge of constructing small bridges and a water supply system that were to formally establish the main overland route used by nearly all future travellers in the district. Few of these wells survive today in sufficient detail to identify their locations or assess their significance. An exception is Sheoak Well, which was built on the road in front of what was to become Cantara Homestead. Also joining Grey was an accomplished water-colourist, George French Angas, who turned his talents to creating the first authoritative graphical portrayal of Aboriginal life and scenes in the Coorong<sup>9</sup>. His works included an array of vignettes and colourful cameos, some romanticised, of every-day life situations as he encountered them, face-to-face. With written accounts<sup>10</sup> of the journey itself providing valuable ethnographic background about the images depicted in his drawings, Angas' contribution is used today as a primary reference of scholarly and cultural importance to the heritage of 19<sup>th</sup> century South Australia.

For the ensuing decade, pastoral and mining development extended northward to the Flinders Ranges and in a westerly direction to Port Lincoln on Eyre Peninsula. The extraction of copper, gold, and silver and other ore deposits at Glen Osmond, Burra, Blinman, and in the iron triangle not only boosted the colonial coffers, it lifted public expectations of natural endowments and prompted the immigration necessary for infrastructure growth. Within this period of expansion and small scale development, the colony realised a respectable prosperity from



wool, fish, whale products, minerals, and beef that supported a rapidly growing community of about 4000 in 1845.

An important exception to this linear development was the occupation of large tracts of the well watered land around the Lower Murray Lakes, some 60-80 miles Southeast of Adelaide on the other side of the divide. The Narrung Peninsula, which is bounded by Lakes Albert and Alexandrina, and the Coorong, was being bought up by two wealthy men, John Baker and Neill Malcolm, and ownership was a matter of fierce rivalry for many years. Surrounded by unlimited fresh water, abundant grass lands, and access to a rapidly expanding metropolitan market, pastoralism in this lush setting was a certain success. It was also the scene of great experimentation to find the best breeds of stock that were resistant to insect and parasite infestation and at the same time were hardy producers in semi-arid conditions.

The land on the Coorong itself however, and that of the less watered hinterland immediately Southwest, as well as the coastal strip further south were still considered an unknown wilderness that belonged, at least traditionally, to the Ngarrindjeri, itinerant travellers, and to hapless shipwreck victims. Only the narrow corridors of "waste" Crown land<sup>11</sup> and the main overland and stock route to Lacedpede Bay and Mt. Gambier were being incorporated into the public domain and within these, the chief residential settlement took the form of isolated huts, rough holding yards, fences, and informal water holes. Most occupants in these holdings were squatters or were speculators lucky enough to have an occupation license. The direction and scale of settlement, in other words, was predicated on the time honoured formula that stated that the key to wise land investment was proximity to good natural resources, and an effective distribution system. For the salt infested sandy country of the Coorong, this meant that land development would be slow in coming, but that it would nevertheless come.

With the opening of the Mount Alexander gold field in central Victoria in October 1851, the character and pace of settlement in South Australia changed markedly. The lust for gold took people from all socio-economic backgrounds to the diggings for the express purpose of gaining instant wealth. The young colony experienced a mass exodus of skilled craftsmen, professionals, and anyone capable of working with the simplest of abilities. Industrial and domestic development came to a virtual standstill, with the operations of saw mills, wharves, retail shops, and house construction almost evaporating as a result of a disappearing labour force. Even the rural industry was hard pressed to find shearers, drovers, and fencing contractors willing to work. Some estimates suggest that over 50% of the male population on the Adelaide Plains left for Victoria, and for the next three years of the rush, economic prosperity in the colony took a nose dive.

In a tactical move to avoid a de-valuation in the currency brought about by high gold stocks in the eastern colonies, the colonial government appointed Alexander Tolmer to form a gold escort to purchase the gold being mined in central Victoria for the South Australian treasury. In 1852, his forces blazed a new overland route from Wellington on the Murray River due east through the 90 Mile Desert to the central highlands of Victoria that was to become the shortest most direct route to Victoria. The escort was forced by poor water supplies and planning vagaries to return to Adelaide via the Coorong on a few trips during its three year operation. Once a network of more reliable water holes was built on this new route in the ensuing few years however, the main road through the Coorong began to lose regional significance. In June 1855, when discriminatory legislation forced Chinese emigrants to land in South Australian ports in their quest to find gold, both of these overland routes were favoured until landings at Robe shortened the trip and made it possible to circumvent the Coorong altogether. The mass movement of the Chinese through the coastal district may well have surpassed the levels reached two years earlier by colonial diggers making their way to Victoria. The onslaught witnessed a resurgence in local economies along the gold routes throughout the Southeast.

The invasion of Tangani country that began with small scale European settlements and localised land clearance was soon profoundly accelerated by developments in local quarters. Because the Coorong provided the most reliable water supply for cattle and sheep, it was by necessity the most heavily used stock route between the district of Mt. Gambier and its markets in Adelaide until rail links took over the market in the 1870s. A well established corridor was

etched out in the early 1850s by the movement of large herds along the inland margins of the Coorong lagoon where shallow water tables were readily exploited and previous small residential upgradings gave promise of good water and an update on the road conditions ahead. The movement of stock generally proceeded without a hitch year round if the herd followed the higher dry ground near the edge of the lagoon where the margins of the forested ridge lines joined the low dunes and cliffs on the Coorong lagoon. For the Tangani on the other hand, the development could not have been more disastrous, for the route went straight through their main wintering camps and adjoining wetlands which were important refuges during the harshest times of the year. The result was fouled water holes that became unsuitable for human use, and the destruction of crucial vegetation stands around swamps which provided not only the fibre for nets and baskets, but the habitat for a range of important foods, especially fish. Whatever may have been the impacts of disease and violent conflict on the indigenous landowners over the previous two decades, the damage inflicted by cloven hooves could not have delivered a more decisive blow to traditional subsistence practices.

Then, in mid-1859, a mission station was established at Point McLeay on the shores of Lake Alexandrina, and its first superintendent, George Taplin, commenced to Christianise the Ngarrindjeri within the confines of their own country. It functioned not only as a farm and rations depot, but in a sense it also became a sanctuary for members of the community willing to adopt new methods in land use and a different life style. Consolidating its control over the next decade, the mission did in fact encounter a people who still maintained spiritual and physical contact with land that for millennia had been exclusively under their own control. Traditional practices of hunting, fishing, and gathering, of initiating young people, of administering tribal law, and resolving issues of social discourse and inheritance, were nevertheless being supplanted by pastoral and commercial interests at the heartland of Ngarrindjeri country, and group solidarity was weakened as a result. The fringe camps that formed outside the mission in the more remote areas of Ngarrindjeri clan estates, particularly those in the Coorong, became desperate centers of a traditional life that was nevertheless being consumed by rapid changes that were splitting the very fabric of Aboriginal culture.

Seizing on the announcement of a new electrical technology that promised instantaneous communications between distant populations, the South Australian government appointed a young, highly qualified technician, Charles Todd, to install its first telegraph system in 1857. With the aid of steamers to deliver the poles, wire, and other construction equipment, contractors blazed a new right of way from Adelaide through the Coorong and onward to Melbourne. This provided the first surveys of the Coorong waters and opened up the Southeast to navigation. Within 18 months of its commencement, commercial and political interests in the two neighbouring colonies were able to communicate at a speed never before imagined.

When land surveys and fencing projects in populated districts west of the lower Murray River were completed in the late 1850s, government agents were able to turn their attention to creating land divisions in the Coorong and the neglected "wasteland" to the Southeast. By the end of 1860, the Hundreds of Barker had been surveyed for sale and, moving gradually southerly along the coast, surveys of the Hundreds of Glyde, Santo, Duffield, and Neville followed until, by the end of 1864, the remaining vacant land in the South East had been parcelled off into crown allotments. By fencing land specifically for cultivation and grazing, and modifying plant associations and soil fertility across the entire land unit itself, a European land use strategy was firmly installed throughout most of the colony. When it also sought to eliminate all competing land use practices through articulated drainage schemes<sup>12</sup> and culling all natural predators, the entire Coorong district had finally witnessed the arrival of a new phase of human settlement in its most potent form, and the extinction of traditional subsistence practices of the Ngarrindjeri was all but complete.

It was under these circumstances of regional economic growth, technological innovation, and the implementation of rural land use strategies that the sites investigated in this project gained prominence in the mid-19<sup>th</sup> century. The sites today survive as mere place-names on maps and signboards, but the evidence verifying their historical significance will be obtained either from contemporary historical sources or from analysis of the frail archaeological remains that might be recovered in the ground. Neither of these considerable lines of inquiry have ever been re-



searched in heritage studies concentrating on the Coorong. For this reason, the investigation undertaken in this project has necessarily needed to research a wealth of archival documentation to establish the historical background upon which the archaeological interpretation could be constructed. The effort has been ground breaking and the results are discussed in the following sections of this chapter.

## 2.2 CHINAMANS WELLS

### 2.2.1 Chinamans Wells Water Reserve

Chinamans Wells is located 16 km south of Salt Creek in the Coorong National Park in Section 78 in the Hundreds of Neville, but the events surrounding its construction took place some years before land subdivisions were first officially proclaimed in 1863. The earliest reference to Chinamans Wells by name was recorded on 24 September 1856 by Charles Todd during a preliminary inspection to establish a telegraph route between Melbourne and Adelaide<sup>13</sup>. The name for the site he used was "Chinamen's Wells". As the newly appointed superintendent of the Telegraph Department for South Australia, Todd personally conducted all original field inspections to approve the line and purchased much of the technical equipment incorporated in the first telegraph system in the new colony. Although the report only mentions the well in passing the overland track through the Coorong at the crossing, the use of the plural reference to wells may comply with placename conventions of the day, or it may imply that more than one well existed at the time of the visit. The fact that two wells are listed in an inventory of public wells at this location in the 20<sup>th</sup> century<sup>14</sup> suggests therefore that the latter is true.

Under orders to establish residential blocks along the Coorong Road, government surveyors set out to subdivide land in the newly declared hundreds of Neville in the vicinity of Chinamans Wells. Led by a James Brooks, a team pegged out the boundaries of Sections 75 and 78 in April, 1863, and mapped the telegraph line and geographic features of the site, as is copied from a plan<sup>15</sup> in an official diagram book, Figure 2. The Assistant Surveyor-General issued instructions that the 40 acres of Section 78 surrounding the well was to be set aside as a water reserve, whereas the 15 acre Section 75 was to be made available for leasing. The odd shape of Section 75 follows the shoreline of a large salt lake on one side and the coach track on the other, and its southern boundary terminates at the convergence of the main overland tracks leading from Tilley's Swamp and Maria Creek (the township of Kingston). Given its comparatively small size and the fact that the survey team pegged similar properties around homesteads during this particular field work, the placement of such a small, irregularly shaped block of land so close to a water reserve and a junction of the overland route is *prima facie* evidence that Section 75 was established for residential use. As no homestead was present at the time of the survey, were the surveyors working for some interested party who may have wished to develop the property?

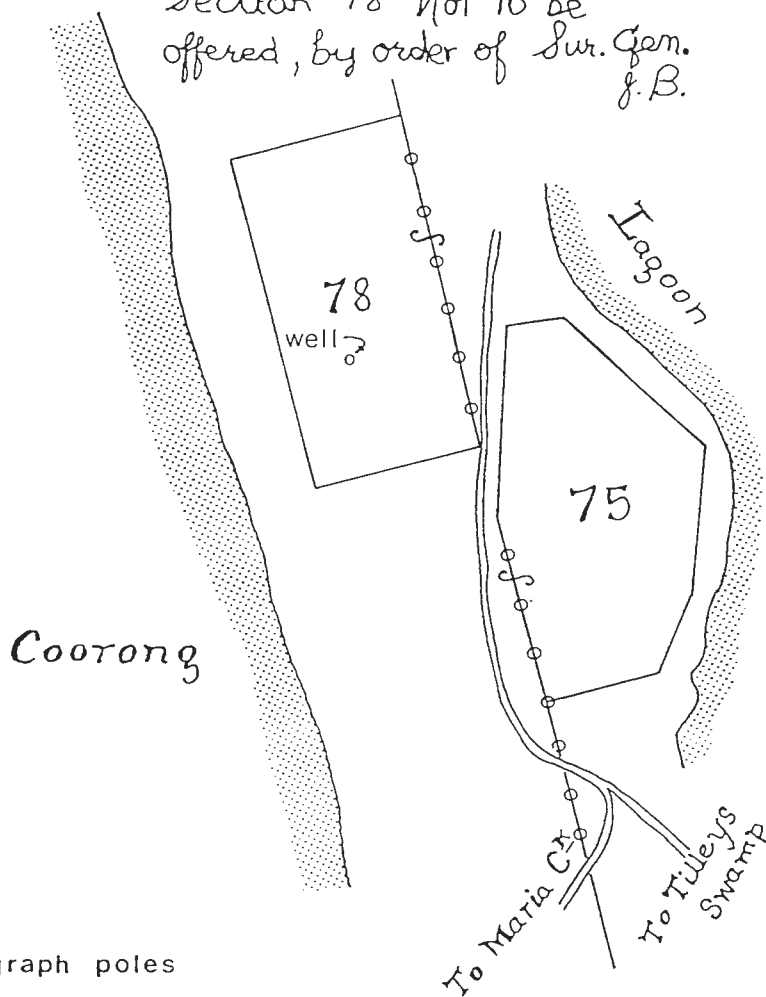
That the answer to this question is yes is suggested by the following events. On June 25, 1863, a month after the survey was completed, a notice for the sale of Section 75 appeared in a leading Adelaide newspaper<sup>16</sup>. Then a succession of four notices reading "to let, house and land at Chinamans Wells...." was published by both the *Observer* and the *Chronicle*, beginning on 16 January, 1864, just six months after the property first went to public auction. These give the earliest indication that a dwelling had been built on the site, with the offer of rental suggesting the speculative nature of the venture. These advertisements urged interested parties "to apply to John Gall, Coorong," a farmer who lived on a neighbouring run. Although Gall was eventually to become the principal land owner in the district, land title entries<sup>17</sup> show that Joseph Darwent purchased the property in September, 1863, and accordingly, he most probably was the builder of the house.

Several fragmentary observations recorded in the 1860s reveal further important historic details of the public's perceptions about Section 75. Wentworth's Gazetteer<sup>18</sup> describes the site in 1866 as a "spring lying on the main road from Wellington to Macdonnell Bay at the Coorong

H<sup>d</sup> Neville



Note: Section 78 not to be offered, by order of Sur. Gen. J.B.



φ Telegraph poles

LEGEND

== COACH ROAD

○—○ TELEGRAPH LINE

FIGURE 2 Enlarged copy of original sketch of Chinamans Wells taken from diagram book, Hundreds of Duffield, compiled by John Brooks in 1863. While telegraph and fence line appear on original, buildings and wells do not.

SURVEY SKETCH MAP, CHINAMANS WELL 1863

Crossing.” In another popular publication describing important places to visit in the South East<sup>19</sup> in 1867, the site is promoted as a “public house with cultivation for horses on the way to Coolatoo.” At the time, the only public houses on the main road between Meningie and Kingston were located at Macgrath Flats, Woods Well, Salt Creek, and Coolatoo, spaced far enough apart to provide convenient overnight accommodation<sup>20</sup> or a meal for weary travellers and chaff and water for spent teams of horses. Curiously, the name “Chinamans Wells Eating House” appears penned by hand on the first comprehensive navigation chart<sup>21</sup> compiled for the Coorong, entered as though it stood merely as an unofficial acknowledgement of its existence. These are the only direct references to the house being used specifically for public accommodation found in this research.

By the end of the decade, however, the public function of the site may have diminished somewhat. In his private journal, Holmes describes a daunting trip through the Coorong heading south from Meningie to Geelong in 1870 as follows.

...it was still raining, road fearful, difficult matter to keep my seal, through swampy country, creeks to cross, small lagoons knee deep, through the Coorong, up to the pole of the crack in fact it was covered once, still raining heavily, mud flying in all directions, travelling about 9 miles per hour. One o'clock arrived at Chinamans Wells, a station for changing horses.<sup>22</sup>

As a matter of historical background, it should be pointed out that the development of a reliable mail and water supply for the Coorong commenced in earnest some decades earlier, manned principally by the police. On November 4, 1845, Inspector Gordon lead a party of mounted police from Adelaide to Rivoli Bay and then onward to Mt. Gambier for an 2½ month inspection tour. His diary gives a view of the main overland track and the general nature of the water supply, as the following entries show.

Nov. 8: Halted at Wellington to enable the men to dry their cloths etc. as they were in the water some hours yesterday.

Nov. 9: Started early this morning and encamped at Mr. Giles' station near Lake Albert, distance 21 miles. Met Mr. Thompson and party with 45 horses for Adelaide this morning.

Nov. 10: Crossed the desert today and encamped on Macgrath's Flat, distance about 18 miles. The road being heavy for the dray horse being sandy and very hilly.

Nov. 11: Encamped on a fine, grassy flat, distance about 15 miles. Found only one small native well but dug two others and got plenty of good water. met Mr. Rhodes from Port Phillip with cattle for Adelaide.

Nov. 12: Encamped at the Sheepskin Well 5 miles beyond the Salt Creek, distance 12 miles. There is no more water for next 24 miles, water is very good, feed pretty fair.

Nov. 13: Encamped at the She Oak Wells, distance 24 miles. Plenty of water and feed very good. The dray horses are strong today. The road very hard and level. Corp. McCulloch's horse was lead today having a saddle gall.

Nov. 14: Crossed the Coorong this morning and encamped at a hut made by the Police who accompanied H. E. Governor Grey, distance about 18 miles. Plenty of wells and good feed through this day's march<sup>23</sup>.

It is apparent that even by this early stage in colonial administration, a network of wells had been established through the Coorong, exploiting the shallow supply of fresh water that flows above the natural water table with its high salinity. No doubt many ancient soaks maintained by Aboriginal owners were upgraded for this purpose by early grazers. Located at the site that later was to become Cantara Homestead, the Sheoak Well was in fact built by Major Burr and his troopers during Governor Grey's expedition through the district a year earlier and this was the main public water supply at the site until the large underground tanks were built at the homestead to capture roof runoff. These (along with Sheepskin and others relating to Grey's 1844 inspection) are the oldest known or named wells in the Coorong. The first regular mail service between Mt. Gambier and Adelaide commenced on February 5, 1847,<sup>24</sup> and utilised the main route through the Coorong on a fortnightly basis, road conditions permitting.

There is an single tantalising suggestion that Chinamans Wells may have been constructed prior to the Chinese immigration to Victoria. In his travels southward through the Coorong



on his way to the Victorian goldfields in 1852, Ragless recorded in his diary the following references to limestone wells:

Friday, 30 Jan.: Started this morning at half past 7 o'clock, reached the Salt Creek at 10 o'clock. The Salt Creek is fresh here. We passed a dray—one of its shafts was broken. About half a mile further—another dray. One o'clock stopped and cooked some dinner. 3 o'clock started from limestone wells. The water in the Kewring River (Coorong?) is salt. Moved from limestone well at 4 o'clock, went on about 8 miles and came to a bog on one of the flats of the Koorung and got bogged; horses, and all had to unload the dray and carry the things about 200 yards. Moved about 2 miles and camped for the night.

Sat. 31 Jan.: This morning was very cold and wet—moved on where the road turns off for Mt. Alexander and stopped for dinner. Moved about 1 hour and then made for Tuleys Flat (Tilleys Flat ed.). Here we crossed a flat about 4 miles.... Went about 10 miles and camped for the night—the mail man passed.<sup>25</sup>

While the limestone wells mentioned by Ragless are situated about 3 hours travel south of Salt Creek by dray and could have been Chinamans Wells, there is no specific reference suggesting a Chinese connection in his or any other account of the period. Given that this project has located round holes cut into natural layers of limestone in the vicinity of Chinamans Wells and that this practice was most likely carried out by any settler or immigrant in the district, this reference is not definitive enough to refer to the Chinese wells discussed here.

Mail and coach horse teams were commonly changed every 8–12 miles in the Coorong in order to assure reliable schedules on a service that traversed some of the worst road conditions imaginable. Chinamans Wells was ideally situated between the inns at Salt Creek and Coolatoo, both of which had established good public patronage since opening in the mid-1850s.

There is published evidence to identify at least one person who might have lived at Chinamans Wells while it was a public eating house. The *Directory of South Australia*<sup>26</sup> lists all public houses for the South East and their proprietors of the day. In the two years between 1867–68, a J. Hunter is listed as the proprietor of an unnamed public eating house in the Coorong, all others being mentioned by name and licensee. Because the title holder for Chinamans Wells, Joseph Darwent, was a business acquaintance and partner of James Hunter, the miller from Tea Tree Gully, it is reasonable to presume Hunter was the same J. Hunter mentioned in the directory. This is the only published information which suggests that Chinamans Wells was 1), an eating house during the 1860s, and 2), that James Hunter was the manager for at least two of these years.

Between November 1879 and March 1880, G. D. Morrison walked Northwest through the Coorong on his way to Wellington from Geelong. Upon leaving Kingston on a hot February day, he observed that:

... ten miles before getting to Coolatoo, some men were putting up coach stables. I left about 10.30. After six miles you come to Mr. Gall's out station, Cantara, where I got some water. The road up till now had been on the west side of the pipeclay, but now it gradually worked across and after a mile or two of walking, in the pipe clay itself took you to a sandy road on the other side. In a short time you came to some more coach stables at Chinamans Wells. The water here is very nice.<sup>27</sup>

Unfortunately, no description of either the stables or the homestead is given in this account.

In his reminiscences of life as a young mail coach driver in the South East, Thomas Smith<sup>28</sup> describes his duties in the section between Kingston and Salt Creek. He provided chaff and grain for the horses used to haul the mail and coaches through the Coorong, and Chinamans Wells became a changing station for this service. Presumably the stables mentioned by Morrison on his journey were also used by Smith.

No written accounts pertaining to the site for the ensuing decade seem to have survived. When the Assessment Books for the Meningie Council<sup>29</sup> were first compiled in 1889, John Gall is listed as the registered owner of Section 75 at Chinamans Wells, but his eldest son Joseph is also recorded as the occupier. This arrangement continues unchanged in the books until 1909, when the occupants are no longer recorded. Furthermore, unlike the listings for other homesteads in the district, those pertaining to this particular section of land fail to mention either



construction of a homestead or other type of improvement occurring on the property. Nor does the land valuation reflect the fact that such improvements existed either. Does this mean that a house did not stand at Chinamans Wells? On the surface this apparently contradictory evidence casts doubts that anyone lived at the site at all. However, public houses were not commonly taxed at this time in the Coorong settlement and therefore did not appear on Council books. The house in all likelihood did exist and it was this public house that had now become a private homestead for the heir apparent to Cantara, Joseph Gall.

A series of unrelated documents record aspects of public use of the water reserve from this time onward. From the office of the Engineer-in-chief, a draft letter to the Government Gazette for 1895 advertises the water rates at Chinamans Wells as follows:

One Pence for every 10 gallons to individuals  
 ½ Pence per head of great cattle  
 2 Pence per head of camel  
 10 Shillings per 1000 head of sheep.<sup>30</sup>

In October, 1895, a contract was won by W. F. Batten, John Galls' brother-in-law, to clean out and repair the Needles, Stony, Chinamans, and Sheoak Wells water supplies. The specification of the contract requires that:

fencing around the wells to have posts no less than 4" diameter and with 5-6 wires, the post base of either to be charred or tarred.<sup>31</sup>

At Chinamans Wells, the contract required the builder to:

Construct and erect whip, fixing sixty feet of troughing, supply under logging same as above (for Needles). Each set of troughing to be tarred inside and out, and all woodwork except logging. All materials to be taken delivery of by me and to cart same to well. Work to be completed in 1 month. The logging to be not less than 5" diameter—the troughs to be fastened with wooden pins to the underlogging.

At this point in time, the Gall family had been collecting half fees from water users at the well, but a steady decline in traffic over the old coach road prompted John to relinquish authority to his son Murray. It is clear that these documents are referring to the stock watering hole and not the Chinese well itself. In a subsequent correspondence<sup>32</sup> to the Engineer-in-Chief, Murray reports that the whip is in a state of disrepair and in 1932, the Surveyor General received a report<sup>33</sup> that the well "...was in good order, but not used or of any valve to any one 1935". The report went on to claim that Joseph Gall did not want any of these wells for watering purposes. In 1935, the southern district engineer notes the presence of 13 lengths of galvanised sheep troughing at the well<sup>34</sup>.

### 2.2.2 Biographic notes on Title Holders, Section 75, Hundreds of Neville.

The first freehold title to Section 75 was held by Joseph Darwent<sup>35</sup>, who purchased it for £72 on September 8, 1863. At the time, Darwent owned a thriving business on Grenfell Street in Adelaide where his services as a stock and shipping agent, and grains merchant, gained him a world wide reputation. It was through his efforts that the coastal steamer trade prospered in South Australia and his advertisements for travel and shipping to the eastern ports, New Zealand, and other overseas ports appeared regularly in the *Observer* and the *Register*. His fleet of ships, including the *Omeo*, the *Aldinga*, the *Coorong*, the *Kangaroo*, and the *Gutenberg* were familiar sights throughout the coastal runs along the Southern Ocean. One arm of this network extended up the River Murray as far as the Darling River. Darwent specialised in the transport, storage, and milling of cereal crops, especially wheat. He owned a flour mill and dwelling in Milang, which he sold in 1867<sup>36</sup>, and was financial partner in the operation of a large mill at Tea Tree Gully, a small settlement Northeast of Adelaide. A full summary of Darwent's accomplishments is recounted in his obituary<sup>37</sup>.

Darwent's appetite for financial deals in transportation and navigation gained him a reputation as an enterprising land speculator, and skilled business man in search of a dollar. The following

advertisement appearing in 1864 reveals a business arrangement made in a village north of Adelaide which might have parallels in the Coorong.

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Flour mill to be let, at a nominal rent, the Tea Tree Gully Steam Flour Mill: together with a 4 roomed house.<sup>38</sup> For further particulars, apply to Mr. J. Hunter, Tea Tree Gully, or Mr. J. Darwent, Adelaide

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A historical study of Tea Tree Gully<sup>39</sup> concluded that this particular mill was owned and managed by James Hunter beginning in 1854. Owing to a declining water supply, the milling operation folded in the mid-1860s, presumably putting Hunter out of work. As discussed in the preceding section, a J. Hunter managed a public eating house in the Coorong in the mid-1860s. Given that Darwent owned both properties, it is likely that James Hunter may also have worked on both properties for the owner.

In the late 1860s, the partnership of Darwent and Dalwood won a contract with the South Australian government to construct the Darwin-to-Alice Springs section of the overland telegraph service. Fraught with a difficult supply line and adverse environmental conditions, the contractors incurred substantial delays in meeting deadlines which forced the government to appropriate the company's assets. As a result, Darwent declared bankruptcy in 1871<sup>40</sup> and Dalwood moved a motion in the supreme court for compensation for assets seized by government agents. In the first class certificate of insolvency, Darwent itemised his assets and liabilities for the court to dispense to creditors against the estate. In addition to a family home in Melbourne St. North Adelaide, his chattels and real estate included at least six ships, over 330 square miles of pastoral land in South East South Australia (including Cantara Station), 75,500 head of sheep, 250 cattle, and 350 horses. By this time, Sections 75, 76, and 77 had been mortgaged to the Bank of Australasia and the leases for the South-eastern tracts were obtained by J. B. Spence by indenture. The combined stress of both these court cases may have been too much for Darwent, for on October 20, 1872, he died suddenly at the age of 48, leaving behind a wife, two sons, and a daughter.

The mortgage of Section 75 was discharged in 1871 and the title was transferred to John Brodie Spence, gentleman of Adelaide. Spence was also the manager of the English, Scottish, and Chartered Australian Bank which held the mortgage for most of Darwent's pastoral holdings in the South East. The insolvency case remained under consideration by the court for nearly six years before a final decree was issued.

John Gall, a sheep farmer from the Coorong, and David Murray, a warehouseman from Adelaide acquired the title<sup>41</sup> to Section 75 in 1876. Gall<sup>42</sup> first took up a pastoral run at Scrubby Swamp in the southern Coorong in 1862, after being a manager for prominent landowners in the district for the previous decade. In 1866, he built a small house at Tilley's Swamp Station with his wife of three years and in the following year, their second son, Joseph, was born. In early 1883, with a family of 14 children, they moved from Tilley's Swamp to the much larger estate at Cantara in the sandhills of the southern Coorong. It was here that the Gall family played an influential role in the social and economic life of the Kingston area, with the family owning over 400 square miles of pastoral land at the peak of their enterprise. With his sons managing Tilley's Swamp, Dalkeith, and eventually Lake Eliza Stations, Gall became the owner of the largest landholdings and horse breeding operations in the area. He was chairman of the Lacepede District Council between 1892-1907, and was a highly respected president of the Kingston Pastoral, Agricultural, and Horticultural Society until 1907. In the 1880s, Gall won a contract<sup>43</sup> to carry the mails between Kingston and Meningie and during this period, Cantara served as a changing station for the horses used on the run, and for a brief time it was also a post office<sup>44</sup>. In 1907, the patriarch died at the age of 77 and the title of Section 75 was transferred to his widow, Anna Maria Gall. It stayed in the family until 1932, when Murray Gall died.

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Joseph Gall<sup>45</sup> was born in 1867 at Tilley's Swamp and graduated from Prince Albert College in 1881 at the age of 14. As heir apparent to the Gall estate, he became the manager of Tilley's Swamp Station, which included 270 square miles of land immediately inland and south of Chinamans Wells. By 1889 when assessment records list him as the occupier of Section 75, he would have been only 22 years old and an experienced horseman. Family descendants suggest



that he had expensive tastes and could afford to cater to them, although in later life these extravagant habits alienated him from his brothers. He married Kate Jamieson from Kingston in 1902 and is believed to have moved into Cantara upon his father's death shortly after 1907.

### 2.2.3 Oral History

Several elderly residents from the Coorong were interviewed to obtain information about the way Chinamans Wells was used and how it may have been named. In order to establish the credibility of these eye-witness accounts, a summary of the background of each informant is appropriate at this point in the discussion.

Ron Bonney<sup>46</sup> has worked in the district as a rabbit trapper, farmer, and station hand for most of his 74 years, and at the time of this interview (1983), he was living with his wife Lolla on a farm in the southern Coorong. As a youth, he knew Old Joe Walker and Alf Watson, two revered Aboriginal identities from the Coorong who were born in the mid-19<sup>th</sup> century. Old Joe witnessed the arrest of Malachi Martin<sup>47</sup> at Salt Creek in 1863 during his teenage years, and the two old men loved to relate their experiences from the early days with Bonney and anyone else willing to listen. Miss Phyllis Gall<sup>48</sup>, a granddaughter of John Gall knew a great deal about John, although she had not personally met him. She and her cousins were told many stories about life at Cantara by the various offspring of John and Anna Gall, and in fact Miss Gall lived at the homestead with her grandmother for a short period of time during her youth. She was told that John first met his wife Anna Batten at the Chinamans Wells Homestead.

Bonney recalls that Old Joe told him about seeing Chinese labourers constructing the well when he was a very young child. This work was said to have taken place on the salt lake at Chinamans Wells, although specific localities were not mentioned at the time. Old Joe stated however that the Chinese only camped in the vicinity and did not actually reside there from one year to the next. If Joe's age is correct, as reported by Hastings<sup>49</sup>, he would have been born about 1845. From personal experience, Bonney remembers that many residents, farm hands, and trappers used Chinamans Wells whenever they worked in the area because the water was especially clear and sweet tasting. This observation was also made by G. D. Morrison in 1880 and by many others. Regular use of the well ceased a few decades ago, however when the stone plug covering the entry hole was stolen and birds were able to foul the water. It seems there was an unwritten agreement that every user had to be responsible for the protection and maintenance of the well because of its unique character. Unanimous testimony from several witnesses described the plug as resembling the lid of a common ceramic teapot with the flanged edge fitting snugly over the entry hole of the coverstone. It was slighted dome-shaped and had no handle to facilitate removal. Although most residents interviewed also identify wells at Macgrath Flats, Woods Well, and Stony Well as being Chinese, all agree that the well at Chinamans Wells is unique in design.

The story that the Chinese merely camped at the well is independently confirmed by Miss Gall. She relates<sup>50</sup> that it was common knowledge in the family that no one actually lived at the well, although travellers routinely camped there. The story of a legendary market garden and Chinese settlement rumoured to have existed at the site, she believed, may arise from the employment at Cantara of a Chinese gardener in the late 19<sup>th</sup> century. It seems that this man was well liked by the Gall family and frequently presented the children with gifts he brought back from the many visits he would make to China. Being a competent and dedicated gardener, he was given free reign in the garden and was allowed to grow vegetables for his own use. Miss Gall suggests that he kept such a garden at Chinamans Wells and that rumours to this affect began then. There are very few locations close to Cantara other than at Chinamans Wells in which fresh water and adequate soil occurs together and therefore this story does have considerable credibility.

Three Chinese officials visiting Adelaide in 1983 to supervise the exhibition of the Entombed Warriors inspected the well to give their assessment of its possible Chinese origins and to enjoy the Coorong over a picnic lunch<sup>51</sup>. As archaeologists directing excavations in provincial China, Mr. Lu Shao Chen, Mr. Xi Hua Men, and Miss Sheng Wei Wei, are authorities on the

design and stylistic characteristics of Chinese architecture in rural China. At the completion of the visit, they offered the following comments about the well.

- The well is typical of those used in Southern China over the last three centuries. Because of heavy seasonal flooding in coastal areas, well heads must be built above ground and covered to prevent invasion from insects and birds. A small shelter may have been built above the well for protection against the rain.
- It is the custom in China to place coins in the well upon completion of construction as a token of thanks or good luck, as well as a means of wishing prosperity on the well itself. Chinese travelling through the countryside customarily purchase their drinking water.
- A detailed explanation of construction techniques could not be offered by the team members. They explained however that the investment of expertise and time in the construction of wells, walls, and similar masonry structures is usually considered appropriate in the interest of durability. Although various materials may be used in well construction, a strong preference is given to stone shaped to form a cylindrical casing. Water is customarily drawn from the well with pails or buckets by a person standing on its top.

There is one person who lived and worked in the Southern Coorong who saw the homestead at Chinamans Wells still standing. In an interview<sup>52</sup> at the Meningie nursing home, Harold Lloyd described his life as a boundary rider at Cantara Station and Salt Creek for the Gall family, one that revolved heavily around horses beginning at a very early age. He was 13 years old in 1912 when he visited the site on horseback, along with a party of older friends. They stayed long enough to inspect the buildings and grounds while their horses rested. Although the house was abandoned and the window and door frames were partially askew, the roof and walls were intact. He said that the roof was flat with a single pitch and one interior floor consisted of a mortar-like material and was strewn with a loose, charcoal, and rubbish layer. To gain entry to the house, one had to step up into the building, possibly to avoid the rubble that accumulated across the floor and threshold. During the last stage of World War 1, Lloyd helped a private road contractor, Walter Ramsey, demolish a portion of the house for rubble to fill potholes in a section of the Princess Highway. While no further details about the site or other structures on the property were reported by Lloyd, archaeological evidence cited in the following chapter will confirm that a thick dark plaster and mortar layer formed inside the house during its final stage of collapse and that fire swept through it several times. Lloyd's brief account demonstrated an extraordinary memory that was independently confirmed by archaeological investigation.

#### 2.2.4 The Chinese in The South East

Although a small number of Chinese settlers resided in South Australia during the early colonial period<sup>53</sup>, the first major influx of Orientals arrived in the 1850s as a result of political developments in Victoria. Fuelled by economic turmoil and racial biases, some white miners and settlers were incensed by the growing number of Chinese miners who could work the gold-fields in western Victoria more successfully than themselves. Under mounting political pressure, the Victorian legislature passed a bill in June 1855 which imposed a £10 poll tax on each Chinese national disembarking at a Victorian port and limited the number of Asian passengers to one for every ten tons of cargo. To avoid the tax and the transportation quota, Chinese immigrants were forced to land in South Australian waters and walk to the gold fields either overland from coastal ports, or through towns on the Murray River. By far the largest number landed at the newly settled port of Robe<sup>54</sup> in Guichen Bay and travelled the 150 or so kilometres into Victoria. Some also arrived in Port Adelaide where groups congregated to walk en-mass through the Coorong to the mines. It is during this three year period that Chinamans Wells is believed to have been built and Chinese coins were obtained by Aborigines<sup>55</sup> in the Southeast. In light of Todd's sighting of the well in September 1856, could the Chinese over-landing to Victoria have built the well as local history suggests, or were the Chinese simply



working as labourers for local contractors? Exactly what were the circumstances of their construction and what is the wells' significance to Chinese settlement in Australia?

The answer to this question lies in the arrival dates of Chinese passengers in South Australia. When the poll tax was declared in Victoria in June 1855, the tiny village of Robe was ill-prepared for large influxes of either cargo or people through its gates. The port did not yet offer safe anchorage close to the jetty so that off-loading was accomplished with small lighters which ferried goods between ship and shore. This method was often hampered by weather conditions and could result in mishap and serious loss of goods and life. The harbourmaster and customs agent, Henry Melville, had just assumed his official post and his staff had yet to arrive to give assistance. The police posted to the town were heavily engaged in mail delivery and reconnaissance tours of the district to maintain law and order under rather primitive conditions. Nevertheless, the station journal<sup>56</sup> for the period indicates that when the ships bearing Chinese immigrants first arrived, the police were immediately pressed into duty to clear them through customs and to ensure safe entry into the colony. The *Burra Burra*, the first ship listed on the record book, arrived on March 2, 1856 carrying 130 Chinese, and again on the 20<sup>th</sup> of that month, she returned with an additional 150 passengers, presumably from Port Adelaide. From then on at irregular intervals, well over 26,000 Orientals eventually landed at Robe for the short journey to the border. Whether or not still earlier arrivals occurred is not possible to determine from archival sources, but because Chinamans Wells had already been sighted in late-1856, their construction either coincides with or predates the declaration of the poll tax in Victoria.

Port Adelaide was another important port of call for the Orientals. The first record of landings listed in the local newspaper is the announcement that the baroque *Samarung*, which left Singapore for Adelaide with 200 celestials aboard<sup>57</sup>, would arrive in late December, 1855. Eleven Chinese disembarked at the port from the *Lochinver* shortly before Christmas and in the following listing<sup>58</sup>, 480 Chinese landed before the end of the year. This pace steadily increased throughout the first half of the new year until several thousand Asians had amassed in the South Australian capital. If this arrival schedule is a true reflection of the immigration pattern, it would appear that Port Adelaide received the first wave of Chinese immigration in South Australia, several months before Robe became the preferred landing point. It is likely therefore that the arrivals in Adelaide were deliberately setting up a strategy to facilitate the arduous trek overland and this included plans to build a water supply for the expected influx of Victorian bound compatriots. The remaining question pertains to how this was executed and to what extent were Chinese practices adopted to the Australian conditions. The answer to this question will be the central topic addressed by the archaeological investigation of the site discussed in Chapter Three.

### 2.2.5 The Telegraph in The Coorong

The South Australian Government was committed to establishing a telegraphic link with Melbourne to boost trade and commerce with its much more populated neighbours. Charles Todd was appointed to the post of superintendent of telegraphs in mid-1856 and instructed to commence work on the infant technology in telegraphy immediately. The route he chose went south from Adelaide to Victor harbour, across Hindmarsh Island to Pelican Point in the Coorong, and from there finally down the coach road through Chinamans Wells to Robe<sup>59</sup>. Letter books<sup>60</sup> and other records for the period document Todd's personal attention to technical detail from the onset of the assignment. Timber was felled from stands of blue gum and stringy bark on Mt. Jagged, south of Adelaide, and shaped into tapered poles with 5 inch square butts. To mount the single galvanised wire to the pole, brown earthenware insulators were installed, although these were soon replaced by the superior double skirted, white porcelain models. Workmen were instructed to bury the posts 5-6 feet deep, to use limestone around the base to deter fire-prone plant growth, and to clear the route of trees to prevent damage to the wire from fire or falling branches. Construction of the line between Pelican Point to Robe was contracted to Walter Thomson of O'Halloran for £40 per mile of line. The dressed timber was stockpiled at Pelican Point on the Coorong and carried by barge to Salt Creek for use further south. The service opened on April 1857 and quickly gained acceptance

in both colonies as the first intercolonial telecommunications network to join the vast social and commercial interests in Australia.

A materials failure in the insulation of the submarine cable across in the lower Lake Alexandrina and extensive termite attack to posts forced Todd to institute changes to the design of the system beginning in 1859. To avoid crossing the treacherous Coorong waters, a new line was strung over the Murray River at Wellington and supplies of Western Australian Mahogany (Jarrah) and River Red Gum were brought in to replace the less insect resistant local timber posts. A repeater station at Macgrath Flats was built to ensure signal strength between Meningie and Robe, and for a period it became a depot for spare parts and tools. Use of this public house as a telegraph office was discontinued<sup>61</sup> in 1873. As a part of Todd's upgrade, two wires were installed to cope with the increased traffic as the service gained widespread public support. By 1861, the improvements had been completed and plans were already being made to extend the service to towns north of Adelaide, eventually joining Darwin in a network that reached London. This system remained in operation in the Coorong until the introduction of the telephone in the 1930s.

### 2.2.6 The Role of Navigation in the Coorong

With all the heavy losses caused by boggy conditions, long distances, and an uncertain feed and water supply, the primitive overland transport system and stock route through the Coorong was being widely criticised as a hindrance to economic development in the rural centres throughout the Southeast. With paddle-wheel steamers starting operations on the Murray River in November, 1853, Goolwa became the central port facility for the river trade. This status was guaranteed with the establishment of a link to the sea port at Port Elliot by a horse-drawn rail link<sup>62</sup> which commenced operations in May, 1854. By the end of the decade, Goolwa had become a ship manufacturing centre and clearing station for the vast inland navigation network that connected many inland ports in the Murray-Darling River drainage system. Flat-bottomed steamers and sail boats were also providing a regular service to such remote places as Salt Creek, Hacks Station, and Macgrath Flats despite the numerous hazards to navigation and treacherous weather conditions on the sheltered Coorong lagoon. Moderately large tonnages could be handled with ease in the salt water and the passage provided reliable connections with ports around Lake Alexandrina, and coastal towns around the Southern Ocean. A well known steamer captain, C. H. F. Kruse, delivered materials for the original telegraph system in 1857 to Salt Creek and, in 1864, his ship regularly stopped at Chinamans Wells for nine months of the year<sup>63</sup>. In the same year, W. J. Browne proposed an adventurous scheme<sup>64</sup> to create an inland waterway to the fertile Lower Southeast District of Robe, Millicent, and Mt. Gambier. This plan called for the construction of a channel up Salt Creek into Tilley's Swamp and from there a system of canals was to be built through Reedy Creek to allow steamers free passage to Mt. Gambier by way of the vast unconfined swamps that dominated the district. Theoretically, the main aim of this development was to connect the largest most productive rural centres in the colony with the capital city, thus enabling many primary producers rapid, reliable access to major market outlets. In reality of course, the inland waterway was completely uncharted and no one had undertaken a survey of water levels and their fluctuations in the district to produce data, which if known then, would have curtailed any further discussion on the matter.

Nevertheless, a spate of correspondence to many newspapers of the day<sup>65</sup> enthusiastically supported this scheme as a means of overcoming the great losses incurred by pastoralist. Some writers alternately advocated cutting a deep channel southward through the Coorong from Salt Creek to Kingston, hence providing protected passage around a particularly hazardous although increasingly vital seaway. The most important aspect of these proposals however is the dubious claim that Chinamans Wells could be one of a number of successful ports in the southern Coorong. While these schemes were supported by both residents of the Coorong and the general public alike, doubts were being raised about the technical difficulties and uncertainty of hydrological conditions<sup>66</sup>. These discussions naturally cast a great deal of public attention on the potential economic growth of the Southeast and land values rose accordingly. Whatever may have been the longer term shortcomings of these schemes however, there is no



question that both Joseph Darwent and John Gall would have been major benefactors if any of the them were to have gone ahead as proposed. It was under the influence of rising public expectation to achieve greater prosperity, driven by the introduction of steam power and electric telegraphy, that land speculation had finally begun to have a noticeable grip on the Coorong.

## 2.3 HACKS STATION

### 2.3.1 Background Investigation

Separated from the mainland by the 90 mile long Coorong lagoon, the Younghusband Peninsula was an especially remote setting for pioneer farmers to settle in the period 1840-60, although many prospective investors were clamouring to purchase any land on it from the South Australian Company as soon as it came on to the market. Hacks Station was the first permanent settler station to be established on this portion of the coast.

It was initially investigated in 1982 during a routine archaeological survey of Aboriginal sites at Parnka. Acquiring its name from the Tangani word for the place, Parnka was a prominent Aboriginal lookout point<sup>67</sup> atop the highest sand hill in this part of the peninsula. A scatter of mid-19<sup>th</sup> century household artefacts adjacent to building rubble half way down from the summit of the sand hill seemed to be the mostly likely indicators of Hack's habitation. An analysis of surface collections tentatively confirmed this suspicion, although definitive excavations to compile floor plans and the occupational history of the site had yet to be conducted. The data and a discussion of the excavation results obtained from that preliminary survey are presented in the final report of the research into prehistoric land use in the Coorong. In light of the potential for a more comprehensive archaeological interpretation of the site, a full-scale excavation of several structures was undertaken in 1983. The following historic notes were obtained to elucidate the history of land use at Parnka to guide the interpretation of those excavation results.

### 2.3.2 Notes on Hack Family

John Barton Hack and his family arrived in Adelaide from Tasmania aboard the *Isabella* in February 1837 and immediately purchased several properties in and around the newly established capital of South Australia<sup>68</sup>. In 1843 he was declared insolvent and turned to a range of pursuits to gain an income. Further ventures in a mine at Burra and as a timber merchant in Adelaide expanded Hack's quite considerable involvement with economic development of South Australia. By the end of the 1840s, he had established the colony's first dairy, set up a whaling station at Encounter Bay, and was installed as a member of almost every prominent public committee, commercial board, and institution in the young colony. In 1852, J. B. and four of his sons tried their hand in the Victorian gold fields, returning with 40 lb. of the precious metal for their troubles. In 1858, Hack again fell upon difficult times, and, plagued by failing eyesight, he moved his family to the Parnka run on the Coorong opposite Macgrath Flats where they again established a small dairy. Hack described the settlement as follows:

...leaving North Adelaide, we removed there (Coorong) and commenced dairy operations. There was no sort of improvements on the run; everything had to be done. I took with me doors and windows for a house, and managed by degrees to make a home. A part of the deck of a vessel was washed ashore near our camp, and we broke it up and found enough battens for the framework of a house of five or six rooms, filled in with bush materials, and thatched with bog grass. We were successful in making excellent cheese, but found it very difficult to get it to market, our route being via Goolwa. The great trouble was the run was unsuitable for a dairy, and after some years trial, it appeared that the balance of expenditure over receipts was too great to be overcome<sup>69</sup>.

Both anecdotal and archival documentation provides enough information to give a thumbnail sketch of the station and the kind of life experienced by the family for the following five years of exile. Because the station had few neighbours to help out in times of need, a large contingent of family and friends gathered on the property to erect the buildings and fencing. A descendant of the family<sup>70</sup> relates that Hack's eldest son, William, helped his parents to manage



the farm, and that despite their relative isolation, the family received many guests at the station<sup>71</sup>. In addition to the perilous coastal track to Goolwa through the sand hills of the Coorong and across the Murray mouth, a crossing was established some 2000 ft. south of Parnka at a wide point in the lagoon that still bears Hacks name on maps of the area. This joined the main overland route at Macgrath Flats and became the lifeline for later settlers on the peninsula in times of need. In subsequent occupations, a punt crossing was established at Parnka at a point called Hells Gates, named after a pair of submerged limestone reefs which protrude into the narrow channel. The Hack youngsters loved to ride their horses through the paddocks with their Aboriginal friends and, in parliamentary testimony<sup>72</sup>, Hack reveals that he had developed a close rapport with his Aboriginal neighbours, the Tangani clanspeople who were the traditional owners of this portion of the Coorong. Throughout the years at Parnka, Hack kept a letter book<sup>73</sup> in which the family business is recorded. In it, we are told that the Milang steamer regularly supplied the station with provisions and that shipping costs and herd depletion caused by the harsh coastal environment steadily eroded profits. With some forceful advice from a neighbour, Hack replaced the cattle with sheep in 1861, and acquired additional pasturage some 40 miles further inland to start anew. There he soon found that his fleeces were ruined by burr infestation and sand, and the herds suffered from foot rot. In early 1863, Hack departed from the station with his family, eventually to return to Adelaide and the office work of a public official.

### 2.3.3 Notes on Early Habitation

The investigation into Hacks Station sought to acquire as much information about the former habitation record for the property from both archival records and oral history. This endeavour has produced a variety of useful, albeit unconnected insights into the use of the property. The following discussion<sup>74</sup> presents the essence of this information with a particular view towards identifying the physical remains and periods of occupation which will be significant in the archaeological investigation.

The earliest records of pastoral land tenure at Parnka<sup>75</sup> provide only sketchy details of land use in the central and northern Coorong peninsula. When land was first parcelled out for sale sometime prior to 1850, the South Australian Company was a principle landowner and occupation licences were held by squatters and by investors who were not necessarily occupiers. The original Parnka Lease (No. 226) of 22 square miles was held by Michael Martin and John Bradford in 1851, four years before McGrath Flat was subdivided for lease hold. The northern half of this lease, the section known as Parnka, was taken over by J. B. Hack and his younger brother Stephen in 1858 under circumstances that only someone with Hacks influence may have been able to master. As described elsewhere in this report, the earliest published record of actual residency on the run is attributed to Hack on a navigation map<sup>76</sup> compiled by Richard Loveday in 1866-7, some three years after the lease was re-issued to the Honourable John Baker at Hack's request. This notation would imply that the house was still standing three years after Hack abandoned the farm, but there is no clear statement that it was inhabited.

A Hundreds of Glyde withdrawn survey map of Parnka<sup>77</sup> dated July 1895 shows a house and a stock yard located close to the edge of the Coorong near Hacks Crossing and almost opposite Cow Island. A narrow track following the water's edge is also surveyed the length of the Parnka run. Cadastral features such as fences but not ownership information is given on the map. No further detail was obtained in the archival records referring to the character of land use or a specific residency of the run for most of the remainder of the 19<sup>th</sup> century.

### 2.3.4 Oral History

Verbal testimony from two Coorong residents was acquired through personal interview to assist with the investigation of Hacks Station. Bill Coad<sup>78</sup> took up residency in a one-room hut opposite Parnka Point in 1934, and for 15 years ran a dairy on the run. He also operated a cable-driven punt to transfer dairy products and supplies back and forth across the narrow Coorong straits. A small punt was in use in 1926, but was replaced sometime after Coad's arrival with a larger one. In addition, he conducted sightseeing tours for parties wishing to visit the ocean or other points of interest, and up until its demise in the 1950s, the punt was the major

means of conveyance for market-bound goods for farms on the Younghusband Peninsula. Coad also recalls that sheep grazing on the Coorong was unsuccessful because the fleece became too sand-laden to shear. Since the 1960s, the Parnka property ceased to be a pastoral run and was instead taken over by campers, trappers, cocklers, and itinerant travellers.

Melville Appelkamp and his sister (Mrs Bill Coad) were raised in a crude Nissen hut on Attrill's run opposite Cow Island (near Hacks Crossing) beginning in 1910<sup>79</sup>. They understood that in 1895, William Ashby and J. B. Attrill purchased adjoining leases at Parnka to run dairy cattle, Ashby maintaining a herd of 200 animals. Ashby built his homestead on the flats in the survey transect, and during the period of its construction, he lived in Hacks House. As a ruin, the house faced the Coorong with a single door and two windows, but Appelkamp and his sister were unable to recall the exact location of the building. The Ashby holdings consisted of a large, crude stock shed, a windmill, and tank (built in the 1930s), and a homestead that is not described. Water for stock was collected in waterholes which were cleaned out annually by a team of horses hitched to a large steel scoop. Domestic drinking water however was drawn either from soaks at the foot of the dunes in thick scrub, or from small waterholes dug into the Coorong beach. Curiously, the Appelkamps both report that freshwater flowed steadily at sunset, and that good water was available year round.

### 2.3.5 Survey of Farm

In 1864, the Surveyor-General of South Australia, G. W. Goyder, toured the Coorong to evaluate the pastoral properties for tax assessment purposes. During this visit, he compiled comprehensive sketch maps and notes describing the improvements to each pastoral run on the peninsula. These accounts reveal how extensive had been the pastoral development of the Younghusband Peninsula since the colony was proclaimed only twenty-five years earlier. The entry for Hacks Station<sup>80</sup>, by then owned by J. Barker, captures the layout of the site a year after Hack had abandoned it. A copy of this sketch, Figure 3, locates the water holes and other features assessed in the vicinity of Parnka by Goyder. In an enlargement penned by the surveyor, Figure 3a, is a site plan of the station showing that eight buildings, a watering hole, a well, and a watering hole made up the home precinct. The accompanying description of Parnka, keyed into the sketch with upper case letters, creates the impression of the fragile nature of the buildings just as they were left. It reads as follows;

A. From 10 chains E. of high water mark on fence coast S. E. and NW-E and south 7 or 8 miles over similar country to Dodd's run with wattle and rank vegetation to water hole on Coorong----£1.

Thence 3 miles SE (in bay) to Parnka passing 3 water holes---£1,£1,£3.

Country as before---about 1600 sheep, 50 horses, and 6 bullocks. Sheep about 4 months. run coasty. Improvements at Head Station wattle and dub (sic) house 54 x 24 ft floored--10 framed windows, 8 doors, floor tumbling to pieces--£ 40, kitchen--£ 10, shed--£ 0, 3 roomed house, floored, doors and windows, thatch falling to pieces, room and stables, dairy and fittings, thatch falling in---woodshed paling, oak batten floors and thatch falling to pieces, 50 x 18 feet---£ 20, yards, oak---£ 5, old stables---£ 0, well fallen in, garden and paddock fences----£ 0, flat rushes and C. V. F. G.

B. 1 mile SE by SSE passing water hole at ¾ mile---£ 3. to square well 4 ft., fences,---£ 5. and 60 ft. troughs total---£ 15. Country sand hills as before, flats VFG with samphire cutting grass rushes. Pigface. Bushes and herbs---low sand rises FG. Bushes, dwarf mallee, a few wattles, herbs, and a little black.<sup>81</sup>

C. Etc.

The layout of Hacks Station at the end of Hack's tenure can be reconstructed from the written and graphical details given in these accounts. The station consisted of the following buildings, all apparently constructed from a wide range of materials obtained from the run.

- a main house of 5-6 rooms made entirely of local thatching, timber, daub; 54 x 24 ft. floored, with finished windows and doors.
- a three room house, no dimensions given; made entirely of local materials.

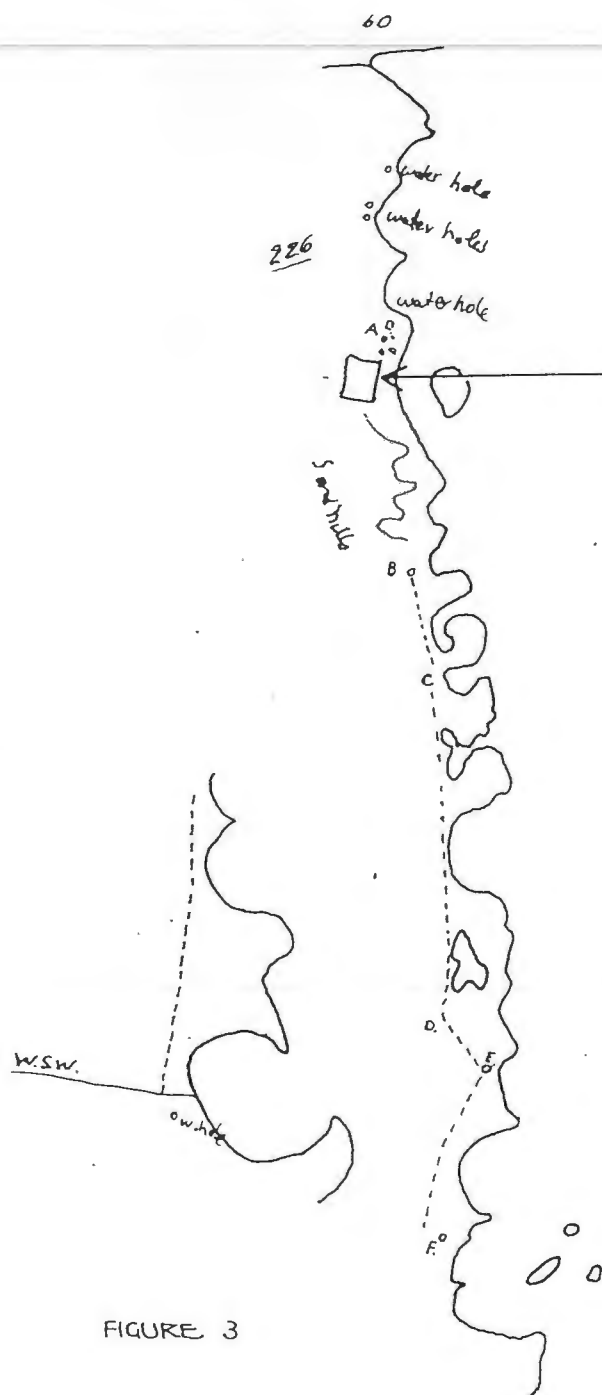
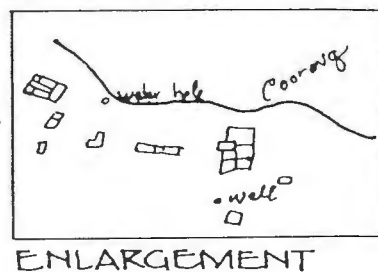


FIGURE 3

FIGURE 3a



ENLARGEMENT

FIGURE 3 Sketch of Hacks Station pastoral run compiled by G.W. Goyder in 1864, two years after the Hack family abandoned site.

FIGURE 3a Enlargement of homestead showing relative position of main buildings mentioned in text.

EARLY SKETCH MAP OF HACKS STATION WITH ENLARGEMENT OF HOMESTEAD



- a kitchen, no description.
- a room and stables, possibly under one roof.
- a shed.
- a woolshed, oak floors, local thatching; 50 x 18 ft.
- an old stables, no further description.
- a dairy with yards, thatched roof.

While the station buildings are not specifically identified on Goyder's map, there is sufficient evidence to speculate on the farm layout so that its main elements can be located by the archaeological investigation. It is reasonable to assume from the layout shown in the enlargement and dimensions given by Goyder that the main house, dairy, and the woolshed, were the most important buildings in the home precinct. It can be presumed however that the woolshed was not built until the enterprise switched from dairy cattle to sheep in 1861. The kitchen is likely to have been detached from the main house, although situated only a few paces away, as too was an outside toilet. These three structures would have constituted the original residential compound erected by the Hack family. The dairy, with its many yards is most likely to have occupied a much larger area than any of the buildings, and it, along with the main house probably had its own water supply. Unfortunately Goyder's original sketch map is exceedingly small and therefore it is unlikely that the buildings are drawn to scale. The shapes and interior divisions however probably do accurately depict his understanding of their approximate design and should prove to be reliable clues about the identity of some structures. If these assumptions are correct, the homestead may be the building drawn on the extreme left of the sketch, with its rooms aligned off a central hall, and the kitchen and toilet/washhouse located a few paces to the side. The water hole nearby at the edge of the Coorong could then have belonged to the household. The much larger structure at the opposite end of the home precinct might then have been the thatched dairy with its yards attached to three sides, and the nearby well supplied the large amounts of water needed to wash down the milking area and keep the cattle clean. This well may have been lined with stone or timber to ensure that a reliable supply of water was available every day. Identification of the remaining buildings, including the woolshed, is too difficult to propose with the available information.

The subsequent habitation history of the property is difficult to describe in any detail, but there are some general conclusions of archaeological importance to be made. The homestead, and possibly some if not all outbuildings, were standing for a period of time after Hack abandoned the farm. For the recollections of the Appelkamps to be correct, Hack's house must have been kept in good repair during the intervening 32 years since his departure if Ashby actually did live in it during the construction of his own residence in 1895. Was then the house they refer to as a having two windows and a door facing the Coorong a pared down version of its original layout, or was it possibly a different dwelling altogether? While this question must remain unanswered, it must be assumed that re-habitation, demolition, repair, and renovation may all have taken place to the Hack Station layout, and at least one new residency was established on the farm in the late-19<sup>th</sup> century. Given the fragile fabric used in the original farm buildings and the impacts of demolition and neglect from subsequent occupiers, the archaeological investigation aimed at identifying fabric related specifically to the Hack residency may encounter evidence of widespread destruction and little else.

## 2.4 CONCLUSION

The historic research of Chinamans Wells has uncovered a myriad of links with the past centring around development as a water reserve and stopping place for travelling public. Encapsulating the historic research so as to inform an archaeological investigation, these can be summarised as follows.

## Chinamans Wells

The construction of the well at Chinamans Well can be dated with confidence to pre-September 1856 and almost certainly coincides with the landing in South Australia of Chinese gold seekers following legislation in Victoria to restrict Asians from working the lucrative Victorian alluvial goldfields after mid-1855. While neither the exact date of construction nor its social context are recorded, circumstantial evidence suggests that it was the first wave of celestials landing either at Adelaide, or possibly Victor Harbour, which built the wells rather than those that disembarked at Robe when its port facility came on line. There is *prima facie* evidence suggesting that more than one well was erected at Chinamans Wells and in addition, the Chinese also built wells at Magrath Flats, Woods Well, and Stony Well. If the force of this testimony is taken as fact, then it must be concluded that the Chinese planned to build an elaborate network of wells to provide a reliable supply of drinking water to a large migration population that was soon to visit the area. The only testimony detailing any specific use of the well by Chinese people indicates that the site was not used at any time for habitation, although it is possible that a Chinese employee at John Gall's Cantara Station may have maintained his personal garden at the well in the late-1890s. The exact relationship of Chinese to the well, its construction details, and the possibly that substantial Chinese involvement took place was not been assessed through the historic research. Once constructed however, the site as a place-name has remained an important landmark until the present day.

In 1863, two small blocks of land were simultaneously surveyed at the site, one being declared a public water reserve and the other apparently designated for residential development. This involved the construction of a wedge pit, a whip, and troughs to ensure an adequate distribution for travelling stock. The historical research has not determined the exact time of construction nor specific details of the reserve's layout. It fell into virtual disuse by the end of the century when half rates were being collected and re-routing of the main road to its existing alignment along the Princes Highway effectively meant that the travelling public bypassed the site altogether.

## Chinamans Wells Eating House

The residential block created in 1863 at Chinamans Wells was purchased by a wealthy Adelaide merchant Joseph Darwent and a house was erected on it by the first month of 1864. Darwent's commercial ventures involving transportation of passengers and cargo via overland and sea routes suggests that the development of Chinamans Wells was a part of a larger plan to cash in on economic growth in the Southeast of South Australia. Although the exact layout of the buildings and the character of their function are not recorded, the station was certainly a horse changing station with a stables from its early days until ca. 1880, if not later. It was also a public eating house at least during the four year period 1866-1869, but the paucity of references suggests that this function may have not have prevailed after its first decade of life. A J. Hunter was most likely the resident manager between 1866-8 and, for the period from ca. 1880-1909, Joseph Gall lived in the house, first as a bachelor and then with his wife. It was abandoned in the period 1907-1910 and finally demolished by ca. 1917. Unfortunately, there is no direct testimony about the success or otherwise of any commercial or pastoral roles of the house nor details outlining the specific nature of its use or development of its layout by any of its tenants.

## Telegraph System

The introduction of telegraphic services in the Coorong in 1857, empowered both local residents and South Australians generally with the opportunity to almost instantly communicate their business and social interests to others. The effect was to reduce for the first time the sense of isolation felt by pioneer settlers living in the Coorong and promote, even if indirectly, the general awareness of the economic potential for regional growth.

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With 470 miles of wire and vast amounts of imported and local timber, insulators, and various electrical equipment and batteries required to operate the telegraph, construction of the telegraph system was probably the first significant public works program undertaken by the South Australian Government. Improvements to double the carrying capacity of the service and en-



sure technical effectiveness implemented in the early 1860s ensured that it lasted for the following 60 years virtually unaltered, except for routine repair and maintenance activity.

## Hacks Station

John Barton Hack established this station at Parnka with his large family to run the first dairy in the Coorong between 1858-1863. The farm began as a modest operation, with the buildings being constructed from thatching, mud, limestone, and a variety of timber from shipwreck and local forests. It is likely that the layout underwent modifications as the residential component was expanded and routine procedures for making the dairy operational were worked out. A sketch map has provided a plausible indication of the layout of the home precinct at the end of Hack's tenure and hence gives clues as to the location of residential and farm buildings. This information will be a vital guide for the archaeological investigation aimed at identifying the function of any particular building at the site. Then too, given the fragile nature of the Hack buildings and demolition of subsequent occupiers of the station, the identification of fabric relating specifically to Hacks occupation may encounter evidence of widespread destruction and little else.

The significance of Hacks Station is that it represents the first of a long series of initiatives by pastoralists to settle the Younghusband Peninsula in the Coorong and exploit its natural resources, each with varying degrees of success.

<sup>1</sup> For an authoritative discussion on the traditional Aboriginal landowners of Parnka, see R. Berndt and C. Berndt, *A world That Was: The Yarlaldi of the Murray River and the Lakes, South Australia*, (Melbourne University Press, Melbourne, 1993), especially pp. 23-24; Norman Tindale, *Aboriginal Tribes of Australia*, (ANU Press, Canberra, 1974), and, *Native Songs of the South-East of South Australia*. *Trans. Roy. Soc. S.A.*, vol. 61, 1937.

<sup>2</sup> The Berndts, 1993, *ibid.*, 309-310, identify 26 or 27 clan estates of the Tangani, whereas Tindale, 1974, *ibid.*, 218, cites 22 estates, although both these sources acknowledge that more may have existed in "traditional times".

<sup>3</sup> A more lengthy discussion of the archaeology of Tangani subsistence patterns is presented in Luebbers, *The Coorong Report 1981*, pp 6-30, 1981.

<sup>4</sup> The role of food production in Ngarrindjeri subsistence economy has been addressed by several researchers, especially R. and C. Berndt, 1993, 109-130, and R. Luebbers. 1981, 3-6. Tindale personally described for the author in 1984 the production of large "pound cakes" by Tangani women which resembled the modern unbaked raisin cake. These were carried great distances on the head and traded with inland groups in the Mallee for whipstick mallee poles that were needed to make the roof structure for the larger dwellings built at the lake shore. Similar references to techniques designed to harness the food chain by storing energy are also important indicators of economic adaptation in the South East generally. For instance, Angas (1847:155) describes mud weirs in the swamps near Lacepede Bay being used to harvest white bait, and identical traps near Salt Creek were said by Goyder (as quoted by Worsnop, *The Prehistoric Arts, Manufacturers, Works, Weapons etc. of the Aborigines of Australia*, p 106, 1897) to catch these fish, which were then used as bait in the Coorong. The Yarlaldi subgroup of the Ngarrindjeri at Point McLeay also maintained stick fish ponds in Lake Alexandrina for keeping Murray Cod alive for later consumption (see G. Taplin's diary, 1859).

<sup>5</sup> Allison Harvey, *Mankind*, vol. 3, 108-112, 1943, cites the exchange of dried fish with clan relatives from Penola, 60 miles Northeast and inland from the Coorong.

<sup>6</sup> The archaeological record of the rise of the cemetery in Aboriginal mortuary practices in the Murray River basin has been documented by C. Pardoe, *The Cemetery as Symbol: The Distribution of Prehistoric Aboriginal Burial Grounds in Southeastern Australia*, *Archaeology in Oceania*, Vol. 23:1-16, 1988, and G. Pretty, *The Cultural Chronology of the Roonka Flat: A Preliminary Consideration*, in *Stone Tools as Cultural Markers*, pp. 288-331, edited by R. V. S. Wright, 1977.

<sup>7</sup> The oldest middens are described by R. Luebbers in *The Coorong Report 1981*, pp 40-47, 1981.

<sup>8</sup> For a more in-depth account of this historical process, see G. Jenkin, *The Conquest of the Ngarrindjeri*, 1982. Much of the background summarised here, originates from this excellent source.

<sup>9</sup> George French Angas, *South Australia Illustrated*, London, 1846.



- <sup>10</sup> George French Angas, *Life and Scenes in Australia and New Zealand*, London, 1847. Vols. 1 & 2.
- <sup>11</sup> Correspondence from the Commissioner of Crown Lands, Mr. Bonney, to the South Australian Company and the office of the Lt. Governor in 1846 reveals that waste Crown Land on the shores of the Coorong was being excluded from pastoral runs for public travel and thoroughfares. SAA Research Notes 1324/126.
- <sup>12</sup> The drainage programs started as experiments to test the effectiveness of the scheme for claiming valuable pasturage in the Southeast. The first was a small, hand dug channel at Salt Creek in 1865 across a narrow calcrete ridge, and the second was at Narrow Neck, near Rendalsham in the lower Southeast in 1866. The area affected amounted to tens of square kilometres, and, after these were enlarged and a network of drains was finally installed, more than 5000 square kilometres came under flood control by the turn of the century.
- <sup>13</sup> This date was reconstructed from a draft report, Charles Todd to Colonial Secretary, SAPP, No. 11, pp 8-14, 1856.
- <sup>14</sup> Annual Public Works Department Report, No. 22. SAA, 1934-5.
- <sup>15</sup> Facsimile copy taken from Hundreds of Duffield diagram book, page 3, 1862, with a signature from James Brooks confirming completion of survey, dated April & May, 1863.
- <sup>16</sup> *Observer*, June 25, 1863.
- <sup>17</sup> Darwent paid £72 for the property, 8/9/1863. C.T. vol. 43, Fol. 217. Lands Title Office, Adelaide.
- <sup>18</sup> Wentworths Gazetteer, 1866, p 9.
- <sup>19</sup> E. Ward, 1869. South Eastern District of South Australia, Its Sources and Requirements. *The South Australian*, Adelaide.
- <sup>20</sup> Batten's public accommodation house operated at Tilleys Swamp, which is located south of Coolatoo. The tourist route and its many watering holes and settings are described in Notes of a Journey from Adelaide to the South East District of S. A., an unpublished manuscript, which is believed to have been written by Sir William Milne, accompanied by G. W. Goyder and W. R. Coultard, January, 1863. John Gall also lived at Tilleys Swamp and married Batten's daughter Anne.
- <sup>21</sup> Sketched navigation chart, Sept. 1866, compiled by R. Loveday. Held by South Australian Lands Department, R68/13. See also Coorong Hazards, SAPP 1866-7, Vol. 3.
- <sup>22</sup> Diary written by H. Holmes. 1870. Mortlock, D3787/2(L).
- <sup>23</sup> Commissioner of Police to Colonial Secretary, F3/2--Journal of Inspector Gordon in charge of mounted Police visiting the Rivoli Bay district from Nov. 4, 1845-January 18, 1846. PROSA.
- <sup>24</sup> Research Note 219, SAA.
- <sup>25</sup> Diary of Oliver Ragless "Goldfield Expedition to Victoria," extracts in *the Gawler Bunyip*, Oct.-Dec. 1908. SAA D6299(L).
- <sup>26</sup> J. Boothby, 1867-8. The Adelaide Almanac, Town and Country Directory and Guide to South Australia. Wigg, Howell, and W. C. Rigby. Adelaide.
- <sup>27</sup> Morrison, G. D. 1879-80. unsourced typescript.
- <sup>28</sup> See J. H. Shepard, *History of Mt. Gambier and the S. E. District*. PROSA 1364.
- <sup>29</sup> Tax Assessment Books, Meningie District Council, Meningie, South Australia.
- <sup>30</sup> PROSA. GRG/1896/545.
- <sup>31</sup> PROSA. GRG/53/16/1895/4422.
- <sup>32</sup> PROSA. GRG/14/1/29.
- <sup>33</sup> Report from A. H. Davison to Surveyor General describing condition of wells in the Coorong for public use, GRG 35/245/1932/18.
- <sup>34</sup> PROSA GRG/23/1/1935/14.
- <sup>35</sup> Certificate of Title. Vol. 43, Fol. 217, LTOSA.
- <sup>36</sup> *Observer*, May 11, 1867.
- <sup>37</sup> PROSA. Davies, 8:142, Newspaper Cuttings.
- <sup>38</sup> *Register*, March 15, 1864.

- <sup>39</sup> Auhl, I. 1976:192. *From Settlement to City, A History of the District of Tea Tree Gully, 1836-1976*. Lynton Publications, Blackwood, S. A.
- <sup>40</sup> PROSA 66/5/2519. Joseph Darwent on the Petition of J. B. Spence to the Supreme Court.
- <sup>41</sup> Certificate of Title, Vol. 43, Folio 217, LTOSA.
- <sup>42</sup> *Pastoral Pioneers of South Australia*. Vol. II, pp 176-7. 1927. Mortlock Library.
- <sup>43</sup> Mortlock, MRG/1/4/2.
- <sup>44</sup> The source of this reference to Cantara's life as a post office could not be re-confirmed at the time this report was being printed.
- <sup>45</sup> *The Cydopedia of South Australia*, Vol. II, p. 985, 1909.
- <sup>46</sup> Interview with Ron and Lola Bonney recorded on audio-tape at their home in the Southern Coorong, 1/5/1982. Project files.
- <sup>47</sup> Malachi Martin was suspected of murdering two people from Salt Creek, but tried only for one of them. For details, see Hastings, *The History of the Coorong*, 1944, unpublished typescript.
- <sup>48</sup> Interview with Ms Phyllis Gall in her home in 1983 was not recorded.
- <sup>49</sup> J. G. Hastings. *The History of the Coorong*, 1944. Unpublished manuscript in possession of author.
- <sup>50</sup> The presence of a Chinese gardener at Cantara was also recounted by Nancy Fagg of Mt. Gambier, 1983.
- <sup>51</sup> The author thanks Dick Richards of the Museum of South Australia for organising this unforgettable visit.
- <sup>52</sup> Interview with Harold Lloyd conducted 16/1/1984 on audio-tape in Meningie. Project files.
- <sup>53</sup> M. Randall, *The Chinese in South Australia Before 1860*. *Proc. Roy Geo Soc. S. A.* Vol 54, pp. 23-33, 1953.
- <sup>54</sup> Cawthorne, E. M. 1974. *The Long Journey, The Story of Chinese Landings at Robe During the Gold Rush Era, 1852-63*. Hansen Printing House, Narracourte, S. A.
- <sup>55</sup> Robert Edwards. *Chinese Coins From an Aboriginal Campsite on the Coorong, South Australia*. *Australian Numismatic Journal*, July/Sept., pp. 102-5, 1966.
- <sup>56</sup> Robe Police Station Journal, PROSA GRG/159/2/vol. 1.
- <sup>57</sup> *Register*, Miscellaneous Shipping Intelligence. Dec. 14, 1855.
- <sup>58</sup> *Register*, Miscellaneous Shipping Intelligence, Dec. 20, 1855.
- <sup>59</sup> SAPP, No. 11, pp. 8-14, 1856.
- <sup>60</sup> Outgoing letters from C. Todd, Magnetic Telegraph Department, held by curator Milton Goolie, Telecom Museum Adelaide. Inward/Outward letters from Superintendent Todd, 1871-73, AA, Adelaide.
- <sup>61</sup> Letter No. 287 (406/73) from Todd to McCallum at Magrath Flats, Oct. 31, 1873, AA.
- <sup>62</sup> For a detailed history of the development of the port facilities of the lower Murray Lakes and Encounter Bay during the 19th century, see J. C. Tolley, *South Coast Story, a History of Goolwa, Port Elliot, Middleton, and the Murray Mouth*, The Ambrose Press, Victor Harbour, 3rd reprint, 1978.
- <sup>63</sup> Letter from Kruse to editor, *Observer*, Aug. 6, 1864.
- <sup>64</sup> *Register*, June 8, 1864.
- <sup>65</sup> *Register*, June 11, 17, 27, Aug. 2, 1864; *Border Watch*, July 8, 1864.
- <sup>66</sup> *Register*, letter from J. Foote, July 10, 1867; from W. Hack, 10 February, 1867.
- <sup>67</sup> Parnka is described as a lookout by Normal Tindale, *Aboriginal Tribes of Australia*, 1974:67.
- <sup>68</sup> This background information is contained in PRG 456/5, 456/7/17, 456/37/3, Mortlock, and Hack's Obituary, 12 Oct. 1884 in *Christian Weekly*.
- <sup>69</sup> Letter book by J. B. Hack, Mortlock, PRG 456/5, and Autobiography of J. B. Hack, 22 April 1884, *Register*.
- <sup>70</sup> Alice Waegner, 1982 personal interview conducted in Adelaide.
- <sup>71</sup> Transcript of letter to Cousin Minnie from Emily M. Hack, Mortlock, PRG 456/37/2.
- <sup>72</sup> Report of Select Committee of the Legislative Council upon the Aborigines. SAPP No. 165, 1860.
- <sup>73</sup> Mortlock, PRG/456. Hack's diary, 1861-62.
- <sup>74</sup> This discussion borrows and elaborates from the final report of investigations to SADENR, Luebbers 1982.
- <sup>75</sup> SAA file 1324/126, withdrawn hundreds plans.

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<sup>76</sup> Sketch maps compiled by Richard Loveday and published in Coorong Hazards, SAPP, 1866-7, Vol. 3, SAA.

<sup>77</sup> Copy with references to field book No. 1914, pp. 1-637.38, held by author with no specific source recorded.

<sup>78</sup> Interview conducted 5 June, 1982, in home of Bill Coad in Meningie and recorded on audio tape. Copy in project files.

<sup>79</sup> Interview conducted 5 June, 1982 at Meningie home of Coads, audio-tape recording in project files.

<sup>80</sup> PROSA, GRG/1439/M. Land tax evaluations by G. W. Goyder, 1864.

<sup>81</sup> Ibid.



### 3 THE ARCHAEOLOGY OF CHINAMANS WELLS

#### 3.1 INTRODUCTION

The main aim of the field investigation of Chinamans Wells Water Reserve sought to establish the major elements of the Chinese well, water holes, and the eating house and relate these to the historical settlement outlined in Chapter One. From the point of view of colonial government, living in the Coornog was like residing at the margins of civilization, ones own home being a part of the wild frontier. In fact, while the remoteness and the nature of work taming the land may have gone largely unheralded and had little impact on social history owing to the mundane ritual of daily life, the Coorong settlers had stories to tell and a past to uphold. This life may have been characterized by the daily routines of mustering, making certain that a meal was too far away, and looking after the well being of ones property. For this perspective, much of what went on around the settlements may have been rather mundane. This study considers the period of expansion, when the fruits of free enterprise and commercialism were just emerging in the district following the on slought of pastoral development.

In theory

In practice, this meant that the habitation and possibly daily character of the habitation, the nature of the household activities, activity areas, and the consumer behaviour as it can be reconstructed from artefact analysis. rong was the archaeological investigation of the Coorong would attempt to address a number of issues related to should address a variety of related issues. In reality, the investigation has little comparative examples of architectural traditions adopted int he Coorong

should expect the succession from public accommodation facility to a rural homestead or outpost to be reflected in the artefact assemblages and layout of the house itself. Infact it might be expected that the house may have been purpose built, or reflect in its design or finish some facit of the speculative nature of its construction.

It might give us a chance to examine the effects of consumerism in the Coorong, the continuity of architectural influence from country English applications to frontier South Australia. Three type of settlements arose in the Coorong. There were those involving investment by non-residents, or those with money who did not live on the premises but who had sufficient capital to invest in the development of a particular operation. Joseph Darwent explemlifies such a person. Then there were those who personally participated and who had the entrepreneurial skills to developFrom the start, the practical limitations imposed on this investigation were clearly apparent. When the backhoe clearing out a thicket of box thorns at Chinamans Wells broke down trying to remove building blocks buried beneath thick vegetation, the remaining element in the mid-19<sup>th</sup> century heritage of the site came to light. The most unceremonious manner presents the results of an archaeological investigation of Chinamans Wells that was based on extensive auger survey of the property, lot 75, 78 and the surrounding land. The objectives addressed are what remains from habitation survive and what is the significance of Chinamans Wells and what has been its history of occupation as seen in terms of 19<sup>th</sup> settlement of the Coorong.

Here then was a chance to lift the veil of silence around the mid-century settlement of the Coorong. The questions to be asked of these sites capable of finding answers from the archaeological investigation.

- What features of the Chinese Well can be used to identify its most likely role in Chinese cultural heritage in Australia?
- What architectural practices operated in the Coorong in the 1860s and can the character of the commercial and domestic role of the Eating house be identified. Where different households resident in the house and can its role as a eating house be described.

- What are the design details of the overland telegraph system and do these relate to
- To describe the history of the history of the public accommodation phase of the homestead and evaluate any evidence that would shed light on its houses in the Coorong and is there sufficient evidence to comment on the speculative environment in which it was built?

Questions raised by the historical research that should be asked of the archaeological data includes the proposition that there is a direct line of continuity between

There are significant shortcomings in the historic documentation which limit the archaeological questions being asked in this project.

The archaeological investigation of Chinamans Wells was not without a set of significant set of restrictions. It was first and foremost an effort to assess the cultural heritage contained within a public reserve. The most basic questions of site identification and boundary must be addressed to ensure a comprehensive documentation. designed to establish the significance of the physical remains of habitation found at the site. recover and assess as much of the physical remains reported here is aimed charged with the responsibility of documenting the physical remains

## 3.2 SITE SETTING

Chinamans Wells and its various historical features, Figure 4, are located on a sandy flat adjacent to the eastern shore of the Coorong lagoon, approximately 8 km north of Cantara Station. On its eastern side, the Princes Highway is the boundary to the Coorong National Park at the base of a low Pleistocene beach ridge called the Wombat Range, and bordering the property on the west is the Coorong lagoon. An alignment of the original main coach track follows the telegraph alignment across low-lying terrain on the property, diverging north of the well to follow either the higher ground towards the east or dropping onto the pipeclay lagoon floor to the west. A modern access track enters the site from the highway at the 19 km sign post and meanders along samphire flats until it terminates at the well itself. In this short stretch, it is believed to follow a much older road bed from Tilley's Swamp. The remnants of a 19<sup>th</sup> century Government well adjacent to this access tract on the highway once provided water for travelling stock when the major stock route followed the highway between Kingston and Meningie.

The surficial geology is dominated by marine and lacustrine carbonate sediments which have been deposited and reformed throughout the Quaternary geological period. For the purposes of this study, the oldest formations are ancient stranded beach barriers which, as prominent ridge-shaped linear structures, have impeded seaward groundwater flow to create extensive wetlands in interdune flats. At Chinamans Wells, a chain of shallow, hypersaline ephemeral lakes<sup>1</sup> formed by ground water discharge in such an interdune flat to the east of the site, extend 18 km north-westward to the exit of Salt Creek. Seasonal cycles of desiccation and recharge from rainwater create ideal chemical and physical conditions for the formation of dolomites, with specific mineral compositions being created in each lake bed. These dolomites are referred to colloquially as pipeclays. A porous limestone containing a high proportion of marine shell grit outcrops in both the Coorong lagoon and the two salt lakes to the east of the site. A thin sheet of unconsolidated aeolian sand with higher rounded hummock shaped sand hills and a thick dark loam top soil has formed between the ephemeral lakes and the shores of the lagoon.

A comprehensive vegetation survey of the Coorong<sup>2</sup> conducted in 1982 characterises the principle plant communities around Chinamans Wells as a mixture of tall shrubland and sedgeland associations. Thickets of Paperbark Ti-Tree (*Melealeuca halmaturorum*) line the shores of both the lagoon and the salt lakes, and an association of Coastal Wattle-Sandhill Daisy (*Acacia longifolia* v. *sophorae*-*Olearis axillaris*) and the South Australian Coastal Mallee (*Eucalyptus diversifolia*) both predominate on the higher dunes. A sedgeland supports Thatching and Spear Grass (*Gahnia filum* and *Stipa stipodes*) in low-lying areas in the stabilised dunes around the salt

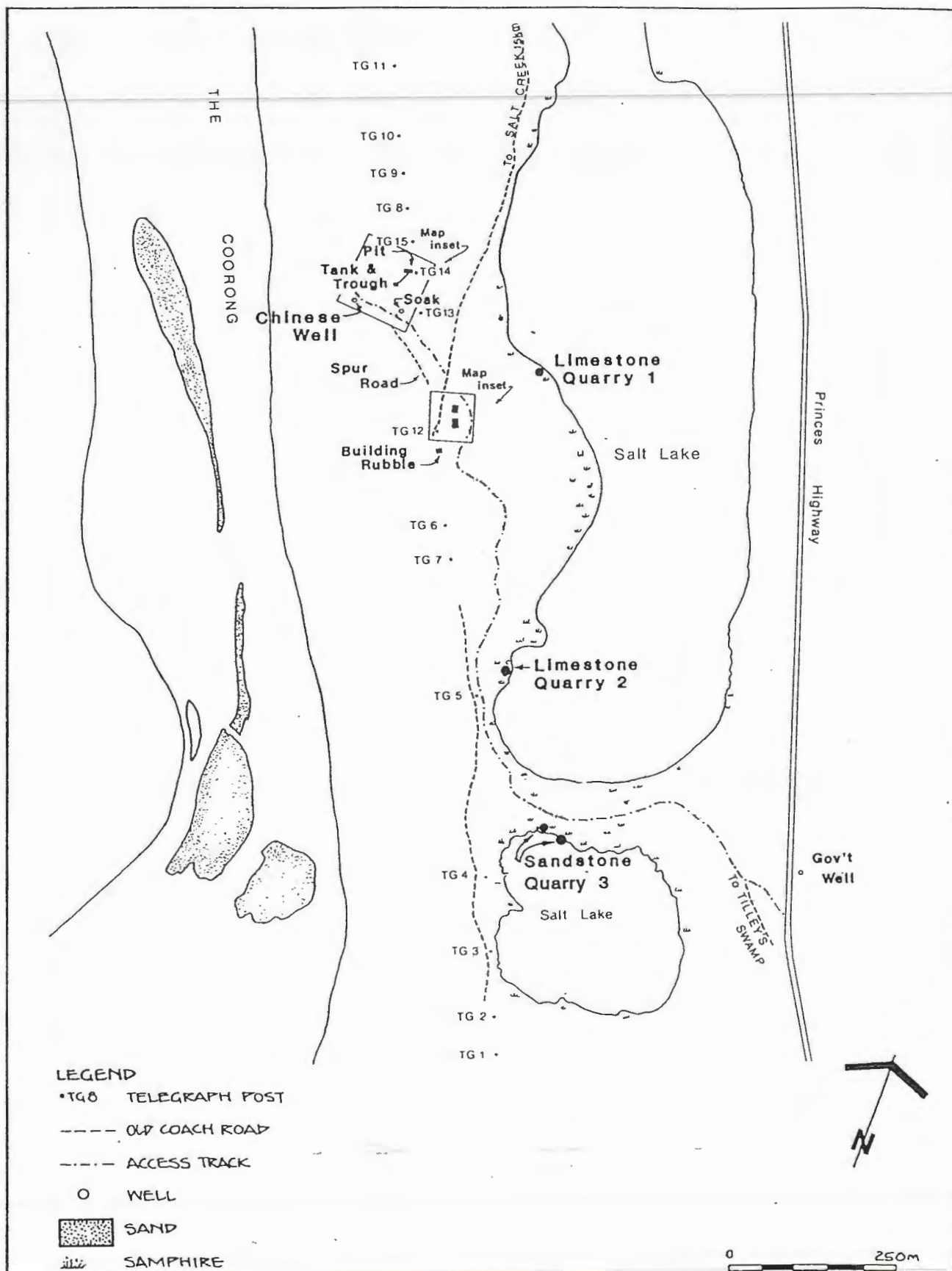


FIGURE 4 Map of cultural features located at Chinamans Wells from ground survey conducted in 1983, plotted from aerial photography.

CULTURAL FEATURES, CHINAMANS WELLS HERITAGE AREA



lakes. Numerous introduced weeds infest the low-lying areas and high winter lake levels flood the access track.

Indurated sheets of calcrete are exposed on dune surfaces and around the water's edge in both the lakes and the lagoon, and calcrete nodules are exposed on some deflated dune slopes. A consolidated marine sandstone outcrops in the shoreline of a small salt lake to the south of the site. Dolomite mud is the major sediment on the floors of the ephemeral lakes and lagoon. Sand and gravel beaches line both the lakes and salinity levels for both the ephemeral lakes and the lagoon vary widely seasonally.

Drinking water in the Coorong is usually drawn from a perched water table which flows just above a shallow saline aquifer and is recharged by rainwater. At Chinamans Wells this important resource was obtained from several sources: the limestone wells from which the site derives its name, a stone-lined wedge pit which originally included a whip, iron troughing and tanks, and a small linear water hole or soak which is filled with sand. Each of these structures occurs at the edge of a depression in an otherwise flat, sedge covered plain consisting of dark, fine grained lacustrine sediments overlying aeolian and marine deposits. This environment is indicative of a fluctuating water table which occasionally rises above the ground surface to form standing pools of water, and an ephemeral wetland. On the Younghusband Peninsula too, the testimony of residents indicates that excellent tasting water could be obtained at the base of the sandhills just above the level of the salt water lagoon simply by digging a shallow pit near the water's edge.

### 3.3 METHODS

Except for the well itself, almost all historic fabric at Chinamans Wells was demolished to ground level ca. 80 years ago and the ruins are now overgrown and partially covered by sand. Without knowledge of the layout of buildings and activity areas, excavators elected to clear away all loose rubble and vegetation in order to locate masonry fabric and artifact concentrations. A semi-permanent recording station consisting of an alidade and plane table was established north of the house to map all cultural features and vegetation on the site. The measurements obtained from the station contributed to the construction of the Site Plans for the Water Reserve, Figure 5, and the eating house, Figure 6. The total area mapped in this fashion, which spans both the reserve and the residential precinct, measures ca. 180 x 300 m.

A two pronged methodological approach was launched to locate and describe buried materials which might reveal information about the 19<sup>th</sup> century habitation of the site. The first was a sub-surface survey aimed at identifying all fabric and artefacts that might survive *in situ* on the site. The instrument used was a steel auger which was normally pushed into the ground to detect compaction changes and the presence of harder more resistant objects. The probe has a 1.3 m long shaft also recovered a thin sample of the underlying soil in stratigraphic position to enable colour and content characteristics to be assessed for their archaeological significance. The survey at the completion of the field work had disclosed the trackway, various secondary and primary artefact deposits, masonry fabric, clay paving, and the water table in low lying areas of the site.

The second prong, was a program of systematic excavation to expose and analyse the structures and activity areas uncovered in archaeological field investigations. This involved first clearing away all surface obstacles and then imposing excavation squares over archaeologically sensitive ground, either as individual units or in a grid system of metre square units. Soil removal then commenced by trowelling or shovelling sediments in arbitrary layers within the unit. The progress of excavation was recorded in a notebook or excavation form, and on either colour or B&W film. The soils so excavated were routinely sieved dry by hand on wire screens with either 6 or 12 mm apertures and the fractions were retained in appropriately labelled plastic bags. The artefact collection was then processed by Snoek<sup>3</sup> and given conservation treatment in the laboratory as required. Because some variation in excavation strategy was required to expedite fabric analysis, deviations in procedural techniques occurred. For this reason, excavation

progress for each major cultural feature is individually detailed under sections titled “excavation progress” in the following discussion.

While artefact retention was a central objective throughout the investigation, two separate strategies were adopted to recover them. An abundance of sub-surface deposits were located around the eating house and outbuildings to form a reasonable prediction of the outcome of excavation. Therefore, these excavations proceeded both inside and out of the structures with relative ease and an abundance of material. The auger survey around the Chinese well on the other hand, showed that little or no structural remains or artefacts were present. predict at the Chinese well and therefore the areas chosen for excavation were located in the most likely habitation was available differed according to the objectives sought and quantity of physical remains uncovered by the auger survey.

Cultural features were excavated and recorded using standard archaeological field procedures<sup>4</sup> adopted to systematically uncover cultural materials with a minim of damage. Controlled excavation was conducted with shovels and trowels, with all residues being sieved on throw screens with either 6 mm or 12 mm square apertures. Power equipment was not used to excavate the site. Where gentle excavation was required, brushes were substituted for trowels. The sieve fractions were hand sorted in the field and subsequently processed for analysis and assessed for their conservation needs in a laboratory. The progress of the excavation was recorded on 35 mm colour slides which form a portion of the project file.

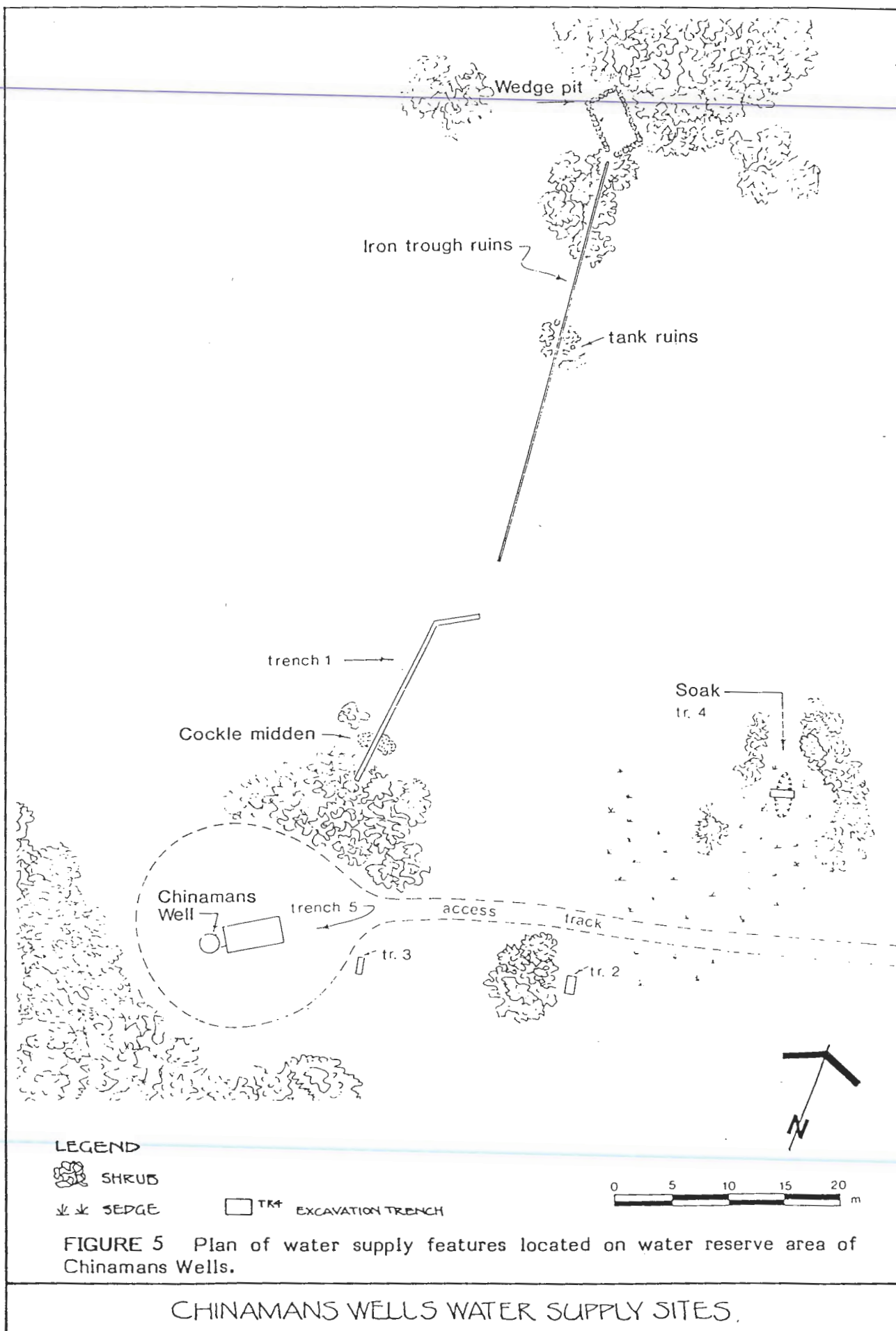
Snoek conservation, where appropriate in a laboratory. Shovels and hand trowels Excavation and analytical techniques differs according to the particular depositional and environmental context surrounding each archaeological feature. The description of the methods used therefore will be presented in the appropriate section titled Excavation Process.

The central aim of the archaeological research has been to describe and date these two buildings and to provide a plausible explanation of their use, and to investigate the evolution of land use in the Coorong using Chinamans Wells as an example. Several main lines of evidence were investigated to achieve this goal: 1) fabric analysis of architectural detail, 2) dates for artefact manufacture, 3) functional analysis of artefactual content and distribution patterns, and historical documentation. Owing to time constraints, a full excavation of all significant refuse deposits could not be pursued. The absence of these data has therefore limited the extent to which the occupational history of the homestead could be interpreted. Because the particular excavation techniques vary between architectural features of the site, they are described separately in each of the appropriate sections headed, “Excavation Progress”.

### 3.4 EXCAVATION PROCESS IN THE WATER RESERVE

All cultural features in the former water reserve were mapped at the commencement of the investigation and two test trenches were excavated to expose architectural fabric and design details. A further three trenches were dug to examine the location of the local water table and to reveal the sedimentary sequence overlying basal units across the study area. The location of the five test trenches are depicted in the Water Reserve Site Plan, Figure 5. The purpose of the excavations undertaken, the methods employed, and the observations obtained from each trench are summarised in Table 1.

TRENCH NO.	SIZE (metres)	COMMENTS/OBSERVATIONS
1	1 x 22	Two sets of double linear parallel depressions suggests garden furrows. Excavated to locate disturbances related to garden activity and possible structures associated with Chinese habitation. Thin, dark sandy loam overlies matrix of whole, unsorted <i>Coxiella</i> spp. shells and fine grained sand with shell grit. Intrusive animal burrow, cf. goanna, present confined to surface and upper loam unit. Ground water occurs 70 cm below surface, limestone sheet found at base of well is absent here.





		Furrows probably vehicle wheel tracks. The only evidence of habitation is a small Aboriginal cockle midden 14 cm below surface which is suspected to be 2-4000 years old.
2	1 x 2	Trench located in lowest point in terrain to examine natural sedimentation. Stratigraphy identical to trench 1. No traces of disturbance from gardening.
3	0.8 x 2	Stratigraphy identical to trench 1. Water present above natural limestone layer. No evidence of human disturbances or artefacts present.
4 (Soak)	0.6 x 1.4	Excavated to expose vertical soil section and recover artefacts. Sediments hand sieved, water encountered in upper section prevented detailed stratigraphic drawing. Excavation terminated 1.6 m below surface, artefacts present at base.
5 (outside well casing)	5 x 8 plus 1 x 1 m extension joining well case.	Excavated to examine well design and locate possible evidence of external structures associated with well. Sediments trowelled and hand sieved on screens with 4 mm apertures. Excavation exposed external surface of well base, and thin lenses of white clay 10 cm below surface with no discernible form. No trace of an external structure associated with the well was located. External sub-surface stone face of well is rendered in 5 cm thick clay plaster, applied presumably as a weather seal. This is original application. Horizontal lenses of white clay are either the result of modern well maintenance or exfoliation of original above-ground clay render which once extended over shoulder to cover-plate. Stratigraphic evidence of narrow excavation pit associated with original construction is present. Presence of spent lead bullets suggests that well was used as shooting target. Natural sheet of limestone is present at base of well.

**TABLE 1** Summary of excavation results for Trenches 1-5, Chinamans Wells Water Reserve, Section 78.

### 3.5 THE WELL

#### 3.5.1 Excavation of the Well

At the start of the investigation, a mound of soil, rocks, sticks and an assortment of refuse nearly half filled the well, and birds had made nests in the small cavity that remained below the coverstone. A heavy timber frame was erected and plastic sheeting was draped over the well for protection during the investigation. The fill was removed first by hand shovel down to water level and then as a slurry by a sludge pump, with all material being sieved on a screen with 12 mm apertures at the end of the discharge pipe. Similarly, artefacts from Trench 5, were recovered by trowel and sieved on 4 mm screens. An inventory of the artefacts recovered from Chinamans Wells has been prepared by Snoek<sup>5</sup>. The well with its protective wire mesh cage removed is shown in Plate 1, as it appeared at the commencement of the investigation.

The artefacts recovered from the well relate to recent visitor behaviours and little else. A large quantity of eroded coins, all minted in Australia in decimal denominations was recovered at all levels of the fill, along with plastic cutlery, film containers, metal foil, chewing gum, broken glass bottles, and other modern camping refuse. The only Chinese object recovered was a brown teapot lid of the type found on supermarket shelves today. Snoek concluded from analysis of the dateable items in this collection that the fill accumulated after 1966 when the decimal system was introduced into Australia. It is likely therefore that the well was last cleaned out at some time after 1966.

Excavation Trench No. 5 was pegged out on the track encircling the well and excavated by trowel to uncover artefacts or architectural fabric that might suggest the presence and character of habitation around the structure itself. Careful peeling back of thin spits in a five day exercise encountered a random scatter of late 19<sup>th</sup> and 20<sup>th</sup> century artefacts which had no obvious indication of an association either to the well or

### 3.5.2 Well Design Details

The masonry elements of the well, Figure 6, consist of curved limestone blocks which are assembled to form a perfectly shaped cylindrical casing of four courses below ground level, and a dome-shaped shoulder on top. A set taper in the shoulder blocks ensures a narrow symmetrical opening at the top of the limestone masonry unit. On the shoulder was placed a round, wedge shaped coverstone of marine sandstone, weighing an estimated<sup>6</sup> 560 kg., which acts to maintain the characteristic “beehive” profile of the masonry above ground. A perfectly round entry hole 43 cm in diameter cut through the cover plate permits access to draw water and to conduct periodic maintenance. There is no evidence of repair or restoration of the masonry fabric, and, except for two possible old carved initials, the masonry is free of graffiti. The casing rests on a naturally occurring limestone sheet through which a perfectly round hole has been cut to allow ground water to flow up into the well sump. This limestone is identical to the porous masonry blocks used in the well and therefore may itself be a conduit of groundwater through the site. Three sets of opposing toe holes have been cut inside the masonry shell and numerous shallow cut marks on the adjacent surface of the casing indicate either damage from cleaning or attempts to shape the masonry at the time of construction. A white pipe clay render up to 5 cm thick seals the external casing surface below ground, and, judging from the extra amounts of clay scattered around the well, it probably extended over the entire masonry unit up to the cover stone. The render exposed by excavation is shown in Plate 2. The overall height of the well above the limestone sheet is 1.78 cm and it is 1.65 cm in diameter (OD). Although seasonal fluctuations in ground water may fill the well somewhat, its relatively small capacity of about 650 litres suggests that it was designed for human consumption rather than general stock watering purposes.

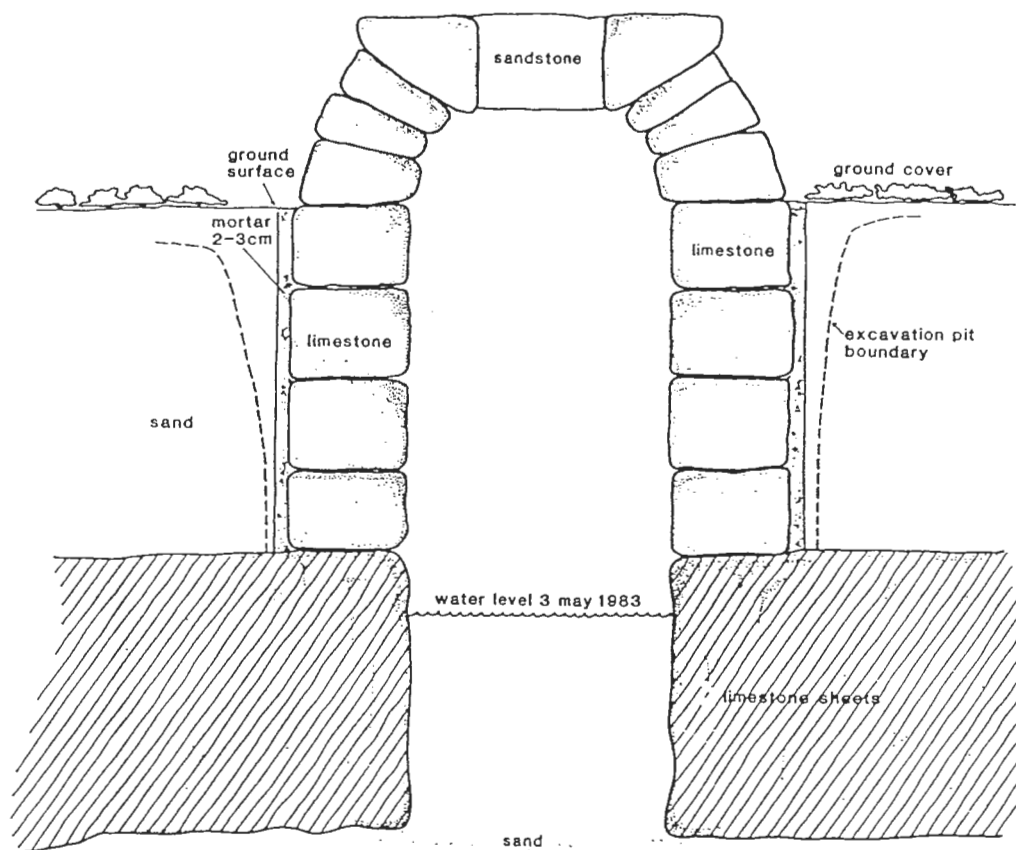
### 3.5.3 Stone Quarries

While sharing similar sedimentary conditions under which dolomitic clay is formed, the two salt lakes at the site contain two quite different marine sediments, both of which were ideal building materials. A marine limestone consisting of a conglomerate of whole and broken marine molluscs and other fossils occurs as a thick horizontal sheet within sand and clay sediments in the larger lake. It can be traced across much of the study area in the submersion zone as an outcrop in the Coorong lagoon and both salt lakes. Within the smaller lake to the south, a hard sandstone containing quartz sand and marine fossils occurs in much the same stratigraphic position as the limestone in the adjoining lake basin. Being more resistant structures in the local water table, these cemented sediments control the shape of the shorelines and the flow of water throughout the ephemeral wetland generally. Both sedimentary layers experience seasonal submersion and are typically buried beneath a fresh layer of dolomitic clay each year.

A thorough search of the adjacent shores of the Coorong lagoon and salt lakes located extraordinary evidence illustrating the way these sediments were quarried for the construction of wells at the site. Located with steel probes, these include remarkable shallow circular pits cut into the limestone at two sites in the larger salt lake and two small pits in sandstone in the smaller salt lake south of Chinamans Wells. An excavation program involving hand tools and pressurized water was employed to clean the quarry faces for close inspection and the areas impacted in this way were backfilled at the end of the investigation. The location of the three quarries discussed here is shown in the Site Plan, Figure 4.

#### Quarry 1

Located due east of the Chinese well, Quarry 1 consists of a single pair of semi-circular cuts that form a perfectly symmetrical arch 4.3 m in diameter, with the limestone between the cuts being left undisturbed and not cut into blocks. Discovered in the closing minutes of the field investigation, the quarry was only roughly cleaned off to expose its outline and general morphological features from which measurements were taken. Because no additional information was obtained, it is not discussed further in this report.



#### Dimensions

total height: 1.78m  
 outside diameter: 1.65m  
 inside diameter: 0.88m  
 cap diameter: 1.20m  
 entry hole diameter: 0.43m  
 no. of toe holds: 6

#### Materials

cap: sandstone  
 casing: limestone  
 rendering: dolomitic clay

#### ESTIMATED AGE OF MANUFACTURE:

1855-6

#### ESTIMATED WEIGHT OF CAP:

560kg

#### INVESTIGATION DATE:

1983

**FIGURE 6** Cross-section of Chinamans well showing construction details and dimensions.

CHINAMANS WELL, COORONG SOUTH AUSTRALIA



## Quarry 2

The largest quarry pit, Quarry 2, is located at the southern end of the large salt lake and was fully excavated and recorded. It consists of four shallow circular pits set in approximate alignment along the shoreline, Figure 7. A range of cuts made as semi-and full circles as well as a number of disused blocks cut in various geometric shapes can be observed on the limestone bed. Several shallow tool marks on the limestone surface, sometimes describing short overlapping segments of an arc, clearly indicate that the existing limestone surface is the original working face of the quarry. A general over view of the quarry is captured in Plate 3 at an intermediate point in the excavation.

The sharp outline of the southern most circular cutting in this quarry, Plate 4, reveals a wide variation in the products of the stone removal. Here, several rows of blocks with different widths were carved from one side of a semi-circular cutting. Extensions to the south produced an elongation to the otherwise arcate shape of the quarry outline, the limestone in this area measuring no more than 18 cm thick. Curiously, the pilot hole for the main arc has itself been incorporated into a trapezoidal-shaped block, which was, notwithstanding this, left undisturbed *in situ*. The arrow in this plate indicates the location of the pilot hole.

## Quarry 3

An equally significant discovery was made in Quarry 3 in the small lake 500 m south of Chinamans Wells, Plate 5. Consisting of two small circular pits in the shoreline spaced 40 m apart, this quarry produced the sandstone coverplate used on the well. In one pit is a perfectly round slab which has been cut from the parent sandstone layer and left undisturbed *in situ*. A centring hole 30 mm in diameter has been drilled through the 38 cm thick layer of stone for anchoring the cutting tool that shaped the stone. The excavation trench around it is irregular in shape and compression marks around its perimeter suggest damage caused by levers. Cracks occur across the slab and down one edge, most likely caused when attempts were made to remove it from its deep bed. In its raw unworked form, this slab is estimated to weigh 1100 kg. The second pit is nearly identical to the first except that the slab is missing and presumably now sits atop the well.

### 3.5.4 Construction Process

The striking pattern of curved cut marks, drill holes, and loose limestone blocks in the lake side quarries clearly illustrate both mass production and custom-made techniques used to manufacture stone blocks. A pilot hole was first drilled or chiselled into the rock face several inches deep to centre the initial cut. Then a chain or rope with one end anchored to the hole and the other attached to a chisel was stretched tightly to fix a radius for cutting a large arc across the limestone face. A hammer may have been used with the chisel, but the limestone is soft enough to cut by simply drawing a sharp tool firmly across the surface. The most common cuts made in this manner are perfect circles ranging in size from 4.3 to 4.5 m in diameter. Once two concentric arcs had been cut through the limestone to the underlying sand, and the end cuts had been made, the block could be readily lifted from the quarry floor. The blocks produced by this process had a perfectly symmetrical curvature, ranged in thickness from 12-25 cm, and exhibited end and side faces that were accurately cut at right angles. Depending on the radius chosen, standardized shapes and sizes were achieved simply and quickly. Successive rows of blocks could be cut from the one pilot hole until the desired amount of stone was obtained. The "lop-sided" shape of some circular cuts is the result of additional blocks being removed from outside a sector of the main 4.3 m cut, and this seems to have always involved custom-made blocks. The presence of "scallop" shaped cuts in the edge of one circle in Quarry 2 (see Plate 3) appears to be produced by hand quarrying in exactly this manner. There is also a low incidence of individual rows of blocks being carved from arcs which have centring holes that do not fall within the main circular cut.

While still moist, the limestone is particularly soft and can easily be shaped by any sharp steel tool, but once air-cured, it develops internal strength and a hard, weather resistant exterior that is ideal in building applications where load bearing requirements and mechanical vibration are

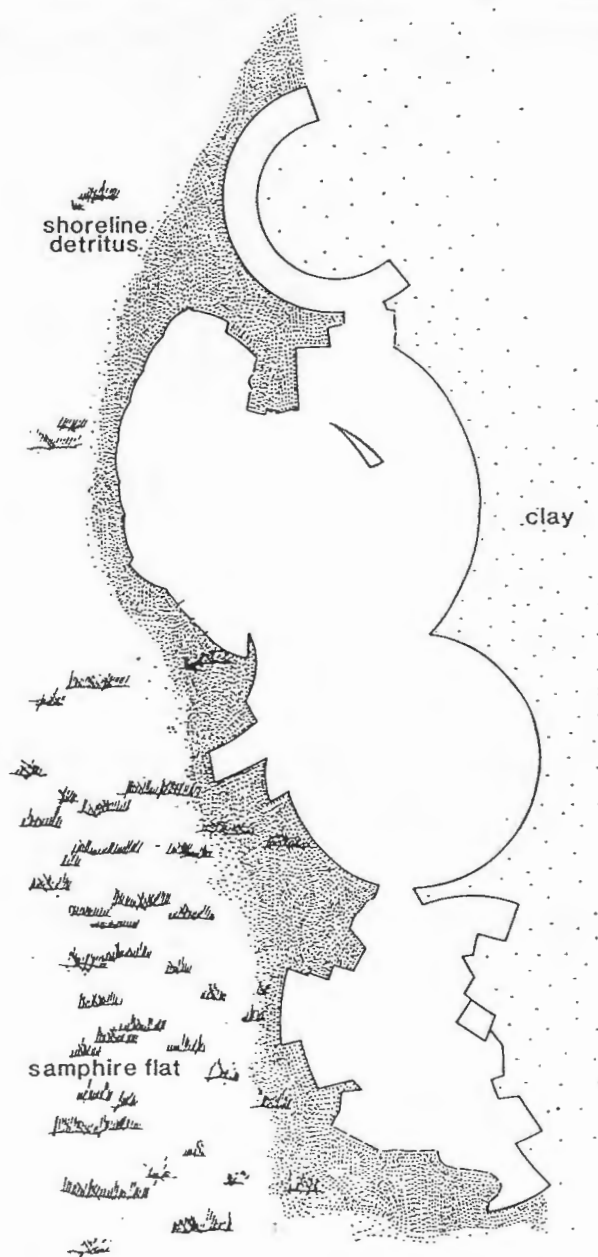


FIGURE 7 Map of Limestone Quarry No. 2 on western shore of salt lake, Chinamans Wells. Water laps arcuate cuttings from the right at the edge of limestone layer. Total length of cutting is 21.5m.

# CHINAMANS WELLS LIMESTONE QUARRY



low. If the curing process of Mt. Gambier limestone<sup>7</sup>, which has a similar composition as that quarried at Chinamans Wells, is any guide, Chinese stone masons would first air-dry the stone for 2-3 weeks before it could be used in construction.

There are major discrepancies between the dimensions, quantities, and design specifications of limestone blocks quarried at Chinamans Wells which raise several intriguing questions about the scale and general intent of well construction at the site. The reason for making circular cuts in the limestone is theoretically to produce blocks of the same curvature as the well casing, which in this instance is a circle 1.6 m in diameter. The diameter of most circles cut in the quarry face is nearly three times larger than this, although the "scallop" cuts made by hand approximate the size of the blocks actually used in the well itself. Furthermore, limestone barely comprises 2.1 cubic meters of the well fabric, whereas the amount of stone actually removed from the main quarry amounts to 15 cubic metres, or seven times the volume required in the construction of one well. This does not take into account the stone from Quarry 1, although it was not in fact utilised. Finally, most of the blocks used in the casing are 30-35 cm thick, which is substantially more than the maximum of 25 cm for any of the limestone measured in the quarry itself. The only limestone found with this thickness occurs either under the existing well, or in the Coorong lagoon.

These inconsistencies could suggest several explanations for the process of well construction at the site. It could be that a considerable degree of experimentation was required to develop techniques and locate limestone suitable for the job. The porous stone is exceedingly friable and solid sections in the exposed weathered bed of limestone are difficult to locate, and materials failure may have been common with masons unfamiliar with this particular type of limestone. It is also possible that several periods of quarrying and construction took place, each with different objectives. The possibility that renovation or repair was required at some time in the past can not be ruled out and the adoption of hand-made blocks is consistent with this evidence. The apparent excesses implies an extraordinarily high level of incompetence on the part of the builders however, which seems unlikely, and still does not account for the pattern of cutting four or five sets of blocks with such large curvatures. Alternatively, it more probably suggests that more than one well was built from the quarries located on the salt lake and that more than one design was adopted. If this was the case, then one or more quarries are still buried in the lake shore. The wide variance in curvature of blocks furthermore would suggest that much larger wells were being designed by Chinese stonemasons at Chinamans Wells.

### X-Ray Defraction

To examine the possibility of there being additional stone quarries at the site, the problem of determining the origins of the materials in the well and quarries was researched. To pursue this question, it is necessary to trace the materials used to construct the well to a particular source on the lake fronts. Systematic studies of the lacustrine sediments in the ephemeral lake system in the Southern Coorong<sup>8</sup> has been conducted by Flinders University researchers using petrographic and X-Ray defraction analytical techniques. These concluded that each lake basin contains a unique mineral composition which can be used to distinguish the sediments in one lake from another. The larger salt lake, for instance contains hydromagnesite-rich sediments<sup>9</sup> which, along with other characteristics are unlike the composition of neighbouring lakes.

Samples of limestone and dolomite from the quarry and from the clay render and limestone blocks used in the well were subjected to X-Ray defraction and petrographic examination. A comparison of scans on the clay samples demonstrated a remarkable similarity in composition, which Lock<sup>10</sup> concludes is acceptable evidence that the clay render originated from the hydromagnesite lake shore containing the two limestone quarries. Furthermore, a visual study by von der Borch confirmed that the two limestone samples shared identical taxa and textural properties. *We therefore must conclude that the well was made from carbonate materials taken from the adjacent salt lake. This confirms the conclusion that at least some of the limestone used in the Chinese well was taken from a quarry in the salt lake that has yet to be discovered.*



### 3.5.5 Searching for Other Chinese Wells

A search of the lake shore at Chinamans Wells and certain other promising localities on the ~~19<sup>th</sup> century main route was conducted to locate other Chinese wells in the Coorong.~~ The following discussion summarises the results of this inspection.

The wells at Macgrath Flats, Woods Well, Stony Well, and one on Banff Station were closely inspected for any indication by way of design of a possible link with Chinese enterprise. All four are implicated through anecdotal account as probably associated with Chinese influx during the gold rush era. The first three had round or square casings which were made of stone or a combination of stone and concrete blocks, and each had a concrete capping stone. In their current state, these do not outwardly exhibit Chinese characteristics. The one at Stony Well was reported to have been partially renovated in the 1940s with concrete components from an original shape approximating the dome-shaped style of the Chinamans Wells example. It is the only well which could bear a close resemblance to a Chinese construction style, but if any fabric from its original construction survives, it will be located below ground level beyond the view of this investigation. Until this portion of the masonry fabric is assessed, Stony Well's Chinese connection remains undetermined.

The fourth well, on Banff Station adjacent to Chinamans Wells, deserves special attention as an illustration of the difficulties encountered in assessing historic fabric on the basis of its placename. It was always known by the property owner as a Chinese well and is named as such on an early 20<sup>th</sup> century map he produced for the inspection. The well is made of dressed logs which are laid horizontally to form a rectangular casing ca. 5.5 m deep, with the upper shoulders stepped inward somewhat to create a slight constriction to the opening. The corner joins were neatly notched, with the log ends extended well beyond the corner for extra stability. The cover is made as a platform from a combination of timber and sheet metal, and was designed to fit tightly against the casing just above ground level. Both the cover and a portion of the upper casing had been renovated, but the interior fabric from sump to cover was visible through a large entry hole at the time of the inspection.

Although the origin of this timber well was not researched through the historical records, there is little likelihood that it was made by Chinese migrants according to Chinese manufacturing traditions. Instead, it is a close facsimile of immigrant European wells that were made with axes, horses, and shovels sometime in the 19<sup>th</sup> century. Some anecdotal testimony<sup>11</sup> and sketchy reminiscences from eye-witnesses suggests that Chinese work gangs did in fact provide labour for European contractors and public works supervisors in the district during the gold rush period and this well may represent such an enterprise from which it derives its name. There is however no archaeological evidence upon which this well could be considered a historically significant example of Chinese traditional practices in the Australian colonies.

A thorough search of the shores of the adjacent salt lakes and scrub surrounding Chinamans Wells ended with the discovery of a single well in ruins. It is located on the northern end of the salt lake shown in the Site Plan, Figure 4, on a rough track leading off the Princes Highway to the west. The main features of the well, shown in Plate 6, includes a round hole 1.55 m in diameter cut through a shelly limestone layer and a circular mound of pipeclay around the hole. Fragments of a limestone block and a red hand-made brick are embedded in the clay mound and limestone blocks appear to be present in deep water in the sump. This well has been labelled "Chinamans Wells 2" and is probably the base or well sump that remains after the casing has been demolished, the clay possibly being the remnants of the render that was used to seal the casing and shoulder against water penetration. While this hypothesis should be tested by excavation of the clay mound and the contents of the sump fill before it is given credibility, these ruins are the closest approximation in both design and size to the fully intact well described above as being completely Chinese in origin. The discovery of this well may explain the extra quantity of limestone being quarried from the lake bed, but because it appears to be a copy of the extant well, an explanation for cutting such large circles to manufacture blocks still remains a mystery.

### 3.6 WEDGE PIT AND WATER RESERVE

Known by local residents as a wedge pit, this stone-lined structure, Figure 8, provided drinking water for travelling stock on the main run between the towns of Meningie and Kingston. It is a 6 x 3 m rectangular pit, with a depth of 1.3 m, which is lined with masonry walls of free-form calcrete boulders without mortar. At this depth, the base of the pit intercepts the water table at a sufficient depth to ensure that normal recharge results in an adequate water supply. There are no openings provided for access by stock, and, while the pit is typically fenced to keep stock away, no traces of the fence were located at the site. The water was drawn up and delivered to the troughs by a heavy whip which was erected at one corner of the pit<sup>12</sup>. A 60 m long iron trough extends unbroken in a straight-line from the southern corner of the pit through thick overgrowth. It is constructed of short sections of round-bottomed troughs of heavy sheet metal which are bolted together at their flanged ends and was originally supported by a wooden frame a few feet off the ground. In addition, the remains of heavy iron plates from rectangular water tanks or boilers were located in the vicinity of the trough. The riveted, overlapping seams, curved flanges, and heavy gauge of the iron sheets suggest pressure tanks belonging to steam powered machinery. At Chinamans Wells the tanks were probably being recycled after their use-by date had expired.

The site of the pit was cleared to facilitate documentation, and auger surveys were conducted to locate sub-surface features, including the water table. Stone rubble and fine grained sediments underlying a layer of mulch in the pit were excavated to recover artefacts in the pit without success. Although there can be little doubt that this structure is the same one reportedly repaired by Batten in 1896, there was no evidence recovered by excavation which could determine the date of construction. Given its dilapidated state in the late 1890s described in Chapter 2 however, it is reasonable to suppose that construction took place some decades earlier.

### 3.7 THE SOAK, TRENCH 4

#### 3.7.1 Excavation Process

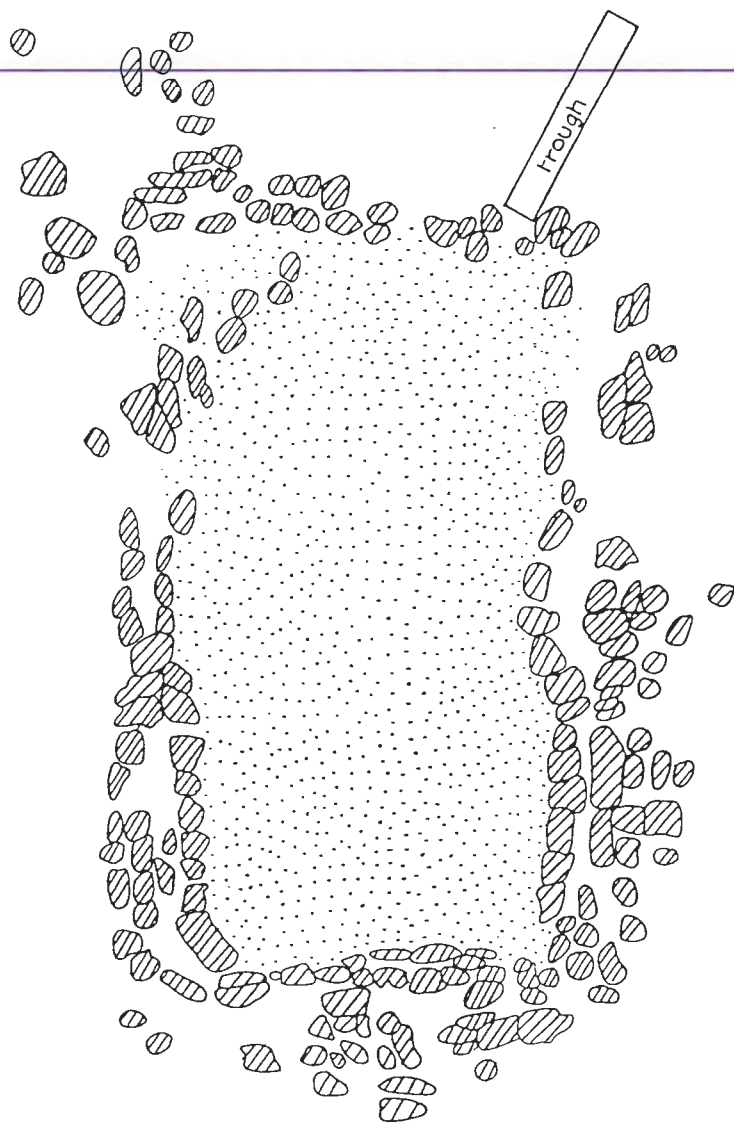
This small linear depression at the base of a low dune appeared to be an artificial soak on the edge of the low plains of the water reserve. Trench 4, measuring 1 x 2.5 m was excavated across the depression to investigate possibilities of human use of this feature. Plate 7 illustrates the sedimentary profile of the excavation trench at the completion of the investigation as observed on the section wall. A wire screen with 12 mm apertures was used to sieve all fill excavated from the soak for artefacts. The physical difficulties of excavating by hand in confined spaces under water forced a halt to the work 1.60 m below ground surface, although the stratigraphic evidence indicated that the soak continued below this level.

#### 3.7.2 Stratigraphy

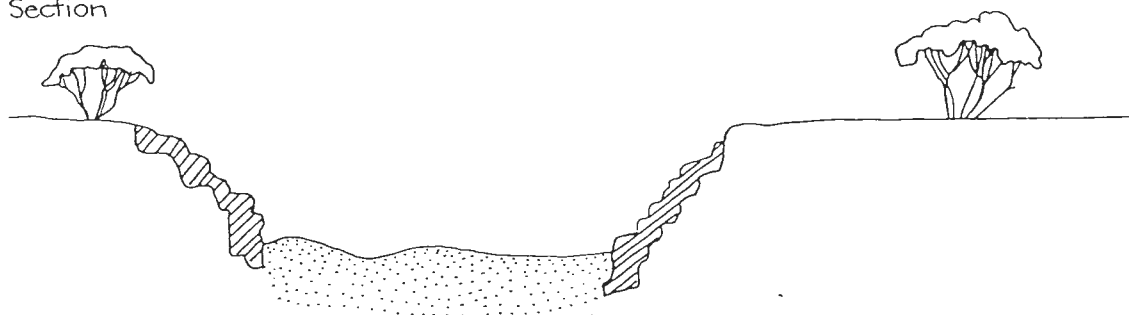
The significant stratigraphic units in the soak, illustrated in Figure 9, is as follows. The soak is a 60 cm wide cut which has been made into a yellow carbonate sand which extends more than 1.60 m below the current ground level. It is filled by a dark, sandy soil with a high organic content and a low proportion of *Coxiella* shells. These sediments in turn underlie a unit of dark sand, living vegetation, and humic litter that appears related to several periods of restoration. Lenses of clay, sand, and shell grit underlie the infill on the shoulder of the narrow cutting, presumably derived from the original excavation of the soak. The existing water table occurs immediately beneath ground surface at the lowest point in the surface depression. The upper stratigraphic units of the vertical section of the north wall, Plate 7, contain excavated fill that has formed as a mound around the original opening, hence the appearance of a depression in the ground contours around the soak.

Included in the fill at various elevations are Aboriginal artefacts and the remains of both domestic and native animals. Four large shells of a common marine helmet (*Hypocassis bicarinata*)




Plan

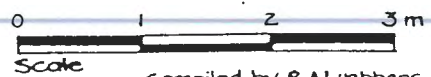


Section



LEGEND

-  CALCRETE STONE
-  SAND/SOIL INFILL
-  SHRUB

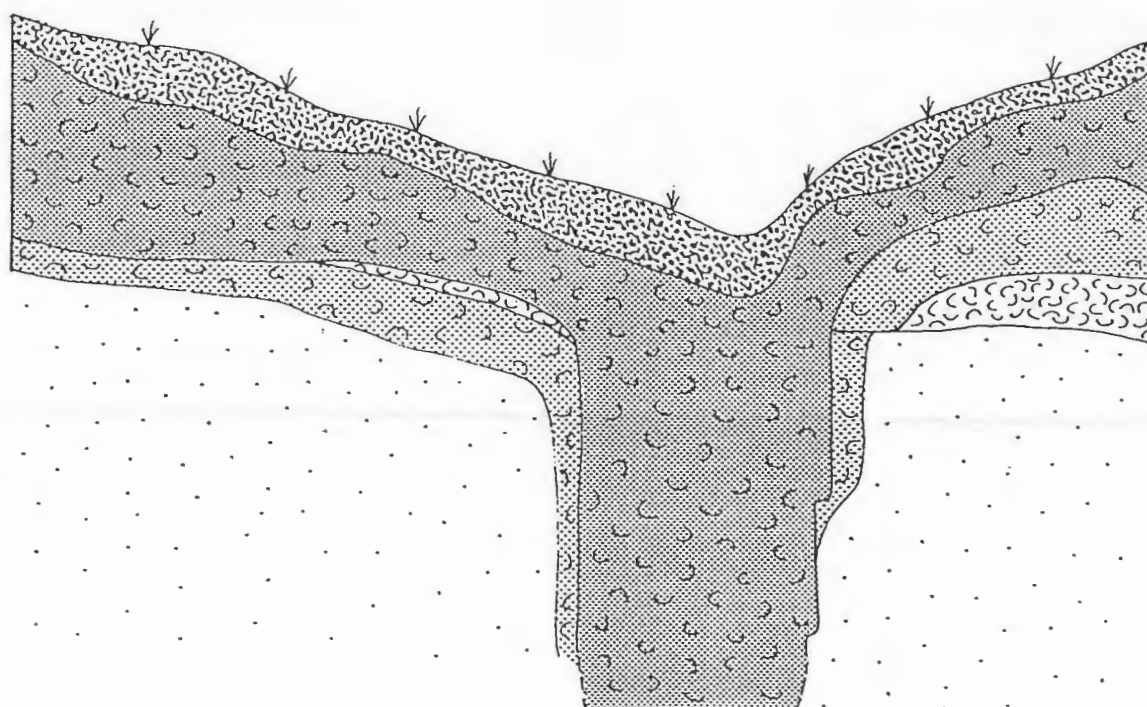


Compiled by R.A. Luebbbers

FIGURE 8 Plan and section of stone lined "wedge pit" shown in partially filled and collapsed state. Extra wide iron trough occurs at upper corner to conduct water into remaining trough system and tanks.

CHINAMANS WELL GOVERNMENT WATER SUPPLY





#### LEGEND

-  HUMIC SOIL
-  DARK SAND/SHELL/MUD
-  SHELL
-  GREY SAND WITH SHELL
-  YELLOW SAND
-  SEDGE

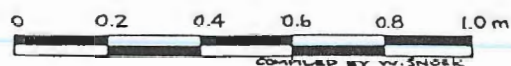


FIGURE 9 Excavated section of "soak", FS4 shows inverted stratigraphy and narrow deep trench originally excavated to obtain water. Water occurs just below lowest point in surface depression.

SECTION OF SOAK, NORTH WALL, CHINAMANS WELL

were recovered on the surface of the sandy infill near the upper surface of the depression. The body whorls of two of the shells had been ground down to the central column to create a type of drinking cup that is common in Aboriginal sites in coastal Southeast South Australia. The bones of rabbit, sheep, and a large kangaroo occurred throughout the fill, some representing nearly complete individuals. Although none of these materials are likely to provide radiometric indications of the age of the soak, the presence of Aboriginal drinking vessels suggest a traditional way of obtaining water from the soak. If this inference is correct, the soak may relate to the 19<sup>th</sup> century land use and suggests it was being used by Aborigines in the 1860s when Chinamans Wells first became a popular public watering place<sup>13</sup>. The presence of the soak may have given European and Chinese immigrants the proof needed to develop the site as an important water reserve.

### 3.8 TRACKWAY

The old coach route through the Coorong can be traced as a narrow track wherever the wheel ruts are still preserved in the dune surface. At Chinamans Wells, it follows the telegraph line along the low-lying terrain on the western edge of the ephemeral lakes to avoid the impassable ridges and sandhills that dominate the terrain. North of the homestead, it crosses the modern entrance track to the well and follows the margin of the larger salt lake, eventually leading to Salt Creek. It appears to divide at the house itself and a spur branches to the well where the physical impressions are lost beneath mobile sand. It was traced in front of the homestead by auger as a compact, hard layer of sand which included a sparse scatter of household artefacts and calcrete nodules. A 1.5 km section of the trackway is shown on the site plan, Figure 4. The alignment of the Princes Highway to the east of the salt lake was first constructed in the early 1860s and would have diverted traffic away from Chinamans Wells once the nearby government well was built. Nevertheless, it was this windy track that passed by Chinamans Wells that was considered the main overland route through the Coorong until it was upgraded and straightened by subsequent road works.

### 3.9 HOMESTEAD, ASSOCIATED BUILDINGS, AND DEPOSITS

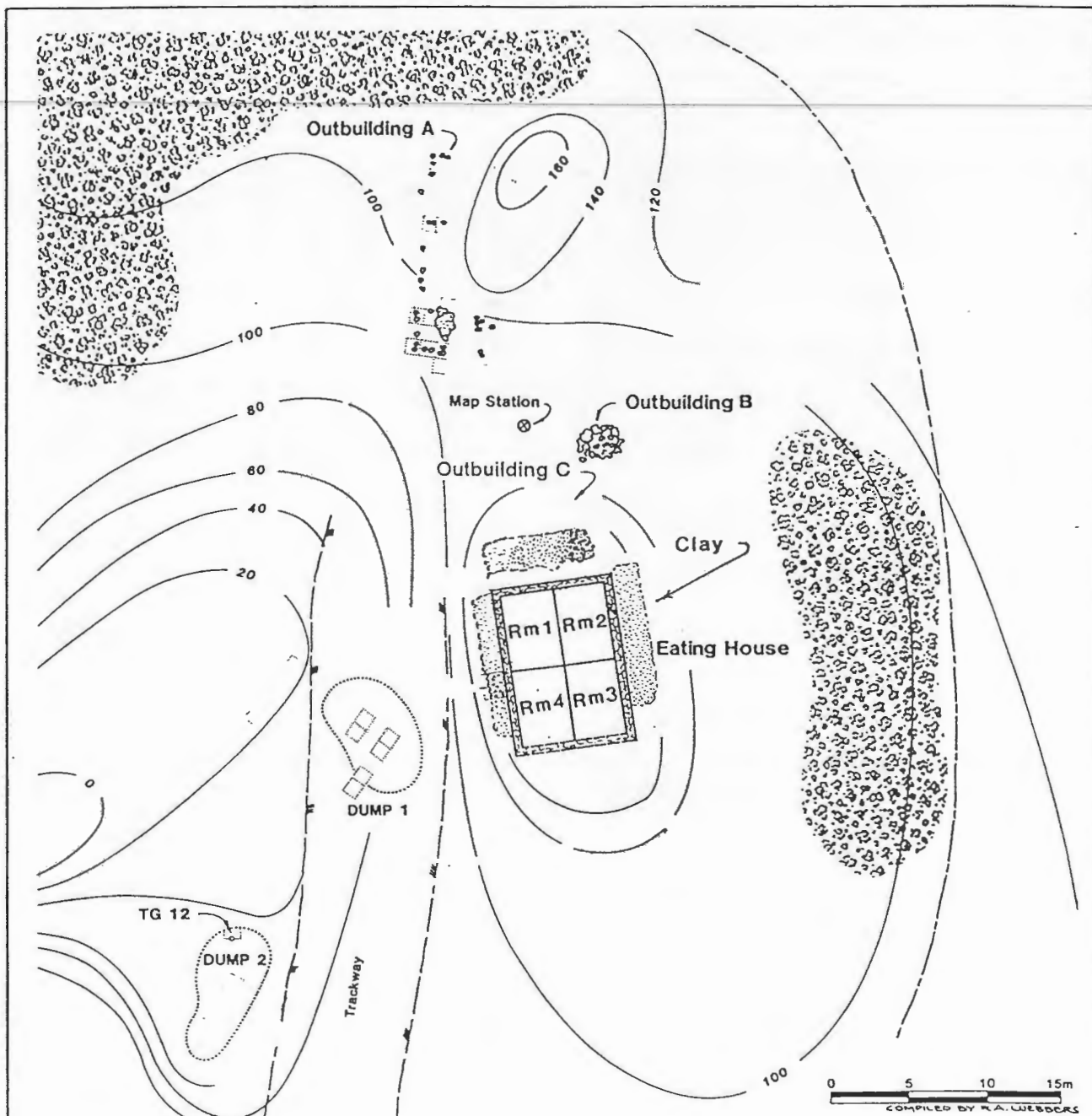
#### 3.9.1 Site Preparation

The first visible traces of occupation on the site came to light when machinery brought in to clear box thorns at the southern end of the building pushed away stone foundations of what appeared to be a small dwelling. Careful clearance revealed a low mound of building rubble and foundation walls beneath a heavy overgrowth of vines and coastal wattle, raising the possibility that Chinamans Wells Eating House had at last been re-discovered. A mound of wall rubble on the inside of the house as it appeared after clearing away shrubs is shown in Plate 8. The surrounding *Acacia* and *Melealeuca* woodland had formed a dense cover over the home precinct, even though severe frosts had killed a number of trees on the site. An auger survey subsequently located the remains of a second building, a small heap of stones, three significant refuse deposits, and a trackway in front of the house, all buried beneath sand and vegetation. Remnants of the intercolonial telegraph line and the meandering wheel cut alignment of the main overland route could be traced through the adjacent woodland for short distances. The home precinct and the historical features identified in it are depicted on the Site Plan, Figure 10.

#### 3.9.2 Excavation Process

The home precinct was cleared of all dead timber and loose building rubble was removed from the ruins in preparation for excavation. All vegetation growing above buried fabric was also removed. A mapping station with a plane table and alidade was set up and a large barrow ramp was constructed to remove the many tonnes of building rubble from the house ruin.





#### LEGEND








-  LIMESTONE
-  COBBLE PAVING
-  ACACIA BUSH
-  EXCAVATION UNIT
-  -20- SURFACE CONTOUR in cm
-  BURIED DEPOSIT
-  --- TRACK

FIGURE 10 Map of eating house, outbuildings and buried deposits of Chinamans Wells Homestead (Gall's homestead and eating house). Compiled from excavation, subsurface probing, and optical survey. House faces buried track that leads to the main well north of the homestead.

#### CHINAMANS WELL EATING HOUSE AND OUTBUILDINGS



Standard excavation techniques were adopted in removing building fabric so that the demolition history and architectural features of the house could be described. The fragmented masonry rubble overlying the house ruins, labelled Layer 1 in field notes, was removed from the site first and discarded without being sieved. This material represents the final period of collapse and demolition of the masonry fabric of the structure. Beneath this was a layer of sand, mortar, plaster, and building masonry referred to as "Layer 2" which was created following house abandonment and is associated with roof loss, fabric decay, and vandalism prior to deliberate demolition. The compact nature of this debris lead some excavators to refer to it as "Floor 1" and hence remove it as a distinct layer. Beneath this layer throughout the interior of the house is a solid clay floor, referred to as "Floor 2", which in reality was the first true floor encountered by excavation. All sediments beneath Layer 1 were sieved on a 4 mm square mesh screen and the artefacts retained have been catalogued by Snoek<sup>14</sup>. Wood charcoal and evidence of extensive burning centring in the hearth and extending across the floor of Room 4 indicated that a considerable amount of timber with nails had been burned sometime during the period of demolition.

Excavation of interior of house concentrated on grids and layers to locate and plot individual artefacts. Outside a different matter.

Excavation of the exterior areas around the house was conducted to investigate structures, floors, paving, and work areas. Paving on the front and rear faces of the house and along the northern end were uncovered in arbitrary levels as individual architectural units rather than in formal excavation squares. Dump 3, which occurs scattered over the rear clay paving, was removed in layers as a single unit and sieved in a routine manner. Refuse in Dumps 1 & 2, on the other hand, was excavated in formal trenches in arbitrary levels and all sediments were sieved on 4 mm square mesh throw screens in order to obtain maximum artefactual samples. Most of the area immediately north of the house end wall was subdivided into 1 metre squares and excavated in stratigraphic levels as precisely as field conditions in the soft sand would allow. Similarly, a 6.0 x 12.0 m grid with 1.0 m squares was established over Outbuilding A and 10 squares were excavated within the grid, although additional areas outside it were also excavated. The field identification number assigned to an individual artefact or soil samples is a three place digit which refers to a specific item within a designated excavation level and square. The number FS3.2.11, for instance, is the eleventh item in the second level of excavation unit 3. Excavation areas which are located outside the house refer to the nearest room number, as for example "Outside East Wall, Room 3" (OSE,RM3). At the completion of excavation, a protective layer of beach sand was laid over the masonry so that only the top most course was visible above the fill.

The house axis is aligned at a bearing of 349 degrees, which is North Northwest. For ease of reference in this report, the house will be considered to be aligned north-south, with the front doors facing due west. With this slight rotation, the top of the illustration of the house becomes north and all cardinal points will shift accordingly. The fabric analysis was explored equally by the excavation team members and is therefore here taken to be a collaborative effort.

### 3.9.3 The Main House

A floor plan for the Main House, Figure 11, was constructed from the results of the archaeological excavation and fabric analysis. The ruin consists of foundation walls of unformed calcrete blocks and the first course of all walls, except for a portion of the southern endwall, which has been completely demolished. Door openings are intact and an examination of the demolition rubble indicates that all external openings on the house front were finished with neatly dressed and sized calcrete blocks, possibly as quoins set out in ashlar style. The rectangular carcass of the house, which measures 10.5 x 8.0 m (34.5 x 26.25 ft.), is divided into two equal sized apartments by a single internal wall with no common door. The fully exposed masonry units of the house ruins at the completion of excavation is shown in Plate 9. Each apartment has a large room 4.9 x 3.8 m (16 x 12½ ft.) and a smaller one measuring 4.9 x 2.7 m (16 x 8¾ ft.). Although the layout of each apartment is identical, Room 1 has an oversize country style hearth which typically are designed for kitchen use. Two standard size doors exit to the front of the house, whereas a much smaller external door exits to the rear of the house

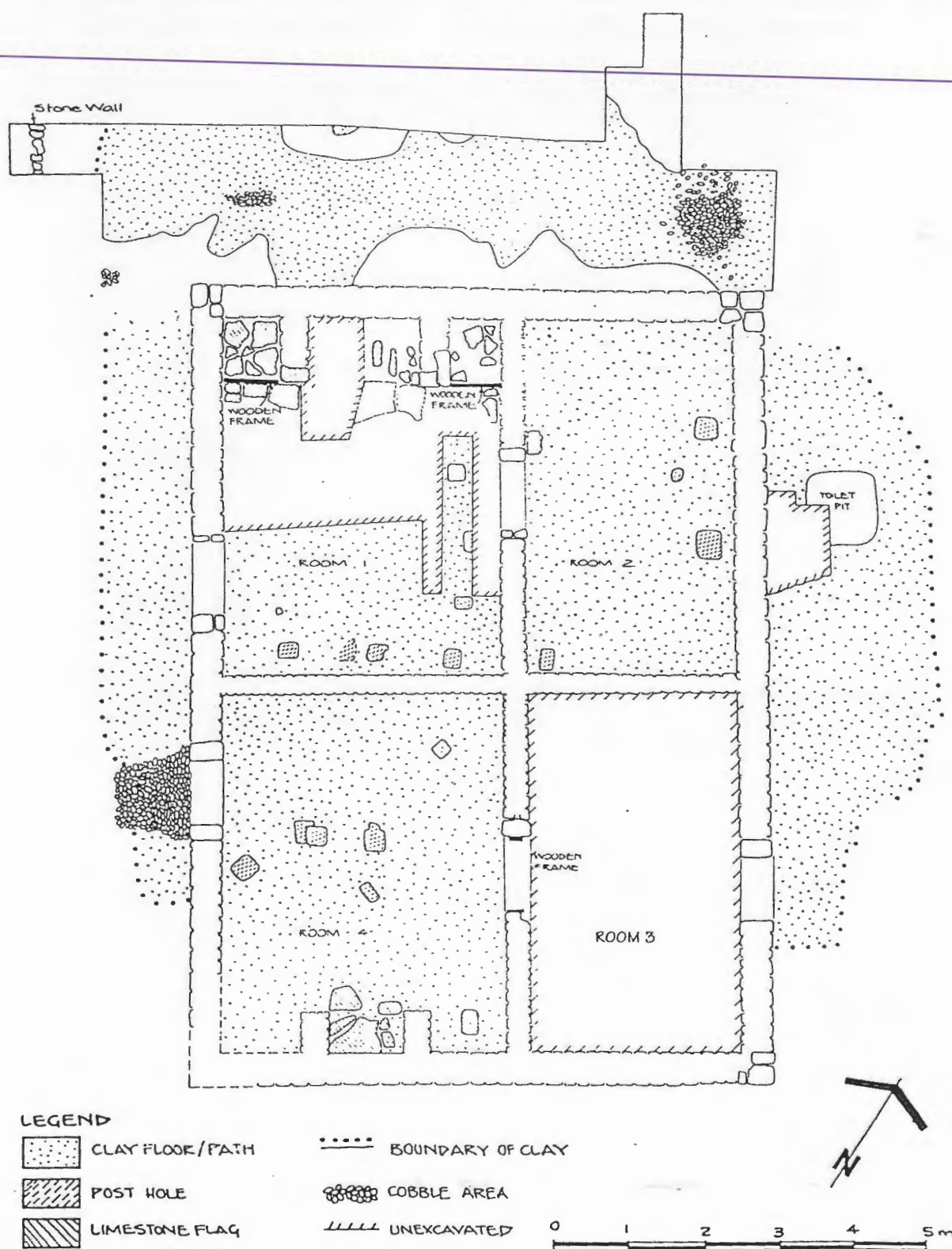


FIGURE 11 Floor plan on main house after excavation of structure and surrounding area in 1983. The building is divided into two separate apartments and is surrounded on three sides by compact clay paths. Room 3 remains unexcavated and portions of the fireplace in Room 1 are partially uncovered. Disturbances occur to the southern end of the house.

PLAN OF THE EATING HOUSE/GALL'S RESIDENCE



through the second apartment. This layout suggests a separation of living areas and function, the northern apartment possibly being the kitchen, pantry, and storeroom. The southern apartment in this scheme would then contain a heated parlour or large bedroom, and a small bedroom. The presence of both shattered sheet glass and dressed building block in the floor rubble indicate that each of the larger rooms had at least one front window. It is certain that the house faced in a westerly direction throughout its life and that only a single small door exited to the rear of the property at the time of demolition. The area of the house is 84 square metres or 904 square feet. The extent of the surviving masonry fabric of the residency at the conclusion of the excavation is shown in Plate 9.

The masonry fabric throughout the building is comprised of selected calcrete boulders which are bonded by a lime-rich mortar. The stone is readily available in the immediate locality without resorting to extensive quarrying. The external walls are made as a double leaf with a rubble core and the internal walls are a single leaf construction which are capped on top by at least one course of flat limestone blocks. A single fallen section of the central internal dividing wall found beneath demolition rubble, Plate 10, has yielded a floor-to-roof cavity height of 3.1 m. The slope of the capping stone on this wall suggests a pitched roof, although its particular configuration is not defined by this evidence. Lloyd's eye-witness account suggested that it may have had a single pitch. A shell-rich lime mortar was incorporated extensively inside the chimney and flue of the fireplace in Room 1. A hard white clay layer, expertly laid level, forms the floor of Rooms 1 & 2, whereas the floor of Room 4 is finished in a sandy lime mortar (and a clay). The floor of this room was heavily charred by intensive fire and was littered with an extraordinary number of crimped square shank construction nails. Such evidence is consistent with intentional burning of a large amount of demolition materials, and in light of the quantity of nails and wide spread fire damage, may also suggest that some portion of the internal finish included timber panelling. All clay floors finish at the same level throughout the house.

The interior finish of the house reveals unexpected refinement for a residency in such a remote setting. All walls in the two large front rooms and in the unexcavated room, Room 3, are finished in a white, finely tooled lime-rich plaster with fluting and rounded edges giving a decorative finish around the fireplaces and front doors. In each of the two larger rooms, a single deep groove occurred somewhere on the front wall, possibly as a dado line or the anchor point for a picture rail. Mould marks indicate that the plaster extended from the clay floor to the ceiling, where the joint was covered by a narrow architrave of undetermined profile, and that the plaster extended around the fireplaces. A low wooden skirting of undetermined profile was installed around the base of the internal wall of each of the two front rooms. The hearth in Room 1 measures 1.7 m across and 70 cm deep, and a warming ledge encircles the firebox inside, and an iron hinge appears to have supported a small crane or a similar attachment to suspend a cooking pot. A pavement of flat stones forming the apron of the hearth extends well into the room and into the adjoining corner recesses of the hearth. Wooden frames embedded into this paving are the remnants of built-in cupboards on either side of the fireplace. Its counterpart in Room 4 has no ledge and measures a mere 0.85 x 0.40 m. A heavy timber base of a red gum telegraph post measuring 1.70 m long found in demolition rubble in front of the hearth in Room 1 is believed of have been the mantel piece.

An effort was made to piece together plaster fragments to investigate possible surface decoration. Engraved and pencilled graffiti appearing extensively on the front walls of both main rooms gave familiar family and first names of people living in the district. One of these, executed in a free hand script included the date of either 1913 or 1923. There was no evidence of any form of surface decoration on the plaster.

The impacts of post-occupation weathering and demolition have impaired our ability to more fully interpret the remarkable rectangular holes that occur in each of the clay floors excavated in the house, illustrated in the Floor Plan, Figure 11. All the holes are roughly similar in size and are rectangular, and many have been sealed by the application of white clay which has been carefully tooled flush with the existing floor. The fire in Room 4 was so intense that it melted glass, accelerated iron oxidation, and baked layers of plaster and mortar so completely that excavators were unable to easily distinguish between the two. For this reason, some of the "holes" identified in this room may have resulted from excavation damage and consequently



are poor candidates for any form of definitive fabric analysis. Similarly, the clay floor in Room 2 was uneven and cracked, although not at all burned. We concluded then that even the processes of weathering and demolition probably altered the morphological features of the clay fabric that are critical in understanding the significance of the holes.

The floor in the kitchen, Room 1, by contrast had been buried under large fallen wall slabs which gave critical protection against erosion and demolition damage from the moment of collapse. Inexplicably, a 5-10 cm thick layer of coarse sand shell grit deposited immediately beneath the masonry rubble covered the entire room, the sediment obviously deliberately brought into the house and spread across the floor before demolition. Because mortar and plaster fragments were absent in it, we can be certain that this happened prior to roof loss, and hence excavators were able to clean the floor by simply brushing away the coarse sediment. Although we can only speculate about the purpose of this sand layer, we can conclude that the clay floor below it was relatively well protected since it was last used. These extraordinary circumstances permitted a set of unique features in the floor to be examined in detail.

A group of rectangular holes are aligned close to the southern and eastern walls of Room 1, Plate 11. One open near the doorway between Rooms 1 & 2 was excavated to examine contents and internal configuration. It is filled with the same sand and shell grit matrix that has been spread across the floor surface, the hole extending some 17 cm below the floor surface. The clay forming the edge of the hole clearly is a faithful mould of a solid upright post or support, with the clay obviously having been laid in a plastic state around it. There is slight breakage to the lip of clay on one side of the hole to indicate that the support was removed by force from the floor, but there are otherwise no signs of damage to the clay fabric. There are two holes in the set of four against the southern wall which have been completely covered by clay, suggesting continued use of the floor after the hole was emptied and sealed, and there are holes in Rooms 2 & 4 which have a similar treatment. Excavation of this hole showed that the underlying sediments are a mixture of calcrete rubble and sand, and that no lower clay floors are present. The rubble appears to be a rough bed prepared to support the clay floor.

These "repairs" were all expertly executed as though appearance and future use were imperative to the household. Taken together, this evidence suggests that some type of upright posts, receptacles, or base plates, which were set into the clay floor, were removed carefully and the hole was skillfully repaired so that the clay floor could be subsequently used unimpeded. It would appear that this practice was intended to extend the use-life of the floor despite repeated modifications to the floor layout, and its application in all three excavated rooms suggests that several changes to the room arrangements evolved in the course of habitation. Exactly how can this evidence be used to explain or describe the pattern or age of residency?

The solution to this question rests with the identity of the object embedded in the floor. We initially concluded that a wooden floor was installed on plates over the existing clay floor, and that some holes in it were sealed to prevent rising moisture (see Snoek, 1984 for a preliminary explanation). For this hypothesis to be correct, the uprights would have to be posts positioned at regular intervals to support joists or battens upon which floor boards were attached. This interpretation must now be discounted however on the following arguments.

- There are insufficient uprights (holes) to support a wooden floor in any of the rooms.
- End walls normally used to support floor joists are absent.
- Impressions or damage from structural timbers are absent in the clay floor and plaster wall finish.
- There is insufficient evidence to indicate that height adjustments were made to the in-built cupboards or hearth area of Room 1 to accommodate the installation of a new floor.

Several possibilities were considered in searching for an alternative explanation. Should the uprights protrude well above the floor level, as would be the case involving posts, extensive areas of the internal walls would be blocked and passage through the doorways would be restricted. If even half the uprights were in place at the same time, the room would be uninhab-



itable. Furthermore, the number of holes is unacceptably high for these to represent floor safes or similar subfloor storage areas. They are too regular in size and distribution in each room to be the result of normal wear or damage from a leaking roof. The best inference we can make from the available evidence is that the holes represent a succession of alterations to the internal layout and function of the house as furniture and/or furnishings were re-arranged and moved about in each room, with each leg or post being either fixed permanently into the floor or positioned over a plate of stone or timber. The most likely furniture installed in this manner would be tables, shelves, and beds. It may be inferred from the succession of "repairs" and the absence of a height change between floors in each room that the existing floor in Room 1 is a part of the original design and that some of the covered holes are likely to mark the arrangement of furniture or furnishings in the early stages of habitation of the homestead. It is noteworthy that the hole over the toilet pit was closed in an identical fashion, clearly indicating a continuing use of that clay floor. The identity of the supports can be clarified if the floors in each room are fully exposed and additional holes are investigated. Portions of Room 1 and all of Room 3 have been left unexcavated should further investigation be required.

All exposed clay floors were examined for wear patterns or evidence of repair that might reveal the intensity of foot traffic or a succession of renovation in each room. The floor in Room 4, which was finished in a cement-weak sandy plaster, was too damaged by fire to identify wear patterns. The application of the more resistant durable plaster surface is possibly an upgrade to a deteriorated floor and implies an expectation of heavy wear. The floor in Room 2 was a poorly formed, friable layer of clay with only a roughly level finish. Decay was too extensive for the preservation of wear marks, but no evidence of repair or renovation suggesting a succession of occupation was uncovered underneath the exposed clay layer. Wear of the well preserved floor of Room 1 was almost absent, suggesting that it may have been laid shortly before abandonment. Patches of very thin, finely tooled clay layers were however present, suggesting that modest localised repairs to worn surfaces was a common technique in floor maintenance. If this is so, the original floor built in 1864 may be incorporated in the clay fabric of the floor that was present at the time of abandonment. Wear patterns were abundantly apparent on the surface of some of the flag stones surrounding the hearth, including those in the corner recess, but anomalies suggested that the stones may have been re-set at the time the floor was last renovated. Unfortunately, time limitations prevented excavators from searching more thoroughly for underlying floors in Room 1.

The exterior features of the house are numerous. A clay path runs the full length of the house front and a similar pavement leads from the rear door to a toilet set close to the exterior wall of Room 2. A skilfully laid cobble paving which is built up over a clay path at the entrance of Room 4 is the only significant example of a succession of construction styles found anywhere in the ruin. A clay pavement at the northern end of the house appears to be another work area which is related to the residential use of the property.

The clay paths at the front and rear of the building deserve more detailed attention in this discussion. All have firm, moderately hard wearing surfaces which slope away from the external walls to enhance drainage, and all are relatively well preserved. The cobble paving, shown in Plate 12, at the entrance to Room 4, which ends at the same elevation as the threshold, has presumably been installed to accommodate extra heavy traffic into this room. The cobbles are bedded in a thin layer of sand which overlies the clay pavement. Similarly, the outside clay paths are built on an unprepared bed of sand, which is also open to moisture from the surrounding ground runoff. If exposed to prolonged wet conditions this clay will become somewhat friable and soft and should normally be covered if it is to serve satisfactorily as a suitable all-weather pavement. Its remarkably good state of preservation outside the house suggests that verandas extended around the house providing shelter above these pavements, even though no evidence of upright posts capable of supporting verandas were recovered.

### 3.9.4 Outbuilding B

The area at the northern end of the house, Figure 12, referred in the field notes as Outbuilding B, is also extensively paved in clay and contains a large number of artefacts. On the surface is an irregularly shaped fragmented clay floor which contains small patches of cobbles and is laid

# ENLARGEMENT

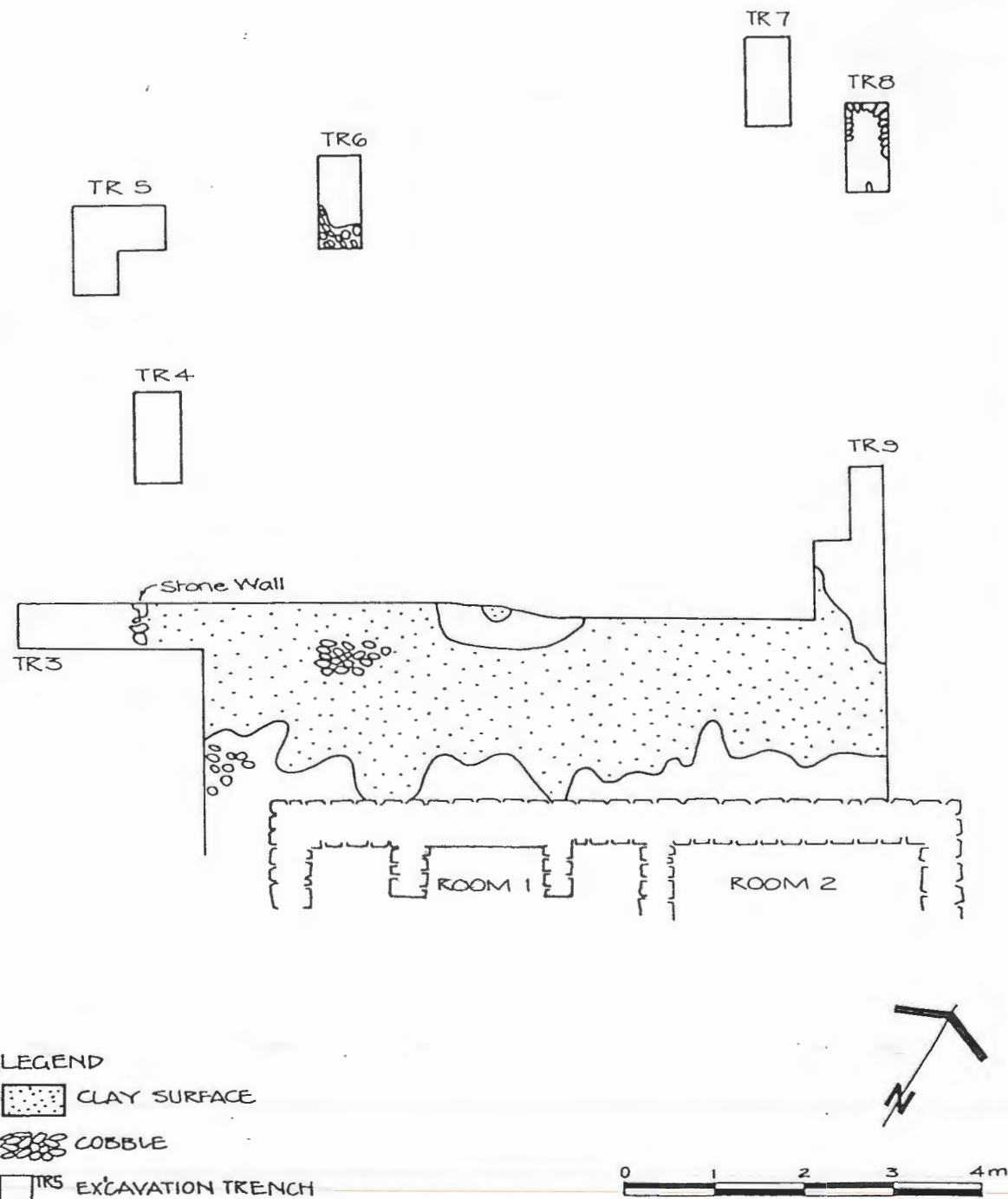


FIGURE 12 Enlargement of northern end of eating house showing clay paving and excavation trenches in vicinity of work shed.

CLAY AND COBBLE PAVING, NORTH END OF GALLS HOUSE



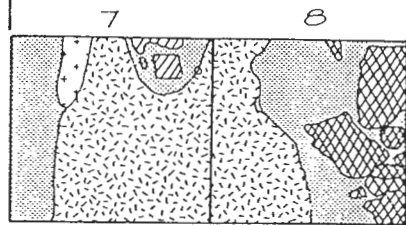
the full width of the house, extending outward from the endwall some 3.5 m. Although it probably originally formed a single paved surface, there are numerous gapping holes across its uneven contour, and the outside edge is now quite irregular and is notably thinner than at the centre. The clay fabric itself is friable and variable in thickness as if extensive repair was frequently needed to maintain an adequate wearing surface. In one area, excavators were able to locate two overlapping clay floors with 8 cm of sand separating the two. In addition, the cobbles, as seen in Figure 12, appear to be either remnants of a single paving or small built-up areas where localised heavy wear had occurred. How should this uneven clay surface be interpreted in light of the other pavements and general site layout?

Several aspects of associated archaeological evidence must be considered to answer this question. The clay surfaces at the northern end of the house are certainly more extensive than are other clay paths around the house, suggesting that it was designed for a specific activity that resulted in frequent replacement and repair. The cobbling may be remnants of a much more substantial pavement that was installed as required, although the clay is clearly the predominate paving material. The range of artefacts recovered from the area, which includes leather boots, horseshoes, metal hand tools, harness gear, saddlery, machinery spare parts, is devoid of personal items or household refuse that typically occurs everywhere else on the site. This suggests the contents of a storeroom or shed that may have served the household. Much of this material was excavated in a narrow trench-like feature that ran nearly against the outside wall from one side of the house to the other. From its irregular shape and contour, we surmise that this feature may have been formed by post-occupation erosion<sup>15</sup>, the clay floor in effect terminating a metre short of the house endwall. The floor is nowhere substantial enough to have withstood the heavy pounding of horse hooves or iron wheeled vehicles which typically are sustained in a stables or purpose-built cart shed. On balance, it is reasonable to infer from this evidence that the northern end of the house was a work area in which maintenance tasks were carried out and items were stored. Because at least one post mould was uncovered just outside the Northwest corner of the pavement, and the edges of the pavement itself were not sharply finished to suggest the presence of walled enclosures, we speculate that an open lean-to or semi-detached shed was built at the northern end of the house and that it was used primarily as a workshop, saddlery, and a storage/livery compartment. While there is no evidence of a forge, it is also possible that horses were shod in this shed. In these terms, the structure was most likely used by a farrier, possibly as a livery stables that was transformed into a general purpose storage shed as its horse-changing role of the homestead diminished through time.

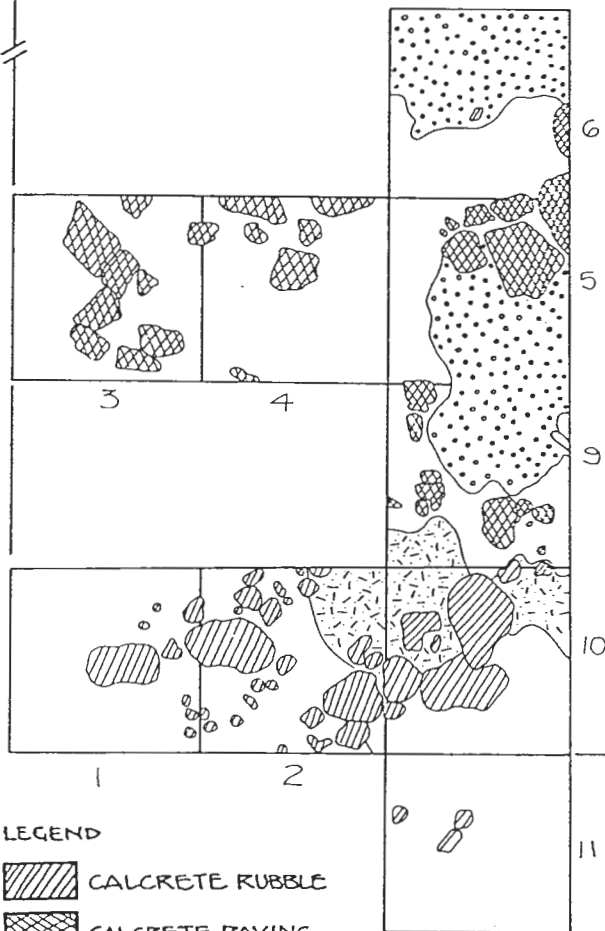
### 3.9.5 Outbuilding A

Guided by the results of an auger survey, a 6 x 12 m grid was installed over the sub-surface remains of Outbuilding A and eleven 1.0 metre squares were arbitrarily chosen for excavation. Test excavation outside the grid was also conducted to explore a very poorly preserved archaeological record of the building. The Site Plan of Outbuilding A, Figure 10, illustrates the main features uncovered.

The remaining building fabric consists of a single course of loosely arranged, large calcrete foundation stones and the remnants of internal stone floor consisting of calcrete flagstone. No mortar or soil packing is used in the foundation nor is the wall formed as a solid masonry unit at any point, suggesting that it had only a limited load bearing capacity. There are no remains of upright posts of any description located by excavation nor is wall rubble present. The floor masonry is comprised entirely of a slightly dispersed cobble paving of small angular calcrete stones, and flat calcrete flagstones, all mixed together in random patches across the interior of the structure. The dispersion of different construction styles and irregular surface contours suggests that the floor sustained heavy damage and had undergone repeated repair. A single instance of flagstone occurs with an underlying cobble pavement. The cobble in each square invariably is more widespread as a consolidated, continuous paving, whereas the flagstone is dispersed as discrete, neatly laid clusters which cover less of the floor area. There are no architectural features in the ruin to suggest the presence of walls, chimneys, window or door openings, nor were patterns of wear detected on the floor.




Refer to Fig 2.10 for section





#### LEGEND

 CALCRETE RUBBLE


 CALCRETE PAVING

 COBBLE

 LIME & CHARCOAL

 WHITE CLAY

5 EXCAVATION TRENCH

 BROWN SAND

 MOTTLED SAND

0 1 2m

FIGURE 13 Plan of excavated area of Outbuilding A, showing stone rubble and cobble and flagstone paving inside structure. Evidence for masonry fabric above ground is not present.

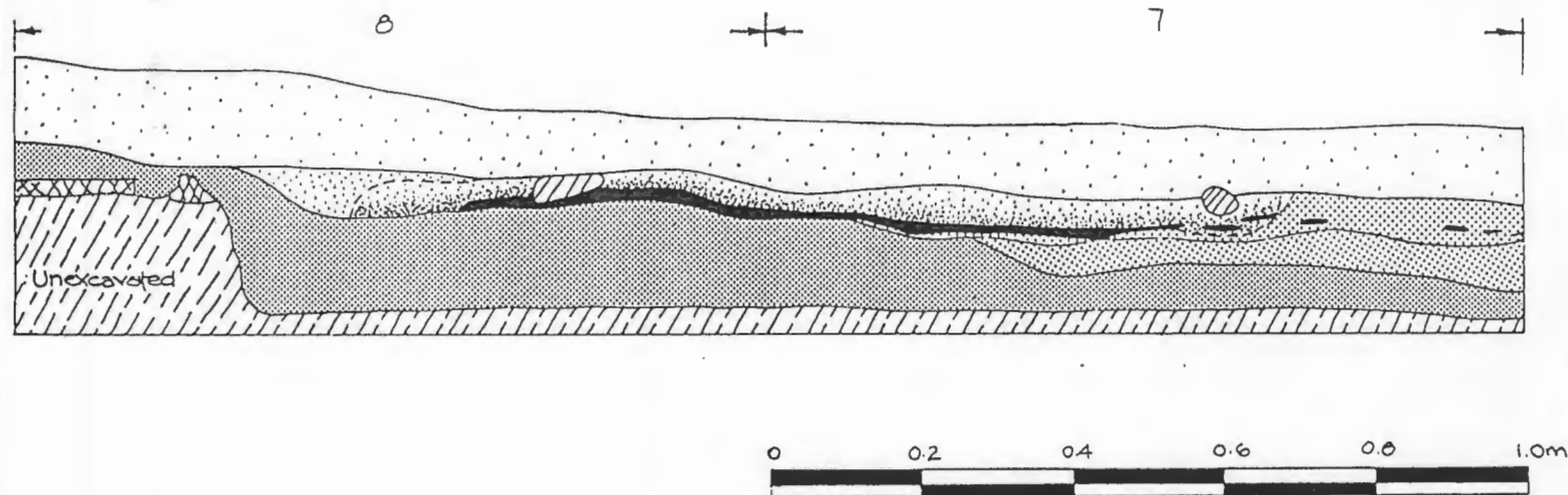
PLAN, STRUCTURE A, SQUARES 1-11, CHINAMANS WELL

Squares 7 & 8 were excavated more deeply to expose all deposits associated with the structure. Viewed facing south towards the house, Figure 13, the section reveals the junction between the flagstone paving on the left and external layers of sediments containing kitchen artefacts and lime mud, ash, and charcoal in varying concentrations. Auger tests indicate that this junction coincides with a line of loose calcrete boulders, presumably the remnants a foundation which can be traced as a boundary on the two long walls and the northern end wall<sup>16</sup>. A dark brown sand of cultural origin spills over the pavement and beyond the structure, a fact that is also confirmed in adjoining areas by auger tests. Above this layer, at the same elevation of the pavement, is a succession of overlapping layers of cultural sediments, some of which contain lens of household refuse mixed in a matrix of ash, sand, and organic residues. The junction with the flagstone appears sharp, suggesting that the refuse was deposited against the building fabric. The compact, solid nature of these lenses and the presence above them of a bright orange sand unit containing burned calcrete and charcoal has lead excavators to conclude that the layer was baked *in situ* by an intense fire, possibly from hot ash from a hearth. The main constituents of the refuse, catalogued by Snoek<sup>17</sup>, include bottle fragments, metal building hardware, ceramic sherds, and a small amount of food bones. That these deposits are confined to a zone "outside" the floor area and that no charcoal or evidence of fire occurs "inside" the structure suggests that solid upright member such as a wall originally separated the two.

The state of the architectural disarray of Structure A and the paucity of building rubble could at first glance be interpreted to be the result of demolition and stone removal from the site. Demolition however is recognised by its own type of residues and disturbance patterns, none of which occurs in the excavated areas of the structure. While the two floor pavements may have been cannibalised and dispersed, areas of both the foundation and paving are sufficiently well preserved *in situ* to illustrate their original construction design. This design clearly included simultaneous use of both paving types and a high incidence of repair and maintenance. On the basis of this evidence, it is reasonable to conclude that the building was a crudely built structure without load bearing masonry walls or the usual domestic provisions of a fireplace. The fabric in the ground and its apparent state of disorganisation probably reflects the true use of the building rather than the end-product of decay and demolition. How then was this building constructed and what function did it serve at Chinamans Wells?

Outbuilding A was not built to the same standards as the homestead. Preliminary estimates suggests that the structure measured about 6 x 14 m and was built with a flagstone and cobble floor which extended across the entire interior of the structure. The above-ground fabric consisted of upright wooden posts, and if enclosed walls were present, by timber cladding. Of course, there is no evidence upon which to reconstruct roof design. The habitation refuse recovered from the floor, a wine bottle and some rosehead iron nails with square shanks, could have been manufactured in the late-1850s, but in no instance could these be firmly associated with architectural fabric belonging to the building. The few nails that were recovered from within the building were likely to relate to the original fabric, but were too eroded to assign a date of manufacture. There can be little doubt however that the structure was contemporaneous with the homestead habitation, although exactly when can not yet be identified with certainty from the physical evidence. The variety of refuse types uncovered along the western wall suggests a range of household activities including food discard, but the numerous building hardware artefacts in the deposit and the fact that all refuse has been broken into small fragments points to secondary disposal. If this is the case, the material in the dump does not necessarily relate to the building. Without additional information, the discarded artefacts provide only circumstantial evidence to suggest that the building was ever inhabited. Similar residential structures typically will have a fireplace. Since no sub-surface remains of a heavy footing were located, we conclude that the structure was a simple outbuilding such as a stable or shed which fell into disuse sometime during the late 19<sup>th</sup> century. The damaged condition of a floor that experienced heavy wear and extensive repair strongly supports the case for a stables, which may have also been used to store horse-drawn vehicles. Such a stables was reported for Chinamans Wells by Morrison in 1879. Many 19<sup>th</sup> century farms in the district had storage sheds and stables for wagons, horses, and firewood, as was required in an ordinary coach/horse changing station, and this site would be no exception. Buildings that are stables at the time of demolition typically are repositories of harness gear, horse-shoes, and other fittings belonging





LEGEND









	CALCRETE RUBBLE		LIME MUD/ASH/CHARCOAL
	CALCRETE PAVING		LIGHT BROWN SAND
	YELLOW SAND		DARK BROWN SAND
	BLACK SAND		ORANGE SAND

FIGURE 14 Cross-section of Outbuilding A, showing baked refuse deposit accumulated against outside wall, with edge of floor paving seen on left.

SECTION, STRUCTURE A SQUARES 788, CHINAMANS WELLS

to carts, buggies, and horsedrawn vehicles. The absence of this material in Structure A is not necessarily unexpected if another building served as a livery stables in its stead. Given that ~~Outbuilding B was the stables at the time the homestead was abandoned~~, Outbuilding A is most likely to have been the original stables which housed horses when Chinamans Wells operated as a changing station.

### 3.9.6 Outbuilding C

This structure is a round heap of calcrete stones with a diameter of 4.0 m and a rounded cross-section that rises to 0.52 m above ground level. The stone are uniformly small (5-15 cm in diameter), are generally round, and are not typical of building rubble at the site. No artefacts or mortar were associated nor could sub-surface deposits or cultural staining be located by steel probe below the deposit. Owing to time constraints, attempts to excavate the structure was not made.

The identity of Structure C is a matter of speculation. Two plausible interpretations of the evidence can be made. These are that it is :

- A heap or stock pile of stones which has been formed sometime in the past, possibly by a former occupant.
- A heap of stones that is unrelated to occupation of the site.

### 3.9.7 Antiquity of Main House Occupation

Commercially manufactured artefacts discarded at Chinamans Wells can provide an indication of the age if their style, shape, or the technique of manufacture can be dated precisely. Registration marks, signatures, or printed information on the artefact in many instances can be precisely dated. Problems arise in dating an occupation from discarded artefacts however if the period of manufacture spans many decades, the artefact is used or is stored for long periods of time, little is known of the period of manufacture, or if the definitive evidence of manufacture on the artefact is missing. Obviously the shorter the period of manufacture and the shelf life of the artefact, the greater is the precision of a date of disposal.

Mid 19<sup>th</sup> century items identified by Snoek

- Wedgwood Burslem and Tunstall ceramic plate 1840-1860 OSNFS Rms. 1 & 2
- J. W. Panhurst in Hanley. Plate 1851-83. proven. as above.
- Edgerton and Co., Lane End plate or platter. 1823-7. Rm 2
- Dark olive case gin bottle frag. pre 1870-Dump 2, lev 6
- Dark olive wine bottle, ca 1860 style, Outbuilding A Sqs 1 & 2 lev 2
- Silver pocket watch case w/ maker's marks, 1839-40. Rm 1, lev. 2. CW1486
- Square cut Rosehead nails with rectangular or wedged shaped shank
- Presence of rough pontil scars on dark olive wine bottles, clear glass vinegar bottles, condiment bottles, and pressed drink glasses suggest dates of 1850-1870s.

An analysis of the artefact collection has been presented by Snoek (1984a) and a comprehensive review of those results is not appropriate here. In assessing the period of occupation for the main house represented in the artefact discard behaviour, Snoek analysed over twenty major classes of manufactured artefacts in the collection for dating purposes. He concluded that nearly all dateable artefacts from the site were manufactured during the period 1880-1915, the majority derived from a large array of kitchen refuse. This is the period shire assessment records show that Joseph Gall lived in the house. There are two items, a watch case from Room 1 and a platter from Room 2, which were made before 1850. Because these could be heirlooms which were curated

### 3.10 DISPOSAL AREAS

There were three main deposits of habitation artefacts excavated during the investigation. These are described in the in order of excavation.

#### 3.10.1 Dump 1

This deposit is a compact, 15-20 cm thick layer of refuse, charcoal, calcrete fragments, and clay which covers a comparatively large portion of the trackway in front of the house. In section, Figure 11, the layer resembles a wedge-shaped lens with a central thick portion containing the greatest density of cultural material. Artefact density is highly variable across the deposit, but taken it is low compared with other deposits. Three post-moulds occur in Square 3 and these penetrate through the refuse layer to the underlying sterile sand unit. One mould is square and is the size of a telegraph post, whereas the two remaining moulds are 3 and 5 inches across respectively.

The content analysis (Snoek) concludes that the dump contains domestic household refuse and a large proportion of building rubble in the form of mortar, charred and unburned calcrete, and ash. Most of the ceramic, glass and metal artefacts are extensively broken in a manner suggesting secondary deposition or re-cycling prior to final deposition. There is a distinct scatter to some artefacts giving an open-air disposal and possible breakage from pedestrian or vehicular impact. Given the concentration against a standing posts, we conclude the Dump 1 represents both primary and secondary discard events surrounding a standing structure, possibly a fence or timber wall.

#### 3.10.2 Dump 2

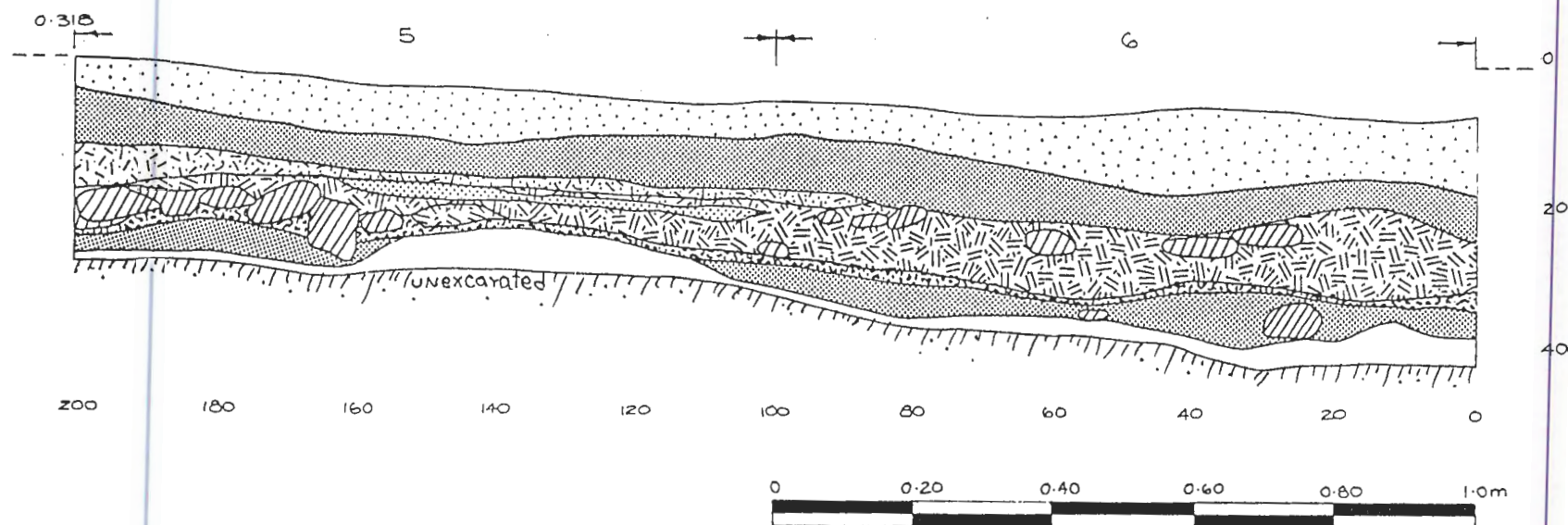
Dump 2 is the greatest concentration of household refuse, ash, and charcoal excavated at the site. As viewed in plan, see Figure 10, the deposit assumes the shape of a sharply bounded 5.0 m long ellipse, except for a layer of scattered refuse on the surface extending in a northerly direction. Six excavation layers, assemblage dominated by kitchen refuse, ie crockery, drinking glass, metal cans, storage jars, personal, clay pipees, and clothing items, and a small component of farming artefacts.

In cross-section, Figure 16, it likewise forms a sharply delineated conical shaped lens with a maximum thickness of 85 cm at the centre and a width of 2.20 m. A thin layer of sand and *Coxiella* shells (depicted in the legend as "sand with whole shell") underlies the artefact-bearing unit of the deposit and this follows the steep contour, dipping below the excavation floor at the deepest point in the section. This is an example of inverted stratigraphy, the *Coxiella*-bearing sand occurring well below the section wall. Auger sections indicate that the dark infill of the dump continues more than 70 cm below the excavated section, but at this depth contains no artefacts.

In light of the depth of this infill, It is possible that the artefact dump was formed over a well or some other disused pit.

The assemblage in the dump<sup>18</sup> represents the most functionally diverse range of artefacts found associated with eating house. In general, the refuse originates from domestic activity, which is predominantly kitchenware throughout each excavation unit. Notable examples of this diversity include whole wine bottles, numerous clay pipes, window glass, buttons made from various materials, apothecary bottles, metal match boxes, a wool bale stencil, small farm hand tools, and Aboriginal stone artefacts. The incidence of nearly whole items or heavily worn objects is high, and the recovery of delicate perishable materials such as lead wine bottle seals, paper labels, bottle corks, leather, and cloth fabric was common. A higher percentage of bottles and bottle fragments in basal layers of the dump has led Snoek to suggest that the deposit originally was a bottle repository before becoming a general purpose dump for the house. There is no stratigraphic or artefact serration patterns to suggest a temporal sequence in the depositional history nor are intrusive disturbances apparent in the vertical section of deposit. In fact, several ceramic fragments from basal and two overlying layers join together to form





#### LEGEND






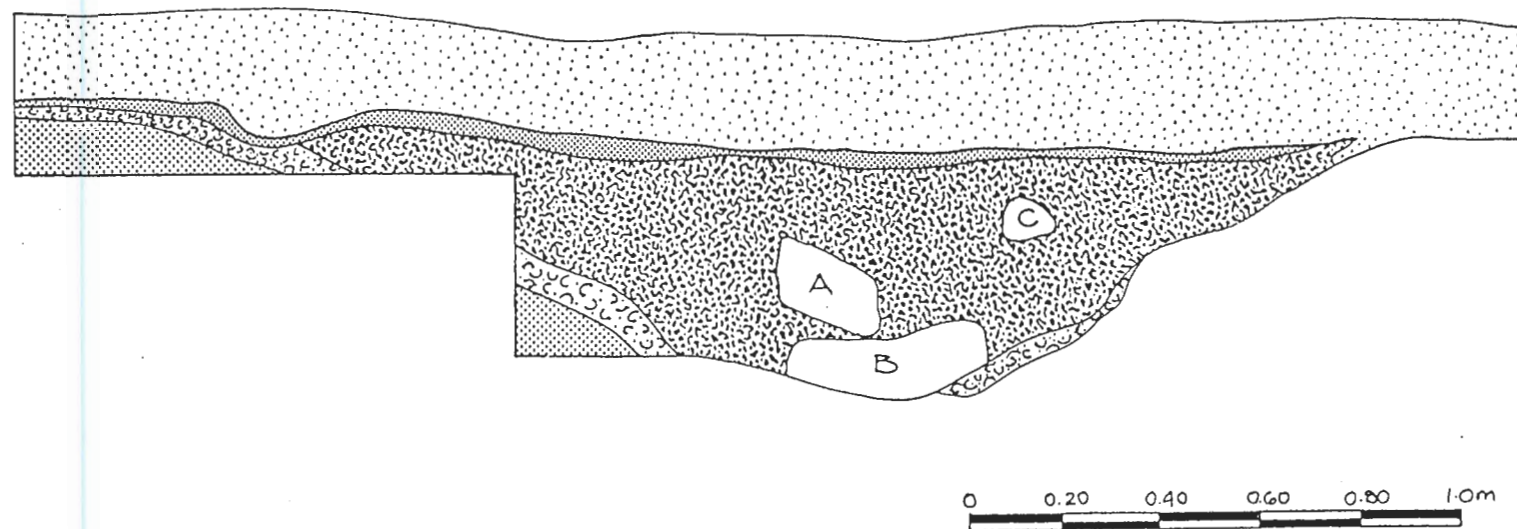

	GRAY SAND		COARSE GREY SAND
	DARK GRAY SAND		CALCRETE
	ORANGE SAND/CLAY/CHARCOAL		GREY SAND WITH HUMUS
	CLAY AND CHARCOAL		CREAM DUNE SAND


FIGURE 15 Cross-section of excavation through Dump 1 showing concentration of building rubble and associated household refuse. Layers labelled clay, charcoal, and dark sand contain domestic artefacts.


SECTION, EAST WALL, DUMP 1, SQUARES 5 & 6, CHINAMANS WELL




#### LEGEND

 YELLOW SAND

 DARK GREY SAND

 DOMESTIC REFUSE

 REFUSE CLUSTER

 SAND WITH WHOLE SHELL

 SHELLY SAND

FIGURE 16 Cross-section of Dump 2 showing pit-like shape of deposit and main concentrations of household refuse.

SECTION, EAST WALL, DUMP 2 GALLS HOMESTEAD

portions to kitchenware used in the house. The presence of small clusters or heaps of refuse suggests that the dump was formed in small increments, possibly over short episodes rather than rapidly in large annual or spasmodic cleaning events.

### 3.10.3 Dump 3

This deposit includes the material collected from both a 15 cm thick layer of building rubble overlying the clay paving at the rear of the house, and artefacts associated with the paving surface itself.

The functional roles of artefacts in Dump 3 and the area outside Room 3 to the east show a predominance of household activities. Over 75% percent of the collection is crockery from the kitchen, most of which are plates, saucers, and cups. Decorative motifs on these occur site-wide, indicating a contemporaneous use. Hardware is the second most common category and this contains items related to the building itself, such as flashing, nails, baling wire, and iron hooks, most of which possibly deposited around the house either in the later occupation phases or as a result of demolition. Pastoral equipment and machinery are missing altogether, suggesting that the residency had little, if any pastoral focus.

Discrete layers and finite depositional centres are absent throughout the deposit, indicating random or secondary discard behaviour were main formational agents in the creation of Dump 3. Nevertheless, artefact fragmentation and distribution patterns suggest that activity around the house may have continued either during or after the accumulation of this refuse. A large number of plates and saucers deposited next to the wall are preserved nearly whole and in nestled clusters beneath the rubble, many obviously broken by the act of discard. Artefacts recovered from the central and outside zones of the clay paving on the other hand were more extensively broken and scattered across the surface, possibly the result of heavy pedestrian traffic or intentional acts of vandalism. The creation of untidy living and activity centres close to the house is a common occurrence around some rural homesteads when disused house litter is stockpiled in a haphazard manner. In this dump however, the pattern of dispersal and fragmentation patterns of so many artefacts is more consistent with intentional vandalism of the kitchen contents, possibly inflicted by strangers to the household.

### 3.10.4 Toilet Pit

Disused toilet pits are commonly used as repositories of domestic refuse discarded from a homestead, the act of abandonment possibly signifying some type of renovation or transition in the household arrangements. Extensive auger surveys across the site failed to detect either a separate well or toilet until, on the second to last day of excavation, a one meter square outline was uncovered in the clay pavement behind Room 2 and under Dump 3, Figure 11. It had been filled to the brim and then the hole was sealed by clay, and the pavement restored to normal use. A single 15 cm thick layer of the fill was excavated and its cultural contents were analysed. An auger used to probe the pit fill was stopped at a depth of 70 cm by a dense layer of glass, the bottom presumably being somewhat deeper. The exposed outline of the toilet pit is depicted in Plate 15 at the conclusion of excavation. The lip of the clay at the pit opening was uniform and the corners were rounded as is seen in this photograph, indicating that construction of the pavement was probably contemporaneous with that of the toilet.

In general, the excavated sample<sup>19</sup> contains bottle glass, ceramics, food bones, and a high proportion of ash and charcoal from a hearth or cooking fire. Chicken and sheep bone are clearly the most common ingredient in this sample. A moderate degree of vertical clustering and horizontal banding in the ash/charcoal component was observed and there is a high incidence of fragmentation of all refuse except food bone. The presence of some ceramic patterns from the pit in other dumps on the site indicates contemporaneous associations with at least the final period of infill of the toilet. Although no date of infill could be determined from the analysis, it is clear that the pit was filled almost exclusively by a mixture of both primary and secondary discard from the kitchen, which gives the contents a distinct character of the occupation of the house. This means that while the last episode of infilling may coincide with the development of other central deposits on the site, the basal layers almost certainly pertain to an early phase



of residency. This is the only artefact deposit investigated at the site which clearly pre-dates the abandonment of the house.

### 3.11 TELEGRAPH LINE

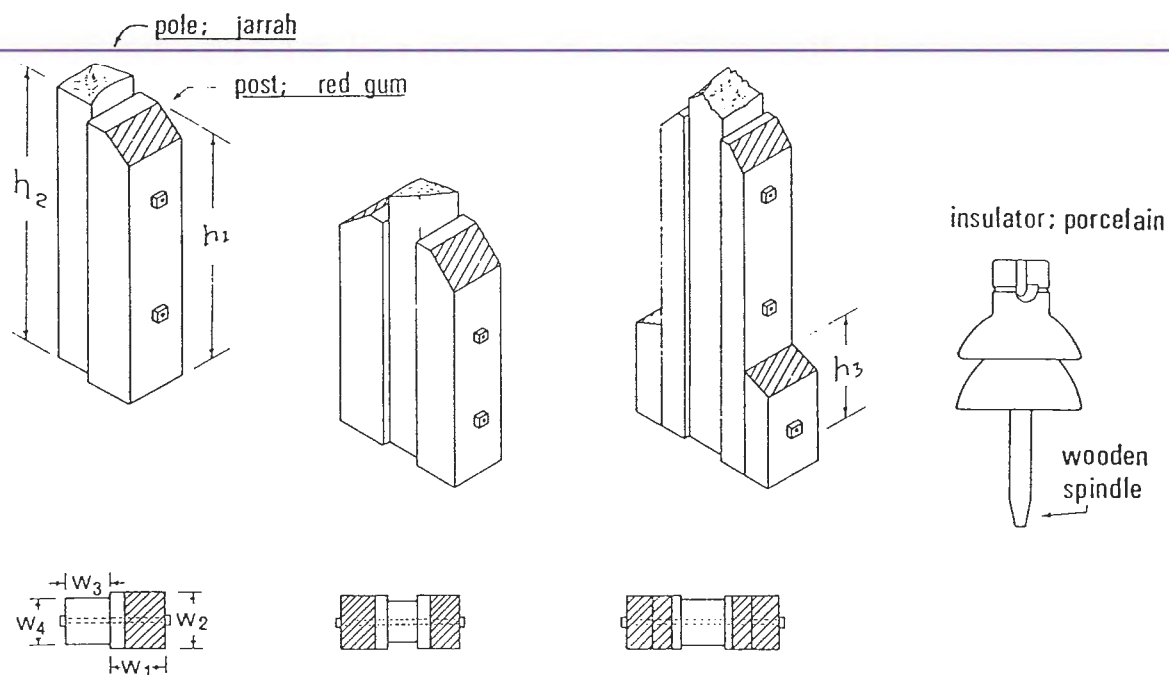
Survey personnel measured and photographed the remains of a section of the intercolonial telegraph installation at Chinamans Wells. As shown in Figure 4, the line follows a straight bearing through the site, joining the coast road to the south before eventually crossing the Coorong near Cantara Homestead. The remains recorded consist of 15 wooden post and pole assemblies, scatters of porcelain fragments at each pole site, and an assortment of mainline and arrester wire strewn across the property. With the system was abandoned in ca. 1930, the Jarrah poles above the posts were sawn or chopped down and used as salvaged timber. A complete insulator and wooden spindle were recovered and now are in the artefact collection from the site.

The relevant measurements and design features of the pole and post assemblies are presented in Figure 17. The red gum post is usually stopend chamfered and in some instances the outside corners of the post are also chamfered. The bolts are made from  $\frac{3}{4}$  inch diameter iron rods with hand-made threaded nuts and washers at each end. The original earthenware insulator used in the line were not found, but its successor, the double skirted white porcelain type, was present at almost every pole site. Three styles of installation were recorded, the differences being in the number of in-ground posts. Presumably the extra posts provides greater stability and rigidity in these swampy and sandy conditions, but there is evidence that some posts were also installed to strengthen the decaying butt of a pole. A short iron bracket with mounting holes found at the site received the wooden spindle at one end and attached directly to the pole at the other without the need of timber cross-arms.

The remnants recorded at the site are obviously the last installations belonging to the system when it was dismantled in the early half of the 20<sup>th</sup> century. The opportunity to date this particular section arose when household refuse with a date of ca. 1910 in Dump 2 was discovered around the base of telegraph pole TG12. To investigate the stratigraphic position of this material, the deposit around the base of the post was excavated by trowel and shovel. The resulting vertical section, Figure 18, reveals that three separate excavations took place to either install or maintain the pole. The succession, referred to as Pits 1-3, appear to result from attempts by line crews to inspect and replace the protective bitumen coating on the pole or to ensure proper contact of the arrester wire. The back-fill of the last two excavations included refuse from Dump 2, suggesting that these repairs may have been carried out in the period 1900-1915. The base of the pole, while soft and waterlogged, was entirely solid and free of termite attack despite being in the ground for at least the past 70 years. If the timber can survive in this condition for the last 70 years, it is reasonable to conclude that the poles and possibly the posts are the original timbers erected in 1861 when installation of the double line was completed. This archaeological discovery highlights the remarkable engineering standards maintained in building the first intercolonial telegraph system in Australia which saw the survival of some fabric *in situ* for more than 135 years.

### 3.12 CONCLUDING DISCUSSION

The aim of the research discussed here is to determine the historic significance of Chinamans Wells in respect to occupation phases and local land use. A detailed search of documentary evidence has provided an outline of development of the site and biographical background of some of the people associated with it. A comprehensive analysis of archaeological remains of the wells, buildings, and habitation deposits on the site has further established temporal and functional relationships in residence patterns and provided architectural details of the structures that once stood on the property. It is timely to incorporate all this information in an attempt to provide an overview of habitation and development at Chinamans Wells. To keep historic

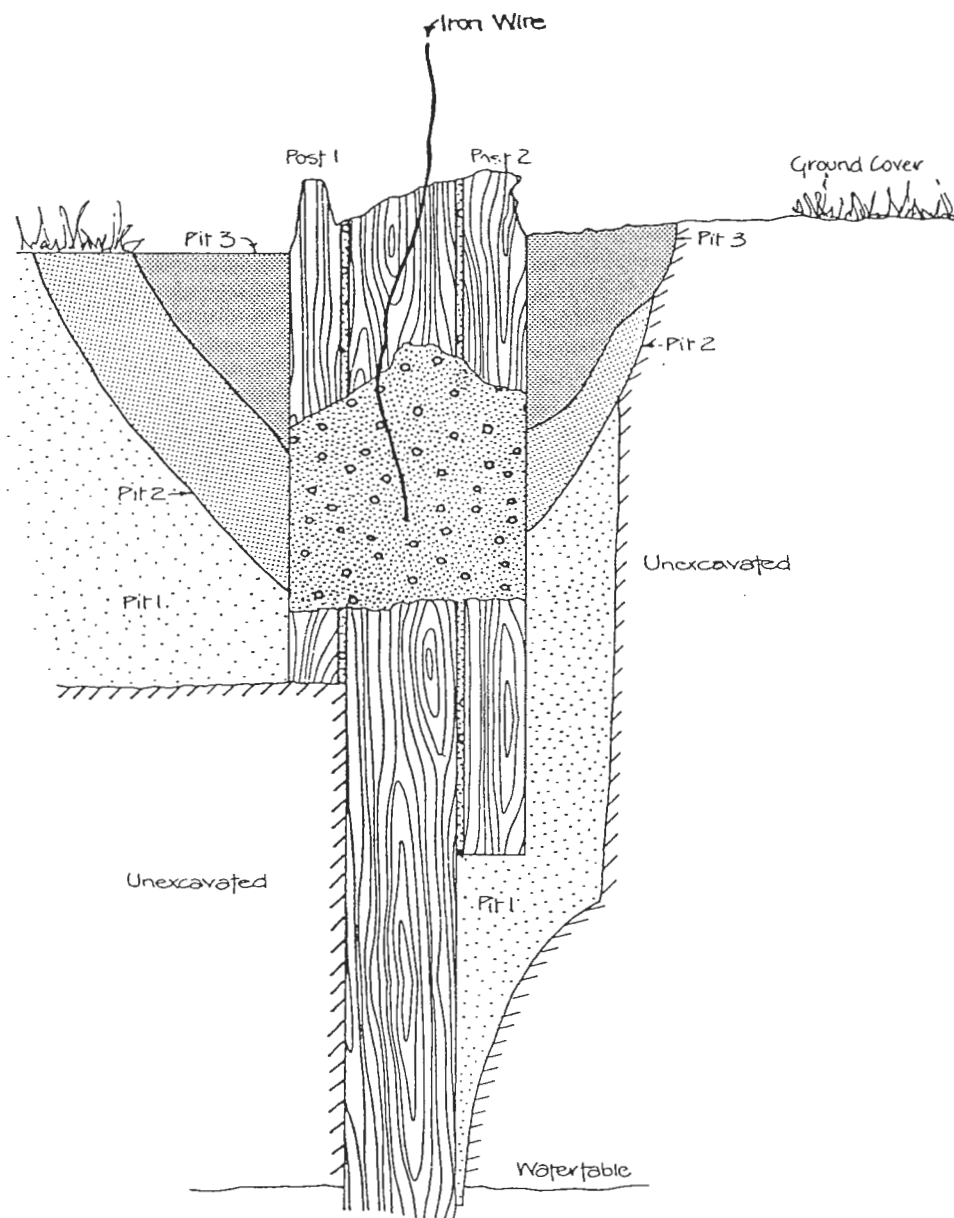


Field No.	Type A		Type B		Type C		Type	
	Post $h_1$	Pole $h_2$	Post $h_3$	Post $w_1$	Post $w_2$	Pole $w_3$	Pole $w_4$	Type
TG 1	950	950	-	190	205	155	165	A
TG 2	-	700*	-	-	-	170	180	A?
TG 3	900	910	-	195	205	145	150	A
TG 4	915	975	-	195	190	155	155	A
TG 5	830	850	-	195	190	150	145	A
TG 6	920	955	-	185	180	150	150	A
TG 7	730	740	-	200	195	150	140	A
TG 8	-	300	-	-	-	155	150	A
TG 9	64	645	-	195	180	145	150	A
TG10	930	300	-	-	200	-	-	A
TG11	1185	1240	380	100	200	155	176	C
TG12	-	-	-	100	180	170	-	B
TG13	790	835	-	190	195	155	155	A
TG14	-	-	-	190	195	155	155	B
TG15	550	-	-	100	200	-	-	-

\*= not in situ

FIGURE 17 Construction details and principal dimensions of telegraph pole, post, and insulators at Chinamans Wells. Upper pole elements and cross-beams are missing from the site. All measurements are in millimeters. A chamfer frequently occurs on bevel edge of post. Arrester wire diameter is 5.0mm, bolt shaft diameter is 18.9mm, and nut head is 32.0mm across. Posts are buried 1.8m deep.

TELEGRAPH POLE, POST, AND INSULATOR DESIGN  
AT CHINAMANS WELL



#### LEGEND



TIMBER



BITUMEN



DARK SAND WITH ARTEFACTS



GREY SAND WITH FEW ARTIFACTS



SAND

0 10 20 30 40 50 cm  
COMPILED BY W. SNOEK

FIGURE 18 Excavated cross-section of telegraph post and pole unit (TG12) showing stratigraphic evidence of previous excavation for maintenance purposes.

TELEGRAPH STUMP TG12 CHINAMANS WELLS



perspective, these conclusions will be summarised in chronological order of their development.

### Chinese at the Site

This investigation has revealed not only the historic circumstances of Chinese immigration in the South Australian colony, but the remarkable character of the technological and tactical responses the large population made to a harsh uncharted environment of the Coorong. Volatile feelings rising in the goldfields of central Victoria against Asian miners were being aired publicly as early as mid-1854 and an ugly mood spread rapidly throughout the settlement. Chinese leaders in Melbourne attempted to stem the brunt of the attack with civic meetings and publications in the press, demonstrating great wisdom and charm frontier colonists seldom understood. Undeterred, the Parliament of Victoria declared a poll tax on immigrants and ships emanating from the Orient. It is likely that Chinese interests monitored these events very closely and responded quickly by directing shiploads of miners to land in South Australian coastal waters close enough to make the trip safely overland to the goldfields, a distance of 120-180 miles depending on the port.

The first travelers made their way to Port Adelaide or Port

### Chinamans Wells Water Reserve

#### Chinamans Wells Eating House

The homestead at Chinamans Wells was a modest residence of four rooms that was made from a variety of local materials by experienced tradesmen. In addition to the natural calcrete blocks, finished

The homestead at Chinamans Wells is the only residential building located on the property with enough artefactual remains to conclude that it is in fact the house advertised for rent by Joseph Darwent in January 1864. It would also by logical extension then have been the house referred to a Chinamans Wells Eating House

<sup>1</sup> The background for this section was taken from von der Borch, Stratigraphy and Formation of Holocene Dolomitic Carbonate Deposits of the Coorong Area, South Australia. *Journal of Sedimentary Petrology*, Vol. 46, No 4, pp. 952-966, 1976, and; von der Borch, Lock, and Schwebel, Ground-water Formation of Dolomite in the Coorong Region of South Australia. *Geology*, Vol. 3, 283-285, 1975.

<sup>2</sup> Vegetation Sheet 12, *Vegetation and Flora of the Coorong National Park and Game Reserve*. 1982. Remote Sensing Application Branch, SADENR, Adelaide.

<sup>3</sup> See W. Snoek, for a discussion of the laboratory analysis and conservation treatment.

<sup>4</sup> Descriptions of the techniques used can be found in Douglas Hobbs, Surveying techniques useful in archaeology, *Australian Field Archaeology: a guide to Techniques* pp 43-63. and Fieldwork: Recording and Measuring, A complete Manual of Field Archaeology by Martha Joukowsky, 1980.

<sup>5</sup> 1984. Snoek, Archaeological Report of Chinamans Wells, The Coorong National Park, Vol., Appendix, 163-173.

<sup>6</sup> The volume of the sandstone was estimated by calculating its density experimentally using the water displacement method.

<sup>7</sup> Information of curing process was obtained from Mr. Bruce Towers, a professional stone mason from Millicent, South Australia, with 30 years of experience with Mt. Gambier limestone.

<sup>8</sup> Coorong (von der Borch, Lock, and Schwebel 1975, von der Borch 1976)

<sup>9</sup> Von der Borch and David Lock, personal communications, 1979,

<sup>10</sup> David Lock, personal communications, 1984.

<sup>11</sup> See Elizebeth Cawthorne,

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<sup>12</sup> A whip consists of a metal bucket that is attached to a long pole by a chain or rope, the whole device swivels around the edge of the pit by way of a post set into the ground. A photograph of a wedge pit and whip, with a timber enclosing fence, from Robe, South Australia, amply illustrates all elements of this method of drawing water for travelling stock, SAA 16391, dated 1966 at time of donation, and labelled "Chinamans Well 12 mile Beachport turnoff." It also is one of a number of wells with dubious "Chinese" connections.

<sup>13</sup> Wentworth Gazetteer, 1866, p 9.

<sup>14</sup> See W. Snoek, 1984

<sup>15</sup> This appeared to be a gully, possibly formed by water cascading from an un-guttered roof.

<sup>16</sup> The line of larger boulders is both discontinuous and somewhat dissipated, suggesting either loss of fabric or a meager use of stone in the foundation.

<sup>17</sup> Snoek, Vol 2, 1984b:152-63.

<sup>18</sup> See Snoek, 1984b; 249-298.

<sup>19</sup> Snoek 1984b;233-244.

## 4 THE ARCHAEOLOGY OF HACKS STATION

### 4.1 INTRODUCTION

Built some five years before any other dairy began operation in the district, Hacks Station became the first permanent pastoral residence on the Younghusband Peninsula in 1858. Some eight buildings made from a blend of local and prefabricated imported window framing served as the domestic centre of the run. Utilising a reliable crossing point on the Coorong, the Hack family established large paddocks for their herd and a system of wells erected at regular intervals along the estuarine shoreline followed the original primitive coastal route that linked Goolwa and Kingston via the Murray Mouth. While this occupation lasted only five years and subsequent owners were to resume farming on the property, this initial settlement represented a unique form of pastoral adaptation to the coast that occurred elsewhere in South Australia at an earlier period in colonial history. With any of the details of this enterprise now lost, the archaeological recovery of the habitation history became the primary objective of this project.

The first archaeological plan of the farm, Figure 19, depicts the cultural features in the area surveyed and identified by Goyder in 1863 as Hacks Station. All former buildings on the site are now either ruins which lay buried in sand, or they are missing altogether. These include a number of large prehistoric shell middens, several scatters of mainly 20<sup>th</sup> century building material, a few sections of low stone walls which are probably related to a dwelling built after ca. 1895<sup>1</sup>, and a few masonry and artefact scatters of possible mid-19<sup>th</sup> century origin. A soak created as a domestic water supply at the edge of the Coorong lagoon has a similar vintage and could also have belonged to Hack.

The trial excavations conducted in 1981-2 concentrated on artefact scatters and masonry fabric that was found on a flat terrace-like area on the lower slopes of the Parnka sand hill. This choice was made because materials seen on the surface were likely to be the oldest found by the survey and the artefact assemblage was clearly derived from residential discard. Once completed, these excavations provided a *prima facie* case for the existence of a mid-19<sup>th</sup> century structure, but its identify, function, or a clear association between building fabric and habitation refuse could not be established without further exposure of the ruins. That report therefore recommended that additional work be conducted to assess the archaeological material further.

The 1983 field program continued in November of that year to focus on the objectives identified in the previous investigation in an effort to determine whether or not the remains identified in the survey were in fact associated with Hacks residency. Owing to increased commitments at Chinamans Wells however, this, the final stage of the investigation faced practical limitations of deadlines and exhaustion. First, while a catalogue<sup>2</sup> and preliminary assessment of the artefacts was completed, a definitive analysis of artefacts could not be undertaken within the deadline established for the project. Furthermore, although a small team of dedicated field workers persevered for three weeks after tackling work in the southern Coorong, inclement weather and fatigue eventually brought the excavation to a halt before sufficient masonry fabric could be investigated. With only an artefact catalogue and knowledge about a limited extent of the ruins, the interpretation of field data must necessarily remain preliminary at this time. The following discussion therefore presents the discoveries made around four structures suspected of belonging to Hacks Station. For a description of the preliminary investigation of the site, see the 1982 project report<sup>3</sup>. Rabbit warren infestation

The constraints imposed were pragmatic—deadlines, decisions of cost, time efficiency



## 4.2 SETTING

The geomorphic features of Hack's pastoral run at Parnka are typical of much of the mid-section of the Younghusband coastal barrier described by Short and Hesp<sup>4</sup>. The barrier is a kilometre wide and is comprised of an underlying beach strandline of calcreted limestone which was formed in the late Pleistocene, and an overlying dune system of carbonate sand, originating after major sea level adjustments subsided about 7-8000 years ago. The dune field, which is characterised by an incipient foredune, remnants of low beach ridges, and deflated soil horizons, has been colonised by a tussock grassland of Hairy Spinifex and Fescue, *Spinifex hirsutus* and *Festuca littoralis*, just above high tide, and sparse vegetation in the hind dune area. The dune sheet extends leeward over a distance of about 600 m to a hummock lined crest, which borders the lagoon shore at maximum spot elevations ranging from 16-20 m. Thickets of a tall shrubland association of Coastal Wattle and Sand hill Daisy, *Acacia longifolia* v. *sophorae*-*Olearis axillaris*, have colonised the crest and slopes at the leeward edge of the dune sheet, where the contour drops rapidly to join the lagoon floodplain. At Parnka, the floodplain is unusually wide and flat, assuming an elevation of approximately 2.5 m above highwater mark of the lagoon. A stable community of *Poa*, and other native grasses, as well as pastoral weeds extends across this plain, and isolated stands of *Sclerostegia arbuscula*-*Halosarcia* spp. and *Acacia sophorae* are also present. Small clay pans, marshes, and meadows occur near the base of the encroaching dune sheet, supporting a microcosm of wildlife and aquatic flora. Eroded remnants of the Pleistocene beach strandline project above the floodplain at various localities and, except for these, there are no rock formations on the barrier which are suitable for use as building material. The rounded shapes of many leading dune crests, the formation of deep deflation basins in the hind-dune areas, and the immature stage of colonising vegetation suggests that considerable dune movement has occurred since pastoral settlement commenced in the 1840s.

An arm of cliffed calcrete Pleistocene beach ridge juts across the lagoon from the mainland, creating the narrowest stretch of water found anywhere on the Peninsula. Strong scouring action of the lagoon under wind pressure has cut a deep channel across Parnka Point, causing treacherous conditions for navigation. A pair of submerged reefs of calcrete having caused steam boat captains to name this place Hells Gates. The expanse of water in adjacent areas of the lagoon are otherwise generally shallow and can be traversed on horseback wherever a hard footing can be found. Hacks Crossing was just such a place that was in use until a punt was built across the deep channel to Parnka Point on the mainland.

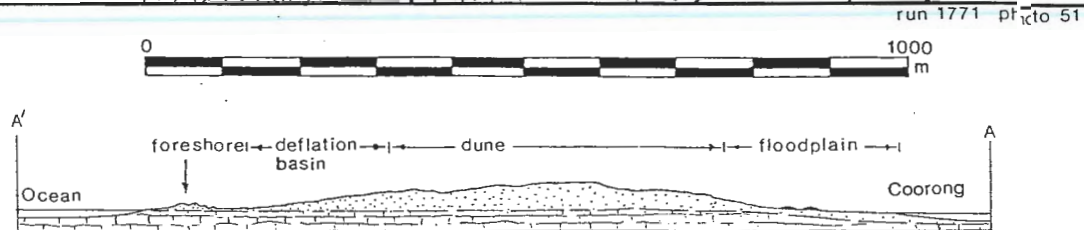
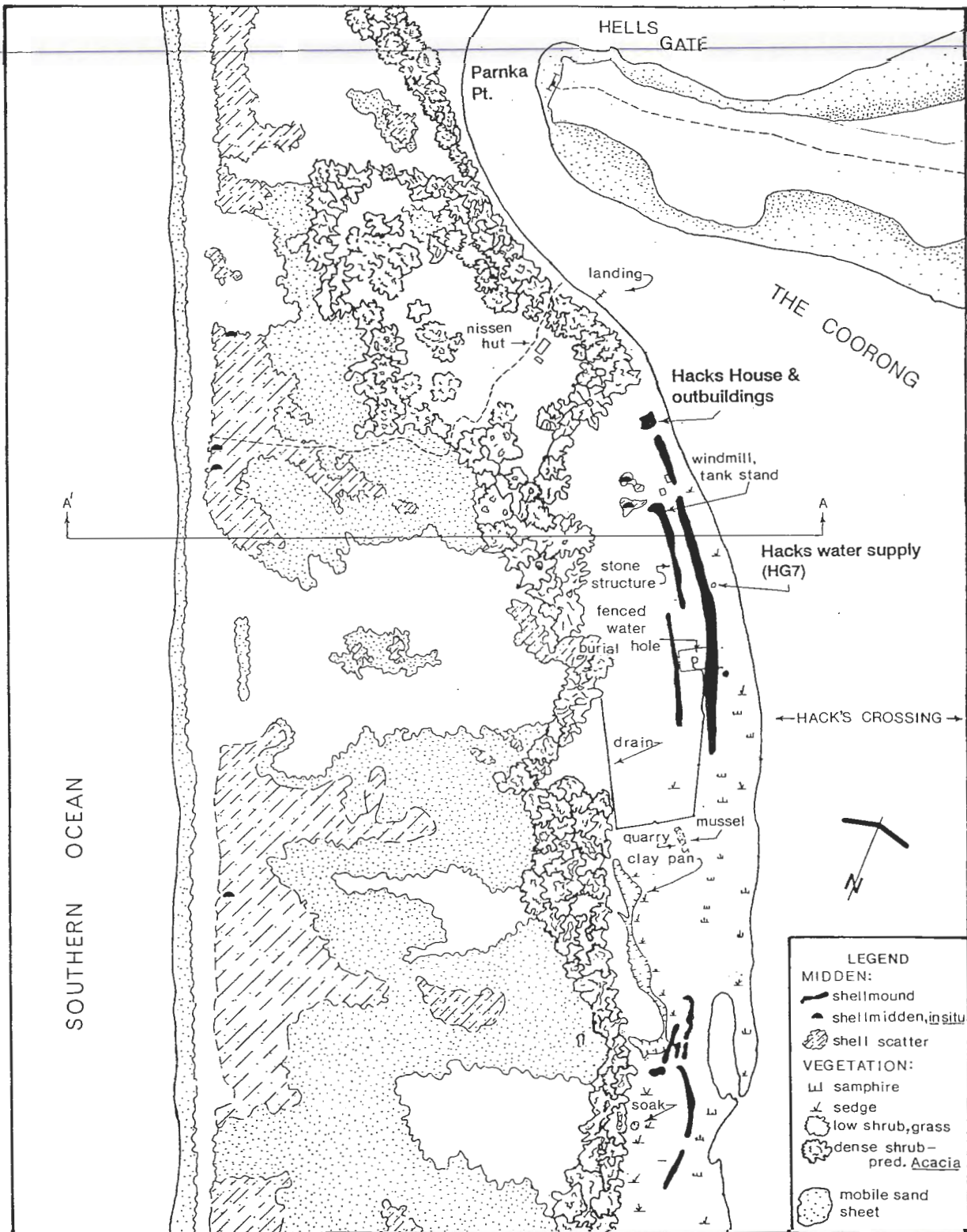
The mainland margin of the lagoon at Parnka consists of low, cliffed calcrete outcrops and high rounded sandhills. Heavy grazing and vegetation clearance have removed much of the tall shrubland, mainly *Eucalyptus diversifolia* and *Acacia* spp. associations, and permitted native and introduced grasses and weeds to prosper.

## 4.3 SITE FEATURES

A plan of the study area showing all cultural features and excavation units was recorded by alidade and plane table during the course of the field investigation. Shown on the site plan, Figure 20, four structures and six artefact scatters, and an Aboriginal oven and artefact scatter were recorded in detail. These are described in the following discussion.

### 4.3.1 Structure A

The remnants of Structure A consists of four foundation walls which form a square with outside dimensions measuring 3.0 x 3.1 m. Although all four corners of the structure are preserved and have been reinforced with additional masonry, a portion of the fourth wall is missing as a result of demolition. The structure is made from unmodified, naturally occurring calcrete boulders which are bonded by a lime-rich mortar to form solid walls 45 cm thick and two courses high through





out the extent of the ruin. Its upper edge appears to be intact and finished at the same elevation and the corner stones are roughly dressed. It was built on a rammed calcrete rubble base 25 cm thick which in turn was formed at the bottom of an excavation trench that cut some 40 cm into a shell-rich Aboriginal midden, referred to as HG 8 in the site plan. A thin layer of calcrete rubble with patches of pipeclay has been laid uniformly across the internal area of the structure at the same elevation as the upper edge of the masonry walls, presumably as a working surface or sub-floor weather seal. Discontinuity of this floor in the vicinity of the northern wall suggests that it, like the adjacent foundation wall, was also a victim of demolition. Heavy gauge wire attached at various points to the masonry fabric of the structure is probably designed to secure timber wall sections or possibly floor joists. A cross-section showing construction details of the foundation wall and the incorporation of a wire tie is depicted in Figure 21. There are no notches or other modifications to the foundation walls that could have supported a timber floor. There is a complete absence of masonry rubble around the structure, such as might occur from demolition, even if the calcrete were carefully salvaged for another building. This leads to the conclusion that the above-ground fabric of Structure A did not include stonework and was most probably timber or a similar light weight material.

The external features which might shed some light on the function or antiquity of the structure are difficult to identify from the available evidence. Post moulds or other forms of vertical support were not present to indicate that verandas or other structures were attached to Structure A. The only trace of an external path or pavement occurs between this structure and building rubble lying on the ground to the south of Structure B. As depicted in aerial view in Figure 22, a solid pavement of pipeclay extends across the north side of the structure and northward towards Structure C. Although its outside edge is now missing, it probably did join the neighbouring building and therefore the two were standing at the same time. A retaining wall made from a mixture of clay and charcoal which has been sandwiched between calcrete flagstones, which have been laid on their edges, and horizontal timber planks separates the clay pavement from a layer of dark coarse shelly sand with patches of clay that has been laid against the western wall of the structure. This shelly sand is definitely used as a fill, and is identical to the interior fill of Structure A beneath the cobble and clay "floor". The clay path appears to finish at a timber plank at the western edge of the excavation square, but the clay-filled retaining wall extends at least 30 cm further west into the excavated section wall. The sandy fill beneath the interior "floor" and rubble packing around the base of the masonry walls contains domestic artefacts, suggesting that some form of habitation may have preceded the construction of Structure A. Obviously additional excavation would be required to clarify artefact associations and construction sequences, but the balance of stratigraphic evidence recovered to date suggests that this building was erected on the remains of an existing occupation.

A total of 179 artefacts were recovered from Structure A. The majority of the refuse is kitchen crockery, glassware, and a variety of interior house fittings, utensils and small miscellaneous household items. The only South Australian made clay pipe found in the investigation, stamped E. Benda, King Williams St. Adelaide, was obtained from a basal level in Square 4. Rosehead nails and window glass were also a significant class of artefacts deposited in the ruin, the nails possibly manufactured after 1850. The decorative patterns in the ceramic ware are mainly the blue floral and willow patterns manufactured in the second half of the 19<sup>th</sup> century.

#### 4.3.2 Structure B

Poor preservation and extensive layout disturbances has meant that the basic dimensions and design of this structure are difficult to accurately re-construct. The remains consisted of partly demolished and deteriorated sub-surface sections of foundation walls made from natural blocks of calcrete bedded in a pure clay mortar. A high incidence of deterioration of the mortar and chemical alteration of the calcrete sometimes prevented excavators from distinguishing between demolition rubble and *in situ* masonry fabric. This was especially so in assessing alignments of rubble in



the interior sections of the building involving potential internal masonry subdivisions. While rabbit infestation was responsible for increasing sub-surface exposure of the ruin, excavations demonstrated that warrens frequently destroyed masonry fabric that was to play a critical role in the subsequent archaeological interpretation.

Despite the limitations imposed by conditions of preservation, some details of Structure B can be described with reasonable confidence. The most significant elements uncovered by excavation are the foundation masonry, clay and calcrete cobble paving, and demolition rubble from a rectangular building which is located near the edge of the Parnka sand hill. The foundation is constructed from a single line of large natural calcrete blocks which form a rough, solid base for light weight walls, with varying amounts of pipeclay being used as a mortar. Built up from different base levels, the wall is finished at the same elevation some centimetres below the existing ground surface. While crudely constructed, the original structure was 5.90 m wide and was at least 12.0 m long, although uncertainty in the location of the western wall may mean that the building was longer. As viewed in cross-section, Figure 22, a sand and shell grit infill and the remnants of a clay floor occur below a sparse layer of building rubble in the interior of the building. The excavation of Square 9 in particular has exposed a distinct, thin clay layer with undulating surfaces representing an original internal floor. On it are *in situ* burned timber fragments and square cut nails and large spikes, the latter two artefact types exhibiting typical mid-19<sup>th</sup> century manufacturing styles. The wood, which actually survives as charcoal, was the size of structural timber such as rafters or floor joists, but occurred in lengths too short to positively identify functionally. That these were probably structural elements of the building however is suggested by the fact that four lengths were aligned parallel across the floor at approximately 2 foot intervals. A large mat of reeds was found on the floor attached to a charred length of a shaped<sup>5</sup> timber batten, most likely the remains of thatching. The fibrous plant tissue was too fragmentary however to identify upon recovery from the sandy floor matrix. A solid clay path occurs against both the exterior edge of the eastern wall 20 cm below the level of the inside floor, and the southern side of the building. A crudely laid pavement of calcrete cobbles spans the length of the northern long wall of the structure. Exposure of these paths is insufficient to propose either their dimensions or external associations. Window or door openings could not be determined from the evidence.

A lime-rich plaster with a distinct pink slip was found throughout the ruin—possibly a rendering over the mud and wattle walls?

One hundred and twenty-nine artefacts were excavated from within the masonry unit of Structure B. The vast majority of this collection (79%) are wedge pointed iron (eubank) nails which Snoek has identified as having been manufactured between ca. 1840-1890. These were excavated in dense concentrations in a layer of sand, charcoal, clay and small amounts of charred timber and are of the size normally used in construction. The second most common class of artefact is window glass, which in this case was always solarized. While most of the nails are most likely to have originated from architectural fabric of the building, none could be given a specific date of manufacture nor could any be related to use in ship building as might be expected if ship wrecked timber was used.

In addition, fancy chamber pots, etched glass lantern shades, a tureen, and a number of food preparation platters and bowls were amongst the items recovered as fragments from the structure. A distinctive set of plates and cups with a black background and a distinct This functional diversity probably reflects a domestic family residency on the site, although there is insufficient information recovered to describe the household group by name or composition

### 4.3.3 Structure C

At the start of excavation, Structure C was a raised mound of building rubble measuring 4.0 x 6.0 m at the northern end of Structure A, Figure 21. dimensions and layout are known from surface exposure, probe survey, and an excavation of a single 1 meter square.

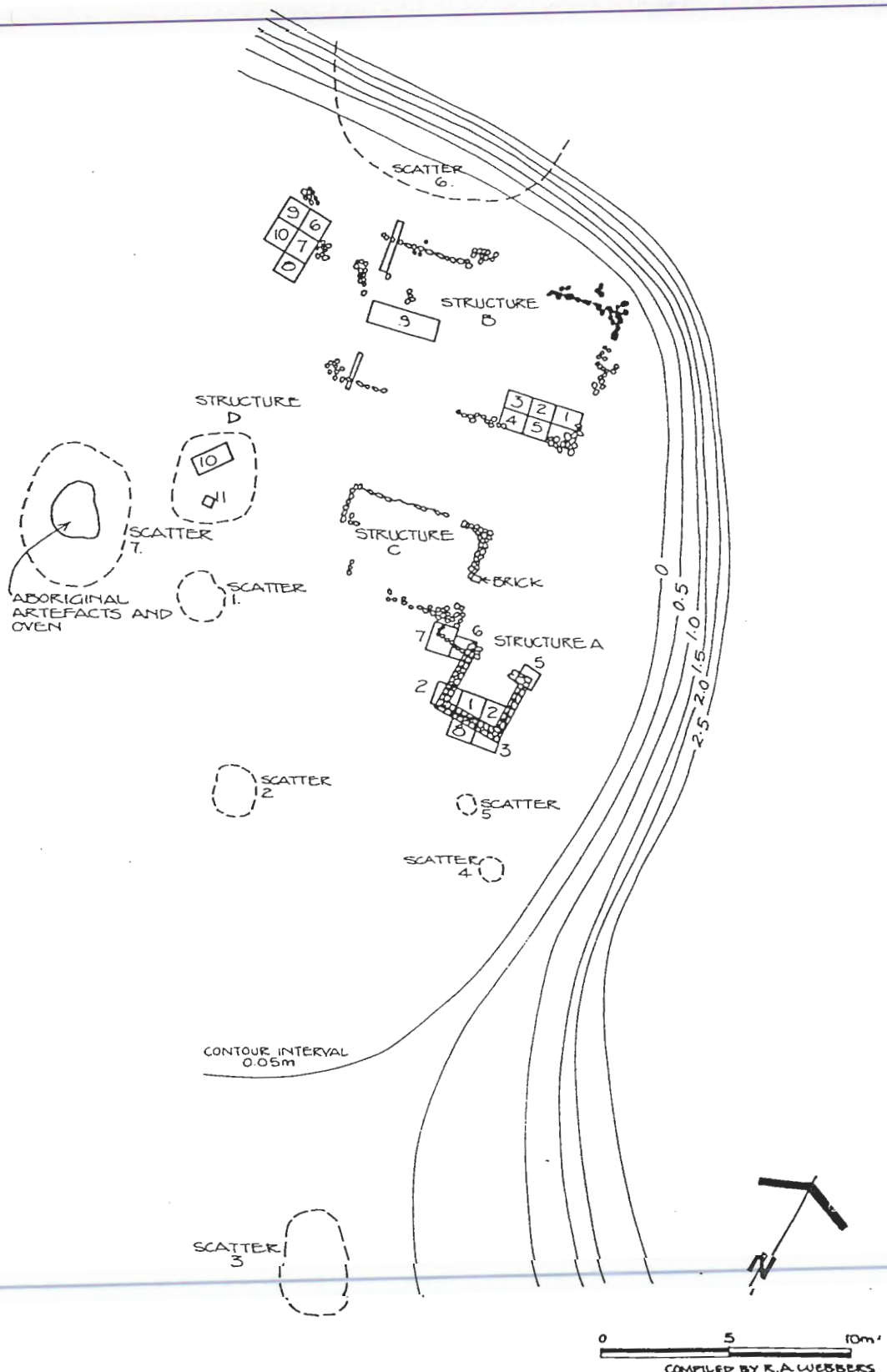
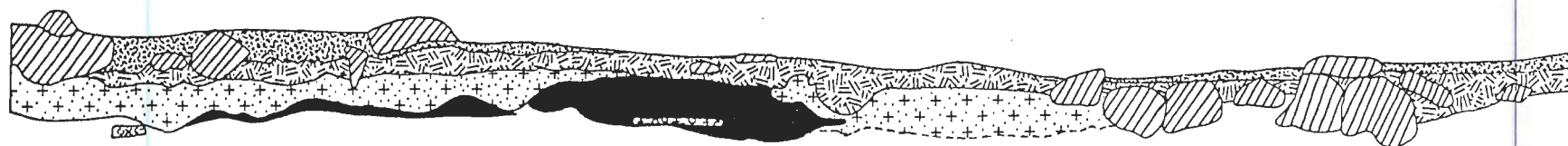


FIGURE Site plan of northern end of Hacks Station showing excavated features and excavation squares investigated between 1981 through 1983.

HACKS STATION, EASTERN SECTION



#### LEGEND








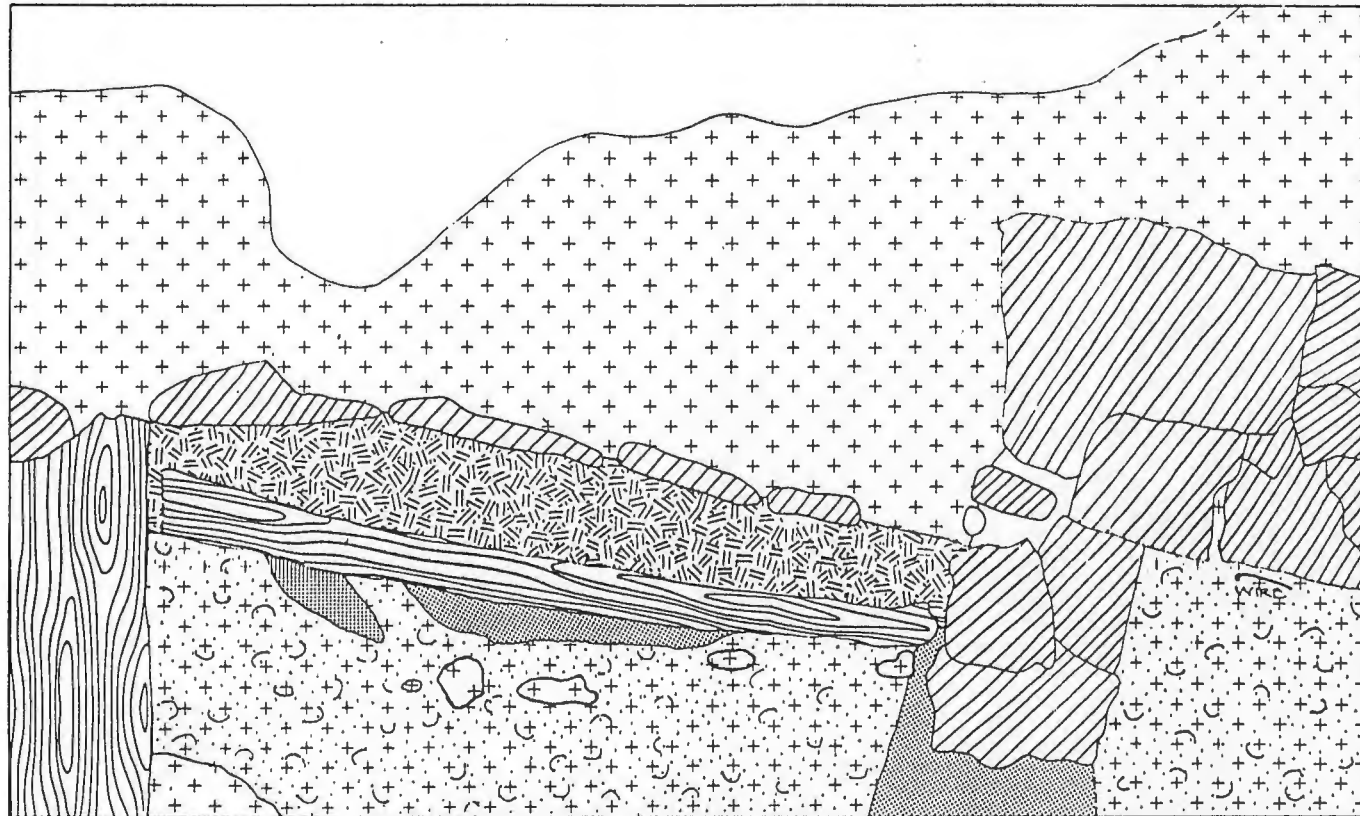
	HUMUS		YELLOW SAND WITH CLAY		SHELL MIDDEN
	CALCRETE		BAKED CLAY		
	GRAY SAND WITH CLAY		YELLOW CLAY WITH SHELLS		

FIGURE Cross-section of building rubble, charred clay and timber, and sane overlying floor of Structure B, believed to have been built by Hack family in late 1850s.

SECTION, TRENCH 9, STRUCTURE B HACKS STATION





# LEGEND



WHITE CLAY



TIMBER



CLAY WITH CHARCOAL



DARK QUARTZ, SAND WITH SHELL



CALCRETE



GREY SAND



COMPILED BY R.A. WEBBERS

FIGURE Plan of northwest corner of masonry wall showing clay path and timber retaining wall outside structure.

PLAN, TIMBER & STONE WALLS, SQUARES 6E7 STRUCTURE A, HACKS HOUSE

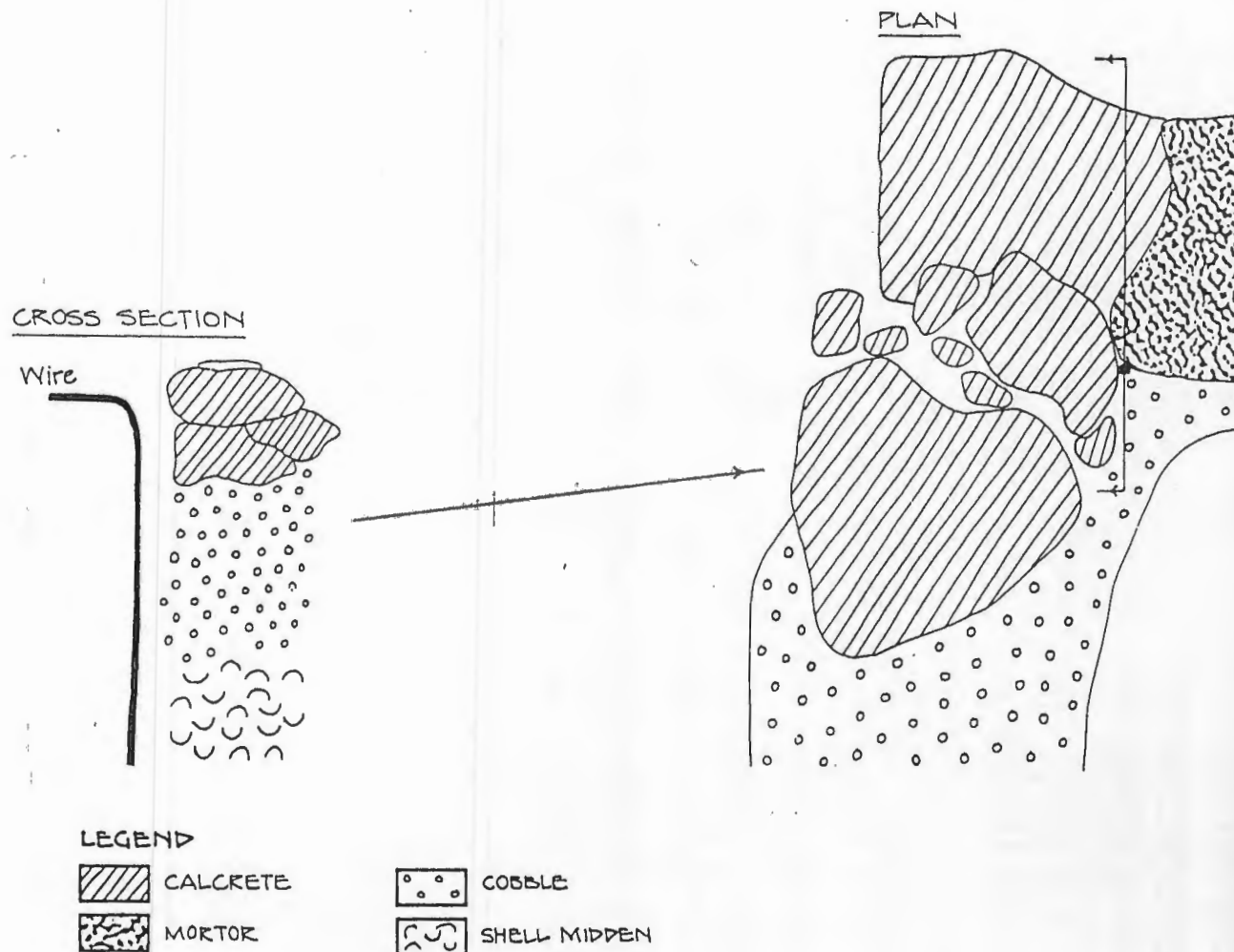


FIGURE Enlargement of northeast corner of Structure A showing construction details of masonry wall and wire fastener.

COMPILED BY R.A. LUEBBERS

ENLARGEMENT, WALL SECTION STRUCTURE A SQUARE 6, HACKS STATION

Structure C is a stone foundation for a building measuring 5.8 x 4.0 m with a irregular interior stone floor.

#### 4.4 CONCLUSIONS

Alignment of Structure A does not correspond with Structures B and C, it was made at a higher standard of finish and design, better materials, and it does not have as ancient a artefact assemblage as the others. The investigation to locate and describe the architectural fabric of the Hacks Station is dependent on finding either artefacts that belonged exclusively to the Hack family members or architectural or other remains that can be convincingly dated to the period of Hacks tenure. To the extent that these criteria are not met, the results of the investigation can not claim to have achieved its objectives.

sed to identify the architectural fabric belonging to Hacks Station must be able to distinguish between the various periods of habitation and the impacts that a succession of habitation. In the absence of artefacts that can be identified as belonging

<sup>1</sup> William Ashby was the land owner and occupier of Parnka in the late-1890s. The cement rich mortar in the masonry fabric suggest a post-1870s date. See Luebbers, 1982:32 for discussion of land tenure.

<sup>2</sup> Catalogue of artefacts excavated from Hacks Station, 1984. Unbound and annotated register of artefacts compiled by W. Snoek. In project files.

<sup>3</sup> Luebbers, R. A., 1982. The Coorong Report 1982.

<sup>4</sup> Hesp, A. D. and Short, P. A. 1980. Coastal Engineering and Morphodynamic Assessment of the Coast Within the South East Coast Protection District South Australia. Report prepared for Coast Protection Board, SADENR, Adelaide.

<sup>5</sup> The edge of the batten was rounded-over, but the cross-section was incomplete.





6824-10253 LIMESTONE WELL, CHINAMAN'S WELL HISTORIC SITE,  
COORONG NATIONAL PARK (RL)

②



6824-10253 STONE QUARRY, WESTERN SHORE OF SALT LAKE, CHINAMAN'S  
WELL HISTORIC SITE, COORONG NATIONAL PARK, LOOKING SOUTH (RL)



