DEPARTMENT OF MINES AND ENERGY
SOUTH AUSTRALIA

REPT. BK. NO. 80/47

TARCOOLA 1:250 000 SHEET WATER WELL SURVEY

by

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ABSTRACT

Of the 608 wells for which records exist on the TARCOOLA 1:250 000 sheet, over 500 were located during 13 weeks of field work. This is estimated to be 70-80% of all water wells ever drilled on the sheet. Hand dug wells were put down from 1880 to 1920 and since then cable tool plants have been used.

Three large pastoral holdings utilise the area for sheep and a smaller holding runs both sheep and cattle. Potable water is hard to obtain and yields are low. Crystalline basement rock either crops out or occurs at shallow depth and this inhibits the availability of groundwater. The only significant aquifer is the Algebuckina sandstone where water of around 1 000 mg/l TDS is obtained. Standing water levels average 25 - 30m below ground level. Recharge is low and irregular and depletion of the groundwater is occurring in many areas. Pollution is not obvious but unexplained nitrate values averaging over 70 mg/l are known.

INTRODUCTION

Field work commenced in August 1977 and was carried out during two visits of 5 and 8 weeks duration. Station managers had previously been contacted by letter and field work was commenced on Wilgena Station, as the long-serving manager was about to retire. On all stations, managers were questioned and station data copied as appropriate. On the largest two stations, extensive data was available and this was of immense help in locating and matching data to bore sites. Personal knowledge from all levels of station personnel was offered and used.

Mulgathing Station in particular, had alpha-numeric well numbering systems, poorly understood by present personnel. As each system contained 20 - 30 well records, it was important to understand how they interrelated in order to obtain maximum information. (see Appendix B). In isolated instances drillers had left inscribed concrete blocks adjacent to their abandoned wells. In the case of the Government wells the site number was recessed into an adjacent post or mulga tree using a brace and bit to outline the shape of the numbers. Several of these were only found by following the wheel tracks left by the rig over 50 years ago.

History of Water Use

After favourable reports from early explorers the Wilgena pastoral holding was taken up in about 1880. When H.Y.L. Brown (Government Geologist) passed through the area in 1884, he described several wells already in existence, e.g. Mullina Well, Moolkra Wells (south & north), Warna Well and Welcome Well.

The finding of gold at Tarcoola in the late 1890's and the subsequent influx of inhabitants resulted in wells being dug in the goldfield area. The water obtained in these wells was too saline for human consumption and stills were used to supply meagre drinking water supplies.

When the East - West railway line was constructed during the years 1912 to 1917, test wells were sunk in a quest for water supplies along the line. Only one of these sites on TARCOOLA appears to have been successful. This is now the site of two abandoned wells south of an abandoned camp site known as the "354 mile camp" between Lyons and Wynbring. The "Government Dam" 12km east of Tarcoola, utilising runoff from Wilgena Hill, is presumed to have been constructed during this period.

During the mid nineteen twenties the Government carried out an extensive drilling programme NW of Tarcoola in previously unoccupied country. Of 40 well sites drilled on the area (now covered by Mulgathing Station) 22 were abandoned because of either saline water or lack of supply, 9 were enlarged 3 of which are still in use, and 7 were equipped, 3 of which are still in use. During the survey all but 2 of these 40 well sites were located even though some are not known to present station personnel.

About the same time extensive drilling was carried out on Wilgena Station and some of these wells are still in use.

On all stations many sites considered favourable were test drilled in subsequent years, with mixed success.

In 1970 the Mines Dept. commenced groundwater investigations for the proposed Tarcoola/Alice Springs railway and this subsequently resulted in a survey of yield and to a lesser extent quality of existing water points. In 1971 a Departmental drilling programme commenced to augment the meagre existing supplies. Of the 9 wells drilled on Tarcoola, 5 located adequate saline water close to the proposed rail alignment and these points were subsequently used. None of these wells will be further used as water is not of stock quality.

Mineral drilling has not located any potable supplies that could be used by the pastoralists.

PHYSICAL FEATURES

Topography

The area is one of gently rolling hills with some breakaway scarps. In the southwest, sandhill country occurs as far

inland as the East-West railway and the only prominent hill is Mount Finke, which rises abruptly to 230m and is visible over a wide area. Scattered throughout the sheet area are several low rocky "ranges" approximately 50m high. These tend to be massive in the higher parts but are surrounded by talus on the lower slopes. In addition, gypseous salt lakes and claypans commonly occur. In other areas the land surface consists mainly of monotonous red soil plains lying 150-200m above sea level.

Climate

Rainfall (Figs 2A, 2B) is highly irregular as it is associated more with tropical low pressure systems from the N.W. than the regular maritime cycles of highs and lows to the south. Daytime temperatures regularly rise to 40-45^{o}C and diurnal range is large.

Annual evaporation ranges from 2800mm in the southern part of TARCOOLA to 2920mm in the north and is at least 15 times greater than the annual rainfall.

Vegetation

Over the whole area mulga is the dominant cover with density increasing in and near ephemeral streams and low lying non-saline or non-gypseous areas. Grassland and blue bush plains are more common in the northern half of the area, but canopy and understory densities vary widely. The southwestern quarter, particularly south of the railway, is sand hill country, sparsely vegetated, but Black Oak and Myall are locally dominant, depending on soil type and moisture.

Land Use

With the exception of the sandhill country in the south west, all of TARCOOLA is leased as pastoral holdings. With

the exception of the Kychering block and part of Carnding Well station, where cattle are run, the pastoral holdings are used for sheep grazing.

Mineral exploration commenced in the 19th century and by 1901 Tarcoola and Erea Dam goldfields were in full production. Gold mining had all but ceased by 1905 and since then the only exploration has been for iron and sedimentary uranium minerals. With the exception of very localised areas little evidence of mineral search remains.

SURFACE HYDROLOGY

There are no permanent surface streams but poorly co-ordinated, ephemeral drainage channels occur, where surface sand does not immediately absorb rainfall. These drainage channels are all relatively short and terminate in clay pans and cottonbush swamps.

GEOLOGY

The TARCOOLA sheet area lies in the northern part of the Gawler Craton, which is a stable area of basement rocks partly covered by thin sediments, Permian to Recent in age (Fig 3).

The oldest rocks are the Mulgathing Complex which are quartzo-feldspathic metasediments with interbedded banded iron formations and metabasic sills and flows. These rocks were subjected to metamorphism 2 500-2 300 million years ago.

Hutchison Group metasediments were then deposited, and subsequently metamorphosed during the Kimban Orogeny. These rocks outcrop in only two localities; near Wilgena Hill and south east of Bulgunnia Homestead.

The Mulgathing Complex and Hutchison group metasediments are uncomformably overlain by the Tarcoola Beds, a thick

sedimentary sequence (middle Proterozoic). Folding of the Tarcoola Beds was accompanied by extrusion of Gawler Range volcanics.

The final phase of igneous activity at about 1 480 million years B.P. resulted in the intrusion of granitic stocks into the Mulgathing Complex, Hutchison Group, Tarcoola Beds and the volcanic sequence.

Faulting of the crystalline basement allowed the deposition of thick Permian sediments in the Mulgathing Trough.

The Permian and older rocks are capped by a thin layer of poorly sorted clayey quartz sand, probably fluviatile in origin and Jurassic in age. Thin marine Mesozoic clays, (Bulldog Shale) overlie the Jurassic sands in the northern portion of the sheet area.

During the early Tertiary, Jurassic and Mesozoic sediments were subsequently eroded and carbonaceous sands and clays, (Pidinga Formation) were deposited in channels which are now represented by the present day lake systems. Miocene dolomitic limestones were deposited in lakes associated with the drying up of the early Tertiary environment.

A greater part of the sheet area is now covered with Pleistocene sandy gravels which are partly calcreted and ferruginised, and Recent sand spreads.

HYDROGEOLOGY

As a generalisation, groundwater on TARCOOLA is hard to find and even where supply is adequate, quality is marginal. As a result many holes were abandoned on completion, or were initially equipped but when water quality deteriorated quite expensive reticulation systems had to be abandoned. Where an adequate supply was established pipe lines were constructed to a maximum length of 60km. These supply water to large areas via many intermediate supply tanks.

Aquifers

The oldest strata providing any water are the Tarcoola Beds. Here water is contained only in joints and cracks and is saline.

The Gawler Range volcanics do not provide an aquifer but configuration of their top surface is significant in that it provides channels for the overlying Jurassic sediments. Well numbers 5737 - 108 & 110 typify this situation.

Granites intrusive into the older rocks contain water only in weathered zones and this water has been "mined" in the few places where useful supplies have been located. Recharge is low due to the meagre rainfall, high evaporation and in many cases lack of channelling structures. Quality is essentially good and in places very good. This has been recognised by drillers and some deep holes have been drilled, e.g. 5736000WW00055 to 87m. Some attempts at drilling in granite have resulted in tools being lost.

Permian Boorthanna Formation exists in one main NW-SE trending trough from NW of sheet 5637 to 5737 but probably exists as a thin drape over a wider area than in the proven trough. The aquifer is a fine sand within black coals, clays and mudstones and the water is saline. Yields are unknown but may be quite high.

By far the most useful aquifer on the sheet is the Jurassic Cadna-Owie sandstone. It is a widespread kaolinitic sand which in places requires a sandscreen. Maximum thickness is in the order of 30m but the average is less than 15m. Dorothy Well (5737-21) is good example of a lens of this formation. Water quality within this unit is around 1 000 mg/1.

Above the Jurassic sediments there are distinct lenses of Tertiary sands. These are equated with the Eocene Pidinga Formation which contains saline water.

Standing Water Levels

Standing water levels range from 8 to 37m and average 25-30m below ground level.

Salinity

Salinites range from a high of 50 000 mg/l in many abandoned holes to 100 mg/l in isolated areas of granite detritus. Water of 4 000-9 000 mg/l is commonly used and from 9 000 to 11 400 mg/l to a lesser extent. Mullina Well at 11 500 mg/l has a history of killing sheep but is still used to some extent.

Yield

On TARCOOLA usable quality water is hard to obtain, as either total volume is low or it exists as a thin layer on top of saline water. Many holes drilled have been dry and others have had yields as low as 0.5 m^3/day. A well is classed as successful if a windmill or jack pump supply can be obtained and maintained. Volumes adequate for even limited irrigation are unknown. Saline water has been obtained at a rate of up to 476 m^3/day, but little testing has been done. As is to be expected yield is generally low in the hard rocks with the best yields available from the sandstones.

Recharge

Low and highly irregular rainfall on to nearly impervious surfaces, combined with high evaporation, produce a low and irregular recharge pattern. There is no known underflow. In many hard rock areas recharge is probably so low that for all practical purposes "mining" of the resource either has or is occurring.

Well Construction and Equipment

There are no known artesian aquifers occurring on TARCOOLA.

Hand dug wells to about 32m were dug from 1880 onwards. These sometimes had lateral drives and occasionally these drives ramified and had up to 27m of lateral drilling off them again. All this lateral activity was an attempt to increase the yield and storage capacity of the well, whilst not encroaching more than a metre or so into the aquifer. From the 1920's cable tool drilling took over and hand dug wells were then only constructed around wells that had good quality water but low yields. Most wells, whether hand dug or drilled, are fully lined as collapse has been a long term problem. In recent years, casing corrosion leading to collapse has been a problem as the saline water takes its toll particularly of 152mm swell joint steel. Recently 140mm O.D. PVC swell joint casing has been used by one driller to overcome corrosion problems. These wells have a few metres of 152mm steel as a surface collar to protect the top of the PVC and to take the weight of the pump column. The PVC is seated on the bottom of the well and hack saw cuts are made over the bottom few metres to allow water entry.

The early wells were equipped with pumps, driven by steam engines, if the supply warranted it, otherwise windlasses and later windmills were used. Jack pumps driven by small diesel or petrol motors are now common but turbines and electrically driven pumps are not used. Many early sites have large circular stone storage tanks, often utilising the rock dug from the adjacent wells. These are a credit to the masons art and many are still in use. More recently galvanised multi-plate squatters tanks have taken over and are the favoured type, but many corroded and abandoned examples were seen. It is,

and has been, common practice to transfer tanks, windmills and troughing from abandoned sites to other areas.

On all stations windmills and force pumps are used to pump water along pipelines to networks of outlying tanks and troughs often many kilometres from successful supply bores.

Groundwater Pollution

Little obvious pollution was evident but we draw attention to the fact that in the 1950's a quantity of cyanide was used to treat the old mullock heaps at the Tarcoola Government Battery and at Tarcoola Blocks Battery in an attempt to recover any finely disseminated gold. The hillside location of these dumps is resulting in a lateral spread of this material.

In recent full analyses nitrate values ranged from 1 to 112 mg/l with an average of 74 mg/l (17 samples). Whilst high, this should be interpreted cautiously as many old analyses had nitrate values over 100 mg/l and no significant increase is suggested. No statistical treatment of the data has been attempted.

SUMMARY AND CONCLUSIONS

Extensive drilling of likely areas for water supplies has been carried out since 1920 with a low success rate. Hydrogeological considerations do not appear to indicate any other significant areas that would warrant drilling, beyond those already attempted. Potential for very low rate pumping of some wells with low salinity does exist, but granitic areas are the only ones likely to sustain low salinity supplies. As nitrate values are tending to be high, it is recommended that water for human consumption should be periodically tested for nitrate level.

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GROUNDWATER & ENGINEERING SECTION

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Plate 1.

Gibraltar Well, Wilgena Station
(not in use)

showing old windlass still in
place
19/12/1977.

Neg 15127

Plate 2.

Kenella Well,
Wilgena Station
(not in use)

showing old stone &
concrete tank &
hut ruins in left
background.
22/8/1977.

Negs 15130 and 15131

Plate 3.

Old drilling rig at
W. Robbins Woolshed
Tarcoola
28/11/1977

Neg 15135

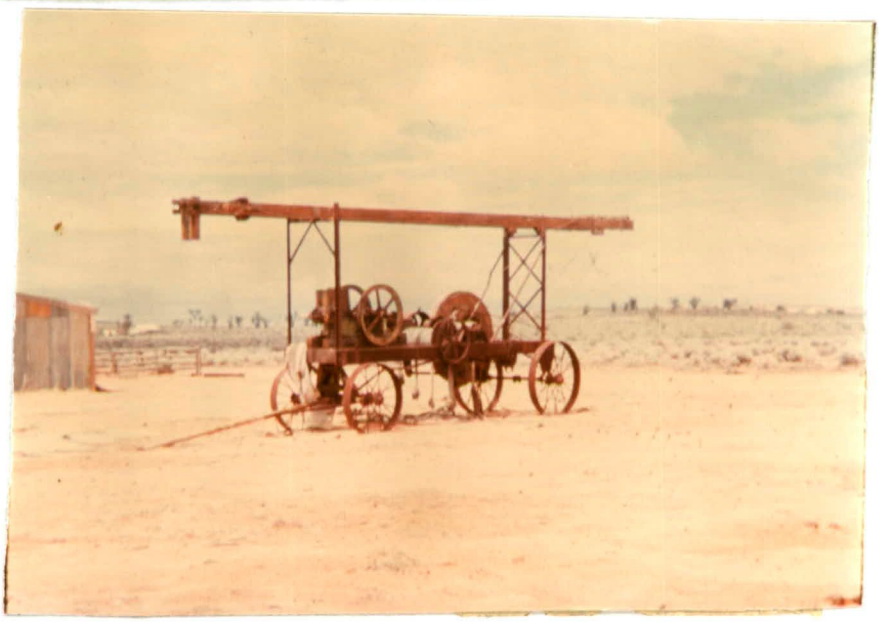


Plate 4.

Welcome Well, Wilgena Station.

Windmill on right pumps water from well to storage tank, Windmill on left pumps water from storage tank along pipelines to other tanks in paddocks N.E. & S.E. 21.8.1977.

Neg 15133

Plate 5.

Government Well No. 57
Mulgathing Station

Bore abandoned 1920's; sludge trench & marker post still visible 1/12/1977.

Neg 15128

Plate 6.

Government Battery, Tarcoola (looking west)

showing mullock heaps which have been treated with cyanide.
26/11/1977

Neg 15134

APPENDIX A

Water Well Data

TARCOOLA 1:250 000 sheet

133°30'	134°	134°30'	135°	
				30°
5637 Mulgathing	5737 Carnding	5837 Bulgunnia		
				30°30'
5636 Wynbring	5736 Malbooma	5836 Tarcoola		
				31°

1:100 000 sheets

DEPARTMENT OF MINES & ENERGY -BORE GENERAL INDEX MOST RECENT DATA 06/08/80

UNIT	NUMBER	DEPTH	SWD		SAMP	ATS	PH	SUPPLY(KL/D)	TIME	YEAR	METH	LOG	STATUS & REMARKS
5636	WW00001	.30 06DEC977			UNKN	1228M		30APR949					COLLAPSED
5636	WW00002	45.42										DRIL	UNKNOWN
5636	WW00003	38.40 C1951											COLLAPSED
5636	WW00004	37.20 C1915											COLLAPSED
5636	WW00005	21.95										DRIL	UNKNOWN
5636	MW00006	1.40 07DEC977										GEOL	COLLAPSED *MALBOOMA-COALFI ELD COAL EXPLORATION
5636	MW00007	46.60 06OCT961			UNKN	30502M		23NOV961				GEOL	COLLAPSED *MALBOOMA-LIGNIT E COAL EXPLORATION
5636	MW00008	37.60 10NOV961			UNKN	17136M		06NOV961				GEOL	COLLAPSED *MALBOOMA LIGNIT E COAL EXPLORATIONS
5636	WW00009	20.30 12DEC977											DRY HOLE
5636	WW00010	18.00 08DEC977											ABANDONED
5636	WW00011	49.30 MAR969										DRIL	COLLAPSED
5636	WW00012	48.50 06DEC977	39.95	06DEC977							WMLL	DRIL	STOCK+DOM
5636	WW00013	49.38 06DEC977	37.37	06DEC977							PUMP	DRIL	NOT IN USE
5636	WW00014												COLLAPSED
5636	WW00015												COLLAPSED
5636	WW00016												COLLAPSED
5636	WW00017												COLLAPSED
5636	WW00018	1.60 08DEC977											COLLAPSED
5636	WW00019	32.00 08DEC977	30.70	08DEC977							WMLL		STOCK
5636	WW00020	.00 08DEC977											COLLAPSED
5636	WW00021	38.30 08DEC977	31.00	08DEC977							WMLL		STOCK
5636	WW00022	31.90 12DEC977	31.22	12DEC977							WMLL		STOCK
5636	WW00023	44.16 12DEC977	32.01	12DEC977									STOCK
5636	WW00024												COLLAPSED
5636	WW00025	37.32 08DEC977	27.69	08DEC977							WMLL		STOCK
5636	WW00026	35.30 12DEC977	25.44	12DEC977									UNEQUIPPED
5637	WW00001	44.60 15NOV977			UNKN	2813M		10AUG945				DRIL	STOCK
5637	WW00002											DRIL	COLLAPSED
5637	WW00003	9.25 15NOV977										GEOL	COLLAPSED
5637	WW00004											DRIL	COLLAPSED
5637	WW00005	36.88 24AUG926	30.78	24AUG926	UNKN	6740M		24AUG926	45 EST	1926		DRIL	UNKNOWN
5637	WW00006											GEOL	COLLAPSED
5637	WW00007	37.33 C1977							11 EST	1977		GEOL	UNKNOWN
5637	WW00008											GEOL	COLLAPSED
5637	WW00009	39.62 25MAY949	30.48	25MAY949	UNKN	276M		25MAY949	21 EST	1949		GEOL	UNKNOWN
5637	WW00010	40.00 14NOV977	27.00	14NOV977	UNKN	2670M		03MAY954					STOCK
5637	WW00011	45.72 C1927			UNKN	643M		02MAY927				DRIL	STOCK
5637	WW00012	49.30 C1927			UNKN	2970M		02MAY927				DRIL	COLLAPSED
5637	WW00013	57.90 B1931										DRIL	COLLAPSED
5637	WW00014	37.80 12NOV977			UNKN	1799M		30APR949				DRIL	COLLAPSED
5637	WW00015	76.50 B1977											DRY HOLE
5637	WW00016	49.37 B1949											COLLAPSED
5637	WW00017	88.30 B1949										DRIL	COLLAPSED
5637	WW00018	17.20 18NOV977	15.87	18NOV977	UNKN	4484M		25MAY949	44 EST	1962		DRIL	UNEQUIPPED
5637	WW00019	39.22 19NOV977	22.90	19NOV977	UNKN	700M		02MAY927			WMLL	DRIL	STOCK
5637	WW00020	27.74 B1977										DRIL	ABANDONED
5637	WW00021	32.00 C1926										DRIL	COLLAPSED
5637	WW00022	39.60 C1926										DRIL	COLLAPSED
5637	WW00023	60.95 C1926										DRIL	COLLAPSED
5637	WW00024	41.41 19NOV977	32.34	19NOV977	UNKN	9453M		02JUL926				DRIL	NOT IN USE
5637	WW00025	46.94 03JAN957	42.06	03JAN957	UNKN	12995M		03JAN957	72 EST	1957			COLLAPSED
5637	WW00026	35.00 10DEC947										DRIL	COLLAPSED
5637	WW00027	36.30 05MAY926										DRIL	COLLAPSED

UNIT	NUMBER	DEPTH	SWD	SAMP	ATS	PH	SUPPLY(KL/D)	TIME	YEAR	METH	LOG	STATUS & REMARKS
5637	MWC0028	37.40 28DEC947		UNKN	12381M		11AUG948					COLLAPSED
5637	MWC0029	28.67 05DEC977	25.0P 05DEC977								PUMP	DRIL STOCK
5637	MWC0030	137.54 17AUG961										UNKNOWN *MT CHRISTIE IRO
												N ORE
5637	MWC0031	28.35 03JUL961									GEOL	UNKNOWN *MT CHRISTIE IRO
												N ORE
5637	MWC0032	37.49										UNKNOWN
5637	MWC0033	52.34 81943									DRIL	COLLAPSED
5637	MWC0034	31.00 31JAN948		UNKN	514M		36AP2949				DRIL	STOCK
5637	MWC0035	23.80 05DEC977		UNKN	528M		11MAY926				DRIL	ABANDONED
5637	MWC0036	28.65 25SEP961										ABANDONED *MALBOOMA-COALFI
												ELD COAL EXPLORATION
5637	MWC0037	41.15 16OCT961									GEOL	ABANDONED *MALBOOMA-COALFI
												ELD COAL EXPLORATION
5637	MWC0038	48.06 09NOV977										COLLAPSED *MT CHRISTIE IRO
												N ORE
5637	MWC0039	106.39 13MAY961									GEOL	UNKNOWN *MT CHRISTIE IRO
												N ORE
5637	MWC0040	9.75 09NOV977									GEOL	COLLAPSED *MT CHRISTIE IRO
												N ORE
5637	MWC0041	55.78 MAR973									DRIL	COLLAPSED
5637	MWC0042	9.40 10NOV977			6526M		07OCT961				GEOL	ABANDONED
5637	MWC0043	51.00 09NOV977	40.80 09NOV977		11581M		18MAY961				GEOL	UNEQUIPPED
5637	MWC0044	55.17 21JAN951									GEOL	COLLAPSED
5637	MWC0045	55.75 18FEB961									GEOL	COLLAPSED
5637	MWC0046			UNKN	14423M		11FEB961					COLLAPSED
5637	MWC0047	26.91 10NOV977			12137M		10MAR961				GEOL	COLLAPSED
5637	MWC0048	3.52 23MAY971										COLLAPSED *MT CHRISTIE IRO
												N ORE
5637	MWC0049	59.40									GEOL	ABANDONED *MT-CHRISTIE-ARE
												A IRON ORE
5637	MWC0050										GEOL	COLLAPSED *MT CHRISTIE IRO
												N-ORE
5637	MWC0051										GEOL	COLLAPSED *MT CHRISTIE IRO
												N ORE
5637	MWC0052	1.00 09NOV977									GEOL	DOMESTIC *MT CHRISTIE IRO
												N ORE
5637	MWC0053											COLLAPSED *MT CHRISTIE IRO
												N ORE
5637	MWC0054											COLLAPSED *MT CHRISTIE IRO
												N-ORE
5637	MWC0055	53.20 29NOV977	41.20 09NOV977	UNKN	6638M		30MAR971	54 EST		1971	GEOL	UNEQUIPPED MT CHRISTIE IRON
												ORE
5637	MWC0056	72.30 02JUN971	58.74 02JUN971	UNKN	15000M	7.0	02JUN971	54 EST		1971	GEOL	UNKNOWN *MT CHRISTIE IRO
												N ORE
5637	MWC0057	44.20 C1975										UNKNOWN *WYNBRING-MULGAT
												HING-AREA
5637	MWC0058	120.40 26APR975										UNKNOWN *WYNBRING-MULGAT
												HING AREA
5637	MWC0059	47.24 30APR975										UNKNOWN *WYNBRING-MULGAT
												HING-AREA
5637	MWC0060	47.24 26APR975										UNKNOWN *WYNBRING-MULGAT
												HING-AREA
5637	MWC0061	158.50 26APR975										UNKNOWN *WYNBRING-MULGAT
												HING-AREA
5637	MWC0062	58.1 26APR975										UNKNOWN *WYNBRING-MULGAT
												HING-AREA

UNIT	NUMBER	/	DEPTH		SWD		SAMP	ATS	PH		SUPPLY(KL/D)	TIME	YEAR	METH	LOG	STATUS & REMARKS
5637	MW00063		27.43	23APR975												UNKNOWN *WYNBRING-MULGAT HING-AREA
5637	MW00064		42.67	20APR975												UNKNOWN *WYNBRING-MULGAT HING-AREA
5637	MW00065		38.10	20APR975												UNKNOWN *WYNBRING-MULGAT HING AREA
5637	MW00066		42.67	20APR975												UNKNOWN *WYNBRING-MULGAT HING-AREA
5637	MW00067		2.45	20APR975												UNKNOWN *WYNBRING-MULGAT HING-AREA
5637	MW00068		74.68	20APR975												UNKNOWN *WYNBRING-MULGAT HING AREA
5637	MW00069		60.95	20APR975												UNKNOWN *WYNBRING-MULGAT HING-AREA
5637	WW00070		42.06													DRY HOLE
5637	WW00071		92.35	16AUG956				6569M		14AUG956					DRIL	COLLAPSED
5637	WW00072		4.72												DRIL	UNKNOWN
5637	WW00073		4.50	14NOV977				17136M		06JUN961						DRY HOLE
5637	WW00074		38.48	08NOV977	37.88	08NOV977	UNKN	607M	7.8	03OCT977				WMLL		STOCK+DOM TCW938
5637	WW00075		39.75	07JUN977	35.70	07JUN977										ABANDONED
5637	WW00076		38.05	12NOV977	35.20	12NOV977									DRIL	STOCK
5637	WW00077		39.90	12NOV977	33.48	12NOV977								PUMP	DRIL	NOT IN USE
5637	WW00078		39.60	C1939											DRIL	COLLAPSED
5637	WW00079		39.62	AUG960											DRIL	COLLAPSED
5637	WW00080		4.30	12NOV977												COLLAPSED
5637	WW00081		1.30	12NOV977												COLLAPSED
5637	WW00082		86.50	FEB962											DRIL	COLLAPSED
5637	WW00083		46.10	APR961	38.00	APR961								WMLL	DRIL	STOCK
5637	WW00084		49.50	14NOV977	31.20	14NOV977								PUMP		STOCK
5637	WW00085		77.85	15NOV977	28.18	15NOV977									DRIL	STOCK
5637	WW00086		.60	15NOV977												UNKNOWN
5637	WW00087		65.20	AUG961	48.00	15NOV977								WMLL		STOCK
5637	WW00088		1.30	15NOV977												COLLAPSED
5637	WW00089														DRIL	COLLAPSED
5637	WW00090															BACKFILLED
5637	WW00091															COLLAPSED
5637	WW00092		73.70	27JUN968												COLLAPSED
5637	WW00093		70.10	JAN961											DRIL	COLLAPSED
5637	WW00094															COLLAPSED
5637	WW00095															COLLAPSED
5637	WW00096		21.90	81977											DRIL	COLLAPSED
5637	WW00097		41.75	16NOV977	36.70	16NOV977								PUMP	DRIL	NOT IN USE
5637	WW00098														DRIL	COLLAPSED
5637	WW00099		38.25	17NOV977	33.80	17NOV977								WMLL	DRIL	STOCK
5637	WW00100		39.60	MAY959											DRIL	COLLAPSED
5637	WW00101		38.40	11DEC967												COLLAPSED
5637	WW00102		23.87	18NOV977	22.20	18NOV977								WMLL		STOCK
5637	WW00103		23.17	18NOV977	16.20	08NOV977								WMLL	DRIL	STOCK
5637	WW00104		22.92	18NOV977	15.56	07NOV977								PUMP	DRIL	STOCK
5637	WW00105		39.99	19NOV977	26.96	19NOV977	UNKN	1756M		07SEP954				WMLL	DRIL	NOT IN USE
5637	WW00106		39.46	19NOV977	26.60	19NOV977								PUMP	DRIL	STOCK
5637	WW00107		18.20				UNKN	16379M		18JAN945					DRIL	COLLAPSED
5637	WW00108		19.20	05DEC977											DRIL	COLLAPSED
5637	WW00109														DRIL	COLLAPSED
5637	WW00110															COLLAPSED
5637	WW00111		38.40	81977											DRIL	COLLAPSED

DEPARTMENT OF MINES & ENERGY -BORE GENERAL INDEX MOST RECENT DATA 06/08/80

UNIT	NUMBER	DEPTH	SWD	SAMP	ATS	PH	SUPPLY(KL/D)	TIME	YEAR	METH	LOG	STATUS & REMARKS
5637	WW00112	42.00 MAR969									DRIL	COLLAPSED
5637	WW00113										DRIL	UNKNOWN
5637	WW00114	31.00 B1979										UNKNOWN
5637	WW00115	47.80 B1979									DRIL	UNKNOWN
5637	WW00116										DRIL	UNKNOWN
5637	WW00117										DRIL	UNKNOWN
5637	WW00118	76.50 B1979									DRIL	UNKNOWN
5637	WW00119	56.70 1978									DRIL	UNKNOWN
5736	WW00001	4.30 18DEC977	2.45 18DEC977									DOMESTIC
5736	WW00002	3.55 18DEC977	2.20 18DEC977									STOCK+DOM
5736	WW00003	2.30 18DEC977									DRIL	COLLAPSED
5736	WW00004	5.10 03DEC977									DRIL	COLLAPSED
5736	WW00005	32.30 AUG948									DRIL	COLLAPSED
5736	WW00006	11.39 B1977					? EST				DRIL	UNKNOWN
5736	WW00007	43.20 C1948									DRIL	COLLAPSED
5736	WW00008	64.53 13DEC977	62.63 13DEC977							WMLL	DRIL	STOCK+DOM
5736	MW00009	.20 12DEC977		UNKN	17135M		14OCT959				GEOL	COLLAPSED *MALBOOMA-COAL-E
												XPLORATIONS COAL
5736	WW00010	39.00 17DEC977	22.67 17DEC977									UNEQUIPPED
5736	WW00011	33.22 B1977									DRIL	UNKNOWN
5736	WW00012	39.62 B1977									DRIL	UNKNOWN
5736	WW00013	21.50 13DEC977										DILAPIDATD
5736	WW00014	5.49 B1977									DRIL	ABANDONED
5736	WW00015	12.30 13DEC977	9.40 13DEC977								DRIL	UNEQUIPPED
5736	WW00016	13.40 14DEC977										DRY HOLE
5736	WW00017	19.95 15DEC977	18.38 15DEC977									NOT IN USE
5736	WW00018	25.60 C1977									GEOL	UNKNOWN
5736	WW00019	33.53 B1977										UNKNOWN
5736	WW00020	32.85 14DEC977	27.45 14DEC977									NOT IN USE
5736	WW00021	3.63 14DEC977									DRIL	COLLAPSED
5736	WW00022	2.85 14DEC977									DRIL	COLLAPSED
5736	WW00023	29.26 29AUG958	28.96 29AUG958	UNKN	17136M		03SEP958	11	1958			
5736	WW00024	72.00 13DEC977	34.12 13DEC977							PUMP	DRIL	NOT IN USE
5736	WW00025	88.10 13DEC977	34.56 13DEC977					BAIL			DRIL	STOCK
5736	WW00026	5.20 13DEC977										COLLAPSED
5736	WW00027	31.70 B1977									DRIL	COLLAPSED
5736	WW00028	52.50 27MAY952									DRIL	COLLAPSED
5736	WW00029										DRIL	COLLAPSED
5736	WW00030	45.10 B1977									DRIL	COLLAPSED
5736	WW00031										DRIL	COLLAPSED
5736	WW00032											COLLAPSED
5736	WW00033										DRIL	COLLAPSED
5736	WW00034	55.47 B1977									DRIL	COLLAPSED
5736	WW00035	29.80 C1951										COLLAPSED
5736	WW00036	22.70 15DEC977									DRIL	COLLAPSED
5736	WW00037	34.84 15DEC977	25.81 15DEC977							WMLL	DRIL	UNEQUIPPED
5736	WW00038											COLLAPSED
5736	WW00039											COLLAPSED
5736	WW00040											UNKNOWN
5736	WW00041											COLLAPSED
5736	WW00042	39.35 15DEC977	26.44 15DEC977									NOT IN USE
5736	WW00043										DRIL	COLLAPSED
5736	WW00044											COLLAPSED
5736	WW00045											COLLAPSED
5736	WW00046											COLLAPSED
5736	WW00047	7.00 15DEC977										COLLAPSED

UNIT	NUMBER	DEPTH	SWD	SAMP	ATS	PH	SUPPLY(KL/D)	TIME	YEAR	METH	LOG	STATUS & REMARKS
5736	WW00048	11.30 13DEC977										ABANDONED
5736	WW00049											COLLAPSED
5736	WW00050										DRIL	COLLAPSED
5736	WW00051	19.51 C1951									DRIL	COLLAPSED
5736	WW00052	2.50 14DEC977									DRIL	COLLAPSED
5736	WW00053										DRIL	COLLAPSED
5736	WW00054	.20 14DEC977										COLLAPSED
5736	WW00055	85.12 14DEC977	9.39 14DEC977								DRIL	UNEQUIPPED
5736	WW00056										DRIL	COLLAPSED
5736	WW00057	49.30 C1951									DRIL	COLLAPSED
5736	WW00058											COLLAPSED
5736	WW00059	36.10 23DEC977	33.60 23DEC977							WMLL		NOT IN USE
5736	WW00060	5.20 19DEC977										COLLAPSED
5736	WW00061											COLLAPSED
5736	WW00062	17.70 17DEC977										COLLAPSED
5736	WW00063	7.40 17DEC977										COLLAPSED
5736	WW00064											COLLAPSED
5736	WW00065	42.52 17DEC977	22.77 17DEC977									UNEQUIPPED
5736	WW00066	12.10 17DEC977	12.20 17DEC977									COLLAPSED
5736	WW00067	48.20 17DEC977	27.29 17DEC977									UNEQUIPPED
5736	WW00068	.70 10DEC977									DRIL	COLLAPSED
5736	WW00069										DRIL	UNKNOWN
5736	WW00070										DRIL	COLLAPSED
5736	WW00071										DRIL	COLLAPSED
5736	WW00072										DRIL	COLLAPSED
5736	WW00073										DRIL	COLLAPSED
5736	WW00074	1.00 03DEC977									DRIL	COLLAPSED
5736	WW00075										DRIL	COLLAPSED
5736	WW00076										DRIL	UNKNOWN
5736	WW00077	45.10 81977									DRIL	COLLAPSED
5736	WW00078	25.60 C1977									DRIL	UNKNOWN
5736	WW00079	.30 15DEC977									DRIL	COLLAPSED
5736	WW00080	72.53 10DEC977	37.51 10DEC977								DRIL	NOT IN USE
5736	WW00081											UNKNOWN
5736	SW00082	147.00 05MAY979									GEOL	UNKNOWN *KONKABY-TARCOOL A-AREA STRATIGRAPHIC INVEST
5736	SW00083	127.00 20JUN969									GEOL	UNKNOWN *KONKABY-TARCOOL A-AREA STRATIGRAPHIC INVEST
5736	WW00084	65.00										UNKNOWN HIERNS-WELL
5737	WW00001	60.00 21NOV977	42.80 21NOV977							WMLL	DRIL	STOCK
5737	WW00002	51.80 C1926									DRIL	COLLAPSED
5737	WW00003										DRIL	COLLAPSED
5737	WW00004	43.78 22NOV977	30.35 22NOV977								DRIL	UNEQUIPPED
5737	WW00005	11.83 21NOV977	8.05 21NOV977	UNKN	3584M		06SEP926				DRIL	NOT IN USE
5737	WW00006	15.67 16NOV977	10.80 16NOV977	UNKN	3342M		25MAY949			WMLL	DRIL	STOCK
5737	WW00007	3.66 21NOV977									DRIL	ABANDONED
5737	WW00008	21.30 C1927									DRIL	COLLAPSED
5737	WW00009	18.40 21NOV977	17.40 21NOV977	UNKN	557M		07FEB927				DRIL	UNEQUIPPED
5737	WW00010	13.70 21NOV977	11.16 21NOV977									UNEQUIPPED
5737	WW00011	2.18 21NOV977		UNKN	1742M		28FEB927				GEOL	BACKFILLED
5737	WW00012	18.29									DRIL	DRY HOLE
5737	WW00013	17.60 C1927									DRIL	COLLAPSED
5737	WW00014	10.90 C1927									GEOL	COLLAPSED
5737	WW00015	35.85 C1909										COLLAPSED
5737	WW00016	30.32 30NOV977	23.30 30NOV977	UNKN	671M		17MAR927			WMLL		STOCK
5737	WW00017	4.00 30NOV977		UNKN	8582M		02MAY927				GEOL	ABANDONED

UNIT	NUMBER	DEPTH		SWD		SAMP	ATS	PH	SUPPLY(KL/D)	TIME	YEAR	METH	LOG	STATUS & REMARKS
5737	WW[illegible]19												DRIL	COLLAPSED
5737	WW[illegible]19	53.6[illegible]		53.34										UNKNOWN
5737	WW[illegible]2[illegible]												DRIL	COLLAPSED
5737	WWC00021	25.30	01DEC977	20.60	01DEC977	UNKN	300M		20OCT924			WMLL		STOCK
5737	WWC00022	30.80	01DEC977	24.70	01DEC977	UNKN	9353M		14NOV977				DRIL	
5737	WW00023	17.1[illegible]	1[illegible]DEC977										DRIL	COLLAPSED
5737	WWC00024	34.28	01DEC977			UNKN	12581M		25MAY949				DRIL	UNEQUIPPED
5737	WWC00025	52.42	C1935										GEOL	COLLAPSED
5737	WWC00026	23.76	02DEC977	14.10	02DEC977	UNKN	5569M		16FEB926					UNEQUIPPED
5737	WWC00027	34.00	29NOV977	31.80	29NOV977	UNKN	557M		14APR926				DRIL	NOT IN USE
5737	WW00028	45.70	C1926										DRIL	COLLAPSED
5737	WWC00029	23.5[illegible]	C1926										DRIL	COLLAPSED
5737	WWC00030	56.00	B1940										DRIL	COLLAPSED
5737	WWC00031	42.60	C1925										DRIL	COLLAPSED
5737	WWC00032	12.60	03DEC977										DRIL	COLLAPSED
5737	WW00033	17.20	03DEC977										DRIL	COLLAPSED
5737	WW00034	43.23	C1925										GEOL	COLLAPSED
5737	WW00035	44.80	C1954			UNKN	943M		30AUG954				DRIL	COLLAPSED
5737	WW00036	45.70	AUG950										DRIL	COLLAPSED
5737	WW00037	36.30	C1943			UNKN	3316M	7.4	27JUN975			WMLL		STOCK
5737	WW00038	17.52	17SEP977	13.80	17SEP977	UNKN	8148M		27SEP975			WMLL	DRIL	STOCK
5737	WW00039	54.5[illegible]	20DEC977	18.10	20DEC977	UNKN	3656M		06APR949			WMLL		STOCK
5737	WW00040	29.49	17DEC977	23.25	17DEC977									UNEQUIPPED
5737	WW00041	30.00	19DEC977	28.10	19DEC977								GEOL	NOT IN USE
5737	WW00042	1.00	21NOV977										DRIL	COLLAPSED
5737	WW00043	.65	02DEC977			UNKN	4870M	5.7	05NOV965				DRIL	COLLAPSED
5737	WW00044	31.07	17DEC977	23.56	17DEC977	UNKN	1770M		23OCT969			WMLL		STOCK+DOM
5737	WW00045	39.01				UNKN	5098M		25MAY949				DRIL	ABANDONED
5737	WW00046	1.55	C1974											COLLAPSED *WYNBRING-MULGAT HING-AREA
5737	MW00047	60.96	C1975											UNKNOWN *WYNBRING-MULGAT HING-AREA
5737	MW00048	51.82	C1975											UNKNOWN *WYNBRING-MULGAT HING-AREA
5737	MW00049	65.53	C1975											UNKNOWN *WYNBRING-MULGAT HING-AREA
5737	MW00050	259.08	C1975											UNKNOWN *WYNBRING-MULGAT HING-AREA
5737	WW00051	30.18											DRIL	UNKNOWN
5737	WW00052	38.03	21SEP977	16.77	21SEP977									NOT IN USE
5737	SW00053	198.00	30MAY979	24.00	30MAY979	UNKN	10281M	7.4	30MAY979	49 EST	2HRS	1979	DRIL	UNEQUIPPED *KONKABY-TARCOOL A STRATIGRAPHIC INVESTIGATI
5737	WW00054	4.30	17SEP977										DRIL	COLLAPSED
5737	WW00055	51.45	21SEP977	32.16	21SEP977							WMLL	DRIL	STOCK
5737	WW00056	47.23	21SEP977	24.45	21SEP977									UNEQUIPPED
5737	WW00057	24.27	21SEP977	16.24	21SEP977								DRIL	UNEQUIPPED
5737	WW00058	42.65	08NOV977	37.40	08NOV977							WMLL	DRIL	STOCK
5737	WW00059	45.38	08NOV977	36.29	09NOV977								DRIL	NOT IN USE
5737	WW00060	44.00	08NOV977	35.02	08NOV977								DRIL	UNEQUIPPED
5737	WW00061	23.90	08NOV977										DRIL	COLLAPSED
5737	WW00062	33.16	21NOV977	18.70	21NOV977								DRIL	UNEQUIPPED
5737	WW00063	6.45	21NOV977	5.79	21NOV977									COLLAPSED
5737	WW00064	38.66	21NOV977	25.36	21NOV977							WMLL	DRIL	STOCK
5737	WW00065	19.50	FEB961										DRIL	COLLAPSED
5737	WW00066	21.90	FEB961										DRIL	COLLAPSED
5737	WW00067	4.20	21NOV977										DRIL	ABANDONED

UNIT	NUMBER	DEPTH	SWD	SAMP	ATS	PH	SUPPLY(KL/D)	TIME	YEAR	METH	LOG	STATUS * REMARKS
5737	WW00068	33.10 FEB961									DRIL	COLLAPSED
5737	WW00069	21.30 MAR961									DRIL	COLLAPSED
5737	WW00070											COLLAPSED
5737	WW00071	40.17 22NOV977	31.72 22NOV977								DRIL	UNEQUIPPED
5737	WW00072	34.57 22NOV977	31.70 22NOV977								DRIL	UNEQUIPPED
5737	WW00073	7.28 29NOV977									DRIL	COLLAPSED
5737	WW00074										DRIL	COLLAPSED
5737	WW00075	49.50 OCT961									DRIL	COLLAPSED
5737	WW00076	37.50 30NOV977	33.90 30NOV977							WMLL	DRIL	STOCK
5737	WW00077	54.17 30NOV977	41.17 30NOV977							PUMP	DRIL	NOT IN USE
5737	WW00078	2.55 30NOV977		UNKN	1120M		04JAN956	21 EST	1956		DRIL	ABANDONED
5737	WW00079	43.52 01DEC977	34.42 01DEC977							WMLL	DRIL	STOCK
5737	WW00080	42.90 01DEC977	34.00 01DEC977							PUMP	DRIL	NOT IN USE
5737	WW00081	39.93 29DEC964									DRIL	UNKNOWN
5737	WW00082										DRIL	COLLAPSED
5737	WW00083	.20 02DEC977									DRIL	COLLAPSED
5737	WW00084										DRIL	COLLAPSED
5737	WW00085	20.00 05DEC977									DRIL	ABANDONED
5737	WW00086	37.81 05DEC977	35.56 05DEC977							WMLL	DRIL	STOCK
5737	WW00087	36.70 05DEC977	35.60 05DEC977							WMLL	DRIL	NOT IN USE
5737	WW00088	38.20 11NOV977	35.55 11NOV977							PUMP	DRIL	STOCK
5737	WW00089	39.90 MAY959									DRIL	ABANDONED
5737	WW00090	36.60 05DEC977								PUMP	DRIL	STOCK
5737	WW00091	36.52 05DEC977	32.38 05DEC977							WMLL	DRIL	STOCK
5737	WW00092	34.70 05DEC977	32.00 05DEC977								DRIL	STOCK
5737	WW00093	42.50 NOV969									DRIL	COLLAPSED
5737	WW00094										DRIL	COLLAPSED
5737	WW00095	30.20 05DEC977									DRIL	COLLAPSED
5737	WW00096	43.80 25FEB948									DRIL	COLLAPSED
5737	WW00097	43.80 18FEB948									DRIL	COLLAPSED
5737	WW00098	16.49 09DEC977									DRIL	ABANDONED
5737	WW00099	49.30 27SEP952									DRIL	COLLAPSED
5737	WW00100	4.00 09DEC977									DRIL	COLLAPSED
5737	WW00101	35.00 22SEP952									DRIL	COLLAPSED
5737	WW00102	23.87 19NOV977	22.20 18NOV977	BAIL	7100C		18NOV977			WMLL		STOCK TIMBER CASING IN WELL
5737	WW00103	33.50 C1930	15.42 17DEC977							WMLL		STOCK
5737	WW00104	27.50 17DEC977	25.60 17DEC977							WMLL		STOCK
5737	WW00105	24.38 17DEC977	19.35 17DEC977									NOT IN USE
5737	WW00106											COLLAPSED
5737	WW00107	20.37 19DEC977	9.48 19DEC977							WMLL		STOCK
5737	WW00108	15.86 19DEC977	11.86 19DEC977							WMLL		STOCK
5737	WW00109	.35 19DEC977										BACKFILLED
5737	WW00110	26.21 C1959								PUMP		STOCK
5737	WW00111	17.00 19DEC977										DILAPIDATD
5737	WW00112	28.02 19DEC977										DRY HOLE
5737	WW00113											COLLAPSED
5737	WW00114	34.20 20DEC977	31.50 20DEC977									UNEQUIPPED
5737	WW00115	34.20 20DEC977	31.50 20DEC977									UNEQUIPPED
5737	WW00116	10.70 20DEC977	7.95 20DEC977							WMLL	DRIL	STOCK
5737	WW00117	49.00 C1934									DRIL	BACKFILLED
5737	WW00118	10.85 21DEC977	6.95 21DEC977									UNEQUIPPED
5737	WW00119											COLLAPSED
5737	WW00120	5.65 21DEC977	5.11 21DEC977							WMLL		STOCK
5737	WW00121											COLLAPSED
5737	WW00122	26.31 21DEC977	21.70 21DEC977							WMLL		STOCK

UNIT	NUMBER	DEPTH	SWD	SAMP	ATS	PH	SUPPLY(KL/D)	TIME	YEAR	METH	LOG	STATUS & REMARKS
5737	WWC0123	16.96 21DEC977	12.50 21DEC977							WMLL		STOCK
5737	WWC0124	14.62 21DEC977	11.50 21DEC977									UNEQUIPPED
5737	WWC0125	59.50 21DEC977	45.01 21DEC977							WMLL		STOCK
5737	WWC0126	23.58 21DEC977										COLLAPSED
5737	WWC0127											COLLAPSED
5737	WWC0128	7.93 91934									DRIL	COLLAPSED
5737	WWC0129	15.63 21DEC977	8.87 21DEC977							WMLL	DRIL	STOCK
5737	WWC0130	36.53 C1934									DRIL	COLLAPSED
5737	WWC0131	11.89 C1934										COLLAPSED
5737	WWC0132	37.81 22DEC977	17.58 22DEC977									DRAINAGE
5737	WWC0133	.25 22DEC977									DRIL	BACKFILLED
5737	WWC0134	37.59 22DEC977	25.22 22DEC977							WMLL	DRIL	STOCK
5737	WWC0135											COLLAPSED
5737	WWC0136	45.43 22DEC977	25.40 22DEC977							WMLL		STOCK
5737	WWC0137											COLLAPSED
5737	WWC0138	10.06 C1934										COLLAPSED
5737	SWC0139	248.00 17MAY979										ABANDONED *TARCOOLA-AREA S
												TRAITGRAPHIC HOLES
5737	SWC0140	120.00 14JUN977										ABANDONED *TARCOOLA-AREA S
												TRATIGRAPHIC HOLES
5737	WWC0141	53.00										ABANDONED
5836	WWC0001	27.35 27NOV977	24.80 27NOV977	UNKN	6997M		26NOV905			WMLL		NOT IN USE
5836	WWC0002	21.85 28NOV977		UNKN	561075M		29SEP936			WMLL		DRY HOLE
5836	WWC0003	33.50 23AUG977	24.50 23AUG977	UNKN	8140M		29SEP926			WMLL		NOT IN USE
5836	WWC0004	15.90 22AUG977	10.60 22AUG977									UNEQUIPPED
5836	WWC0005	15.70 25AUG977	13.78 25AUG977									UNKNOWN
5836	WWC0006											BACKFILLED
5836	WWC0007	13.50 25AUG977	10.27 25AUG977	UNKN	9525M		26NOV962					UNEQUIPPED
5836	WWC0008	8.70 27AUG977		UNKN	10324M		29OCT925					COLLAPSED
5836	WWC0009	24.80 27AUG977	22.80 27AUG977	UNKN	9925M		22NOV962			WMLL		STOCK
5836	WWC0010	36.58 01MAY925		UNKN	1085M		01MAY925					UNKNOWN
5836	WWC0011											BACKFILLED
5836	WWC0012	.40 20AUG977										COLLAPSED
5836	WWC0013	24.38 81894								WMLL		UNKNOWN
5836	WWC0014	4.90 23AUG977		UNKN	7725M		09DEC924				DRIL	UNEQUIPPED
5836	WWC0015	8.00 20AUG977										COLLAPSED
5836	WWC0016	31.72 20AUG977	26.15 20AUG977	UNKN	8682M		10FEB927			WMLL		STOCK
5836	WWC0017											BACKFILLED
5836	WWC0018	105.16						EST			DRIL	ABANDONED
5836	WWC0019	25.23 22AUG977	19.62 22AUG977	UNKN	6140M		06MAR931			WMLL		STOCK
5836	WWC0020	14.65 22AUG977	12.85 22AUG977	UNKN	608M		02APR962					UNEQUIPPED
5836	WWC0021	27.20 27NOV977	26.00 27NOV977	UNKN	3327M		26NOV915					UNEQUIPPED
5836	MWC0022	64.01 17MAY965									GEOL	UNKNOWN *TARCOOLA-AREA M
												INERIAL INVESTIGATION
5836	MWC0023	61.26 12JUN965									GEOL	UNKNOWN *TARCOOLA-AREA M
												INERIAL INVESTIGATION
5836	MWC0024	41.15 14JUL965									GEOL	UNKNOWN *TARCOOLA-AREA M
												INERAL INVESTIGATION
5836	WWC0025	23.80 22AUG977	18.41 22AUG977	UNKN	7745M	6.4	13SEP967			WMLL		STOCK
5836	WWC0026	61.84 23DEC977	8.04 23DEC977									NOT IN USE
5836	WWC0027	31.53 20SEP977	15.37 20SEP977	UNKN	45000M	4.6	20SEP977				GEOL	UNEQUIPPED
5836	WWC0028	29.03 20SEP977	2.00 20SEP977	UNKN	5000M	7.6	20SEP977				GEOL	UNEQUIPPED
5836	WWC0029	15.00 20SEP977	5.03 20SEP977	BAIL	5000M	7.7	20SEP977				GEOL	UNEQUIPPED
5836	WWC0030	4.50 20SEP977									GEOL	COLLAPSED
5836	WWC0031	12.97 20SEP977									GEOL	COLLAPSED
5836	WPC0032			UNKN	214M		29MAY956					UNKNOWN

UNIT	NUMBER	DEPTH		SWD		SAMP	ATS	PH	SUPPLY(KL/D)	TIME	YEAR	METH	LOG	STATUS & REMARKS
5836	WP00033			24.00	14OCT972		15435M	14OCT972						
5836	WW00034	9.10	24AUG977									PUMP		WASTE DISP
5836	WW00035	15.50	24AUG977	8.90	24AUG977									NOT IN USE
5836	WW00036	21.80	23AUG977	9.44	23AUG977									UNEQUIPPED
5836	WW00037	28.20	20AUG977	9.34	20AUG977									NOT IN USE
5836	WW00038	13.30	22AUG977	12.85	22AUG977									UNEQUIPPED
5836	WW00039	21.80	22AUG977	9.19	22AUG977									UNEQUIPPED
5836	MW00040	76.55	10JUN966										GEOL	UNKNOWN *TARCOOLA-AREA M INERAL INVESTIGATION
5836	MW00041	3.25	29JUL966										GEOL	UNKNOWN *TARCOOLA-AREA M INERAL INVESTIGATION
5836	WW00042	24.00	22AUG977	19.50	22AUG977									NOT IN USE
5836	WW00043	7.01	22AUG977											ABANDONED
5836	WW00044													BACKFILLED
5836	WW00045	.20	22AUG977											BACKFILLED
5836	WW00046	42.13	23AUG977	30.38	23AUG977							WMLL		STOCK
5836	WW00047	68.60	23AUG977	65.00	23AUG977							WMLL	DRIL	STOCK
5836	WW00048	27.85	24AUG977	27.62	24AUG977							WMLL		DOMESTIC
5836	WW00049	32.12	24AUG977	31.07	24AUG977							WMLL		DOMESTIC
5836	WW00050	5.35	25AUG977											
5836	WW00051	30.41	27AUG977	26.34	27AUG977									
5836	WW00052	27.61	27AUG977	26.35	27AUG977	UNKN	10382M	26NOV962					DRIL	UNEQUIPPED
5836	WW00053	17.50	21OCT978	9.38	21OCT978	BAIL	5500M	21OCT978						NOT IN USE
5836	WW00054	.35	25AUG977									WMLL		NOT IN USE
5836	WW00055	25.52	27AUG977	22.14	27AUG977									COLLAPSED
5836	WW00056	39.59	03SEP977	20.15	03SEP977							WMLL		UNKNOWN
5836	WW00057													UNEQUIPPED
5836	WW00058	26.40	15DEC977											COLLAPSED
5836	SW00059	304.95	15AUG971											DRY HOLE
5836	WW00060												GEOL	STRAT. OBS *TARCOOLA AREA S TRATIGRAPHIC OBSERVATION
5836	WW00061					UNKN	10096M	01MAY925					GEOL	ABANDONED
5836	WW00062												DRIL	UNKNOWN
5836	WW00063	27.10	27NOV977	24.30	27NOV977								DRIL	ABANDONED
5836	WW00064	29.70	28NOV977	23.13	28NOV977									UNEQUIPPED
5836	WW00065													NOT IN USE
5836	WW00066	33.50												COLLAPSED
5836	WW00067	26.50	28NOV977	23.50	28NOV977							WMLL		NOT IN USE
5836	MW00068	40.23	11NOV969											NOT IN USE
5836	MW00069	47.24	11NOV971										GEOL	UNKNOWN *SOUTH-LAKE-TIN-MINE TIN COPPER ZINC
5836	MW00070	35.05	11NOV971										GEOL	UNKNOWN *SOUTH-LAKE-TIN-MINE TIN-ZINC-COPPER
5836	MW00071	36.58	11NOV971											UNKNOWN *SOUTH LAKES TIN MINE TIN ZINC COPPER
5836	MW00072	29.87	11NOV971										GEOL	UNKNOWN *SOUTH-LAKES-TIN -MINE TIN ZINC COPPER
5836	MW00073	22.86	11NOV971										GEOL	UNKNOWN *SOUTH-LAKES-TIN -MINE TIN ZINC COPPER
5836	WW00074													UNKNOWN *SOUTH-LAKES-TIN -MINE TIN-ZINC-COPPER
5836	MW00075					UNKN	50000M	7.1 C1979						ABANDONED
5836	MW00076					UNKN	50000M	6.7 C1979						UNKNOWN
5836	WW00077					UNKN	25000M	7.1 C1979						UNKNOWN
5836	MW00078					UNKN	19000M	7.8 C1979						UNKNOWN
5836	MW00079					UNKN	50000M	7.3 C1979						UNKNOWN

UNIT	NUMBER	DEPTH		SWD		SAMP	ATS	PH		SUPPLY(KL/D)	TIME	YEAR	METH	LOG	STATUS & REMARKS
5836	MWC0080					UNKN	50000M	6.0	C1979						UNKNOWN
5836	MWC0081					UNKN	50000M	5.9	C1979						UNKNOWN
5836	MWC0082					UNKN	50000M	6.4	C1979						UNKNOWN
5836	MWC0083					UNKN	25000M	6.8	C1979						UNKNOWN
5837	WW00001	20.34	08SEP977	18.45	08SEP977										UNEQUIPPED
5837	WW00002	10.80	19SEP977											DRIL	DRY HOLE
5837	WW00003	19.46	19SEP977	16.00	19SEP977	UNKN	4598M		18SEP962						STOCK
5837	WW00004	18.04	17SEP977	14.39	17SEP977		474M	8.2	27SEP975				WMLL		STOCK
5837	WW00005														COLLAPSED
5837	WW00006														COLLAPSED
5837	WW00007	19.52	05SEP977	17.14	05SEP977	UNKN	13766M		05DEC962						UNEQUIPPED
5837	WW00008	18.46	14SEP977	18.00	14SEP977										UNEQUIPPED
5837	WW00009														COLLAPSED
5837	WW00010	58.40	SEP949											DRIL	COLLAPSED
5837	WW00011	29.00	16SEP977	22.46	16SEP977										UNEQUIPPED
5837	WW00012	20.28	09SEP977	18.61	09SEP977									DRIL	UNEQUIPPED
5837	WW00013	25.02	14SEP977	8.50	14SEP977										NOT IN USE
5837	WW00014	64.11	14SEP977	37.00	14SEP977	UNKN	5015M	7.7	25SEP975				WMLL	DRIL	STOCK
5837	WW00015	28.15	13SEP977	12.00	13SEP977	UNKN	9[illegible]M		29NOV962				WMLL		STOCK
5837	WW00016	22.00	14SEP977	15.14	14SEP977	UNKN	9510M	7.2	25SEP975				WMLL		STOCK
5837	WW00017	.20	08SEP977												COLLAPSED
5837	WW00018	22.85	08SEP977	18.80	08SEP977	UNKN	3199M	7.7	11NOV975						STOCK
5837	WW00019	26.52	08SEP977	23.09	08SEP977										UNEQUIPPED
5837	WW00020	24.92	10SEP977	20.73	10SEP977	UNKN	1637M	8.5	11NOV975				WMLL		STOCK
5837	WW00021	35.97	1948											DRIL	STOCK
5837	WW00022	9.67	12SEP977												COLLAPSED
5837	WW00023	35.97	SEP949											DRIL	UNKNOWN
5837	WW00024	38.40													COLLAPSED
5837	WW00025	24.21	12SEP977	24.16	12SEP977								WMLL		STOCK
5837	WW00026	5.62	12SEP977												COLLAPSED
5837	WW00027	38.45	13SEP977	32.00	13SEP977	UNKN	3217M	7.6	09NOV975				WMLL		STOCK
5837	WW00028	33.30	13SEP977												NOT IN USE
5837	WW00029	48.62	13SEP977	41.00	13SEP977								WMLL		STOCK
5837	WW00030	19.60	13SEP977												UNKNOWN
5837	WW00031	38.02	07SEP977	36.84	07SEP977	UNKN	4461M	7.5	11NOV975						UNEQUIPPED
5837	WW00032					UNKN	543M		20JUN925						UNKNOWN
5837	WW00033	19.10	07SEP977												UNEQUIPPED
5837	WW00034												WMLL	DRIL	DOMESTIC
5837	WW00035	7.10	10SEP977			UNKN	2228M		12DEC962					DRIL	DRY HOLE
5837	WW00036	24.62	10SEP977	21.52	10SEP977										UNEQUIPPED
5837	WW00037	23.00	12SEP977	20.30	12SEP977								WMLL		STOCK
5837	WW00038	28.05	12SEP977	23.10	12SEP977	UNKN	7697M		05DEC962				WMLL	DRIL	STOCK
5837	WW00039	29.50	12SEP977	25.52	12SEP977										NOT IN USE
5837	WW00040	30.10	12SEP977	26.47	12SEP977	UNKN	10110M		29NOV962				WMLL		NOT IN USE
5837	WW00041	31.35	12SEP979	30.90	12SEP977	UNKN	7690M	7.6	10NOV975						UNEQUIPPED
5837	WW00042	.91	12SEP977											DRIL	COLLAPSED
5837	WW00043	34.39	12SEP977	30.61	12SEP977	UNKN	4649M	7.4	10NOV975				WMLL		STOCK
5837	WW00044	65.00	C1977			UNKN	3756M		12DEC962				WMLL		STOCK
5837	WW00045					UNKN	1021[illegible]M		21FEB957						ABANDONED
5837	WW00046	43.63	07SEP977	31.90	07SEP977	UNKN	2185M		12DEC962						NOT IN USE
5837	WW00047	54.33	02SEP977	20.68	02SEP977								WMLL		STOCK
5837	WW00048	35.45	01SEP977	29.04	01SEP977	UNKN	5755M		28NOV962				WMLL		STOCK
5837	WW00049	36.88	16AUG925											DRIL	UNKNOWN
5837	WW00050	30.72	01SEP977	29.13	01SEP977	UNKN	987PM	7.7	09NOV975				WMLL		STOCK
5837	WW00051	.75	01SEP977											DRIL	BACKFILLED
5837	WW00052	30.48	16AUG925											DRIL	UNKNOWN

UNIT NUMBER		DEPTH		SWD		SAMP	ATS	PH	SUPPLY(S/L/O)	TIME	YEAR	MATH	LOG	STATUS & REMARKS
5837	WWC0082	13.00	16AUG925										DRIL	UNKNOWN
5837	WWC0084	38.50	31AUG977	37.20	31AUG977	UNKN	11167M		14SEP962					UNEQUIPPED
5837	WWC0085	6.25	17SEP977	57.25	17SEP977									UNEQUIPPED
5837	WWC0086	23.10	26AUG977	21.80	26AUG977								WELL	STOCK
5837	WWC0087	20.57	26AUG977	19.40	26AUG977	UNKN	1220M		17DEC945					UNEQUIPPED
5837	WWC0088	26.93	31JUL925										DRIL	UNKNOWN
5837	WWC0090	36.50	02SEP977	20.00	02SEP977	UNKN	9925M		19JUN958				WELL	STOCK
5837	WWC0091												DRIL	ABANDONED
5837	WWC0093	12.20	03SEP977											COLLAPSED
5837	WWC0092	25.60	03SEP977	11.00	03SEP977	UNKN	2727M		17FEB944				WELL	STOCK
5837	WWC0095	30.72	26AUG977	25.16	26AUG977	UNKN	1042M		12DEC962				WELL	STOCKPOND
5837	WWC0064					UNKN	5147M		23JAN965				WELL	UNKNOWN
5837	WWC0065	31.00	31AUG977	22.50	31AUG977	UNKN	3245M	7.5	09NOV973					STOCK
5837	WWC0066													COLLAPSED
5837	WWC0067	15.55	01SEP										DRIL	BACKFILLED
5837	WWC0068	42.06	29SEP977	15.24	29SEP977					12 EST	1925		DRIL	UNKNOWN
5837	WWC0069	21.00	30AUG977	14.70	30AUG977									NOT IN USE
5837	WWC0070													COLLAPSED
5837	WWC0071													UNKNOWN
5837	WWC0072	.21	31AUG977											COLLAPSED
5837	WWC0073	10.00	31AUG977											COLLAPSED
5837	WWC0074	19.21	10MAR925											UNKNOWN
5837	WWC0075	.20	31AUG977											COLLAPSED
5837	WWC0076	2.40	31AUG977										DRIL	COLLAPSED
5837	WWC0077	4.50	31AUG977										DRIL	COLLAPSED
5837	WWC0078	46.67	17SEP977	9.45	17SEP977	UNKN	3172M	4.7	13NOV974				GEOL	UNEQUIPPED
5837	WWC0079	16.72	08SEP977	10.30	08SEP977								GEOL	UNEQUIPPED
5837	WWC0080	19.81	31MAR971										GEOL	UNKNOWN *TARCOOLA-ALICES
														RINGS-FALL BALLAST INVESTI
5837	WWC0081	20.12	27MAR971										GEOL	UNKNOWN *TARCOOLA-ALICES
														RINGS-FALL BALLAST INVESTI
5837	WWC0082	19.81	03APR971										GEOL	UNKNOWN *TARCOOLA-ALICE-
														RAIL BALLAST INVESTIGATIONS
5837	WWC0083			18.77	17SEP977	UNKN	1355M	5.6	10MAY972				GEOL	UNEQUIPPED
5837	WWC0084	90.41	20SEP977	4.25	20SEP977	UNKN	4.99M	5.1	20SEP977				GEOL	UNEQUIPPED
5837	WWC0085													BACKFILLED
5837	WWC0086													COLLAPSED
5837	WWC0087												DRIL	ABANDONED
5837	WWC0088	20.23	10SEP977	15.68	10SEP977									UNEQUIPPED
5837	WWC0089	12.80	15SEP977	9.60	15SEP977	UNKN	41.4	7.5	15SEP977				PUMP	DRIL DOMESTIC
5837	WWC0090												WELL	STOCK
5837	WWC0091	32.00	81925										DRIL	BACKFILLED
5837	WWC0092	23.70	08SEP977	10.07	08SEP977								PUMP	DRIL STOCK
5837	WWC0093												DRIL	COLLAPSED
5837	WWC0094													COLLAPSED
5837	WWC0095												DRIL	ABANDONED
5837	WWC0096	22.59	07SEP977	22.12	07SEP977	UNKN	2437M	7.6	10NOV975				WELL	STOCK
5837	WWC0097	29.90	10SEP977	26.75	10SEP977	UNKN	1136M	7.9	10SEP977				PUMP	DRIL DOMESTIC
5837	WWC0098	25.20	10SEP977	21.72	10SEP977								PUMP	DOMESTIC
5837	WWC0099	30.60	10SEP977	23.47	10SEP977								WELL	DOMESTIC
5837	WWC0100	15.27	10SEP977										DRIL	UNEQUIPPED
5837	WWC0101	25.00	10SEP977	21.00	10SEP977								WELL	DRIL STOCK
5837	WWC0102	.50	05SEP977											COLLAPSED
5837	WWC0103	15.77	10SEP977										DRIL	COLLAPSED
5837	WWC0104												DRIL	COLLAPSED
5837	WWC0105	1.47	10SEP977										DRIL	COLLAPSED

UNIT NUMBER		DEPTH	SWL	S/PP	ATS	DH	SUPPLY(KL/D)	TYPE	YEAR	METH	LOG	STATUS & REMARKS
5837	WWC[illegible]	21.47	15SEP977	18.83	14SEP977					WMLL	DRIL	STOCK
5837	WWC[illegible]107											UNEQUIPPED
5837	WWC[illegible]1.9											COLLAPSED
5837	WW[illegible]1.0	31.22	15SEP977	2[illegible].27	15SEP977					WMLL		STOCK
5837	WWC[illegible]110	21.50	13SEP977	2[illegible].19	13SEP977						DRIL	UNEQUIPPED
5837	WW[illegible]111	25.65	15SEP977	2[illegible].31	15SEP977						DRIL	UNEQUIPPED
5837	WWC[illegible]112											BACKFILLED
5837	WWC[illegible]113	25.93	09SEP977	17.7[illegible]	09SEP977	UNKN	5470M	3.[illegible]	27SEP975	WMLL	DRIL	STOCK
5837	WW[illegible]114	34.45	09SEP977	17.45	09SEP977					WMLL	DRIL	STOCK
5837	WWC[illegible]115	.40	09SEP977								DRIL	BACKFILLED
5837	WW[illegible]116	23.1[illegible]	09SEP977	18.92	09SEP977			BAIL			DRIL	STOCK
5837	WWC[illegible]117											COLLAPSED
5837	WWC[illegible]118	35.70	SEP940								DRIL	UNKNOWN
5837	WW[illegible]1.9	44.2	SEP940								DRIL	COLLAPSED
5837	WW[illegible]120	27.93	13SEP977	11.62	13SEP977							UNEQUIPPED
5837	WW[illegible]121	27.23	13SEP977	17.[illegible]	13SEP977					WMLL		STOCK
5837	WWC[illegible]122	.45	13SEP977									BACKFILLED
5837	WWC[illegible]123	35.7[illegible]	13SEP977	12.90	13SEP977						DRIL	UNEQUIPPED
5837	WW[illegible]124	33.58	12SEP977	31.58	13SEP977	UNKN	6431M	3.2	29SEP975	WMLL		STOCK
5837	WW[illegible]125	29.30	81929								DRIL	COLLAPSED
5837	WW[illegible]126										DRIL	COLLAPSED
5837	WWC[illegible]127										DRIL	BACKFILLED
5837	WWC[illegible]128											COLLAPSED
5837	WWC[illegible]129	43.61	01934									COLLAPSED
5837	WW[illegible]13	.65	14SEP977									COLLAPSED
5837	WW[illegible]131											BACKFILLED
5837	WWC[illegible]132	38.18	12SEP977	31.04	12SEP977					WMLL	DRIL	STOCK
5837	WWC[illegible]133	31.0[illegible]	12SEP977								DRIL	UNEQUIPPED
5837	WWC[illegible]134	29.[illegible]	81931									BACKFILLED
5837	WW[illegible]135	29.6[illegible]	12SEP977	25.24	12SEP977					PUMP		STOCK+DOM
5837	WWC[illegible]136	35.2[illegible]	03SEP977	13.90	03SEP977					WMLL		STOCK
5837	WWC[illegible]137	11.72	03SEP977	6.90	03SEP977					WMLL		STOCK
5837	WWC[illegible]138	31.61	03SEP977	31.20	03SEP977					WMLL		STOCK
5837	WWC[illegible]139	13.32	03SEP977	11.71	03SEP977							UNEQUIPPED
5837	WWC[illegible]14[illegible]	4.5[illegible]	03SEP977									BACKFILLED
5837	WWC[illegible]141					UNKN	377.M		23NOV925			UNKNOWN
5837	WPC[illegible]142											UNKNOWN
5837	WWC[illegible]143											COLLAPSED
5837	WWC[illegible]144	12.57	30AUG977									UNKNOWN
5837	WWC[illegible]145	41.53	07SEP977	36.92	07SEP977					WMLL	DRIL	STOCK
5837	WWC[illegible]146	25.00	12SEP977	24.66	12SEP977							UNEQUIPPED
5837	WWC[illegible]147											COLLAPSED
5837	WWC[illegible]148											COLLAPSED
5837	WWC[illegible]149	13.94	22DEC977	7.12	22DEC977							UNEQUIPPED
5837	WWC[illegible]15[illegible]	37.10	81035								DRIL	COLLAPSED
5837	WWC[illegible]151	1.00	15SEP977									COLLAPSED
5837	WWC[illegible]152	1.00	15SEP977									COLLAPSED
5837	WWC[illegible]153	.35	15SEP977									COLLAPSED
5837	WWC[illegible]154											COLLAPSED
5837	WWC[illegible]155											COLLAPSED
5837	WWC[illegible]156											COLLAPSED
5837	WWC[illegible]157											COLLAPSED
5837	WWC[illegible]158											COLLAPSED
5837	WWC[illegible]159	2.0[illegible]	15SEP977									COLLAPSED
5837	WWC[illegible]160	16.80	17SEP977	14.43	17SEP977							STOCK
5837	WWC[illegible]161	22.39	17SEP977	2[illegible].00	17SEP977					WMLL		STOCK

DEPARTMENT OF MINES & ENERGY -BORE GENERAL INDEX MOST RECENT DATA 06/08/80

UNIT	NUMBER	DEPTH	SWD	SAMP	ATS	PH	SUPPLY(KL/D)	TIME	YEAR	METH	LOG	STATUS & REMARKS
5837	WW00162	9.75 JUL949									DRIL	UNKNOWN
5837	WW00163										DRIL	ABANDONED
5837	WW00164	10.06 03FEB925										ABANDONED
5837	WW00165											UNKNOWN
5837	WW00166											UNKNOWN
5837	WW00167	21.95 B1929									DRIL	ABANDONED
5837	WW00168											ABANDONED
5837	WW00169	28.30 C1934									DRIL	UNKNOWN

APPENDIX B

Mulgathing Station Drilling History

APPENDIX B

Mulgathing Station Drilling History

1. Sequence of Drillers

Lands Dept. drilling	Mid 1920's	
Harry Russell	1938-39	
Bannerman	1944-46	
M.G.S. Talbot	Sept 1947-Aug 1948	used "SP" = station plant
Joe Davis	1951 -	)Used "NSP" =
T.J. Cutler	27/5/52-1/12/52)	New station plant
J. Dowling	June 1953-Sept 1953	
Lyall McCarthy	1956	
A. Brian Lawson	Feb 1959 -	
Ian R. McDougall	28/12/64 -	
T.M. Steele	20/8/65-5/1/66	
Jack S. Mostert	1967-68	
Gibson	Dec 1969	
Frank Howe	Dec 1971 - on going	

2. Bores drilled by Station personnel (prefix "S")

Local Number	Location	Date drilled	Unit No.	
S1	No plot			
S2	Malbooma Swamp		5736-34	
S3	No plot			
S4	No plot			
S5	No plot			
S6	No plot			
S7	No plot			
S8		before 1939	5636-2	
S9	Durkin		5637-18	
S10	No plot			
S11	West of Durkin		5637-15	not locate
S12	SW of Durkin		5637-16	
S13	Mallee Hen Pdk.		5637-17	
S14	North Irria Pdk.		5637-70	
S15	Irria		5637-94	
S16	Mailgate - old bore		5737-45	
S17	Warrior - 2nd hole		5636-1	
S18	Disappointment Bore 1	before 1949	5737-98	
S19	Disappointment Bore 2	before 1949	5737-100	
S20	Tandanya Pdk.		5737-30	
S21	Ambrosia Out station		5737-74	
S22	North Charcott Pdk.		5637-2	
S23	East Durkin Pdk.		5637-20	
S24	West Durkin Pdk.		5637-32	not locate
S25	Charcott		5637-14	
S26	South of Durkin		5637-72	not locate
S27	Aristarchus Pdk.		5637-33	
S28	No plot			

S29	Aggression	5737-7
S30	6 miles west of Malbooma circa 1939	5736-12
S31	Ambrosia Pdk.	5737-51

3. Drilling by M.G.S. Talbot using station plant = "SP" (1947-1948)

Local Number	Location	Date drilled	Unit No.	
1SP	Victory	13/9/47	5737-3	
2SP	Victory	25/9/47	5737-4	
3SP	S.E. of Snake Rocks	13/10/47	5737-20	
4SP	East of Snake Rocks	12/11/47	5737-18	
5SP	Talbots Well	28/12/47	5637-28	
6SP	Symons Pdk.	10/12/47	5637-26	
7SP	site 23 well, (1st)	23/1/48	5637-29	
8SP	site 23 well, (2nd)	31/1/48	5637-34	
9SP	Nightshade Pdk.	18/2/48	5737-97	
10SP	Nightshade Pdk.	25/2/48	5737-96	
11SP	Mailtrack Rd, Ambrosia Pdk.	March 1948	5736-3	
12SP	Malbooma swamp		5736-7	
13SP	Malbooma swamp	March 1948	5736-8	
14SP	Malbooma swamp (?clean out of S2)		5736-34	
15SP	Div. fence Hurricane/ Warrior West		5636-5	
16SP	9 mile tank	Aug 1948	5736-5	
17SP	Old well swamp No 2 hole	1948	5736-76	
18SP	Old well swamp No 1 hole	Aug 1948	5736-72	
19SP	Gulliar	19/9/48	5637-7	Not located

4. Drilling by J. Davis or T.J. Cutler, using New Station Plant = N.S.P.

(1951-1952)

Local Number	Location	Date drilled	Unit No.	Driller
1NSP	South of Malbooma	1951	(5736-52,	Davis
2NSP	" " "	"	53,54 but	
3NSP	" " "	"	cannot be	
4NSP	" " "	"	correlated)	
5NSP	" " "	"		
6NSP	" " "	"		
7NSP	Malbooma/Ealbara Pdk	"	5736-57	Davis
8NSP	Hierns Rd	1951	5736-51	"
9NSP	Pinding Swamp	"	5736-35	"
10NSP	Pinding Swamp	"	5736-37	"
11NSP	1 mile south of Pinding Well	15/1/52	5736-43	"
12NSP	Pinding Swamp	31/1/52	5736-41	"
13NSP	Pinding Swamp	31/1/52	5736-36	"
14NSP	Malbooma Swamp		5736-30	"
15NSP	Malbooma Swamp	24/3/52	5736-31	"
16NSP	White Ant (Location unknown)	22/4/52	None	"
17NSP	Wirlie "	1/5/52	None	"
18NSP	Malbooma Swamp	5/5/52	5736-29	"
19NSP	Malbooma Swamp	21/5/52	5736-33	"
20NSP	Malbooma Swamp	27/5/52	5736-28	Cutler
21NSP	Mail Rd/Malbooma Swamp water course	19/6/52	5736-56	Cutler
22NSP	Old Well Swamp-Ambrosia Pdk.	8/7/52	5736-73	Davis
23NSP	"	28/7/52	5736-75	"
24NSP	"	5/8/52	5736-71	"

Local Number	Location	Date drilled	Unit No.	Driller
25NSP	Old Well Swamp	9/8/52	5736-70	Davis
26NSP	3m south of Ambrosia Tank	27/8/52	5736-69	
27NSP	½mile N of No. 26, Ambrosia watercourse	16/9/52	5737-84	
28NSP	Disappointment	22/9/52	5737-101	Cutler
29NSP	"	27/9/52	5737-99	"

5. Drilling by Lyall McCarthy using Station Plant = SPMcC (1954-1956)

Local Number	Location	Date drilled	Unit No.
SP1McC			
SP2McC	Regal	29/6/54	5737-1
SP3McC	Honeysuckle		5737-35
SP4McC	Bunyip		5637-105
SP5McC	?Victory		
SP6McC	Snake Rocks		5737-78
SP7McC	Mailtrack Pdk.		5737-141
SP8McC	NW cnr Mailtrack Pdk.		5637-109
SP9McC	Warrior Well		5636-12
SP10McC	Nightshade No. 2		5637-108
SP11McC	NE cnr Nightshade Pdk.		5737-95
SP12McC	East Durkin Pdk.		5637-115
SP13McC	"		5637-116
SP14McC	"		5637-117
SP15McC	"		5637-118
SP16McC	"		5637-119
SP17McC	Woomera Sth. Pdk.		5637-98
SP18McC	Pundinya Pdk.		5636-111
SP19McC	South Woomera Pdk.		5637-113
SP20McC	Spitfire Pdk.		5637-44
SP21McC	Spitfire Pdk.		5637-46
SP22McC	Victory		5737-71
SP23McC	White Nose	1956	5737-76
SP24McC	Koolye Bore	1956	5637-25
SP25McC	North Charcott Pdk.	1956	5637-71
SP26McC	North Charcott Pdk.		5637-80
SP27McC	SE of Woomera Tank		5637-81

Local Number	Location	Date drilled	Unit No.
SP28McC	McArthur Pdk.		5637-114
SP29McC	Claysons Well		5736-78
SP30McC	Hierns Well		5736-77
SP31McC	Pinding Well		5736-46
SP32McC	Malbooma H.S.		5736-55

6. Drilling by A.B. Lawson with station plant = LSP (1959-1962)

Local Number	Location	Date drilled	Unit No.
LSP1	Malbooma Swamp	Feb 1959	5736-25
LSP2	Mailgate Swamp	May 1959	5737-85
LSP3	Mailgate New Swamp	May 1959	5737-89
LSP4	Euleena	May 1959	5637-100
LSP5	Ambrosia Outstation Jul	July 1959	5736-75
LSP6	Honeysuckle site	Aug 1959	5737-36
LSP7	"	Aug 1959	5737-42
LSP8	"	Sept 1959	5737-62
LSP9	Charcott	Aug 1960	5637-79
LSP10	"	Aug 1960	5637-76
LSP11	"	Sept 1960	5637-77
LSP12	Irria	Jan 1961	5637-93
LSP13	Muckanippie Pdk	Feb 1961	5737-65
LSP14	"	Feb 1961	5737-66
LSP15	"	Feb 1961	5737-68
LSP16	"	March 1961	5737-69
LSP17	"	April 1961	5737-64
LSP18	West Well	April 1961	5637-83
LSP19	Irria	Aug 1961	5637-87
LSP20	Irria	Sept 1961	5637-88
LSP21	Ambrosia - 50' N of well 20	Sept 1961	5737-73
LSP22	Ambrosia - 75yds W of Well 20	Oct 1961	5737-75
LSP23	No 30 site		5637-97
LSP24	Mt Christie Pdk	Feb 1962	5637-82

7. Drilling by J. Mostert (prefix M) (1963-1970)

Local Number	Location	Date drilled	Unit No.
M1	Malbooma Swamp	July 1963	5736-24
M2	Euleena	12/8/63	5637-99
M3	Rocks Pdk. - Malbooma	2/9/63	5736-50
M4	East Malbooma Pdk.	25/9/63	5736-80
M5	Irria	11/12/67	5637-89
M6	Durkin	11/12/67	5637-101
M7	Durkin	14/12/67	5637-104
M8	Mailgate	13/4/68	5737-88
M9	Irria	27/6/68	5637-85
M10	Irria	27/6/68	5637-92
M11	Warrior	20/3/69	5636-11
M12	Warrior Rubbish Dump	March 1969	5637-112
M13	Warrior - N. edge of swamp	1969	5636-13
M14	1 mile west of Mailgate	Nov. 1969	5737-93
M15	Tandanya Pdk. - 1.8m S.W. of Mailgate	14/12/69	5737-94
M16	Mailgate New Swamp	18/5/70	5737-92
M17	West of Mailgate	May 1970	5737-90

8. Drilling by Ian McDougall (prefix McD) (1964-1967)

Local Number	Location	Date drilled	Unit No.
5McD	Dusty	29/12/64	5737-81
6McD	Claysons Pdk.	Feb. 1967	5736-79

9. Drilling by T.M. Steele, (1965-66)

Local Number	Location	Date drilled	Unit No.
1	Dusty	26/8/65	5737-80
2	1½ mile west of Ambrosia outstation	28/8/65	5737-83
3	1½ mile west of Ambrosia	8/11/65	5737-43
4	Paratoo Pdk - 100yds NW of No 2 Well	5/1/66	5737-82

10. Drilling by Gibson, (1966)

Local Number	Location	Date drilled	Unit No.
1	Mailgate	20/7/66	5737-86
2	Mailgate	25/7/66	5737-87

11. Drilling by Frank Howe using station plant, prefix "H" (1971-1976)

Note: There are a series of "H" numbered wells on Commonwealth Hill, Bulgunnia and Mulgathing stations each commencing H1. When reading Howe data it should be borne in mind that he was not consistent in his use of "SWL". In most cases he is actually quoting the thickness of water standing in the hole and not the depth to the standing water level. Where possible his data has had this idiosyncrasy noted on it.

Local Number	Location	Date drilled	Unit No.
H1	Victory	12/12/71	5737-59
H2	Mailgate	DEC 1972 + further work	5737-91
H3	Durkin	Dec 1972	5637-103
H4	NE cnr. Morley Pdk	March 1973	5637-41
H5	West Well	April 1973	5637-84
H6	Victory	April-May 1973	5737-61
H7	"	May 1973	5737-58
H8	Snake Rocks Pump Jack Well	6/8/75	5737-77
H9	Dusty	7/8/75	5737-79
?	Victory	18/10/76	5737-60
?	"	23/10/76	5737-72

APPENDIX C

Bulgunnia Station Drilling History

APPENDIX C BULGUNNIA STATION-DRILLING HISTORY

Drilling by Frank Howe 1975-1976)

Local Number	Location	Date drilled	Unit No.
H1	Cedric	Sept. 1975	5737-55
H2	Sth. Carne Pdk.	Oct. 1975	5837-114
H3	North Twin	Nov. 1975	5737-134
H4	Tom Pdk.	Nov. 1975	5837-105
H5	Phyllis Pdk.	Nov. 1975	5837-103
H6	Verity Pdk.	April 1976	5837-106
H7	East Goode	May 1976	5837-92
H8	Days Bore	May 1976	5837-132
H9	Marie Pdk.	Kingoonya 1:250 000 sheet	
H10	NW of woolshed swamp	1976	5837-135
H11	East Tait	1976	5837-101
H12	Leslie	1976	5837-145
H13	Sth. Luscombe Swamp	1976	5837-161
H14	Homestead Swamp	1976	5837-97
H15	Johns	1976	5837-123
H16	Johns	1976	5837-121
H17	Johns	1976	5837-120
H18	Wooly Pdk. (Patricia)	1976	5837-116
H19	Shorn Pdk.	1976	5837-110
H20	Shorn Pdk.	1976	5837-111

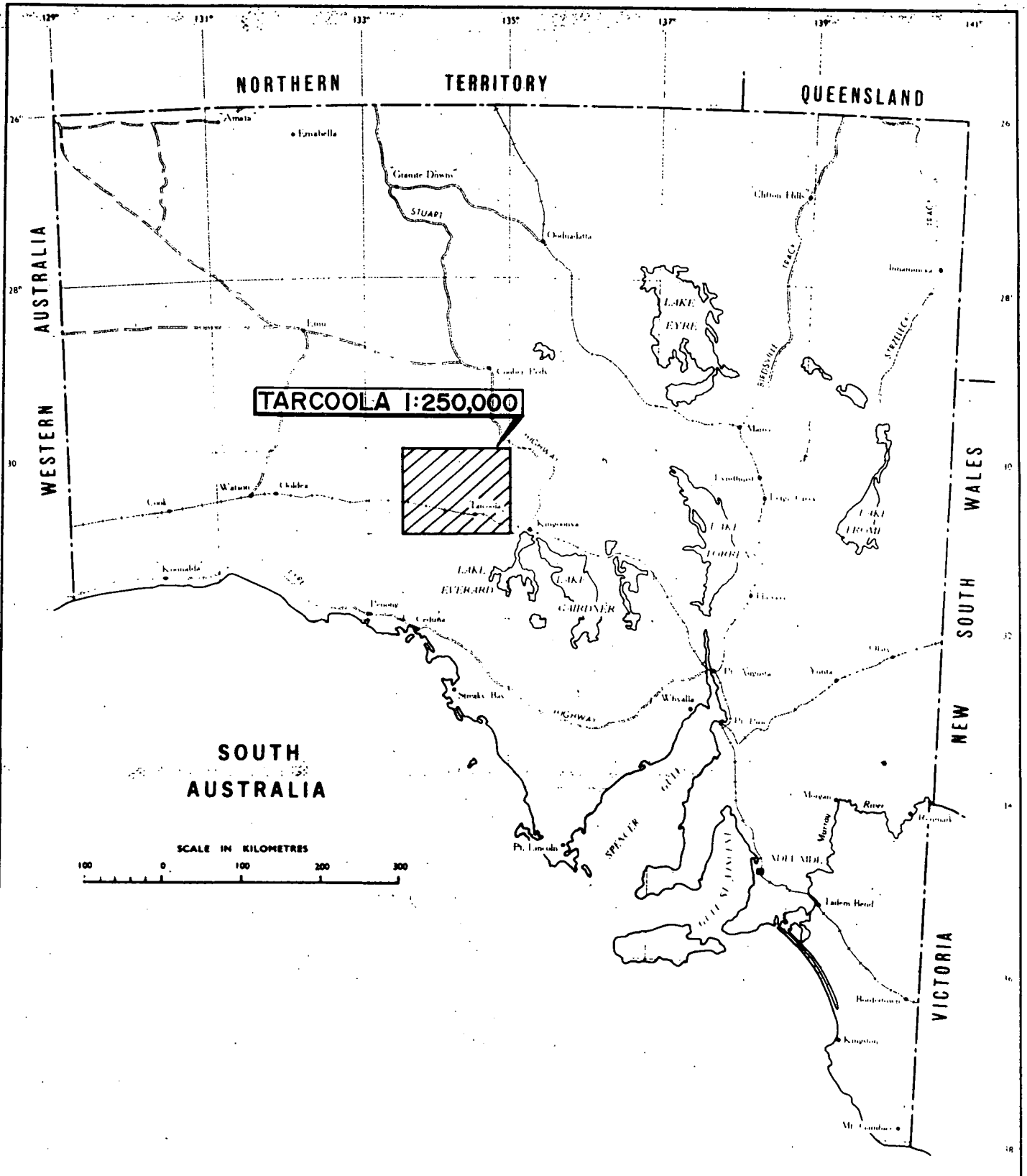


Figure 1.

DEPARTMENT OF MINES AND ENERGY
SOUTH AUSTRALIA

Compiled. F & J. ASLIN	TARCOOLA 1:250,000 WATER WELL SURVEY	Date: 2nd April '80
Drn. C.J.W. Chd.	LOCALITY PLAN	Drg. No. S 14746.
9.7.80		

1824

P.F. No. 55850 9967

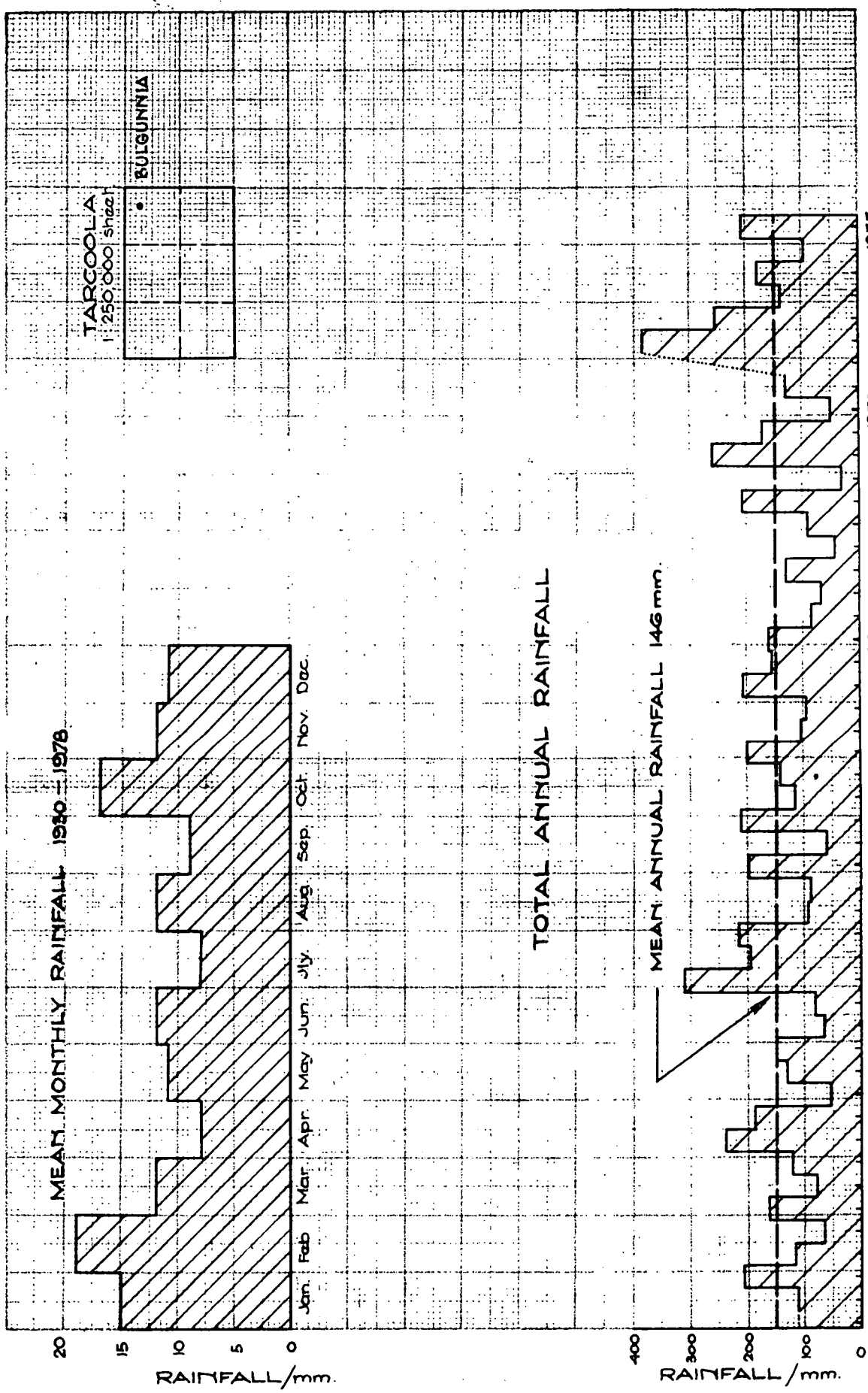


Fig. 2A.

	DEPARTMENT OF MINES AND ENERGY SOUTH AUSTRALIA	SCALE
COMPILED F.J. ASLIN	TARCOOLA 1:250,000 WATER WELL SURVEY	DATE 2nd April '80
DRN C.J.W CKD	BULGUNNIA	PLAN NUMBER
9.7.80	RAINFALL STATISTICS	514747.

1834

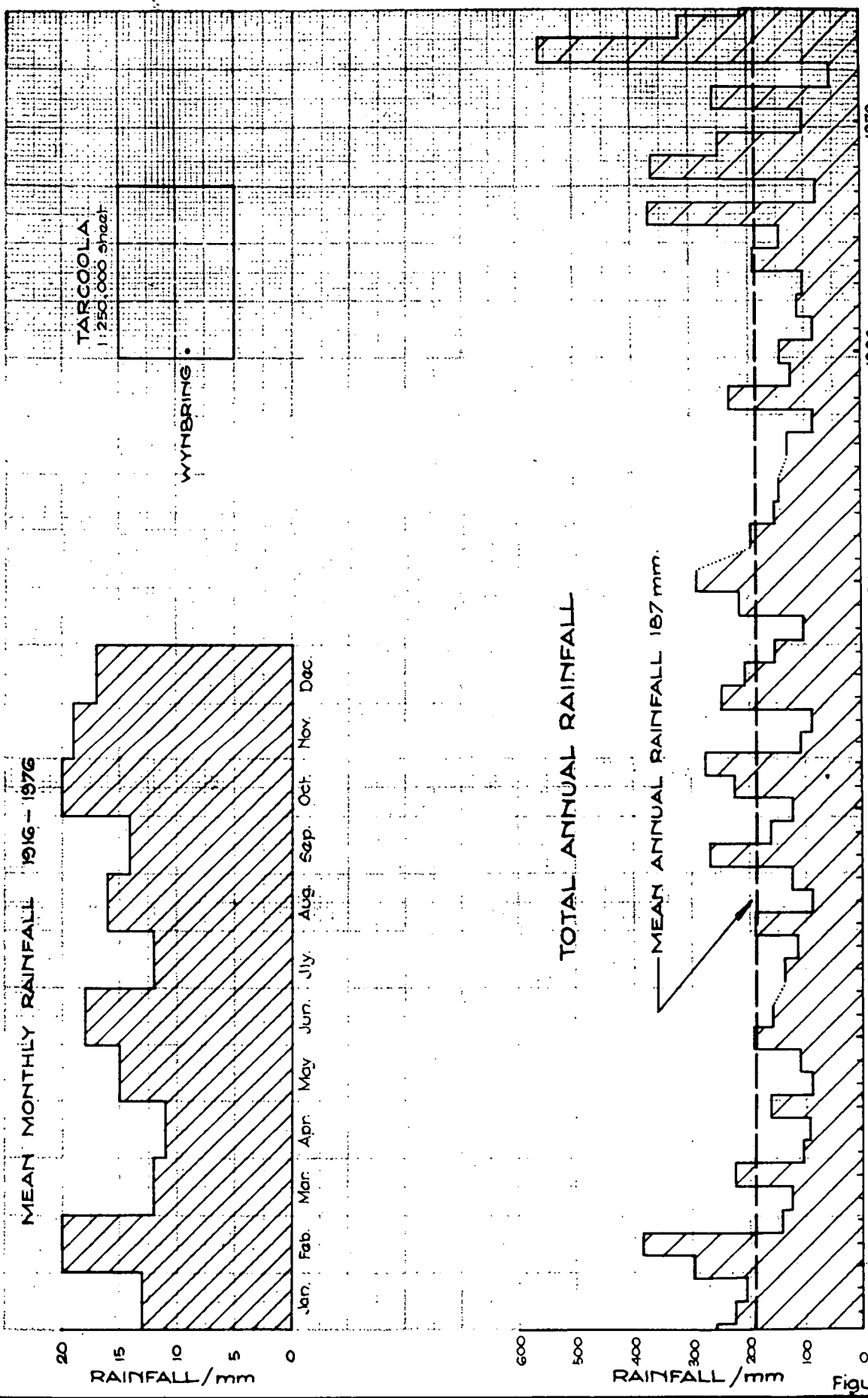
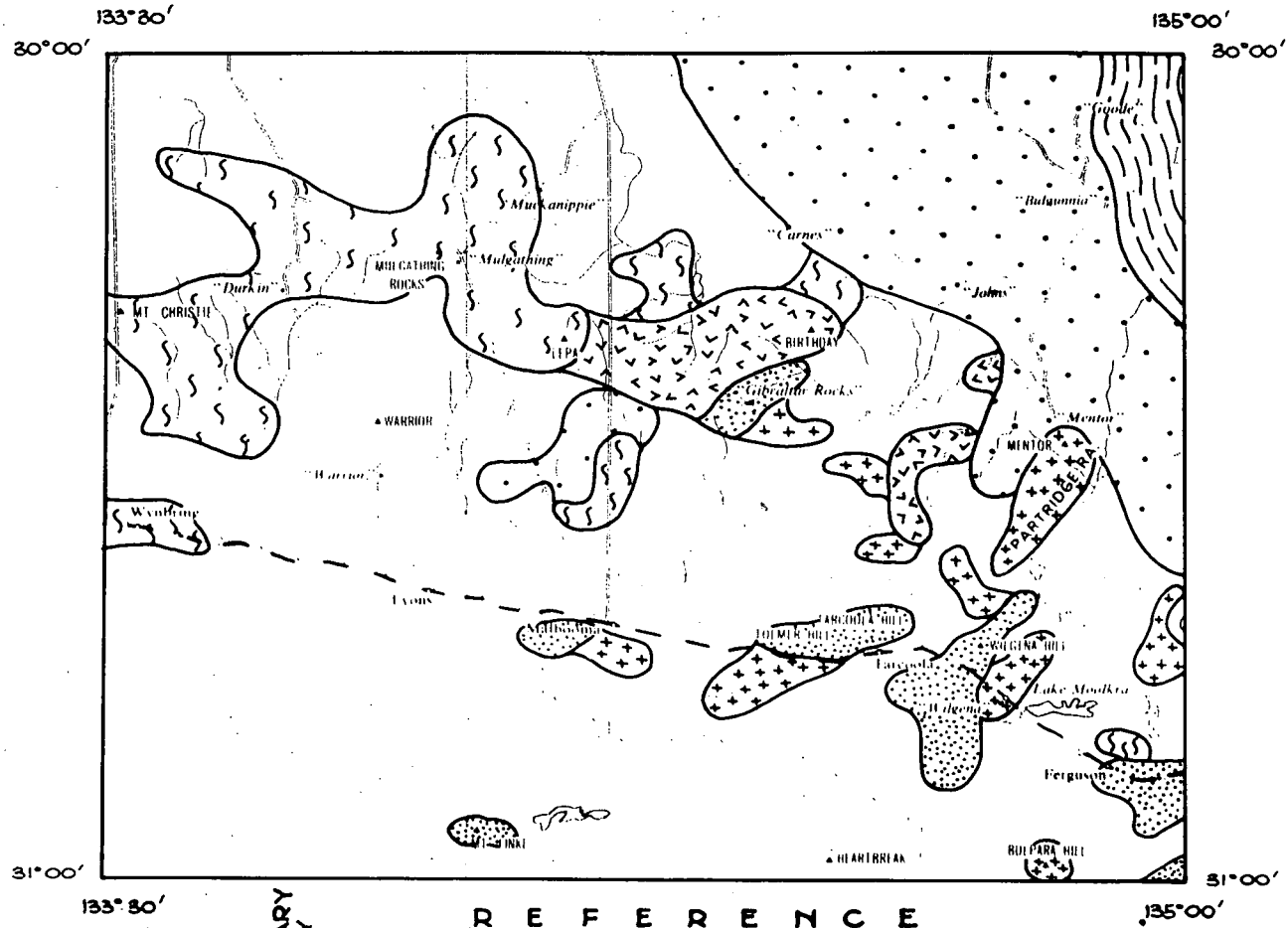


Figure 28.

	DEPARTMENT OF MINES AND ENERGY SOUTH AUSTRALIA	SCALE
COMPILED F.J. ASLIN	TARCOOLA 1:250,000 WATER WELL SURVEY	DATE 2nd. April '80
DRN C.J.W. CKD	WYNBRING	PLAN NUMBER
9.7.80	RAINFALL STATISTICS	514748.

1834



REFERENCE

QUATERNARY -TERTIARY

SAND DUNES, sand spreads and lake deposits with ferruginous gravel, calcrete and silcrete.

MESOZOIC

BULLDOG SHALE - fine grained clayey siltstone

CADNA-OWIE FORMATION - fine-medium grained sandstone

UPPER PROTEROZOIC

KOKATHA and HILTABA - Granites

GAWLER RANGE VOLCANICS.

TARCOOLA BEDS - Dolomite shale, sandstone and quartzite.

LOWER PROTEROZOIC

MULGATHING COMPLEX and HUTCHISON GROUP - Schist, gneiss and amphibolite with altered basic and ultrabasic rocks.

SCALE

0 10 20 30 40

KILOMETRES

Figure 3.

DEPARTMENT OF MINES AND ENERGY
SOUTH AUSTRALIA

COMPILED F.J. ASLIN

C.D.O. 4.7.80 DATE

DRAWN C.J.W.

SCALE 1:1000,000

DATE 2nd April '80

CHECKED

PLAN NUMBER S14749

TARCOOLA 1 250,000 WATER WELL SURVEY

GENERALIZED GEOLOGY

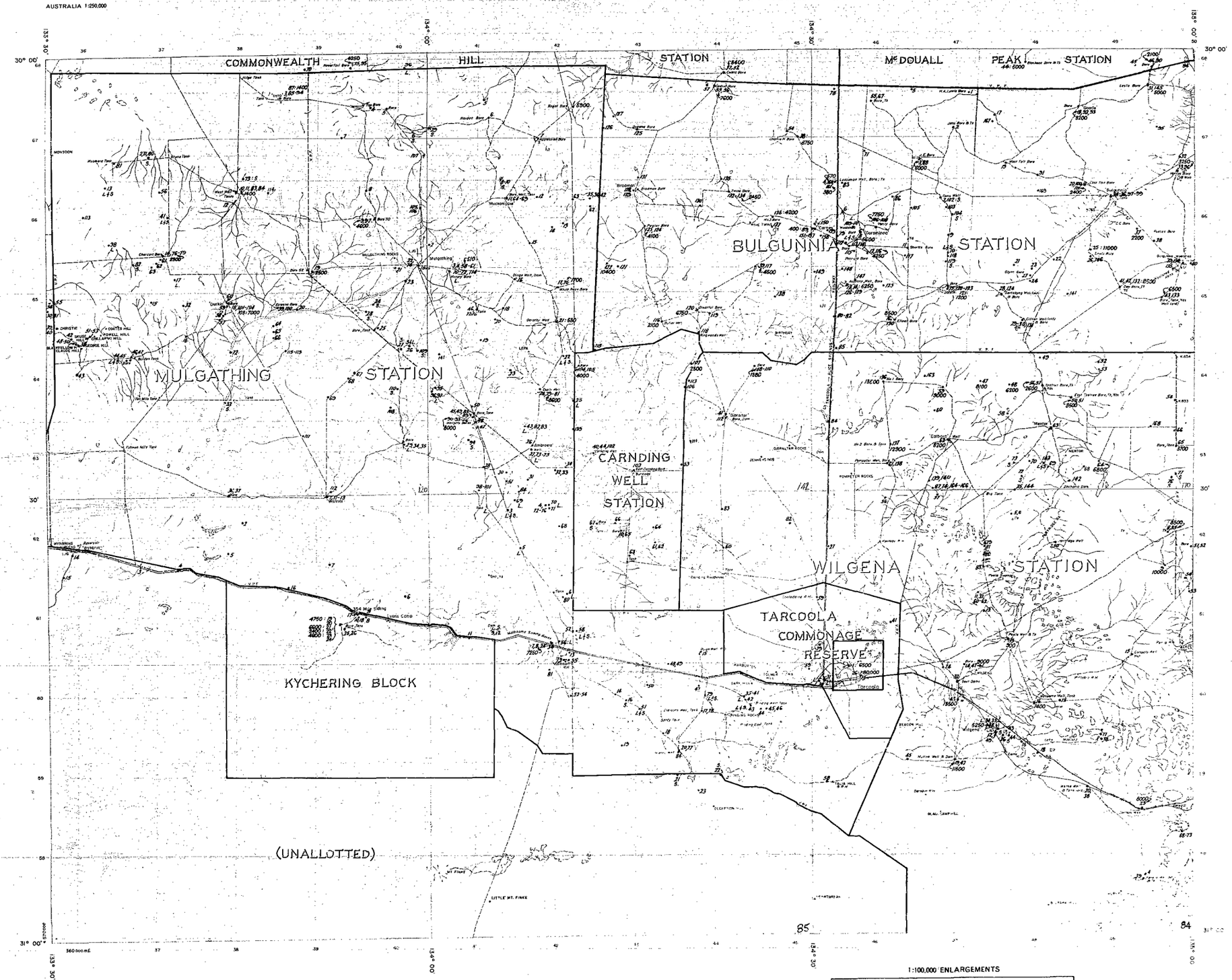
7834

TARCOOLA

DEPARTMENT OF MINES AND ENERGY—SOUTH AUSTRALIA

AUSTRALIA 1:250,000

BORE LOCATION SERIES



REFERENCE

TARCOOLA TOWNSHIP

See microfische for detailed location of the following wells

5836—1-3, 21-24, 26, 33, 40, 63-67.

Well Number (see below) 57

Salinity (mg/ℓ) 2700

Abandoned well-- salt ..... S

Abandoned well-- low yield L

Pastoral Boundaries .....

To obtain full Well Unit No., prefix well number with 1:100,000 sheet number

Bore, Well, Tank .....

Waterhole .....

Dam .....

River .....

Swamp .....

Clay Pan, Salt Pan .....

Head Station .....

Outstation .....

Landing Ground, Aerodrome .....

Railway .....

Highway & National Route No .....

Track .....

Triangulation Station .....

Astronomical Station .....

BASE MAP — Department of Mines and Energy, South Australia

PROJECTION — Universal Transverse Mercator

GRID — Australian Map Grid, Zone 53

The location of bores on this plan is derived from Departmental and private sources. Bore detail may be available from Departmental records upon application

ADJOINING 1:250,000 SHEETS

TALLARINGA	COOBER PEDY	BILLAKALINA
BARTON	TARCOOLA	KINGOONYA
FOWLER	CHILDARA	GAIRDNER

SCALE 1:250,000

KILOMETRES 5 0 5 10 15 20 25 KILOMETRES

1:100,000 ENLARGEMENTS

5637	5737	5837
5636	5736	5836

Figure 4.

DEPARTMENT OF MINES AND ENERGY SOUTH AUSTRALIA

TARCOOLA 1 250,000 WATER WELL SURVEY

WELL LOCATIONS, SALINITIES AND PASTORAL BOUNDARIES

COMPILED	F.J. ASLIN
DRAWN	C.J. WARMAN
DATE	2nd April '80
CHECKED	
C.O.D.	DATE
SCALE	1:250,000
PLAN NUMBER	80-219

1834