DEPARTMENT OF MINES SOUTH AUSTRALIA

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DRILLING & COMPLETION PRACTICES

IN THE GREAT ARTESIAN BASIN.

by

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12th October, 1971

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THE GREAT ARTESIAN BASIN

ABSTRACT

IN

The waste of underground water from the Great Artesian Basin has been reported on many occasions. Attempts to rehabilitate these bores in the past were only partially successful due to the corrosive nature of the water. A new approach to the completion and rehabilitation of shallow bores has been developed. The order of magnitude of funds required to repair or replace existing bores in the Basin is \$560,000. Control of existing drilling practices in the area is recommended to prevent the perpetuation of malpractices.

INTRODUCTION.

The poor condition of flowing bores in the Great Artesian Basin section of South Australia has been recognised for many years. Limited action has been taken to correct this situation or to prevent its perpetuation by poor drilling and

completion practices within the Basin.

The condition in South Australia was summarised by Johnstone (1968) as:

> - of the 1970 deep artesian wells recorded, it is estimated that:

30 have some form of control but need repair;

30 are adequately controlled;

- 40 cannot be located, or have ceased to flow, or have very small flows etc.
- the total present flow rate is conservatively estimated at 34.5 million gallons per day. The decrease in flow is estimated at 1.59% per annum (1.89% per annum west of Marce and 1.23% per annum for the remainder of the Basin).

Shepherd and Hancock (1964) reported on action in other States where the Great Artesian Basin exists:

New South Wales

There are 640 flowing bores in the Great Artesian Basin and 6 men are fully employed in measuring the flow, pressure and temperature of these bores. The work of reconditioning these old bores is now well advanced; all these are pressure cemented. <u>Queensland</u>

There were 2,500 artesian bores, but approximately onethird have ceased to flow over the past 50 years. In 1954 a Committee concluded that, although decreasing artesian supplies in Queensland "constitutes a disability, its incidence, particularly from an economic viewpoint is far less serious than was feared in many quarters when the investigation commencedAs bores ceased to flow, adequate supplies of water can in general be made available by pumping from the bore which has ceased to flow

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and by the provision of other artesian or sub-artesian bores or excavated tanks." It was considered that "The chief problem for the Government is to ensure that the flowing supplies are utilised in the best interests of all concerned." It was also recommended "that a general programme for the strict conservation of flows from existing artesian bores be not undertaken." Johnstone (1968) reported that Queensland flowing production had decreased as follows:

 1914
 355 m.g.d. from 1229 bores

 1943
 229 m.g.d. "
 2008 "

 1954
 211 m.g.d. "
 2500 "

 1968
 192 m.g.d. "
 3060 "

and that control procedures had been introduced.

The diminution of flow rates is not a new phenomenon. L. Keith Ward (1946 page 50) reports that the Fifth Interstate Conference on Artesian Water in 1928 was informed that for "233 bore holes at which there have been gaugings from 1914 to 1928 the flow had diminished by 39.92% over the whole period, or by an average annual amount of 3.07%. This figure for the rate of annual decrease in flow has diminished, and is now 2.18% of the 1914-1915 flow." L. Keith Ward (1946) continues - "To conserve the supplies, it is obvious that every precautionary measure should be taken during the construction of every new borehole to enable the flow to be controlled and shut off when the issuing water is not being turned to account."

Notwithstanding this early appreciation of the problem, in 1971 there is no inspection of drilling or completion operations of new bores in the South Australia sector of the Great Artesian Basin. Registration of drillers is not required, and new bores could

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be completed in a manner similar to early drilling practices where control is limited to the number of years it takes the casing to corrode.

THE GREAT ARTESIAN BASIN

The Great Artesian Basin in South Australia occupies 119,820 square miles, taking up the whole of the northeastern portion of the State. The Basin is situated almost solely in remote, sparsely populated parts of this State in areas suit_oblo for only light sheep or cattle grazing. The area of interest is shown in Fig.1.

The main intakes to the Great Artesian Basin have been determined as being from the western margins of the Queensland-New South Wales Great Dividing Range. The isohalsine plan (Fig.1) indicates the gradual southwesterly deterioration in water quality in the main portion of the Basin in South Australia. The quality deteriorates further to the southwest towards the natural outlets the mound springs where, except for high surface evaporation resulting in concentration of the salts, the water is still of good stock quality (Ker, 1964).

Mound springs, together with other springs within the basin, provide the only natural escape for pressure waters. The present generation of mound springs are at a much lower elevation than the older extinct springs which form a prominent feature of the landscape in the Coward Springs-Beresford-Strangways area. These older springs, now 100-120 feet above the plain level reflect a period of much higher groundwater pressure of the aquifer than at present. Although the recent springs are at a lower elevation, they yield no large supplies but are mostly soakages. (Ker, 1964). The chemical characteristics of the underground water vary considerably. It is normally divided between "sulphate waters" in the west and "carbonate waters" in the northeast. The "sulphate waters" have apparently some positive correlation with higher salinity areas noted in Fig.1. They form a highly corresive fluid which attacks steel, and the water bere casing and/or headwirks are caten out in one to two years. Artesian beres, completed in the traditional manner within these areas have a very limited effective life before they deteriorate into an uncontrolled water flow with no visible casing or headworks. The final result is a crater or lake covered with reeds and the actual location of the original bere is often obscured.

The corrosion of the surface well-head and casing is aggravated by lack of care and maintonance. In many instances water is not piped to a sufficient distance from the bore, the ground in the vicinity becoming saturated with corrective water, and early failure of the bore casing is the inevitable result. Leaks in the well-head are rarely repaired, and drains are not maintained - both malpractices contributing to early deterioration and failure.

The full implication of the corresive nature of this water was not appreciated until recently. Johnstone (1963) reports that of fourteen wells rehabilitated up to 1968, ten of these were within the greater than 150 isohelsine area - and approximately seven of these have failed since rehabilitation.

It is fortunate that the main corrective areas exist in the the shallow margins of the basin where bere depths rarely exceed 1,000 feet. The cost of redrilling, or rehabilitation within the margin of the basin is considerably less than the

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northeast of the State where bore depths are up to 7,000 feet.

REMEDIAL WORK TO 1968

Johnstone (1968) reports on a meeting held in Bebruary, 1964, between the South Australian Department of Mines and members of the Department of Lands Pastoral Board to discuss the problems associated with the rehabilitation, control and maintenance of bores in the Great Artesian Basin. The main considerations arising from this meeting were:

- 1. That conservation of underground water by control of flowing boros was essential.
- 2. That an inspection of bores would be made by the Department of Mines in 1964.
- 3. That recommendations would be made for priorities in control of existing bores following those inspections.

Since that time, Johnstone (1968) reports that the following work has been carried out:

Report by D. Ker (1964), Geologist, followed an inspection of the Basin. Though basically a hydrogeological assessment of the geology and groundwater prospects, he records "it can be easily seen by anyone visiting those bores that only a small percentage of the flowing water is being used profitably. Depending on the number of stock per bore and on the yield, the percentage of flow used would probably vary from 1% - 2%. It cannot be emphasised too stringly that the water flowing though the drains does not return to the main aquifer but it is lost by evaporation and

percolating, and is dissipated in shales and sends lying at shallow depth below the surface. Heny boreheads and drains are in a deplorable condition such that the surroundings have become extremely boggy and treacherous to stock and vehicles alike. The stock losses are considerable around these and also in the vicinity of some natural springs. There are cone bores such as Old Tilcha, Culberta, Old Kopperamanna bores which were abandoned because of lack of proper care and upkeep;;; The advantages of flowing water over non-pressure water (which required equipment and power for production), are considerable and should be actively guarded The urgent need for reliable levels, selective flow and pressure tests, and proper regulated control of all flowing bores in emphasised."

-Levelling of flowing bores in the Great Artesian Basin was undertaken - refer progress reports by

C.W. Fryters (1967a), J. Erekelens (1967),

S.C. Wills (1967), C.W. Fryters (1967b).

-Fourteen bores have been re-cased and pressure cemented. Of these bores, seven have deteriorated due to corresive waters, and require further attention.

-Repairs have been attempted, or detailed preliminary work and inspections carried out on five bores. -Laintenance of headwork on stock route bores mainly

along the Birdsville Track.

-Inspections and pressure testing of Birdsville Track bores.

Although a review of the Artesian Basin was undertaken and some rehabilitation work attempted, little progress has been made in the control of wastage or prevention of the decline in aquifer pressure. Artesian bores drilled since 1964, particularly in the "corrosive" sector of the Basin, will further add to the legacy of lost pressures and flows that can never be retrieved.

DRIVING OF JEJ JELLS

Considerable improvement in the completion of water wells has been introduced into Bouth Australia in recent years; Stanley (1967) and Hancock (1971). These have resulted from:

- increased application of prossure calenting;

- the introduction of plastic coated steel casing;

- the use of inert plastic pipe as casing.

Using a combination of these innovations, Hancock (1971) has outlined three alternative types of completions for flowing artesian bores;

1. Deep artesian well completions;

2. Shallow artesian well completions (non-corresive water)

3. Shallow artesian woll completions (corresive water).

These types of completion are a considerable advance on the original techniques used by drilling contractors in the development of the Great Artesian Dasin (Fig.2). They are aimed at long term life for the producing well, control of contamination and pollution, positive regulation of the water flow, and conservation of the aquifer pressure.

As a generalisation, the initial capital cost of the recommended type of completion (Hancock, 1971) is higher, and requires a greater degree of competence on the prt of the driller than earlier techniques. However, the modern completion offers the

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best and cheapest method of obtaining long term control of artesian wells. The higher initial cost is more than compensated by the trouble-free life of the bore, since the cost of repairs, maintenance or rehabilitation of poorly completed bores is both difficult and exponsive.

It is considered that the new techniques available for drilling and completion can attain long term bore life in the Great Artesian Basin. Their use, specification and implementation is recommended. Further work by Andel on anti-corrosive materials. and improvements in completion techniques are considered warranted.

PROBLEMS OF BORE REHABILITATION

It is submitted that <u>new</u> bores in the basin should be completed in the best possible way that costs and technology will allow.

On the other hand, in South Australia the question of whether the <u>existing</u> bores should be repaired and controlled remains to be resolved. Artesian bores in New South Walcs have been repaired and flow restrictions placed on production. <u>Underground water. like all our other resources. exists in some</u> <u>finite quantity and it may be argued that it chould be preserved</u> for future generations.

There are significant problems associated with this bore rehabilitation. A number are enemurated:

-Responsibility: the oldest wells were drilled by contractors on stock routes, in an effort to develop the North. Other bores were completed for the Pastroal Board, the Commonwealth Railways and pastoral holdings.

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Present limited finance within each area results in a status quo while the underground water runs to waste. As quoted in Ker's report (1964), many of the bores and drains are in "deplorable condition such that the surroundings have become extremely boggy." Some wells are centred in the middle of lakes or deep crators where the cost of locating the bore, plus earthworks to move the required equipment over the bore would constitute the major cost in the remedial operation. The number of bores requiring repair is unknown. For example, some bores have suffered major reductions in flow. This could be for a number of reasons - collapse of the overlying aquiclude to plug the aquifor; bridging of the bore to prevent the rise of artesian water; or very possibly the corrosion and holing of casing co the artesian water is escaping - at an unknown rate, into thief zones higher up the section.

This last alternative constitutes a permanent loss of our pressure underground water, contributes to declining aquifer pressures, and can only be detected by using subsurface equipment (D. Lock, 1971).

- The costs of repairs to rehabilitate artesian bores are prohibitive so far as pastoralists are concerned. Fourteen bores were rehabilitated between 1964 and 1968. Costs for twelve of these bores totalled 075,200, and costs for the remaining two were not itemized.

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A number of techniques have been developed to rehabilitate existing bores so that long term life can be expected. Technically, this is feasible. However, considerable funds would be required to have a significant impact on the conservation of the underground water pressure.

REMABILITATION OF EXISTING BORES WITH PLASTIC PIPE

The advantage of P.V.C. pipe is its resistance to corrosion, and this single advantage dictates its use in the corrosive section of the Great Artesian Basin.

The main limitations to using P.V.C. pipe as casing

are:

- it cannot be used as a substitute for steel casing when drilling with a cable tool plant;
- its softening point, required under the Australian Standard K 138, is a minimum of 75°C (167°F). This restricts its use to 'cool' artesian bores;
- possible damage to the P.V.C. pipe when drilling out cement, following pressure cementing;
- the P.V.C. pipe must be adapted to steel wellhead equipment to avoid damage by vandals or cattle;
- a reliable cement bond cannot be obtained to the P.V.C. pipe without surface treatment of the P.V.C.; /·4
 the specific gravity of P.V.C. is approximately 404; thus it tends to float when running in a hole filled with the weighted mud necessary to control the artesian pressure.

P.V.C. pipe is aveilable in a large selection of sizes and wall thickness. It must be stored and transported with care to provent damage and distortion.

Efforts have been directed to using P.V.C. pipe for casing. Completions have been successfully achieved both inside and outside the Great Artesian Basin.

A number of techniques have been developed for cementing P.V.C. pipe in artesian wells. Two such operations are illustrated:

Fig.3: Casing with large diameter P.V.C.

Fig.4: Casing with small diameter P.V.C.

Both these programmes are designed to overcome the limitations of using plastic materials:-

- The plastic pipe or cementing tools do not require cleaning out after pressure cementing.
- the plastic pipe can be cemented in flowing artesian bores or in bores controlled with weighted drilling fluid.
- A limited lenght of steel pipe is run as the lower section of the casing to overcome buoyancy. It is comented in a section of the bore where ultimate corrosion and failure will not adversely influence the long-term control of the bore.
- The lower joints of the P.V.C. pipe are treated by using P.V.C. cement and attaching coarse beach sand to give a bond to the sulphate resistant cement.

The advantages of having an inert, non-corrosive casing to control waste of water and depletion of aquifer pressures are such that the use of this material must be stipilated whereaver

depth and temperature considerations allow its use.

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ABANDOMMENT OF CRATERED BORES

The exact location of many bores is camouflaged by swamps, reeds, deep washouts and craters in the vicinity of the bore. The worst occurrences exist where the original bore was drilled in a depression with poor drainage. (All new artesian bores must be drilled on "high spots" where drainage of water away from the bore will materially reduce the cost of repairs and rehabilitation (Smith, 1965).

The cost of roadwork or bridge construction to gain machine access to the existing bore area, plus the final location of the bore, forms a significant cost in the rehabilitation work. Having located the original bore - entry of drilling and cleanout equipment has been prevented by railway sleepers, railway iron, boulders and general rubbish which has been dumped into the water-filled crater. In other instances old drilling equipment and corroded casing form further obstacles to economical and successful completion.

In these cases, abandonment of the bore by cementing off the artesian flow and replacing with a correctly completed bore is the logical and cheapest solution on the shallow western margin bores.

The development of angle drilling capacity of rotary drilling machines (similar to the Gryphon 5 Mark II unit operated by this Department), offers the means of economically drilling a new hole to intersect the aquifer close to the original bore. Following the establishment of communication between the two holes, they can both be abandoned by pumping full of cement. A programme is included in Fig.5.

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ESTIMATED COSTS

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The Summary of the condition of Artesian Bores (after Johnstone, 1968) is included in the Appendix.

Eighty bores needing early attention are highlighted. Work associated with these bores could vary from the replacement of surface equipment, to lining with P.V.C. pipe, to final abandonment and redrilling a replacement bore. The cost of this work is impossible to estimate on existing information.

Recent estimates have been prepared, covoring rehabilitation and repair of a number of bores:

| | | Estimated Cost |
|-----------------------|--------------|----------------|
| | | (8) |
| Coward Springs | (084000017) | 4,000 |
| McEwins | (084000013) | 5,000 |
| Wood Duck | (082000004) | 6,500 |
| Watsons Creek | (072000009) | 6,500 |
| Duck Hole | (08200002) | 6,500 |
| Raspberry Cree | k(073000001) | 6,500 |
| Strangways Springs | (084000004) | 4,500 |
| Honeymoon | (083000053) | 7,000 |
| | | |

46,500

Mobilisation

\$50,500

4,000

All these bores are located in the shallow western margin area deeper bores towards the centre of the Basin may require up to \$20,000 for rehabilitation. As a guide to the total funds required to rehabilitate, repair or replace the main bores in the basin, an estimate of \$7,000 per bore is considered an average figure. Total funds for 80 bores requiring attention will approximate \$560,000. To be effective, these funds would be required in equal increments over a 7-year period.

Not only is the repair of existing bores a major cost factor, but more importantly, it is imperative that new bores being drilled now and in the future, be completed in the best possible manner. This cannot be achieved without the development of some Authority to control the activities of drilling contractors. This Authority will constitute a further cost element in the control of wasteful practices presently occurring with our underground water resources.

CONCLUSIONS

The ruthless exploitation of the Great Artesian Basin has been going on for years. The significant conclusions resulting from this review of the problem are:-

- Future bores constructed in the Basin should be rigidly controlled so that they are completed in the best manner that costs and technology will ellow.
- Only licenced drillers should be allowed to operate in the area.
- Bore completions <u>can</u> be attained which offer long-term control and conservation of underground water, even under the most corrosive conditions.

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- Research in conjunction with Amdel on corrosion protection and control could assist in further dovelopments.

- Existing bores are flowing water to waste, at a conservative estimate of 34,500,000 gallons per day. Effective rehabilitation, repair or abandonment <u>con</u> be achieved.
- Funds required to control major losses of water, so bores can be "shut off when issuing water is not turned to account" are estimated to be of the magnitude of ()560,000.
- Funds for this work are not available from the rural sector which was largely responsible for the exploitation of the Basin.

ACKNOLLEDGIALENTS

I wish to thank Mr. J. Boyd, Senior Drilling Overseer, for the information resulting from his experience gained on the repair and rehabilitation of ertesian bores in the Great Artesian Basin. By thanks are also due to other personnel in the Drilling Section who contributed discussion and criticism of the modified completion techniques.

The work conducted by Mr. I. Johnstone formed the basic framework for this report, and his work is gratefully acknowledged.

(DJS:MFV: 12/10/71)

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APPENDIX

Key to bores shown on Fig. 1

١,

| Grid Reference | llundor | Name of Bore | | | | |
|-------------------|---------|----------------------|--|--|--|--|
| G 1 | 2 | Allinga (Lit. Daro) | | | | |
| | 9 | Hamilton Creek No. 2 | | | | |
| | 10 | Junction | | | | |
| | 11 | Benory Creek | | | | |
| | 14 | llount Garah | | | | |
| | 15 | Stevenson's | | | | |
| | 16 | Appirinna | | | | |
| | 18 | Vitcherio No. 1 | | | | |
| G 2 | 1 | Horse shoe | | | | |
| | 2 | Alberga | | | | |
| • | 3 | Gire Creek | | | | |
| | 4 | Macumba Nonestead | | | | |
| | 5 | Brown's Creek | | | | |
| | 6 | Codnadatta Town | | | | |
| | 8 | Allandale Homostead | | | | |
| | 9 | Watson's Creek | | | | |
| | 11 | Vondillina Honestead | | | | |
| | 14 | Hount Dutton | | | | |
| | 16 | Big Cadna-owie | | | | |
| | 17 | Øchenden | | | | |
| | 23 | Cootabarcoollia | | | | |
| | 29 | Toondina No. 1 | | | | |
| | 30 | Toondina No. 2 | | | | |
| | 34 | Honn's Creck | | | | |
| | 37 | Plantation | | | | |

| | e Anno 1997 - Anno | |
|-------------|---|-----------------------------------|
| G 3 | 1 | Raspborry Creek |
| | 11 | Peake (United Aborigines Ciesion) |
| | 15 | 5-Cilo (Nilponna) |
| | 17 | Ono Pres Bore |
| | 20 | 1-aile bore |
| | 21 | Dirribirrianna bore |
| | 210 | and opring |
| | 22 | Gerdon bore |
| | 23 | Old Dilpinna hosestead |
| | 27 | Edsards Crook Ro. 2 |
| | 36 | Villov bore |
| | 53 | Wild Bog Creek |
| R 1 | 1 | Purnie No. 1 |
| Н З | 1 | Snoke Creek |
| | 2 | Duck Hole |
| | 3 | Peachanurroma |
| | 4 | Good Duck |
| II 3 | L y. | l'ilne |
| | 21 | Johnstone No. 3 |
| | 24 | Lovi |
| | 29 | 3 Springs - Anna Creek Station |
| | - 36 | Hope Creek |
| | 40 | Douglas Greek |
| | 41 | Applistice |
| | 52 | "Little" Blythe |
| | 53 | Eonoynoon |
| | 5 4 | Sunny Greek |

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|------------|---------------------------------------|-----|-------------------|
| | R 3 | 58 | Nancy's |
| - | | 60 | Undum |
| • | | 65 | Big Blythe |
| • | 14 | 4 | Strongways |
| | | 6 | Lothdridge |
| | | 8 | Derectord |
| t; | | 10 | Ang ua |
| | | 11 | Welcome |
| | | 13 | ' licEwin |
| | | 14 | Trig bore |
| | | 17 | Coward Springs |
| | | 19 | Margaret Creek |
| | | 34 | Prices |
| - | | 56 | New Anna Creek |
| - | | 59 | Kunns |
| - | | 60 | One Free bore |
| • | 12 | 2 | Poonarunna Eo. 1 |
| | I 4 | İŞ. | Lake Letty No. 4 |
| | · · | 5 | Lake Letty No. 3 |
| | | 6 | Lake Lotty No. 2 |
| | | 7 | Morris bore |
| •~ | | 8 | Lake Letty IIo. 1 |
| • • | | 9 | Deerald Springs |
| - | | 10 | Curdinurka |
| | | 13 | Nov Year Gift |
| | | 15 | Smith's bore |
| | | 17 | Eorris Creek |
| | | | |

-3-

| | - | | |
|-----|---|----|--------------------------|
| | I 4 | 18 | Charles Angus |
| • • | | 19 | Pinnis bore |
| - | | 21 | Beatrice boro |
| • | | 23 | Alberrie Creek |
| | | 24 | Venable's bore |
| | · | 25 | Cooryanna |
| · | | 26 | Gallanna |
| P. | | 44 | Davenport Springe |
| • | · · · | 46 | Bopeechee |
| • | | 48 | Bull Paddock |
| | | 66 | Jack Boot |
| | | _ | 70 |
| | 15 | 1 | Coyder's Lagoon |
| - | | 2 | llount Gason |
| • | | 7 | <u>Eirra</u> Litta |
| | J 3 | 3 | Lungorannie |
| | | 6 | Lulka |
| • | | 8 | Sopperanana IIo. 1 |
| | • | 9 | Kopperanana No. 2 |
| | · · · · · · · · · · · · · · · · · · · | 11 | Cannewaukeninna |
| | 34 | 1 | Peachawarring (Kelly's) |
| | | 2 | Clayton |
| - | | 3 | Torkanina |
| • A | | 4 | Dulkaninna (Frome Greek) |
| • | | 5 | Sinclair |
| | | 6 | Barion |
| | | 7 | Lake Harry |
| • | . · · · · · · · · · · · · · · · · · · · | 9 | Branson's |

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| | والمحمد ومكان فتخطر برداري انتفك فالمستان ويستعلن ومقال ومقال وخالي وخالي فتكانته والمراجع والمرد فيبر | |
|-----|--|--------------------------|
| J 4 | 11 | Frome Crock |
| | 12 | Nergott Springs |
| | 13 | Larree Railway |
| , | 15 | Marree No. 2 |
| | 16 | Abdul |
| | 17 | Harree No. 1 |
| | 19 | Coolong Springs |
| | 20 | Well Creek |
| | 21 | Lake Billy bore |
| | 23 | Two Mile bore |
| | 24 | and Spring |
| | 29 | Cooryaninna |
| | 30 | Jowellery Croek |
| | 31 | Old Troudaninns |
| | . 32 | New Troudeninne |
| | 33 | Chapalanna |
| | 34 | Yarra Mill |
| | 35 | Clayton Dam |
| | 37 | Nick of Sime |
| | 43 | Junction |
| | 65 | Clarks bore |
| | 71 | St. Stephens Ponds Ro. 3 |
| , · | 72 | St. Stephens Ponds Ro. 1 |
| | 75 | Peters Camp |
| | 76 | St. Stephens Fond No. 2 |
| X 1 | 6 | Pandie burra No. 1 |
| | | |

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| K 4 | 3 | Monticollina |
|------------|----|---------------------|
| | 5 | Toon katchen |
| | 9 | Reteor |
| | 12 | liurnpeowie |
| | 17 | Quart Pot |
| | 22 | Dean's Lookout |
| | 23 | Petermorra |
| | 25 | Lake Crossing No. 4 |
| <i>.</i> | 33 | Vollatchie |
| | 69 | Yerila |
| L 2 | 9 | Patchavarra |
| ¢ | 11 | Innemincka No. 1 |
| | 23 | Gidgealpa No. 1 |
| | 25 | Gidgealpa No. 6 |
| | 27 | Nerrimelia No. 1 |
| L 3 | 11 | Dullingari No. 1 |
| L 4 | 5 | Old Tilcha |
| | 6 | Silcha |
| | 7 | Coonanna |
| | 8 | Yandanna |
| | 13 | Fortville Ho. 3 |
| L 5 | 6 | Buloocurtina |
| | 7 | Cootabarlow No. 1 |
| | 9 | Cootabarlow No. 3 |
| | 10 | Lakeside |
| | 11 | Black Cak |

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| L 5 | 12 | Boundary (Lake Boolka) |
|-----|----|------------------------|
| · . | 14 | Connee Creek |
| | 16 | Arboola |
| | 17 | Curraworra |
| | 21 | Glonmanyie No. 1 |
| | 55 | Glenmanyle No. 2 |

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FIG. 6.

125000011

BLACK OAK BORE

Neg.20314

An existing artesian bore equipped with control valves, and with a dry area in the vicinity of the well head.

This completion is satisfactory but varies from the recommended artesian well headworks (Hancock, 1971). Production can be "controlled and shut off when the issuing water is not being turned to account" (L. Keith Ward, 1946)



FIG. 7.

Photo D. Lock

NCEWINS BORE 084000013

Neg...

Uncontrolled artesian flow of 220,000 gallons per day gushing from a small diameter pipe. A storage tank was built around the original bore. This became filled with solids, resulting in the elevated position of the water discharge.



FIG. 8.

HORSESHOE BORE

072000001 14

Nes. 16731

An Artesian bore located in a swamp overgrown with weeds. The original bore site was selected in a low lying area with no natural drainage.



FIG - 9.

Photo - D. Lock

SNAKE CREEK BORE 08200001 Neg.... Uncontrolled artesian flow bubbling to the surface from the bottom of a lake 200 feet in diameter. The bore was drilled in a depression between sand dunes, with no natural drainage from the well head. The poor site selection will result in a very expensive re-equipment or abandonment operation.



FIG . 10.

Photo D. Lock

COORYANINNA 104000033

Neg...

Uncontrolled artesian flow of approximately 700,000 gallons per day issuing from pipe bend; also from bottom of deep pond surrounding the well head:



FIG-11

Photo D. Lock

DUCK HOLE BORE

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082000002

Neg

Uncontrolled artesian bore with a flow of 100,000 gallons per day gushing from the open casing.

A P P B B N D B I DX 2

SUMMARY

CONDITION OF ARTESIAN BORES

6.

·1M-2,70 A1811

REVISED LIST

SEPTEMBER, 1971

(Modified from Johnstone, 1968)

| N.S. | Not Seen |
|------|---------------|
| Fg | Flowing |
| Fd | Flowed |
| DNF | Did not Flow |
| ? | Flow estimate |

Flow estimated by visual inspection only Tested

Bores requiring early attention.

NOTES: 1.Original Flow Figures from Bulletin 23 (Ward, 1946) or Bore Record Cards. 2.Present flow figures quoted without qualification are unreliable and unconfirmed. 3.Flow quoted 1,000's gallons per day.

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| C | Grid | No. | Bore No. | Name | Reported Depth | Flow Original | 1,000G/D present | Salirity p.p.m. | Date drilled | Eore Level | Bore Levelling Survey Report No. | Conditions and Remarks | Pastoral , Lease |
|---|------|-----|-----------|----------------------|-------------------|------------------|---------------------|--------------------|-----------------|---------------------|---|---|--------------------------------|
| | GI | 5 | 071000002 | Allinga (Mt.Dare) | 1160' | 413 | 300? | 735 | 1917 | · · · | | Old Engineer-in- Chief bore. No report on condi- tion | Dalhowie Springs Station |
| | GI | 16 | 071000016 | Appirinna* | 1550' | · 25 | ⁻ 25 | | 1923 J | 304 ' | 3 | Uncontrolled from 6" casing broken off at ground level - overgrown with reeds | Macumba Station |
| | G2 | 2. | 072000002 | Alberga | 1200' | 156 | 230T [.] | 1904 | 1942-45 , | 390.87' | 3 | Fully recondition- ed by D. of M. June1968. 3" P.V.C. pressure cemented. Flow tested after reconditioning. | Commonwealth Railways |
| | G2 | 8 | 072000008 | Allandele H.S. | 12501 | D.R.F. | | 3414 | 1954 | 434 | 3 | 6" open casing and windmill. | Allandale Station |
| | ES | 41 | 083000041 | Armistice* | 1250' | 50 | 60T | 5340 | 1918 | | | Uncontrolled: Fartially repair- ed Sept.1965 but not pressure cemented - no valve (flow test- ed after partial relining) | Anna Creek Station |
| | H4 | -10 | 084000010 | Angus* | 319' | . 86 | 40? | 3555 | 1920 | 68.32 | 2 | Uncontrolled: concrete ring around open casing | Stuart Creek Station |
| | I4 | 23 | 094000023 | Alberrie Creek | 690' | 11.5 | 0.5 | | 1942 | 90 . 23' | 2 | Fully controlled: pressure cemented 4" P.V.C. D. of M. Cct.1967 | Commonwealth Railways |
| | J4 | 16 | 104000016 | Abdul | 241' | 72 | Small | 2020 | 1915 | 154.51' | 1 | Equipped windmill poor condition | Marree ' Township |
| | 1.5 | 16 | 125000016 | Arboola | 1060' | .230 | | 1728 | 1913 | | | Controlled: sound condition? | Quinyambie Station |
| | | | | - ' | | | | | | | | | |
| | | | • | | | | | | н. 1. | · · · · · · · · · · | | | |
| | I | | 1 | 1 | 1 | 1 | | 1 | | | | [| 1 |

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| Grid | ro. | Bore No. | Name . | leported Depth | Flow Original | 1,000G/D present | Salinity p.p.m. | Date drilled | Bore Level | Bore Levelling Survey Henort No. | Conditions and Remarks | l'astoral Lease |
|------------------|-----|-----------|---------------------------|-------------------|------------------|---------------------|--------------------|-----------------|---------------|---|--|------------------------------|
| G2 | 5 | 072000005 | Brown's Creek* | 2,100' | 10 | 5 | 2357 | 1920 | 346' | 3 | Uncontrolled: from 4" casing and flowline, all badly corrod- | Macumba Station |
| · G2· | 16 | 072000016 | Big Cadnaow ie Bore* | - ? | 18 | ? | 2992 | ? | | | ed No details | Allandale Station |
| G3 | 21 | 073000021 | Birribirri- "nna Boro* | 80' | Large | ? | ? | 1014 | 2661 | 4 | Not located in reeds | |
| H3 | 65 | 083000065 | Big 31;rthe* | 700' | 250 | 150 | ? | 1918 | 42.07' | 4. | Uncontrolled: Very poor condit- ion, water bubbl- es up through sand in swamp over a large area. Big flow. | Peake Station |
| H(4 ⁻ | 8 | 084000008 | beresford | 310' | 173 | 60T ⁻ | 3713 | -1942 | 99.10' | 2 | Fully controlled: Repaired D. of M. Nov. 1965. 4" I.V.C. pressure cemented with 4" valve | C. A. Railways |
| I4 2 | 21 | 994960021 | Bentrice* | ? | 100 | 25 ? | 2343 | 1920's | 40.18' | 2 | Uncontrolled: Open 3" casing | Finnis Springs Station |
| I4 4 | 46 | 094000046 | Boreechie | ? | | Small | 2240 | ? | 11.14' | 2 | Uncontrolled: possibly spring | Finnis Springs Station |
| I4 4 | 48 | 094000048 | Bull Fadd- ock | ? | ? | Small | ? | ? | 26,08' | • 2 | Uncontrolled open 1%" pipe in cemented stone | |
| J4. | à | 104000009 | Brauson's | 1,005' | 4.3 | poor | 1885 | 1952 · | 109.91' | 1 | Uncontrolled, equipped(wind- mill poor condition | Stephen's Pond Station |
| · L5 _ | 11 | 125000011 | Black Cak | 454' | 24 | ? | 2855 | 1950 | | | Controlled, condition C.K. | Muloowurtina Station |
| I.5 | 12 | 125000012 | Boundary - L.K. Boolka | 1,676'6" | 300 | ? | 1500 | 1941 | | | Uncontrolled: Pair condition? | Tilcha Station |
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|---------------------------------------|-----------------------|----------|------|--------------|---------------------------------------|------------------|------------------|---------------------|--------------------|-----------------|---------------|---|---|--------------------------|
| | - | Grid | 110. | Bore No. | Pame 1 | eported Depth | Flow Criginal | 1,000G/D present | Selinity p.p.m. | Datc drilled | Bore Level | Bore Levelling Survey Report No. | Conditions and Remarks | Pastoral Lease |
| | | G2 | 23 | 072000023 | Cootabar- coollia* | ? | ? | ? | : 2557 | ? | P07.50' | 3 | Headworks? inside galvanised iron tank within flood- ed area | Allandale Station |
| | | H4 | 17 | 024000017 | Coward Springs* | 3081 | 1200 | 700? | 3255 | 1886 | 54.72' | 2 | Uncontrolled: new casing drilled down to acuifer in a crox. locat- ion of old bore. Flow portially reduced by cerent- ing 1967. Remains suspended but further work can be readily cerried out. | C.A. Reilways |
| | | 14 | 10 | 094000010 | Curdimurka* | 450'. | 86 | 43T | 2385 | 1942 | -/4.80' | 2 | Fully controlled- pressure comented 4" steel cosing D. of M. Nov.1966 Discharge to railway tork as required | D.A. Pailways |
| , , , , , , , , , , , , , , , , , , , | | I4 | 18 | 094000018 | Charles Àngus* | . ? | 250 | 100 | 16.45 | 1920 | 20.36' | 1 | Uncontrolled: From open 4" casing | Finnis Spring Station |
| | - | I4 | 25 | 094000025 | Cooryanna | 300'+ | 100 - | . 25 | 1376 | ? | 69.16' | 1 | Uncontrolled but in good condition | Callana Ctation |
| , , | • | I4 | 26 | 094000026 | Callanna | 330 ' | 15 | 10 | 1742 | 1942 | 143.89' | 1 | Uncontrolled but in good condition | Callana Stàtion |
| | | J3 | 11 | 103000011 | Cannuwauk- aninna* | 2847' | 276 | 540T | 1272 | 1916 | 61.23' | 4 | Controlled with old style head- good condition but casing suspect | Stadunra Station |
| • - - - | | J4 | 2 | 104000002 | Clayton* | 1704 ' | 800 | 740T | 1055 | 1908 | 148.30' | 1 | Controlled with old style hecd- dampness around concrete block- casing cordition suspect. | Stadunna Station |
| | | J4 | . 19 | 104000019 | Coolong SF. | 170' | Small | nil | 1870 | 1927 | 141.96' | 1 | Windmill fair condition | |
| | | ÷ | | | · · · · · · · · · · · · · · · · · · · | | | | | | | | | |
| | Ľ. | - | 1 | M-2.70 A1811 | · · · · · · · | | | | | | 1 | · | 1 | |

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| Dr.H Ed. Zoin Ho. Yamo Depring Principal Prin | | r | | | | | | | ····· | | + | <u>1</u> | | |
|---|------------|-------------|-------------|--------------|----------------------|-------------------|------------------|---------------------|--------------------|-----------------|---------------|--|---|-------------------------|
| 29 90 109000033 Contrart 1597* 1080 7007 990 1914 108.02* 1 Bacontralisd, port excitsging port port excitsging port excits | \$ | Griđ | Nó. | Eore No. | Mame | peported Depth | Flow Criginal | 1,000G/D present | Valinity p.p.s. | Date drilled | Bore Level | Bore Levelling Survey Report No | Conditions and Remarks | Pastoral Lease |
| 24 53 194000033 Obspelant 1367' 250 150 1035 1926 196.79' 1 Uncontrolled, Station Station 6 24 35 102-00735 210rton 1130' 400 356'. 1745 1913 624.59' 1 Decentrolled, Station Station <t< td=""><td></td><td>J.4</td><td>50</td><td>10400033</td><td>Cooryan- * inna*</td><td>1597'</td><td>1080</td><td>700?</td><td>970</td><td>°1914</td><td>103.02'</td><td>1</td><td>Uncontrolled, bore in deep pond casing exposed, water from large bend and below water level, very poor condition.</td><td>Murnpeowie Station</td></t<> | | J.4 | 50 | 10400033 | Cooryan- * inna* | 1597' | 1080 | 700? | 970 | °1914 | 103.02' | 1 | Uncontrolled, bore in deep pond casing exposed, water from large bend and below water level, very poor condition. | Murnpeowie Station |
| 24 35 104/20038 21 arts 1132' 460 356' 1775 1913 p28.59' 1 Theorital detect plowing and shart flow line. Kurrpowie 24 75 124000005 21 arts 7.5 nil 1325' 1915 264.42' 1 Nindmill Eundowing 24 7 124000007 Consuma 2030' 500 295 2198 1903 Controlled, condition 0.4' (no loaks when valve closed) Fillow 15 7 12500007 Controlled 1375'5" 900 7 1670 1949 Controlled condition 0.4' (no loaks when valve closed) 20]owurtina Etation 15 9 125000009 Controlled (0.3') 1325' 1250 7 1900 1912 Controlled condition 0.4' (arreworro) Guityeshie Station 15 14 125000017 Controlled (0.0') 1325' 1250 7 1900 1912 Controlled (0.0') Quityeshie Station 15 14 125000017 Controlled (0.0') Ningeshie Station | e far - | ئے ۔ | 33 | 104000033 | Chapelorr & | 13671 | 250 | 150 | 1035 | 1926 | 196.791 | 1 | Uncontrolled, flowing from cacing | Nurnpeowie Station / |
| 24 55 10000066 Diarks 2.5 nil 1335 1915 264.12* 1 Windmill Nundwara-Station .4 7 124000007 Communs 2030* 500 295 2198 1903 Controlled, had-aid valve Station 1.5 2 1750*0007 Contherlow (0.1 ± 0.1 | | 34 | 35 | 10400035 | Clarton Dan* | 11301 | 400 | 350 | 1715 | 1913 | 224.591 | 1 | Uncontrolled, flowing from bend and short flow line. | Murnpeowie Station |
| .4 7 13400007 Conmuna 2030' 500 295 2198 1903 Controlled, head-wid velve outside when | | 24 | | 104000065 | Clarks | | 2.5 | nil | 1335 | 1915 | 264.12' | 1 . | Windmill | Mundowdna Station |
| 1.5 7 17500007 Gootabarlow 1434' 904 ? 1507 1949 Controlled condition 0.K. Muloowurtine Station 1.5 9 125000009 Gootabarlow 1375'3" 900 ? 1670 1949 Gontrolled condition 0.K. Muloowurtine Station 1.5 14 125000014 Goone C 0.1 * 1325' 1250 ? 1900 1912 Controlled condition 0.K. Station 1.5 14 125000014 Goone C 0.1 * 1325' 1250 ? 1900 1912 Controlled: Station Station 1.5 17 425000017 Durneworrs* 1156' 280 ? 1700 1913 Uncontrolled: very por condition Station 1.5 17 425000017 Durneworrs* 1156' 280 ? 1700 1913 Uncontrolled: very por condition Station 1.5 17 425000017 Durneworrs* 1156' 280 ? 1700 1913 Uncontrolled: very por condition Station | • | <u>,</u> 24 | 7 | 1?4000007 | Coonanna | 2030' | 500 | 295 | 2198 | 1903 | | | Controlled, head and valve condition C.K. (no leaks when valve closed) | Tilcha Station |
| 15 9 12500009 Cootabarlow 1375'3" 900 ? 1670 1949 Controlled condition C.K. Station 15 14 125000014 Goonec C.I.* 1325' 1250 ? 1900 1912 Controlled: fair condition? Quinyamble Station 15 17 425000017 Curreworra* 115C' 280 ? 1700 1913 Uncontrolled: condition? Quinyamble Station 15 17 425000017 Curreworra* 115C' 280 ? 1700 1913 Uncontrolled: condition? Quinyamble Station 15 17 425000017 Curreworra* 115C' 280 ? 1700 1913 Uncontrolled: condition? Quinyamble Station 16 17 425000017 Curreworra* 115C' 280 ? 1700 1913 Uncontrolled: condition? Quinyamble Station 16 17 425000017 Curreworra* 115C' 280 ? 1700 1913 Uncontrolled: condition? Station | • | 1.5 | ? | 125000007 | Cootabarlow | 1434 ' | 904 | ? | 1607 | 1949 | | | Controlled condition O.K. | Muloovurtina Etation |
| 1.5 14 125000014 0oonec 0.1.* 1325' 1250 ? 1900 1912 Controlled: fair condition? Quinyamble Station 1.5 17 125000017 0.111000000000000000000000000000000000 | - | 15 | ò | 125000009 | Cootabarlow No. 3 | 1375'3" | 900 | ? | 1670 | 1949 | | | Controlled condition C.K. | Mulocwurtina Station |
| 15 17 425000017 Curreworrs* 115C' 280 ? 1700 1913 Uncontrolled: Very poor condition Station | | 15 | 14 | 125000014 | Coonec 0.7 * | 13251 | 1250 | ? | 1900 | 1912 | • | | Controlled: fair condition? | Quinyambie Station |
| | | 15 | 17 | 425000017 | Curreworra* | 1156' | 280 | ÷ | 1700 | 1913 | | | Uncontrolled: very poor condition | Quinyambie Station |
| | | | | | | | | | | | • · | | | • |
| | • | | · | | | | | | | • | | | | • |
| | | | | | | | | | | | | | | • |
| | | | | u_9.70 41444 | | • | | ·~. | | | | | | |

| | Grid | No. | Bore No. | Name | Reported Depth | Flow Original | 1,000G/D Present | Salinity p.p.m. | Date Drilled | Bore Level | Bore Levelling Survey Report No. | Conditions and Remarks | Pastoral Lease |
|---------|------|----------------|-----------|----------------------|-------------------|------------------|---------------------|--------------------|-----------------|---------------|---|--|------------------------------|
| | H2 | [.] 2 | 082000002 | Duck Hole* | 800' | · 750 | 100 | ? | 1913 | 211.68' | 4 | Uncontrolled-flow squirts up from open casing. | |
| بدوند ا | H3 | 40 | 083000040 | Douglas Creek | 380' | flowed | Nil | 4700 | 1938 | | | No longer flowing; bore in bottom of well, equipped wind mill. | |
| | I4 | 44 | 094000044 | Davenport Springs | ? | seepage | ? | 2250 | | | | Uncontrolled-3" casing. | |
| | J4 | 4 | 104000004 | Dulkaninna | 2226 4 | 1000 | 2401 | 936 | 1898 | 125.08 | 1 | Fully controlled- D. of M. pressure cemented 3" welded pipe - constriction in casing reducing flow. | |
| | K4 | 22 | 114000022 | Dean's Lookout * | 1071 | 360 | ? | 1742 | 1915 | | - | Uncontrolled. | |
| | L3 . | 11 | 123000011 | Dullingari No.1 | 11,588 | | 960 | 9082 | 1962 | | | Controlled-head repaired 1966. | |
| | | | | | | • | | | • | | · | | |
| | G3 | 27 | 073000027 | Edwards CK. No.2 | 623' | D.M.F. | Nil | 2156 | 1943 | 413' | 4 | Fomona Fump at 240' | C.A. Railways |
| | I4 | 9 | 094000009 | Emerald * Springs | | 48 | 40 | 2300 | 1920 | -15.54' | 2 | Uncontrolled-bore on top of sandhill, probably spring,3" pipe discharges to trough. | Stuarts Creek Station |
| | I5 | 19 | 094000019 | Finnis | | | 5 | 1882 | 1920 | 34.12 | 2 | Uncontrolled:Bore enclosed by wooden tank. possibly a spring. | Finnis Springs Station |
| | J4 | 11 | 104000011 | Frome Creek | 563 | 40 | 14.4T | 1493 | 1957 | 146.38' | 1 | Controlled-good condition. | St.Sterhen's Pond Station |
| | L4 | 13 | 124000013 | Fortville No. 3 | | 432 | 376 | | 1964 | | | Controlled D.of M. headworks, good condition, no leaks under pressure. | 、 |
| | | | | | | | | | | | | · · · · · <u>-</u> | · · · · |

| | | | | | | | | - · · | • | 4 · · · | | |
|------|-------------------|-----------|---------------------|-------------------|-------------------|--------------------|--------------------|-----------------|---------------|---|---|-----------------------|
| Grid | No. | Bore No. | Name | Reported Depth | Flow Original | (0005/p Fresent | Salinity p.p.c. | Date Drilled | bore Level | Bore Levelling Survey Report No. | Conditions and . Remarks | Pastoral Lease |
| | | | | · · · · · | | | | .] | | | | |
| G3 | 22 | 073000022 | Garden Bore | 80' ' | 5 | ? | 2130 | 1914 | 2371 | 4 | Not located in reeds | Nilpinna . |
| JŻ | 1 | 102000001 | CCYDER'S Lagoon | 4850 | 600 | 500 | 671 | 1900 | 102.1 | 9! 4 | Controlled old style head, | 01ifton Wills |
| L2 | 23 | 12200023 | Gidgealr | e | | | | | | | disintegrating. | Stations |
| 1.2 | 20 | 122000025 | hu. (| 12,114 | | 525 | 1880 | 1964 | | an di j ang | Controlled, good condition | |
| | | | No. 6 | 78051 | | 2000 | | 1963 | 6, | | Controlled good condition | |
| ŢÈ | 21 | 125000021 | Glenmany Sg. 1 | ic 890' | 10.8 | ? | 2345 | 1921 | | | Casing remains - no detaîls | Quinyambie Station |
| Ĩ. | 22 | 12500032 | Clennan- yie No. | 833 2 | 4.6 | 4? | 1955 | 1947 | | | "No details of headworks | Quinyambie Station |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| G1 | ? | 7 · | hauilter Oreek* | 14171 | 232 | 1002 | 4 | 1406 | | | | |
| 60 | | | | 14 | <i>L)L</i> | 100. | | 1070 | | | NO details | |
| ų∠ | | J7200001 | horsesno | e* 650' | 25 "strong" | ? | 2995 | 1914 | 364 ' | . 3 | Uncontrolled from 6" pipe in con- | Macumba, Station |
| | | | | | | • | | | | | Overgrown with reeds. | |
| Ģ2 | 34 | 072000034 | HAULUS OREEK | ? | "week- medium" | ? | ? | ? | 288.1 | F | Incontrolled: from 2" outlet | |
| | | | | | | - - | | | | | on 4 casing encased with concrete | |
| * 3 | 36 [°] (| 083000036 | Hope Creek | 300' | 120 | 72T | 4517 | 1918 | 279.9 | 2' 2 | Fully controlled with pressure comented 3" | The Peake Station |
| | | | | | | | | | | | welded pipe and 4" yale valve (D. of M. Cctober | |
| | | | | | | •••• | | | | | 1965). | |

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| Grid | No. | Bore No. | Mare | Reported Depth | Flow Criginal | LOCCG/D Present | Salinity p.p.m. | Date Drilled | Bore Level | Bore Levellin, Eurvey Report No. | Concitions and Remarks | Fastoral Lease |
|------------|-------|-----------|----------------------|-------------------|------------------|--------------------|--------------------|-----------------|---------------|---|--|-----------------------------------|
| H3 | 53 | 083000053 | Honeymoon | 308' | 580 | 3501 | 4855 | 1956 | 245' | 2 | Controlled: L of M. 1965 but deteriorate water gusning o at base of concrete block. | Anne Creek Station đ, ut |
| J 4 | 12 | 104000012 | Hergott Sp. | 137* | 27 | Very Small | 1650 | 1952 | 124.39' | 1 | Uncontrolled - poor condition | C.A. Railway |
| | 1. | | | Δ. | | | L | | | · · · | | • |
| L2 | 11 | 122000011 | Innaminka No. 1 | 12,638 | 26.4 | 21 | 1891 | 1959 | | • | Controlled, good condition. | Innaminka Station |
| G1 | 10 | 071000010 | Junction* | 1448' | 208 | 0.48 | .? | 1908 | 472' | 3 | Head surrounded by stone cairn with valve on top - condition doubtful | Hamilton Station |
| 113 | 21 `* | 083000021 | Johnston's Ec. 3 | 985' | 750 | 500? | ? | 1918 | | | Uncontrollec: Very poor con- dition, no casing remains in 30' diam. | Anne Uraek Station. |
| 14 | 66 | 094000066 | Jack Boot | 1651' | 800T | , | 2230 | 1965 | • | | pool. Fully con- trolled: drille D of M S/N 913/66 | Luloorina 1 Station |
| J4 | 30 | 104000030 | Jewellery Creek* | 1733' | 1250 | "poor" | 970 | 1914 | 75.35 | 1 | Uncontrolled in poor conditi | Nurnpeowie on. Station |
| J4 | 43 . | 104000043 | Junction | 723' | 0.48 | Nil | | 1924 | | | No further details | . · |
| | | | | ۵ | | | | | | | | |
| J3 | 8 | 103000008 | Kopperamar No. 1* | ina 3000 ' | 800 | 300? | 1105 | 1897 | 53.28' | 4 | Uncontrolled - water wasted - | Ltadunna Station |

| | | _ | | | , | | | | | | | | ••• |
|----------|------------------|-----|--------------------|--|---------------|--|--------------------|--------------------|-----------------|---------------|---|---|------------------------------|
| | Grið | No. | Bore No. | Name | Reporteó | Flow Criginal | 1000G/D Present | Salinity p.p.r. | Unte Drilled | Bore Level | Bore Levelling Survey Report No. | Conditions and Eemarks | Pastoral Lease |
| , | J3 | 9 | 10300000 | 9 Kopperaman No. 2 | na 325616" | 390 | 456T | 881 | 1549 52 | 51.72 | ' 4 | Controlled wit D of M 3 way head, good condition | h Etadunna Station |
| | К2 | 3 | 11200000 | ð Kalladeina | 3984 ' | 500 | 400? | 715 | 1913 | | 1 | Double head valve - con- dition good 4 | Clifton Hills Station |
| | | * | | | | | | | | | 1. | | |
| | H3 | 24 | 03300002 | 4 Levi* | 300 | 24 | 10 | 2530 | 1920 | 228.1 | b' 2 | Uncontrolled: Head surrounde by 4%ft. con- crete tank, 1f high with out- let pipe. | The Peake d Station t. |
| | H3 | 52 | 08300005 | 2 "little" Blythe* | 180' | 19 | 10 | 2327 | 1920 | 242.2 | 72 | Uncontrolled: 5" open casing flows into small sump, then to cattle troughs. | The Peake Station. |
| | 114 | 6 | 08400000 | 5 Lethbridge | 300' | 360 | 10 | 2. | 1920 | 167.4 | 9'2 | Uncontrolled: Head in 3ft. concrete ring with 3" horizontal outlet. | Stuarts Creek Station |
| | : ₁ 4 | ? | | LL. Eyre Stn. Mo. 1 | ? | 150 | ? | ? | ? | | | Not known - probably same bore as Frice's Bore H4/34 | |
| | 14 | 4. | 09400000 | + LK. Letty No. 4* | 1500' | 70 | 50 | Salt ` | 1895 | | | No details | Lk. Letty Station |
| | I4 | 5 | 09400000 | 5 Lk. Letty* ("Big Bor No. 3 | 1598' *") | 2000 | 1400 | 1350 | 1921 | 55.83 | 1 | Good condition but no valve control. | Lk. Letty Station |
| | I4 | 6 | 09400000 | 5 Lk. Letty No. 2* (Crow's Nest") | 1253' | 1500 | 1000 | 1450 | 1925 | 51.68 | 1 | Uncontrolled: poor condition | Lk. Letty Station |
| | I4 | ε | 09400000 | E Lk. Letty No. 1 | 700' | 150 | "poor≝. | 1310 | 1920 | 111.1 | 9' 1 | Lquipped windmill | Lk. Letty Station |
| | | | . 134 . 35 . 41444 | | | التوحيد المتشارية المترادين وتوري والمراجع | | | | | الليام مسترعا التكواني المتعادة متجوي | | |

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|---|-----------|-----|-----------------------------|----------------------------|-------------------|------------------|--------------------|--------------------|-----------------|---------------|---|---|---------------------------------|
| Ő | Grid | No. | Bore No. | Nаше | keported Depth | Flow Yriginal | 10C0375 Tresent | Salinity p.p.z. | Date Drilled | Bore Level | Bore Levelling Survey Report No. | Conditions and Remarks | Fastoral Lease |
| | J4 . | 7 | 104000007 | Lake har | 'y 1360' | 120 | 60T | 1279 | 1590 | 146.74' | 1 | Controlled: condition good. | Lk. Harry Station |
| | J4 | 21 | 10400021 | Lake Billy* | 1118' | 250 | 30? | 3322 | 1916 | 221.51' | 1 | Uncontrolled: has 1½" pipe and rubber packer in 4" pipe. | Mundowdna Station |
| | K4 | 25 | 114000025 | Lake Crossing No. 4* | 1703' | 130 | ? | 1.69 oz. P/G | 1897 | | | In middle of reeds and bog- not seen. | |
| ¢ | L5 | 10 | 125000010 | Låke Side | 1076' | 12.5 | ? | 1970 | 1949 | | | Controlled: Condition O.E. | Muloowurtina Station |
| | | | | | | | | | | | | | |
| | G1 . | 11 | 071000011 | Memory Creek* | 803 ' | 125 | 75 | ? | 1920 | | | No information on condition | Dalhousie Springs Station |
| | G1 | 14 | 071000014 | Mt. Sarah* | 1025' | ? | "Nediur' | 2 | 1910 | 431.61' | 3 | Uncontrolled from 5" casing and outlet pipe | Nt. Sarah Station |
| 6 | G2 | 4 | 072000004 | Macumba H.S. * | 1500' | 12.0 | ¢. | 2083 | 1950 | 340.12' | 3 | Repairs in progre July 1971 | ss J: Macumba Station |
| | G2 | 14 | 072000014 | Mt. Dutton | 369' | 156 | ? | 2523 | 1942 | 273.35' | 3 | Equipped valve and piping to overhead tank. | C.A. Hailway: |
| | H3 | 4 | 08300000 4 | Lilne* | 300' | ? | 20 | 2350 1 | 1920. | 214.93' | 2 | Uncontrolled: liead surrounded by 4½' concrete tank, 1ft. high with outlet pipe | The Peake Station |
| | ਜ4 | 13 | 084000013 | McEwin* | 150' | 480' | 22CT | 4851 | 1900 | 129.96' | 2* | Uncontrolled: Flowing from 2½" I.D. pipe. | Stuert Creek Station |
| | 94 | 19 | 084000019 | Margaret Creek* | 691' | 10 | 9.6 | <u>;</u> | 1896 | 137.83' | 2 | Uncontrolled: flowing from 4" open casing. | Ludla Station ' |
| | I4 | 7 | 094000007 | Morris | 1100' | Fa. | Nil | ? | 1900 | ? | · 1 | No-details, bore buried by sand | Lk. Letty Station. |
| | 14 | 17 | 1194000017 119-270 A1811 | Morris Creek | 1858' | 750 | 4CO > | 1714 | 1920 / | 16.23' | 2 | Uncontrolled: fro open 6" casing. | Finnis Springe T |

| | 20. | Bore No. | Name | Reported Depth | Flow Original | ICCCG/D Present | Salinity p.p.m. | Date Drilled | Bore Level | Bore Levelling Survey Report No. | Conditions and Remarks | Pastoral Lease |
|-------|-----|------------|------------------------|-------------------|------------------|---------------------|--------------------|-----------------|---------------|--|---|----------------------------|
| J2 2 | 2 | 102000002, | Mt. Gasor | 4420' | 480 | 260 T | 715 | 1900 (| 145.48 | ' 4 | Controlled: fully pressure a cemented 3" | Clifton Hills Station |
| | | | | | | | | | | | welded steel pipe July 1967 D of M | |
| J5. 1 | 7 | 102000007 | Mirra Mitt a | 3534' | 470 | 460T | | 1901 | 117-23 | 1 4 | Controlled: old style head. | Cowarie Station |
| J3_3 | 3 | 103000003 | Munger- annie | 3370' | ? | 540T | 728 | 1900 | 191.58 | 1 4 | Controlled: old.style head. | Mungerannie Station |
| J3 (| 5 | 103000006 | Kulka* | 3445' | 800 | 700 | 842 | 1906 | 206.60 | ' 4 | Controlded: old style head. Valves inoper- able. | Mulka Station |
| J4 6 | | 104000006 | .arion | ? | 500 | 450 | ? | 1948 | 201.36 | 1 | Controlled: condition good, equipped poly- thene piping. | Lk: Harry Station. |
| J4 - | 13 | 104000013 | Marree Hailway | 3421 | 27? | ? | • | 1886 | | | No details | C.A. Railways |
| J4 - | 15 | 104000015. | Marree No.2 | 391' | 72 | 1!i1 | 2268 | 1942 | 151.27 | 1 | Equipped Fomona pump. | C.A. Railways |
| J4 | 7 | 104000017 | Larree No. 1 | 575' | 72 | Mil | 2393 | 1907 | 148.43 | 1 | Located in hut. | Marree Townshij |
| E4 3 | , | 1140000003 | Lonticell | ina 2550' | 43 | ? | 6850 | 1920 | | | No details | E. & W.S. Bor |
| K4 0 |) | 1140000009 | etéor* | 931 | 461 | "good" | 1200 | 1910 | | | Uncontrolled: Foor condition. | Murnpeowie Station. |
| K4 1 | 5 | 114006012 | Murnpeowi | e* 1300' | 300 : . | ? | 1260 | 1912 | 272.39 | 1 | Uncontrolled: bore head | Murnpeowie Station. |
| L2 2 | | 122000027 | Merrimeli No. 1 | a 10,322' | ? | 2000+ ^{E4} | ? | 1964 | | | Controlled - O.K. repaired | |
| | | | | | | | | | | | impossible due steam temp 214° F. | |
| L5 6 | | 125000006 | Suloowur- tina* | 14321 | 314 | 234 | 1625 | 1904 | · · · | | Controlled, but water issues fro | Maloowurtina. m Station |
| | | | | | | | · · · | | • | | off (1965) | |

| 12 | | | - | · · · · · · · · · · · · · · · · · · · | | | | | | | × | · · · · · · · · · · · · · · · · · · · | |
|---------|-------|-------------|-----------|---------------------------------------|-------------------|------------------|--------------------|--------------------|-----------------|---------------|--|--|-------------------------------------|
| | lorid | No. | Bore No. | Name | Reported Depth | Flow Original | 1000G/D Present | Salinity p.p.m. | Date Drilled | Bore Level | Bore Levelling Survey Report No | Conditions and Remarks | Fastoral Lease |
| | | | | | | | | | | | | | |
| 2 2 | Н3 | 58 | 083000058 | Nancy's * | 1072' | 216 | 300 T : | 4855 | 1962 | 209.71' | , ² | Controlled:D.of M. 1965. 4" rubber lined valve corrod- ed away (July.1971) | Anna Creek Station |
| | H4 | 56 | 084000056 | New Anna Creek | 1001 | 86 | 2.4 | ? | 1961 | 233.29 | 2 | Equipped windmill- probably not flow- ing. | Ann a Creek Station |
| | H4 | 5 9. | 084000059 | Nunn's * | 433' | 410 | 144 T | 5210 | 1960 | 177.85' | 2 | Controlled: D.of M. pressure cemented, equipped glass- lined cast iron | Anna Creek Station |
| | | | | | | - | | | | • | | flowline. Small leakage under concrete block. | |
| | -14 | 13 | 094000013 | New Year's Gift * | 237' | 300 | 150? | 2212 | 1920 | 36,88' | 2 | Uncontrolled: From 6" casing, 4" bend all badly corroded Very poor condition | Stuarts Cre & Station |
| | J4 | 32 | 104000032 | New Troudan- inna * | 1350' | 987 ? | 700 | ? | 1934 | 150.25' | 1 | Uncontrolled: flowing from bend on casing. | Murnpoowie Station |
| | J4 | 37 | 104000037 | Nick of Time | t 1400' | 250 | 150 | 1055 | 1926 | 272.97' | 1 | Uncontrolled: leak ing around concrete at ground level. | Murnpeowie Station |
| | G2 | 6 | 072000006 | Oodnadatta Town | 1571' | 270 | 1 40 | 1819 | 1894 | 382.84' | 3 | Equipped head and valves | ∃. & 7.S.T öwn Supply |
| | G2 | 17 | 072000017 | Ochenden | < 150' | 30 | ? | 2620 | ? | 228.88' | 4 | Uncontrolled:open casing in open galv iron tank | Allendale Station |
| | G3 | 17 | 073000017 | One Tree Bore | 284' | 11 | 6? | 3085 | 1940 | 247.78' | 4 | Head cemented in- in good condition | Nilpinna Station |
| а, , | G3 | 23 | 073000023 | Old Nilpinna H.S. * | 80' | 120 | 24? | 2130 | 1915 | | | Not located in reeds | Nilpinna Station |
| | H4 | 60 | 084000060 | One Tree | 124' | 58 | 29T | 5780 | 1962 | 190.82' | 2 ! [*] | Controlled: D.of N pressure cemented, equipped 4" gate valve - good condition(flow test after repairs | Anna Creek Station |
| | - Y | | | | | | | | | | | | |

| J4 34 604000031 014 ************************************ | Grid | No. | Bore No. | Nane | Reported Depth | Flow Original | 1,000G/D Present | Salinity p.p.m. | Date Drilled | Bore . Level | Bore Levelling Survey | Conditions and Remarks | Pastoral Lease |
|---|----------|------------|------------|----------------------------------|-------------------|------------------|---------------------|--------------------|-----------------|---------------------------------------|-----------------------------|--|--------------------------|
| J3 34 0400003 01d * Troudannins 1609* 987 "poor" 845 1909 149.16 1 Hommerolladisesing poported blocked, poor condition Numpeorie L4 5 24000005 01d %104* ? 750 Nil ? 1900 149.16 1 Hommerolladisesing poported witholded, poor condition Numpeorie G2 37 770000037 Plantation* ? "Small" ? ? 352.86 3 Incontrolled: Head not visible inside wall rootangular veit Not visible inside Not visib | | | | | | | | | | | Report No. | | |
| L4 5 24000005 Old Tilcha* ? 750 Nil ? 1900 Name Name Particle Pilcha Static 0.2 37 072000037 Flantation* ? "Small* ? ? 332.86 Jmoontrolled: Head not visible inside scale Particle Particle 63 11 973000017 Flantation* ? "Small* ? ? 332.86 Jmoontrolled: Head not visible inside scale Particle | J4 | 3 4 | 104000031 | Old * Troudannina | 1609' | 987 | "poor" | 845 | 1909 | 149.16 | 1 | Uncontrolled:casing reported blocked, poor condition | Murnpeowie Station |
| 62 37 972000037 Plantation* ? "Small" ? ? ? 352.86 3 Incontrolled: Head not visible inside small rectangular well. 63 11 973000011 Peake (United Ab. Mission) 820* 170 14.4 2285 1900 172* 4 5" casing 14"galvan- sed water pipe to 500* 11 1 D81000001 Furni No. 1 6168* ? ? 921 1963 0.K3x French Petroleus Ht. Daresstar 112 3 D82000037 Feacharmur- 1275* 500 100? 2315 1913 Daresstar Macumba Station Station 114 34 D84000034 Frices 939* 150 60 2670* 1933 Deschood by thing wery corroled. Station 114 34 D84000034 Frices 939* 150 60 2670* 1933 Deschood by thing wery corroled. Station 12 2 092000002 Ponaruna 5567* 1750 1750? 1964. Ex French Petroleus- fully reconditioned by thing wery corroled. Not fully reconditioned by thing wery corroled. Not fully reconditioned by thing wery corroled. Not fully recondition god. Repai | L4 | 5 | 124000005 | Old Tilcha* | ? | 750 | Nil | ? | 1900 | | | Abandoned, but apparently still flow- ing beneath surface. | Tilcha Station |
| 6.2 37 072000037 Flantation* ? "Small" ? ? 332.86 3 Incontrolled: Head not wishle inside small rectangular well. 6.3 11 073000011 Peake (United Ab., Mission) 820' 170 14.4 2285 1900 172' 4 5" casing if "galvan- ised water pipe to 300'. 500'. <td></td> <td>•</td> <td></td> <td>,</td> <td>i.</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> | | • | | , | i. | | | | | | | | |
| G3 11 073000011 Peake (United Ab. (United Ab. (Uni | G2 | 37 | 072000037 | Plantation* | ? | "Small" | ? | ·? | ? | 332.86 | 3 | Uncontrolled: Head not visible inside small rectangular well | |
| H1 1 08100001 Furni No. 1 6168' ? ? 921 1963 0.KEx French Mt. Daresta 112 3 082000003 Feacharmur- anna 1275' 500 100? 2315 1913 Description Macumba 14 34 084000034 Frices 939' 150 60 2670' 1933 Description Anna Creek Station 12 2 09200002 Foonarunna No. 1 5567' 1750 1750'? 1964 Ex French Petroleum- fully reconditioned D. of M. Spelember, 1966, shut in pressure Anna Creek 14 1 104000001 Feachawarrin 2484' 500 400? 1652 1917 Equipped old style Nead, syle headworks, No Peachawarrin 14 1 104000007 Feters Camp ? 600 500? 1324 1949 83.87' Uncontrolled bod on Mulcorina. 14 1 104000023 Fetermorra* 1243' 192 100? 1963 Pliy controlled. Clifton Rill 14 1 104000003 Fetermorra* 1243'< | G3 | 11 | 073000011 | Peake (United Ab. Mission) | 8201 | 170 | 14.4 | 2285 | 1900 | 172' | 4 | 5" casing 14"galvan- ised water pipe to 800'. | Peake Station |
| H2 3 B2000003 Feacharmur- anna 1275' 500 100? 2315 1913 Jacontrolled:Bers in middle of swamp surrounded by thick reeds. Open casing very corroded. Macumba Station H4 34 D64000034 Frices 939' 150 60 2670' 1933 Jacontrolled:Bers in surrounded by thick reeds. Open casing very corroded. Anna Creek Station H4 34 D64000034 Frices 939' 150 60 2670' 1933 Jacontrolled with old style headworks. No (N.K. Anna Creek Station H2 2 092000002 Poonarunna No. 1 5567' 1750 1750? ? 1964. Ex French Petroleum- fully reconditioned D. of M. September, 1966, shut in presaure 191 p.s.i. Peachawarin Station J4 1 104000001 Peachawarin na 5600 500? 1324 1949 83.67' Uncontrolled wond on willoorina. Condition good. Peachawarin Station J4 6 11000006 Pandie Burra No.1 7255' 450 4807 500 1963 Pully controlled Mulnorina. Casing and flowline Station J4 2 114000023 Fetermorra | H1 | 1 | 081000001 | Furni No. 1 | 6168' | ? | ? | 921 | 1963 | | | O.KEx French | Mt. DaresStati |
| H434D84000034Prices939'15060 $2670'$ 1933Surrounded by thick rects. Open casing very corroded. Controlled with old style headworks. No further details, condition apparently $0.K$.122092000002Poonarunna No. 15567'1750'?1964.Ex French Petroleum-fully reconditioned D. of M. September, 1968, shut in pressure 191 p.s.i.14110400001Peachawarri na *2484'500400?16521917Equipped old style Peachawarrin Station *1475104000075Feters Camp ?600500?1324194983.87'1Uncontrolled: bend on Mulcorina Station *14611100006Pandie Burra 7255'450480T5001963********************************* | H2 | 3 | 082000003 | Peacharmur- anna * | 1275' | 500 | 100? | 2315 | 1913 | | | Petroleum Uncontrolled:Bore in middle of swamp | Macumba Station |
| 12209200002Poonarunna No. 15567'17501750??1964.Ex French Petroleum- fully reconditioned D. of M. September, 1968, shut in pressure 191 p.s.i.J4110400001Peachawarri na2484'500400?16521917Equipped old style head. Repaired D. of M. June, 1971. Condition good.Peachawarrin StationJ475104000075Peters Camp?600500?1324194983.87'1Uncontrolled: bend on station.J475104000075Peters Camp?600500?1324194983.87'1Uncontrolled: bend on station.J475104000075Peters Camp?600500?1324194983.87'1Uncontrolled: bend on station.J46111000006Pandie Burra No.17253'450480T5001963Fully controlled- station.Clifton Hill Station.J423114000023Petermorra*1243'192100?10951899Uncontrolled value yobeMurnpeowle Station.J2912200009Patchawarra54580.2Will?1914Vick less yobe7 | H4 | 34 | 084000034 | Frices | 939' | 150 | 60 · · · | 2670' | 1933 | | | reeds. Open casing very corroded. Controlled with old style headworks. No further details, condition apparently D.K. | Anna Creek Station |
| 141104000001Peachawarri na2484'500400?16521917Image: Second se | 15 | 2 | 092000002 | Poonarunna No. 1 | 5567' | 1750 | 1750? | ? | 1964. | | | Ex French Petroleum- fully reconditioned D. of M. September, | |
| J4110400001Peachawarri na2484'500400?16521917Equipped old style head. Repaired D. of M. June, 1971. Condition good.Peachawarrin StationJ475104000075Peters Camp?600500?1324194983.87'1Uncontrolled: bend on Muloorina casing and flowlineStationK16111000006Pandie Burra No.17253'450480T5001963Fully controlled- stationClifton Hill StationK42311400023Petermorra*1243'192100?10951899Uncontrolled 'walwe StationMurnpeowle StationL29122000009Patchawarra54580.2Nil?1914ValueMurnpeowle Station | | | | | | • | | | | | . , | 1968, shut in pressur 191 p.s.i. | e |
| J475104000075Peters Camp*600500?1324194983.87'1Uncontrolled: bend on casing and flowlineMuloorina Station.K16111000006Pandie Burra No.17253'450480T5001963Fully controlled- stationClifton Hill StationK423114000023Petermorra*1243'192100?10951899Uncontrolled walwe stationMurnpeowie StationL29122000009Patchawarra54580.2Nil?1914Value (pastoral Board, 1930)Innaminka St | J4 . | • 1 | 10400001 | Peachawarri na * | - 2484' | 500 | 400? | 1652 | 1917 | · · · · · · · · · · · · · · · · · · · | | Equipped old style head. Repaired D. of M. June, 1971. Condition good | Peachawarinna Station |
| K16111000006Pandie Burra7253'450480T5001963Fully controlled- StationClifton Hill StationK423114000023Petermorra*1243'192100?10951899Uncontrolled value ValueMurnpeowie StationL29122000009Patchawarra54580.2Nil?1914Value (pastoral Board, 1930)Innaminka St | J4 | 7 5 | 104000075 | Peters Camp | • ? | 600 | 500? | 1324 | 1949 | 83.87 | 1 | Uncontrolled: bend on casing and flowline | Muloorina Station |
| K423114000023Petermorra*1243'192100?10951899Uncontrolled value LoesMurnpeowie StationL29122000009Patchawarra54580.2Nil?1914Value lessMurnpeowie Station | 31 | 6 | 111000006 | Pandie Burra No.1 | . 7253' | 450 | 480T | 500 | 1963 | | CY. | Fully controlled- | Clifton Hills |
| 12 9 122000009 Patchawarra 5458 0.2 Nil ? 1914 Value less (pastoral Board, 1930) Innaminka St | K4 | 23 | 11 4000023 | Petermorra* | 1243' | 192 | × 100? | 1095 | 1899 | | | Uncontrolled 'value | Murnpeowie |
| | 52 52 | 9 | 122000009 | Patchawarra | 5458 | 0.2 | Nil | ? | 1914 | | | Value less (pastoral Board, 1930) | Innaminka Sta |

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| Gr | id | No. | Bore No. | Name | Reported Depth | Flow Original | 1000G/D Present | Salinity p.p.m. | Date Drilled | Bore Level | Bore Levelling Survey Report No. | Conditions and Remarks | Pastoral Lease |
|---|-----|------|-----------|----------------------|-------------------|------------------|--------------------|--------------------|-------------------|------------------|---|--|------------------------------------|
| | | • • | · | | | | | | | | | 0 | |
| K4 | • • | 17 | 114000017 | Quart Pot * | 950' | 106 | 76? | 1215 | 1914 | | | Uncontrolled. | Aurnpeowie Station |
| | | | | | | | | | | | | | |
| | | | | | | | | - | | | | | |
| | | •. | | | | | | | | | | | |
| Gğ | | | 073000001 | Raspberry Creek * | 416 * | 1250 | 1000 | 3200 | 1913 | | | Uncontrolled:casing not visible in 20ft | C.A. Railways Mt. Barry Station |
| | | | | | | | | | | | | diam.concrete re- taining well-over- | |
| | | | . : | | | | | | | | - | grown with reeds. | |
| · • • | | | | | | • • • | | | | | | | |
| | | | | | | | | | | | | • | |
| C .1 | | 15 | | C1.4 | 44071 | 1.00 | | | | | | N | |
| GT I | | 12 | 0710000[5 | stevenson's | 1193 | · 180 | 1481 | 1940 | 1907 | | - | Fully reconditioned by D. of M. August | Macumba Station |
| | | | • | | | | | | | | | 1965 - pressure cemented 6" da sing. | • |
| 17.0 | | | | * | | | | | | | | | |
| H2 | | | 08200001 | Snake Creek | 2327' | 1000 | "large" (750) | 1912 | 1920 | 209 ' | 3 | Uncontrolled.Bore in centre of lake | Macumba Station |
| | | | | | • • • • • • | | | | | | | 200 ft across. Very poor condition. | |
| Н3 | | 54 0 | 083000054 | Sunny (Ireek | 6801 | 120 | ጸናጥ | 1265 | ⁶ 1058 | 252-551 | 2 | Uncontrolled Paper | ad Anna C r eek |
| | | | | | 000 | 120 | | 4205 | 1970 | C)C•)) | ے ب | D. of M. 1965. Wate | r Station |
| | | | | | | | | | | | | concrete block when | |
| • | - | | | | | | | | | | | Flowline corroded | |
| H4 | | 4 (| 084000004 | Strangways | 365' | 1200 | 168T | 5953 | 1886 | 142•7 <u>?</u> ' | 2 | away. Uncontrolled: | Anna Creek Station |
| | | | | D.F. | - | | | | | | | 1965 by pressure | |
| | | | | | | | | | | | | cemented 6" casing. Bore now in poor | |
| | | | | | | | | | | | | condition in centre | |
| 14 | | 15 (| 094000015 | Smith's | ? | | | 1733 | 1.020 | -5 111 | 2 | (1971). | Finnie Springs |
| | | | | Springs | | | | , | 1920 | -2.11 | ۷ | 4" open casing. | Station |
| ЛA | | 5 | 0400000 | Sinclein | 12021 | 430 | 400 | 1100 | 1015 | | | Gentrelled with | Dullioninno |
| .т.л | | 71 | 104000074 | St Stanhant | 1.000 | 472 | 400 9 | 1100 | 1915 | 223024 | | old style head. | Station |
| 04 , , , , , , , , , , , , , , , , , , , | | | 0400007 | Fond No.3 | | | | | : | | | windmill? | St. Stephens Ponds Station |
| U 4 | | 14 | 10400012 | Pond No.1 | 5 OU' | · · · · | TEN | | <i>•</i> | | | Abanaonea (dry) | Station |

| _ | | | | • | | | { | | | | | |
|------|----------|------------------------|-----------------------------|-------------------|-------------------|-----------------------------|--------------------|-----------------|---------------------|---|--|---------------------------|
| rid | No. | Bore No. | Name | Reported Depth | Flowø Driginal | 1,000G/D Present | Salinity p.p.m. | Date Drilled | Bore Level | Bore Levelling Survey Report No. | Conditions and Remarks | Pastoral Lease |
| G2 | 29 | 072000029 | Toondina No.1 | 330' | ? | ? | ? | 1963 | | | Ex siesmic shothole - no casing or èquipment. | Delhi/Santos - |
| G2 | 30 | 072000030 | Toondina No.2 | 320' | ? | ? | 2125 | 1963 | | | Ex. siesmic shothol - no casing or equipment. | e Delhi/Santos |
| H4 | 14 | 084000014 | Trig . | 200' | 36 | "small" | 3442 | 1920 | 56 , 30' | **2 | Incontrolled: No further details. | Stuart Creek Station |
| J4 | . 3 | 104000003 | Tarkanina | 1225 • | 25 | "small" | ?. | 1883 | 173.49' | 1 | Incontrolled: bore in bottom of well i poor condition. | Mundownda nStation |
| J4 | 23 24 | 104000023 104000024 | Two Mile Bore and spring | 422' | 10 | "poor" | 2058 | 1915 | 226.88' | 1 | "Woolshed Bore" - equipped windmill | Mundowdna Station |
| L4 | 6 | 124000006 | Tilchə | 2353' | 864 | 877 | 1985 | 1950 | | | Controlled con- dition O.K. | Tilcha Station |
| | | | 、 | 4 . | | | | | | | | |
| H3 · | 60 | 083000000 | Umbum | 487' | 86 | 86T | 3930 | 1957 | 142.68' | 2 | Controlled: D. of M. 1965. Some leal age beneath con- crete block when valve closed down, | Anna Creek - Station |
| | • | | • | | | | | | | | flowline corroded away (1971). | |
| 14 | 24 | 094000024 | Venable's | ? | 90 | 70% | 3315 | 1920 | ,58 . 77' | 2 | Uncontrolled: 4" open casing, surrounded partial- ly by cairn of stones and badly washed out under- neath. | Finnis Springs Station |
| | | | | | | | | : - | • | | | |
| 1 | 18 | 071000018 | Witcherie No.1 | 4803' | 770 | ?. | 1084 | 1963 | | | O.K equipped 6" valve on 978" casing, ex French Petroleum. | Mt. Dare Station |
| 2 | 3 | 072000003 | Wire Creek* | 1550 ' | 86 | | 2083 | 1896 | 367.63' | 3 | Uncontrolled: Obstruction in cas- ing, unsuccessful repair attempt | Macumba Station |
| | | | • | , U | | | 74 | | | | 1965. | |

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| 10 | Grid | No. | Bore No. | Name | Reported Depth | Flow \$ Original | 1p00G/D Present | Salinity p.p.m. | Date Drilled | Bore Leyel | Bore Levelling Survey Report No. | Conditions and Remarks | Pastoral Lease |
|---------|------|---------|------------|--------------------------------|-------------------|----------------------------|--------------------|--------------------|-----------------|---------------|---|---|-------------------------|
| | G2 | 9 | 072000009 | Watson's 🐲 Creek | 971' | 500 | 250 | 2545 | 1913 | 304' | 3,4 | Uncontrolled: head | Allandale Station |
| | | | | | | | | 9 | | | | crete, flow from 3" pipe. Bore in pool and overgrown with reeds. | |
| | G2 | 11 | 072000011 | ^N ondillina H.S. | ? " | very poo | - 11 - | 2228 | 1920 | 328.96' | 3 | Uncontrolled: head works hidden by galv. iron tank in poor condition. | Allandale Station |
| ¢ C | G3 | 36 | 073000036 | Willow Bore | 149' | 5 | 5 | 9340 | 1929 | | | No details (may be same as G3/17 One Tree Bore) | Nilpinna Station |
| | G3 | 53 | 073000053 | Wild Dog Cree (2 bores) | k 200' | 35 | ? | 2307 | 1955 | 230.96' | 4 | 8" abandoned small flow; 4" small flow equipped windmill. | Allendale Station |
| | H2 | 4 | 082000004 | Wood Duck * | 820' | ? | 100 | 2130 | 1913 | 140' | 4 | Uncontrolled: 8" casing inside 18" diam. concrete ring. Possible obstruction in | The Peake Station |
| | H4 | 11- | 084000011. | ₩elcome * | 100' | 9ọ | 15? | 4361 | 1920 | 123.87 | 2 | casing. Uncontrolled: con- crete ring around open casing. | Stuart Creek Station |
| | J4 | 20 | 104000020 | Well Creek | 973' | 17.3 | 2.3 | 1535 | 1915 | 232.71 | 1 | Windmill and pump fair condition | Mundowdna Station |
| | K4 | 33 | 114000033 | Woolatchie * | 1872' | 280 | 11 | 1528 | 1916 | | | Uncontrolled: 4" pipe to troughs. | Murnpeowie Station |
| | | | | | | | | | | • | | | |
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| 11 | G | rid | No. | Bore No. | Name | Reported Depth | Flow# Origina | 1000G/D 1Present | Salinity p.p.m. | Date Drilled | Bore Levél | Bore Levelling Survey Report No. | Conditions and Remarks | Pastoral Leas |
|---|----|-----|-----|---------------|-------------|---------------------|------------------|---|--------------------|-----------------|---------------|---|--|--------------------------|
| 3. 7. 4 7. 4 | Ĵ. | 4 | 34 | 104000034 | Yarrə Hill | 1029' | 508 | 500 | 1187 | 1914 | 208.76' | 1 | Uncontrolled: flow- ing from bend on casing. | Murnpeowie Station |
| • | K | 4 | 69. | 114000069 | Yerila | 1443' | 216 | ? | 2.03 oz. /G. | ? | | | Abandoned | Murnpeowie Station |
| (• • | Ŀ | 4 | 8 | 124000008 | Yandanna | 1642' | 432 | 295 | 1500 | 1901 | | | Controlled: 4" values - water issues from ground when values closed | Muloowurtina Station. |
| · · · | | | | | | | | | | | | | | |
| | G | 3 | 15 | 073000015 | 5 Mile Bore | 108' | 5 | 2? | 2345 | 1915 - | • | 4 | •No Fúrther details | Nilpinna Station |
| | G | 3 | 20 | 073000020 | 1 Mile Bore | 80' | 100 | 50? | 2072 | 1914 | 238' | 4 | Not located in mand and reeds | Nilpinna Station |
| • • • • • • • • • • • • • • • • • • • | H | 3 | 29 | 083000029 | 3 Springs | Equipped Springs | | seepage | | | 205-60' | 2 | Nc evidence of casing. Springs on top of mounds overgrown with | Anna Creek Station |
| • | | | | | | | | | | | | | reeds. | |
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