

RB 37/39

DEPARTMENT OF MINESSOUTH AUSTRALIA.REPORT ON DRILLING OPERATIONSE. & W. S. DEPARTMENTATCOONALPYN.

At the request of the Engineer-in-Chief, E. & W. S. Department that a bore be constructed at Coonalpyn to provide a water supply for that township, Driller Taylor operating Plant No. 39 commenced operations on 1-3-54, and drilling was concluded on 14-4-54 at a depth of 485'.

The upper waters cut were very salt the salinity decreasing with depth; the analyses are as follows:

| <u>Depth</u> | 48' | <u>Salinity</u> | 2800 grains per gall. | | | |
|--------------|------|-----------------|-----------------------|---|---|---|
| | 261' | " | 920 | " | " | " |
| | 300' | " | 234 | " | " | " |
| | 343' | " | 156 | " | " | " |

The water cut at 300' - 302' was tested for 4 hours at 4000 G.P.H., however, the salinity was too high to permit the use of this aquifer for domestic purposes.

The 8" Casing was driven ahead to 330' and seated in a black sticky clay, the seating being sufficiently good to exclude upper saline waters.

Drilling was then continued using smaller tools, and 6" casing; however no suitable aquifer was cut, and bedrock was reached at 485'.

Attempts were then made to develop the water in the strata between 362' and 393', by inserting a sandscreen 15' long 4" I.D. from 382' to 393', and the use of a slush

pump and surger for 4 days.

Following this, a $3\frac{1}{2}$ " plunger pump was installed, and the bore was further developed for 27 hours at 2000 G.P.H. for a draw down of 25'.

This pump was then removed, and a Pomona pump put into operation, and pump tested from 131' for 100 hours at 6000 G.P.H., for a draw down of 60'.

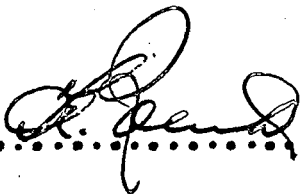
The analysis of this water, was 93 grains per gallon.

Details of the bore are as follows:

| <u>Drilling Commenced.</u> | <u>Drilling Completed.</u> | <u>Depth of Bore.</u> | <u>Supply.</u> | <u>Static Level.</u> |
|--------------------------------|--------------------------------|---------------------------|----------------|--------------------------|
| 1-3-54 | 14-4-54. | 485' | 6000G.P.H. | 30'. |

| <u>Analysis.</u> | <u>Casing.</u> | <u>Sandscreen.</u> | <u>Draw down.</u> |
|------------------|-------------------------|--------------------|-------------------|
| 93 G. P. H. | Surface 8" to 330'. | 15' I.D. 4". | 60'. |
| | Surface. 6" to 382'. | 382' to 393'. | |

Cost details are not yet available, and a cost statement will be issued as an appendix to this report.

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